

University Studies pg. 20

WINONA



UNDERGRADUATE CATALOG 2002 - 2004
WINONA STATE UNIVERSITY | WINONA, MINNESOTA
Minnesota State Colleges and Universities (MnSCU)

WINONA

STATE UNIVERSITY

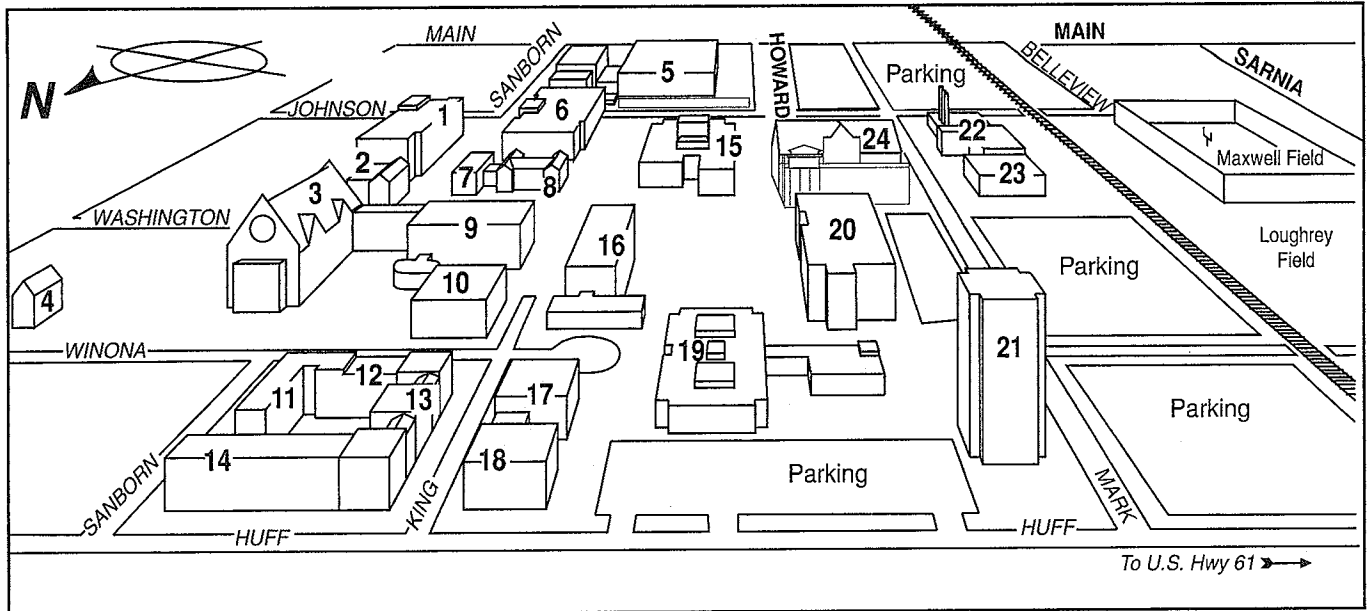
UNDERGRADUATE CATALOG 2002 – 2004

P.O. Box 5838 • Winona, MN 55987-5838

1-800-DIAL-WSU • (507) 457-5000

www.winona.edu

WINONA CAMPUS MAP



1. Maxwell Hall — Houses the Fitness Center, Conference Center and Children's Center
 2. Student Health Services and University Archives
 3. Stark Hall — houses the College of Nursing and Health Sciences, the College of Science and Engineering, the Departments of Nursing and Engineering, as well as the Composite Materials Technology Center
 4. Alumni House — Alumni Affairs
 5. Memorial Hall — houses the Health and Human Performance and Physical Education and Recreation departments, and the facilities for the University's indoor athletic activities and events
 6. Somsen Hall — houses the College of Business, the departments of Accounting, Administrative Information Systems, Business Administration, Computer Information Systems, Economics and Finance, Marketing, Foreign Language; and most administrative offices including the offices of the President, Academic Affairs, Administrative Affairs, Admissions, Financial Aid, Registrar, Adult Continuing Education and Extension, Human Resources (Personnel), Development and University Advancement, Business, academic and administrative computer centers, Publications Office, and the Print Shop.
 7. Howell Hall — houses Student Support Services, the television studio, Audio Visual Services, Media Services, and Disability Resource Center (DRC) and Interpreter Services
 8. Phelps Hall — houses the Mass Communication and Psychology departments, Advising and Retention, the Academic Skills Center, University Honors Program, and the Public Information Office
 9. Pasteur Hall — houses the departments of Biology, Chemistry, Physics, and Geology
 10. Watkins Hall — houses the departments of Computer Science and Art, including a gallery for student and professional art shows and the Watkins Art Collection
 11. Conway Hall — women's residence hall
 12. Shepard Hall — co-ed residence hall
 13. Morey Hall — co-ed residence hall
 14. Richards Hall — co-ed residence hall, and houses Honors Hall
 15. Performing Arts Center — houses the departments of Music, Communication Studies, Theatre Arts and Dance, and facilities for university-sponsored cultural events and KQAL, the campus radio station
 16. Gildemeister Hall — houses the College of Education including the departments of Education, Special Education, Counselor Education, Educational Leadership, Mathematics and Statistics, as well as the Career Planning and Placement Office and the Student Counseling Center
 17. Prentiss Hall — men's residence hall
 18. Lucas Hall — women's residence hall
 19. Kryzsko Commons and University Center — houses the university food services, recreational facilities and lounges, conference rooms, the "Smaug" snack bar, the Campus Book Store and the Alumni Lounge, as well as the offices for Cultural Diversity, the International Student Program, Housing and Student Affairs
 20. Minne Hall — houses the College of Liberal Arts, departments of English, History, Paralegal, Political Science, Sociology and Social Work, Philosophy, Women's Studies, Global Studies and the Writing Center
 21. Sheehan Hall — women's residence hall
 22. Heating Plant
 23. Maintenance Building
 24. Main Library — contains the University's library holdings and the Academic Assistance Center
 25. Lourdes Hall — co-ed residence hall, houses Residential College (not pictured)
- All buildings and parking lots accessible to the handicapped — all buildings equipped with elevators with the exception of #4, Alumni House. Call (507) 457-5008 to pre-arrange accessibility.

Note: Rochester Campus Map (See page 35.)

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2002–2003 ACADEMIC CALENDAR

FALL SEMESTER – 2002–2003

Registration begins, Tuesday	April 16, 2002
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Fall Semester,	Tuesday August 6, 2002
Deadline for applying for graduation in May 2003, Friday	August 9, 2002
Faculty Orientation/Development, Monday, Tuesday, Wednesday, Thursday, Friday,	August 26,27,28,29,30 2002
New Student Orientation/Registration, Wednesday, Thursday, Friday	August 28,29,30, 2002
Final application deadline for Arranged Classes, Internships, Independent Studies (GRADUATE and UNDERGRADUATE), Friday.....	August 30, 2002
Labor Day Holiday (no classes), Monday	Sept. 2, 2002
Day classes begin, Tuesday	Sept.3, 2002
Evening classes begin, Tuesday	Sept. 3, 2002
Last day to add classes without approval of instructor, Friday	Sept. 6, 2002
Approval of instructor needed to add classes, Monday & Tuesday	Sept. 9 & 10, 2002
Last day to drop classes with tuition refund, Tuesday	Sept. 10, 2002
Last day to drop or add classes, Tuesday.....	Sept. 10, 2002
Financial Aid Disbursement, Monday	Sept. 16, 2002
Fall Term tuition payment due, Friday	Oct. 4, 2002
Non-Class Faculty Duty Day - Student Fall Break Day, Friday	Oct 11, 2002
Midterm Day (Last day for undergraduates to make up work from Spring & Summer Terms), Tuesday.....	Oct. 22, 2002
* Last day to notify the Office of Graduate Studies of intent to take Spring Semester Comprehensive Examinations, Tuesday	Oct. 22, 2002
Veterans' Day Holiday, (observed—no classes), Monday	Nov. 11, 2002
Last day to withdraw from classes, Friday	Nov. 15, 2002
Registration for Spring Semester begins, Tuesday.....	Nov. 19, 2002
Thanksgiving break begins at 10:00 p.m., Tuesday	Nov. 26, 2002
Faculty Duty Day, Wednesday	Nov. 27, 2002
Classes resume, Monday.....	Dec. 2, 2002
Deadline for applying for graduation in December 2003, Friday.....	Dec. 13, 2002
Final Examinations, Monday, Tuesday, Wednesday, Thursday,.....	Dec. 16,17,18,19, 2002
Fall Semester Commencement, Friday	Dec. 20, 2002
Non-Class Faculty Duty Day, Monday.....	Dec. 23, 2002
Grades due, 9:00 a.m., Monday.....	Dec. 23, 2002

SPRING SEMESTER – 2002–2003

Registration begins, Tuesday	Nov. 19, 2002
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Spring Semester, Monday.....	Dec. 9, 2002
Deadline for applying for graduation in December 2003, Friday.....	Dec. 13, 2002
Non-Class Faculty Duty Days, Monday, Tuesday, Wednesday, Thursday, Friday	Jan 6,7,8,9,10, 2003
Final application deadline for Arranged Classes, Internships, Independent Studies, (GRADUATE and UNDERGRADUATE), Friday	Jan. 10, 2003
New Student Registration, Friday	Jan. 10, 2003
Day classes begin, Monday.....	Jan.13, 2003
Evening classes begin, Monday	Jan.13, 2003
Last day to add classes without blue cards, Thursday.....	Jan. 16, 2003
Approval of instructor needed to add classes, Friday & Tuesday.....	Jan. 17 & 21, 2003
Martin Luther King Holiday (no classes), Monday	Jan. 20, 2003
Last day to drop classes with tuition refund, Tuesday	Jan. 21, 2003
Last day to drop or add classes, Tuesday.....	Jan. 21, 2003
Financial Aid Disbursement, Monday	Jan. 27, 2003
All University Assessment Day, Wednesday.....	Feb. 12, 2003
Spring Term tuition payment due, Friday.....	Feb. 14, 2003
Midterm Day (Last day for undergraduates to make up incompletes from Fall Semester), Thursday	March 6, 2003
* Last day to notify the Office of Graduate Studies of intent to take Summer Comprehensive Examinations, Thursday.....	March 6, 2003
Spring Break begins at 10:00 p.m., Friday.....	March 7, 2003
Classes resume, Monday	March 17,2003
Last day to withdraw from classes, Friday.....	April 4, 2003
Registration for Fall Semester, 2003 begins, Tuesday	April 22, 2003
Final Examinations, Monday, Tuesday, Wednesday, Thursday,.....	May 5,6,7,8, 2003
Spring Semester Commencement, Friday	May 9, 2003
Non-Class Faculty Duty Days, Monday, Tuesday, Wednesday.....	May 12,13,14, 2003
Grades Due, 9:00 a.m, Monday.....	May 12, 2003

The University calendar is subject to modification or interruption due to occurrences such as fire, flood, labor disputes, interruption of utility services, acts of God, civil disorder, and war. In the event of such occurrences, the University will attempt to accommodate its students. It does not, however, guarantee that courses of instruction, extracurricular activities or other University programs or events will be completed or rescheduled. Refunds will be made to eligible students in accordance with our governing board's policy.

In general election years, no classes may be held after 6:00 p.m. on the first Tuesday in March due to the precinct caucus.

*Pertains to Graduate students ONLY.

SUMMER TERM - 2003

Summer term classes begin and end at various times between Commencement (May 9) and the beginning of Fall Semester classes (September 2.)
 Check course listings to find out when the classes you are interested in begin and end.

Summer Registration opens, Monday	March 17, 2003
Last day for new students to apply for admission	May 5, 2003
Last day for former students to file intent to return, Monday	May 12, 2003
Deadline for applying for Arranged Classes, Internships, Independent Studies, Friday	May 30, 2003
Official beginning of Summer Term, Monday	June 2, 2003
(Some classes begin before this date. Check course listings for beginning and ending dates of all courses.)	
Last day to add or drop (with 100% refund) a course that begins on June 2 or 3 and meets for more than 21 days, Wednesday	June 4, 2003
Fourth of July Holiday (no classes), Friday	July 4, 2003
* Last day to notify the Office of Graduate Studies of intent to take Fall Comprehensive Examinations, Monday	July 28, 2003
Deadline for applying for graduation in May 2004, Monday	July 28, 2003
Official end of Summer Term, Friday	August 8, 2003

Final Examinations will be held during the last scheduled class meeting.

Can add 3 days into session

June 6th - check - do letters

AGAIN mid July

CALL ONE THREE ASK WHEN tuition is due back approx week

2003-2004 ACADEMIC CALENDAR

15th

FALL SEMESTER - 2003-2004

Registration begins, Tuesday	April 22, 2003
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Fall Semester, Tuesday	Aug. 5, 2003
Deadline for applying for graduation in May 2004, Friday	Aug. 8, 2003
Faculty Orientation/Development, Monday, Tuesday, Wednesday, Thursday, Friday,	August 25, 26, 27, 28, 29, 2003
New Student Orientation/Registration, Wednesday, Thursday, Friday	August 27, 28, 29, 2003
Final application deadline for Arranged Classes, Internships, Independent Studies (GRADUATE and UNDERGRADUATE), Friday	Aug. 29, 2003
Labor Day Holiday (no classes), Monday	Sept. 1, 2003
Day classes begin, Tuesday	Sept. 2, 2003
Evening classes begin, Tuesday	Sept. 2, 2003
Last day to add classes without approval of instructor, Friday	Sept. 5, 2003
Approval of instructor needed to add classes, Monday & Tuesday	Sept. 8 & 9, 2003
Last day to drop classes with tuition refund, Tuesday	Sept. 9, 2003
Last day to drop or add classes, Tuesday	Sept. 9, 2003
*Financial Aid Disbursement, Monday	Sept. 15, 2003
Fall Term tuition payment due, Friday	Oct. 3, 2003
Non-Class Faculty Duty Day - Student Fall Break Day, Friday	Oct 10, 2003
Midterm Day (Last day for undergraduates to make up work from Spring & Summer Terms), Tuesday	Oct. 21, 2003
*Last day to notify the Office of Graduate Studies of intent to take Spring Semester Comprehensive Examinations, Tuesday	Oct. 21, 2003
Veterans' Day Holiday, (observed—no classes), Monday	Nov. 10, 2003
Last day to withdraw from classes, Friday	Nov. 14, 2003
Registration for Spring Semester begins, Tuesday	Nov. 18, 2003
Thanksgiving break begins at 10:00 p.m., Tuesday	Nov. 25, 2003
Faculty Duty Day, Wednesday	Nov. 26, 2003
Classes resume, Monday	Dec. 1, 2003
Deadline for applying for graduation in December 2004, Friday	Dec. 12, 2003
Final Examinations, Monday, Tuesday, Wednesday, Thursday,	Dec. 15, 16, 17, 18, 2003
Fall Semester Commencement, Friday	Dec. 19, 2003
Non-Class Faculty Duty Days, Monday, Tuesday	Dec. 22, 23, 2003
Grades due, 9:00 a.m., Monday	Dec. 22, 2003

*Pertains to Graduate students ONLY.

SPRING SEMESTER – 2003–2004

Registration begins, Tuesday	Nov. 18, 2003
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Spring Semester, Monday	Dec. 8, 2003
Deadline for applying for graduation in December 2004, Friday	Dec. 12, 2003
Non-Class Faculty Duty Days, Monday, Tuesday, Wednesday, Thursday, Friday	Jan 5,6,7,8,9, 2004
Final application deadline for Arranged Classes, Internships, Independent Studies, (GRADUATE and UNDERGRADUATE), Friday	Jan. 9, 2004
New Student Registration, Friday	Jan. 9, 2004
Day classes begin, Monday	Jan.12, 2004
Evening classes begin, Monday	Jan.12, 2004
Last day to add classes without approval of instructor, Thursday	Jan. 15, 2004
Approval of instructor needed to add classes, Friday & Tuesday	Jan. 16 & 20, 2004
Martin Luther King Holiday (no classes), Monday	Jan. 19, 2004
Last day to drop classes with tuition refund, Tuesday	Jan. 20, 2004
Last day to drop or add classes, Tuesday	Jan. 20, 2004
Financial Aid Disbursement, Monday	Jan. 26, 2004
All University Assessment Day, Wednesday	Feb. 11, 2004
Spring Term tuition payment due, Friday	Feb. 13, 2004
Midterm Day (Last day for undergraduates to make up incompletes from Fall Semester), Thursday	March 4, 2004
* Last day to notify the Office of Graduate Studies of intent to take Summer Comprehensive Examinations, Thursday	March 4, 2004
Spring Break begins at 10:00 p.m., Friday	March 5, 2004
Classes resume, Monday	March 15, 2004
Last day to withdraw from classes, Friday	April 2, 2004
Registration for Fall Semester, 2004 begins, Tuesday	April 20, 2004
Final Examinations, Monday, Tuesday, Wednesday, Thursday	May 3,4,5,6, 2004
Spring Semester Commencement, Friday	May 7, 2004
Non-Class Faculty Duty Days, Monday, Tuesday	May 10,11, 2004
Grades Due, 9:00 a.m, Monday	May 10, 2004

SUMMER TERM – 2004

Summer term classes begin and end at various times between Commencement (May 7) and the beginning of Fall Semester classes.

Summer Registration opens, Monday	March 15, 2004
Last day for new students to apply for admission, Monday	May 10, 2004
Last day for former students to file intent to return, Monday	May 10, 2004
Deadline for applying for Arranged Classes, Internships, Independent Studies , Friday	June 4, 2004
Official beginning of Summer Term, Monday	June 7, 2004
(Some classes begin before this date. Check course listings for beginning and ending dates of all courses.)	
Last day to add or drop (with 100% refund) a course that begins on June 7 or 8 and meets more than 21 days, Wednesday	June 9, 2004
Fourth of July Holiday (no classes), Monday	July 5, 2004
* Last day to notify the Office of Graduate Studies of intent to take Fall Comprehensive Examinations, Monday	August 2, 2004
Deadline for applying for graduation in May 2005, Monday	August 2, 2004
Official end of Summer Term, Friday	August 13, 2004

Final Examinations will be held during the last scheduled class meeting.

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In general election years, no classes may be held after 6:00 p.m. on the first Tuesday in March due to the precinct caucus.

* Pertains to Graduate students ONLY.

KEY CONTACTS ON CAMPUS

(The area code prefix is 507.)

Academic Affairs	457-5010 fax: 457-5586
Admissions	800 DIAL WSU or 457-5100 fax: 507-457-5620 admissions@winona.edu
Affirmative Action	457-5008 or 457-5013
Business Office (Student Accounts)	457-5075 fax: 457-5598
College of Business	457-5014 fax: 457-5697
College of Education	457-5570 fax: 457-5476
College of Liberal Arts	457-5017 fax: 457-5086
College of Nursing & Health Sciences	457-5122 fax: 457-5550
College of Science & Engineering	457-5585 fax: 457-5681
Cross-Cultural Outreach	457-2394 fax: 457-2472
Disability Resource Center	457-2391 or 457-2409, TTY fax: 457-5155
Financial Aid	457-5090 fax: 457-5628
Housing	457-5305
International Services	457-5303 fax: 457-2474
Library	457-5140 fax: 457-5594
Maxwell Children's Center	457-5368 or 457-2744
President's Office	457-5003 fax: 457-2415
Registrar	457-5030 fax: 457-5578
Rochester Center	285-7100 fax: 285-7175
Scholarship Administration Office	457-5198
Student Affairs	457-5300 fax: 457-2472
Technical Support Center	457-5240
Veterans' Assistance	457-5109

ADMINISTRATION

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(www.mnscu.edu)

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www.winona.edu/president

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Theresa Arrick-Kruger, Human Resources Director, Affirmative Action Officer, Sexual Harassment Officer
Dennis Martin, Director, Institutional Research/Planning
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Office of Vice President for Academic Affairs

www.winona.edu/academics.html

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Nancy Jannik, Dean, College of Science & Engineering
Susan Hatfield, Assessment Coordinator
Russell Lohmann, Director, Rochester Center
Barbara Oertel, Director, Advising & Retention
Gregory Peterson, Director, Financial Aid
Nancy Kay Peterson, Director, Grants and Sponsored Projects
June Reineke, Director, Maxwell Children's Center
Douglas Schacke, Director, Admissions
_____, Registrar

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www.winona.edu/studentaffairs

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John Ferden, Director, Auxiliary Enterprises
Richard Lande, Physical Plant Manager/Facilities
Terri Markos, Director, International Services & Cultural Outreach
Shirley Mounce, Director, Parking Services
Diane Palm, Director, Student Health Services
Joe Reed, Director, Student Union/Student Activities
Don Walski, Director, Security Services

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Joe Whetstone, Vice President for Technology
Joanne Rosczyk, Director, Telecommunications and Safety
Judy Routh, Director, Media Services

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Richard Davis, Director, Publications & Print Shop
Tom Grier, Director, University Communication
Kim Dehlin Zeiher, Director, Alumni Affairs
Linda Wood, Director, Major Gifts & Planned Giving

Office of Comptroller

Scott Ellinghuysen, Comptroller/Chief Financial Officer
Marie Bush, Budget Director
Karen Krause, Bookstore Director

Winona State University is committed to providing equal education and employment opportunities to all persons and does not discriminate on the basis of race, color, creed, religion, national origin, sex, age, marital status, status with regard to public assistance, sexual orientation, disability, or any other group or class against which discrimination is prohibited by Title IX of the Education Amendments, 1972, Minnesota Statutes Chapter 363, Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act, 1974, and other applicable state and federal laws. Inquiries regarding compliance should be referred to the Affirmative Action Officer at (507)-457-5008.

THE UNIVERSITY

Winona State University holds a unique place in the history of higher education in the State of Minnesota. The University was founded on August 2, 1858, when the first Minnesota State Legislature passed a bill establishing normal schools, thereby establishing Winona State University as the first teacher preparation institution west of the Mississippi River. On September 3, 1860, classes began at Winona State University, which has since become a recognized leader in providing excellence in higher education. It is one of seven state universities that are part of the 34-member Minnesota State Colleges and Universities (MnSCU) system. The University operates on three campuses: its original, main campus and the west campus are located in the city of Winona; a non-residential campus is located in Rochester, Minnesota, 45 miles to the west.

The Winona campuses are largely residential and primarily serve a traditional student age population; whereas, the Rochester campus serves primarily non-traditional students. The Institute for Lifelong Education, headquartered on the Rochester campus, meets the needs of the non-traditional student on each campus and provides the structure for outreach activities compatible with the University's mission. Commonly held principles help Winona State University (WSU) prepare undergraduate and graduate students. We value differences and work collaboratively, continuing the legacy of a century-and-a-half of service.

The city of Winona (population 29,000) is nestled among the bluffs of the beautiful Hiawatha Valley on the banks of the Mississippi River—one of the most scenic areas in Minnesota. Students have convenient access to shopping, recreational activities, and community resources. Additional cultural opportunities are available in La Crosse, Wisconsin (30 miles away), Rochester (45 miles away), and in Minneapolis-St. Paul (120 miles away).

In addition to WSU, the city of Winona is home to two other institutions of higher learning: Saint Mary's University of Minnesota, and Minnesota State College—Southeast Technical. WSU cooperates with these area institutions, as well as institutions throughout the MnSCU system and the University of Minnesota, to enrich the educational and cultural opportunities for students at all institutions by sharing their programs and resources.

University Center Rochester (UCR) is an example of the sharing characteristic of Minnesota institutions. The UCR partnership includes WSU-Rochester Center, Rochester Community and Technical College, and the University of Minnesota, offering degree programs from the Associate level through the Doctorate at a single location. Interactive TV and computing connections link UCR to Winona and other sites. (For more details about the Rochester campus, see page 35.)

MISSION

The mission of Winona State University is to educate and enlighten our citizenry at a distinctive institution: a **community of learners dedicated to improving our world.**

We are an exemplary arts and sciences institution with select professional and graduate programs anchored in a general education core. With an enrollment of approximately 7,600 undergraduate and graduate students, WSU is a mid-sized public university committed to retaining small class sizes and to challenging students by maintaining rigorous academic standards. Faculty and administration are involved with students, facilitate cooperative and active learning, and provide prompt respect for our students' diverse talents and ways of knowing. Faculty are dedicated to creating an optimal learning environment for students by using contemporary technology and by building learning communities, which help students maximize their post-graduation successes. Students acquire disciplinary expertise, enabling them to pursue careers or to enter graduate or professional schools. They learn the value of aesthetics and ethical integrity, along with the importance of becoming community leaders and furthering the public good.

WSU recognizes that many of the learning experiences of college occur outside the classroom. It is, therefore, committed to building and maintaining a caring community. Campus community members strive for amicable relationships based on shared values and an affirmation of

the principle of freedom of speech within an atmosphere of civility and mutual respect. Governed by collective bargaining agreements and guided by principled leadership, we respect diversity and collaborate to resolve issues that affect us all. We celebrate our common successes and our distinctive heritage.

We are committed to measuring results against self-defined and national standards. Through this ongoing assessment—one in which students, faculty, and staff participate—we will improve continuously and establish accountability for results. Thus, we shall reaffirm WSU's social contract to provide educational benefits to the people of Minnesota, the nation, and the world.

EXPECTATIONS

WSU is committed to a policy of continuous quality enhancement. As evidence of this commitment, the University has developed the following statement of expectations:

WSU is dedicated to serving the broad educational needs of people living in the region and others attracted to its complement of high-quality programs. The University is committed to preserving, extending and disseminating knowledge. Through this commitment, it fosters a love for learning in an atmosphere of intellectual excitement. It acknowledges the great benefits gained from a free and open discussion of all ideas within the academic setting and encourages respect for others and tolerance for opposing points of view.

In fulfilling its mission, WSU incorporates The Seven Principles for Good Practice in Undergraduate Education to maintain excellence in teaching and outcomes assessment to demonstrate the excellence of WSU's programs and services.

WSU has a rich heritage of providing an educational setting in which students are assisted in achieving their learning goals. WSU's dedication to excellence in academic programs and student services is demonstrated through the high expectations established for everyone at the University—faculty, students, administration, and staff. It is only through the collective efforts of these constituent groups that WSU can achieve its goal of excellence. In working together, each group has high expectations of itself and others.

WSU students are expected to be dedicated to:

- Active learning:** WSU students are expected to be actively involved in the teaching-learning process, committed to applying their learning experience to activities beyond the classroom and making those learning experiences part of their lifelong learning process.
- Standards of excellence:** WSU students are expected to meet the high expectations expressed by faculty and staff members. Students are encouraged to expect excellence of faculty and staff as well. WSU students are entrusted to maintain the highest level of integrity in their academic work and interactions with others.
- Time on task:** Students are expected to be responsible for effectively managing their time so as to expend the utmost energy on their classroom tasks and learning experiences. Students are expected to spend a significant amount of time outside of class on individual studying, in laboratory settings, in the library, or engaged in academic-related discussion with peers, faculty, and administrative staff.
- Cooperative learning:** Students are expected to be committed to learning in settings beyond the classroom such as those learning experiences occurring in group discussions, group work projects, multicultural interactions, and internships.
- Personal growth and development:** WSU students are encouraged to take advantage of the wide range of activities, clubs, and organizations available on campus within their major area of study as well as those activities they choose for their own pleasure. Such experiences contribute to the development of the educated person and provide opportunities for students to meet informally with other students, faculty, and staff.

WSU faculty are expected to be dedicated to:

1. **Excellence in teaching or other assigned duties:** WSU faculty plan and organize courses using instructional methods and materials that promote learning and personal growth for their students. WSU faculty have high expectations for themselves and their students. They conduct their departmental and university-assigned activities with the aim of increasing student learning and success.
2. **Scholarly and research activities:** WSU faculty engage in a variety of scholarly, creative, and research activities that contribute to their excellence in teaching and program quality and provide opportunities for students to learn through participation.
3. **Professional preparation, study, and development:** WSU faculty engage in professional studies and experiences that enhance their capacities to enrich student learning.
4. **Student growth and development:** WSU faculty perceive as their main objective the perpetuation of a learning environment in which students are encouraged to realize their potential. Such encouragement includes faculty/student interaction in small group settings in and out of class, a sound advising system, prompt feedback, respect for diverse talents and ways of learning, and opportunities to work one-on-one on independent study projects. WSU faculty also encourage student participation in campus organizations, cultural events, and extracurricular activities.
5. **Service to the University and the community:** WSU faculty actively participate in the community through memberships in campus and community organizations.

Administration and staff are expected to be dedicated to:

1. **Faculty recruitment and support:** WSU administration and staff help attract and maintain a highly skilled teaching faculty dedicated to teaching, research, and service. Additionally, they support faculty enrichment activities that contribute to the quality of students' learning experiences.
2. **Student recruitment and support:** WSU administration and staff are dedicated to recruiting highly qualified students who can contribute to the academic excellence of the University. Administration supports academic advising and services that increase the quality of students' educational experiences.
3. **Creation of a stimulating learning environment:** The administration and staff are responsible for the creation and maintenance of a physical environment conducive to learning, with adequate resources for both students and faculty—including library, computer and other resources required for instruction, research, and public service.
4. **Cooperative decision-making:** The administration contributes to a cooperative/collegial decision-making process. Such a process ensures the appropriate participation of faculty and students in instructional governance and fosters respect among the constituent groups.
5. **Promoting excellence:** WSU administration is dedicated to carrying forth a leadership role in developing concern for excellence throughout the university community. The administration articulates the support for excellence to all constituencies.

POINTS OF DISTINCTION Facilities

WSU's main campus provides a serene, yet stimulating collegiate environment in the heart of the city of Winona. Tree-lined walkways, fountains, prominent sculpture, and park benches invite students and visitors to a learning community in tune with the natural beauty of southeast Minnesota. The west campus is home to the Residential College, which is housed in the grandeur of Lourdes Hall, one mile from the main campus. WSU-Rochester Center offers modern classrooms and study spaces in the University Center Rochester located on the eastern outskirts of the city of Rochester.

The main WSU campus provides students ample facilities for educational activities that combine traditional charm with convenience. Highlighting the educational facilities is the University Library—a modern facility with 1600 data connections, spaced every 15 feet throughout the building. The library contains 800,000 volumes including books, bound periodicals and microfilm; electronic classrooms; and study rooms and lounge areas. Like the library, all academic buildings are extensively wired for computer access. Most classrooms are equipped with a data projection system and a control station that gives instructors easy access to campus and internet resources. As one element of the WSU Laptop Program, many classrooms also offer a data and power connection for each student.

In addition to the academic buildings, WSU provides exceptional facilities for students' social, cultural and recreational interests.

- The Performing Arts Center contains facilities for musical performances, theater productions and studio work.
- Memorial Hall is the physical education/athletic facility. Its swimming pool, six full-sized gymnasiums, indoor track and tennis facilities, handball/racquetball courts, and physiology of exercise laboratory make it the center for the University's 14 athletic teams (five men's teams and nine women's teams).
- The Student Center (Kryzsko Commons) provides student lounges, dining facilities, student organization offices, conference rooms, and other accommodations for student activities and relaxation.
- The Fitness/Wellness Center (3rd Floor, Maxwell Hall) provides a high quality experience for WSU students, faculty, and staff. The 11,000-square-foot facility is used for recreational exercise, classes, and athletic training. The Fitness Center was developed for both aerobic and strength training.

In addition to its emphasis on providing students with exemplary facilities for academic work, the University also provides students with comfortable, satisfying living accommodations. Eight residence halls house approximately 1,800 students (plus leased space in a traditional residence hall for an additional 200 students on the West Campus).

Laptop Program

At WSU, students use interactive and progressive educational technology that provides immediate feedback and a positive learning experience both inside and outside the classroom. To be a successful lifelong learner and to be competitive in professional settings, WSU graduates need to be comfortable and adept in the world of personal computing. For that reason, all entering students are required to lease a PC or Apple laptop computer to use during their attendance at WSU. The use of a laptop allows students accessibility to coursework, e-mail, and internet resources anywhere and at any time, on a computer over which they, alone, have control. Whether inside or outside the classroom, students learn through personal experience to use computers responsibly and appropriately in daily life. This portable technology is a value-added educational tool; it is but one aspect of what makes WSU a progressive and attractive educational university.

Maxwell Children's Center

Under the auspices of the College of Education, Maxwell Children's Center provides child care services and educational programs for children of students, faculty/staff, and the community. This program provides a living laboratory of child development and exemplary practice for students in professional education programs at WSU. Future teachers have opportunities to work with and observe children from birth through school age. The Children's Center is an important part of the College of Education and the Professional Education Unit; it helps to keep the learning and development of children at the forefront of our professional education programs. See page 32 for more detailed information.

Adult, Continuing Education, and Extension

WSU offers a wide range of learning experiences and opportunities through the Adult, Continuing Education and Extension Division. These include non-credit and CEU activities, workshops and conferences; extension credit courses; senior citizen registration; and the Adult Entry Program, which features individualized advising, career counseling, and credit for prior learning. Non-credit programs, credit courses and advising are located in numerous places throughout the WSU service area. Customized programs also may be developed to meet the continuing education needs of specific agencies, schools, businesses and industries. For more information, see page 30.

Accreditation and Memberships

WSU is accredited by the following organizations:

- Higher Education Commission of the North Central Association of Colleges and Schools (NCA) – for undergraduate and graduate programs
- National Council for the Accreditation of Teacher Education (NCATE) – for all education programs (undergraduate and graduate teacher education, educational leadership, special education, and counselor education)

- Council of Accreditation of Counseling and Related Educational Programs (CACREP) – for the Counselor Education program
- National League for Nursing Accrediting Commission (NLNAC) – for undergraduate and graduate Nursing programs
- Commission for Accreditation of Allied Health Education Programs – for Athletic Training (an Exercise Science program)
- Council on Social Work Education – for the Social Work program
- Accrediting Board for Engineering (ABET) – for the Composite Engineering program
- National Association of Schools of Music (NASM) – for the Music program
- National Association of Schools of Theatre (NAST) – for the Theatre program

WSU is recognized by the following organizations:

- National Association for the Education of Young Children (NAEYC)
- National Council of Teachers of English (NCTE)
- Association for Childhood Education International (ACEI)
- Council for Exceptional Children (CEC)
- National Council for the Social Studies (NCSS)
- National Council of Teachers of Mathematics (NCTM)
- Association for the Advancement of Collegiate Schools of Business (AACSB)
- American Bar Association (ABA) – for the Paralegal program

WSU is approved by:

- American Chemical Society
- Minnesota Board of Teaching
- Minnesota Board of Nursing
- Commission on Collegiate Nursing Education (CCNE) – preliminary approval

ACADEMIC PROGRAMS

WSU comprises five distinctive colleges:

- College of Business
- College of Education
- College of Liberal Arts
- College of Nursing and Health Sciences
- College of Science and Engineering

Through these colleges, WSU offers 7 master's degree programs, 64 undergraduate degree programs, 13 pre-professional programs, and several licensure and specialist degree programs. (For information about graduate programs, see the WSU Graduate Catalog.)

All programs are offered by highly qualified faculty in an environment committed to a love of learning and student service. Approximately 400 faculty members dedicate themselves to delivering rigorous academic programs while maintaining an atmosphere of "small school closeness." Classes average 25 to 30 students; the student-faculty ratio is 21:1.

DEGREES AND PROGRAMS

Bachelor of Arts Majors

- Art
- Communication Studies
- Economics
- English
- French
- German
- History
- Law and Society
- Mass Communication
- Mathematics
- Music
- Political Science
- Professional Studies
- Psychology
- Sociology
- Spanish
- Theatre Arts

Bachelor of Science Majors

- (Non-Teaching)
- Accounting
 - Biology
 - Business Administration
 - Chemistry
 - Composite Materials Engineering
 - Computer Science
 - Cytotechnology
 - Exercise Science
 - Finance
 - Geoscience
 - Human Resources Management
 - Management Information Systems
 - Marketing
 - Mathematics
 - Medical Technology
 - Music
 - Nursing
 - Paralegal
 - Physics
 - Public Administration
 - Recreation and Leisure Studies
 - School and Community Health Education
 - Social Work
 - Sociology: Criminal Justice

Bachelor of Science Majors

- (Teaching)
- Art
 - Business
 - Chemistry
 - Communication Arts and Literature
 - Early Childhood Education (Birth -- Grade 3)
 - Earth Science
 - French
 - German
 - K – 6 with Middle School Communication Arts and Literature 5-8 Specialty
 - K – 6 with Middle School Mathematics 5-8 Specialty
 - K – 6 with Middle School Science 5-8 Specialty
 - K – 6 with Middle School Social Studies 5-8 Specialty
 - K – 6 with Pre-Primary Specialty
 - Life Science
 - Mathematics
 - Music
 - Physical Education
 - Physics
 - School and Community Health Education
 - Social Science: History
 - Spanish
 - Special Education

Two-Year Undergraduate Associate of Arts

Special Licensure Programs

- Developmental/Adapted Physical Education
- School Social Work

Pre-Professional Sequences

- Pre-Dental Hygiene
- Pre-Dentistry
- Pre-Engineering
- Pre-Health Science
- Pre-Law
- Pre-Medicine
- Pre-Mortuary Science
- Pre-Optometry
- Pre-Pharmacy
- Pre-Physical Therapy
- Pre-Physician Assistant
- Pre-Podiatry
- Pre-Veterinary Medicine

ADMISSIONS

Office of Admissions
Somsen Hall, Room 106 (800 DIAL WSU or 507-457-5100)
http://www.winona.edu
E-mail: admissions@winona.edu

The Office of Admissions is responsible for recruiting potential students to WSU, evaluating and approving applications for admissions, recommending newly admitted students for some forms of scholarship aid, facilitating student transfer to WSU from other post-secondary institutions, evaluating international transcripts for WSU equivalency, and verifying eligibility for veteran's assistance.

CAMPUS VISITS

Anyone interested in WSU is welcome to visit the WSU campus at any time; tours begin in the Office of Admissions. When school is in session, student-conducted tours are available at 9 a.m. and 1 p.m. Monday through Friday. Tours are also offered at 10 a.m. on selected Saturdays from September through January (except holidays). Summer tours also are available. For more information or to request materials, contact us at the telephone number or web address above or via the U.S. mail at:

Winona State University - Office of Admissions
P. O. Box 5838
Winona, MN 55987-5838

ADMISSION REQUIREMENTS

Students can apply for admission for either semester during the academic year. A student's ACT and SAT scores are factored into the admission decision for students who come directly from high school or who do not have a class rank. The ACT is required for enrollment (registration) to assist in placement and advising.

Even if they have not graduated from high school, students can be considered for admission if they have a High School Equivalency Certificate based on successful completion of the GED test, if they achieved an acceptable score on one of the college entrance examinations, and if they have completed the 16 units of high school preparation requirements.

WSU requires students applying for admission to meet certain entrance requirements. No one is denied admission because of race, color, disability, sex, sexual orientation, or national origin.

High School Preparation Requirements

To be considered for admissions to WSU, students must have completed the following high school curriculum in grades 9-12:

- 4 years of English (includes composition, literature and speech).
- 3 years of mathematics including 2 years of algebra and 1 year of geometry.
- 3 years of science including 1 year of biology and 1 year of either chemistry or physics. All courses should include laboratory experiences.
- 3 years of social studies including 1 year of U.S. History and 1 year of geography or its equivalent is highly recommended.
- 2 years of a single world language (including non-English native languages and American Sign Language).
- 1 year of specified electives chosen from the following: World culture (including world cultures, area studies, and cultural or ethnic studies); the arts (including visual arts and the performing arts of theatre, music, dance and media arts); and computers.

Post-Secondary Enrollment Options Program

Students who have completed the 10th grade may be considered as applicants if they are currently enrolled in high school and have demonstrated an unusually high ability and/or achievement and are recommended by a high school counselor or principal. To be eligible, high school juniors must be in the top 15 percent of their class or have an ACT of 26 or higher; seniors must be in the top 25 percent of their class or have an ACT of 25 or higher.

International Students

Director of International Services & Cross-Cultural Outreach
Kryzsko Commons, Room 130, (507-457-5303)

Students who are not U.S. citizens are admitted on the basis of certified credential evaluations verifying completion of previous educational studies. Failure to supply official mark sheets from ALL schools attended is considered fraud and grounds for canceling admissions or enrollment. Students must also submit a TOEFL (Test of English as a Foreign Language) score with a minimum of 500/173.

Students must present proof of financial responsibility for the full course of study. The University provides specific financial support forms for this purpose. The University also requires that all financial obligations, including tuition, fees, room and board be paid when students register. The financial support statement is extremely important because very little financial aid is available to students who are not U.S. citizens, and immigration regulations prohibit these students from getting a job outside the campus community. In view of the increasing cost of education and unstable conditions around the world, WSU does not assume responsibility for emergency situations, which can arise while students are attending the University.

Students are required to have health insurance. Students who do not have a health insurance policy are required to purchase one through the University.

WSU requires all non-native speakers of English to complete an on-campus English placement exam unless they transfer to WSU with English composition credits. The English test determines the appropriate English placement.

To request additional information or to request a WSU International Admissions packet, contact the Director of International Services & Cross-Cultural Outreach.

APPLICATION PROCEDURES

New First-Year Students

Students coming directly from high school may apply as outlined below. Applicants are encouraged to submit all admissions material as early as possible during their senior year. For the past several years, WSU has closed new student admissions for the next fall semester as early as December.

1. Complete a WSU Admission Application.
2. Return the completed application to the WSU Office of Admissions with a \$20 non-refundable fee.
3. Request that your official high school transcript be forwarded to the Office of Admissions; the transcript should include high school rank and admission test score.

Alternatively, students coming directly from high school may initiate the application request to WSU when they take their ACT, using ACT-APP. Students who achieve appropriate scores on the ACT and who indicate WSU (2162) as a choice are sent a WSU Admission Application. Prospective students may also obtain information about WSU and/or apply for admissions from the WSU website.

Types of Admission

Note: When this catalog went to print, the admissions criteria described below were under review. Therefore, admission to WSU for fall 2003 must comply with revised guidelines, which will be available in the Office of Admissions.

Depending on their class rank, ACT/SAT scores, and high school curriculum, students are awarded either distinctive or university admission status at WSU.

- **Distinctive Admission:** Students are admitted with distinction if they rank in the upper 15 percent of their high school graduating class and have an ACT score of 26 or above or an SAT score of 1100 or above and have completed the 16 units of high school preparation requirements. Students admitted with distinction attend an orientation and

registration program during the late spring preceding their first year at Winona State.

- **University Admission:** Students are admitted with university admission status if they rank in the top 50 percent of their high school graduating class or they have an ACT score of 21 or above or an SAT score of 1000 or above and have completed the 16 units of high school preparation requirements. Students admitted with university admission status attend an orientation and registration program during the mid-summer preceding their first year at Winona State.

Appeals Process

First-year applicants coming directly from high school who do not meet the above requirements because of special and unique circumstances may be considered for admission by special appeal. In cases where unusual circumstances exist, the student should first complete the regular application process. Then, if the student is denied admission to the University, he/she should write a letter of appeal to the Director of Admissions. This letter should outline the unique circumstance and should be supported by appropriate documentation from outside sources. For example, if a student is appealing based on a learning disability, the student's letter should outline this, and the student should provide support documentation, such as results of IQ tests, IEPs, and support letters from high school faculty.

International Students

Students who are not U.S. citizens must satisfy all WSU application procedures. The Office of Admissions encourages students who are non-U.S. citizens to complete the application process three months before the first day of class for the semester in which studies are to begin. Submitting application material early allows the application to be processed correctly and lets university officials more effectively plan the required orientation programs for international students.

International students may apply as follows:

1. Request the necessary admission application information from the Office of International Services and Cultural Outreach.
2. Submit a WSU International Admissions Application. Include official, certified academic credentials, verifying the completion of previous educational studies; this document must include official mark sheets from all schools attended.
3. Request that your TOEFL score (minimum of 500/173) be forwarded to the WSU Office of International Services and Cultural Outreach.
4. Include a financial support statement that presents proof of financial responsibility for the full course of study. WSU provides specific financial support forms for this purpose.

Placement Tests for New Domestic and International Students

All new students must take the English and mathematics placement exams before enrolling in an English composition or mathematics course. Transfer students who have credit for college-level English and/or mathematics are exempt from this requirement. Placement tests are offered regularly before all registration periods. Information about specific dates, times, and locations of exams is available at the Advising and Retention Center (Phelps Hall, Room 126; 507-457-5600) and at www.winona.edu/class_schedule.

Returning Students

WSU students who have not attended the University for one semester or more (summer excluded) are classified as "returning" students. Returning students must complete the Intent to Return form, which is available in the Registrar's Office (Somsen Hall, Room 114). The Registrar's Office then evaluates the student's record for possible re-admission.

Students are considered to be "returning transfer students" if they have attended another college or university (summer excluded) since they last attended WSU and they intend to take further coursework at WSU. Official transcripts are required for all college/university attendance. Returning transfer students must complete the WSU Application for Transfer and Returning Transfer Admission, which is available in the Office of Admissions. The Office of Admissions evaluates the transcripts for possible admission.

Returning students who have been academically suspended should refer to page 27 for guidelines concerning re-admission under the University's suspension policy. Under some circumstances, a returning student may petition to have a portion of the student's prior WSU transcript set aside and the GPA recalculated. See page 27 concerning the academic pardon policy.

Undergraduate Special Students

Students are classified as undergraduate special students if they are taking undergraduate courses for enrichment, general interest, to transfer to another school, or if they have no intention of earning a degree at WSU. Applicants must (1) file an Undergraduate Special Enrollment form; (2) submit a \$20 non-refundable application fee (if they have not attended WSU and paid the fee previously); (3) submit transcripts of previous college work or Statement of Good Standing for those students wanting to transfer credits to their "home" university or college. Admissions decisions are based on the same standards established for students coming directly from high school and for transfer students.

Post-Baccalaureate Students

Students are classified as post-baccalaureate students if they have a baccalaureate degree and are taking additional undergraduate courses to satisfy a second major, minor or certificate. Applicants must (1) submit a Post-Baccalaureate Application to the Office of Admissions; (2) submit a \$20 non-refundable application fee (if they have never attended WSU and paid the fee previously); and (3) submit transcripts of previous college work and proof of baccalaureate degree.

Non-Matriculated Undergraduate Students

Adult, Continuing Education and Extension Department (ACEED)
Somsen Hall, Room 109 (507-457-5080)

The Non-Matriculated Undergraduate Student Program lets adults who are not seeking a degree take undergraduate classes on campus without going through the formal admission procedure. To participate in the program, the applicant must be a high school graduate (and be out of high school for at least one year) and/or have five years work experience. A maximum of 6 credits can be taken per semester, and a maximum of 12 credits can be transferred to a degree program.

The program opens the University's doors to persons in the community desiring courses for general interest, professional enhancement, or personal enrichment. Contact the ACEED office for more information.

Technical College Students

WSU will accept a 16-credit general elective package of technical courses offered by institutions with appropriate regional accreditation. General education courses will be accepted on a course-by-course basis above the 16-credit maximum for technical courses. Students should see a transfer specialist for more information, particularly if they are interested in transferring credits from technical colleges.

Students are considered transfer students if they are entering WSU from a technical college. To apply, students must request that their official high school and technical college transcripts as well as the appropriate admission test scores be forwarded to WSU's Office of Admissions.

Some departments may offer transfer credit for technical classes that apply to a program of study. Students can obtain a special form to facilitate the process.

TRANSFER STUDENTS

For general planning purposes, students should be aware that transfer of credit works as follows:

- The receiving college or university decides what credits transfer and whether those credits meet its degree requirements. The accreditation of both the sending and receiving institution can affect the transfer of earned credits.
- Institutions accept credits from courses and programs like those they offer. They look for similarity in course goals, content and level. "Like" transfers to "like."
- Not everything that transfers goes toward graduation requirements. Baccalaureate degree programs usually count credits in three categories: general education, major/minor courses and prerequisites,

and electives. The key question for the student to ask is, "Will earned credits fulfill requirements of the chosen degree or program?"

- If students change their career goal or major, they might not be able to complete all degree requirements within the usual number of graduation credits.

Preparing for Transfer to WSU

Minnesota's technical colleges, community colleges, and universities are working to make transfer easier. Students can help by planning ahead, asking questions, and using pathways created by transfer agreements. Students who are enrolled in a college or university should first discuss their plans with a campus transfer specialist on their own campus. Whether currently enrolled in school or not, a student considering transfer to WSU should:

1. Contact the WSU Office of Admissions, and consult the Minnesota Transfer website at www.mntransfer.org. The student should ask for the following materials and information:
 - WSU undergraduate catalog and transfer brochure.
 - Information about admission criteria and materials required for admission (e.g., portfolio, transcripts, test scores). Note that some majors have limited enrollments or their own special requirements such as a higher grade point average.
 - Information about financial aid (how to apply and by what date).
2. After reviewing the materials, make an appointment to visit with an advisor/counselor at Winona State. Be sure to ask about course transfer and admission criteria.

Applying to WSU for Transfer Admission

1. Students should submit a transfer application and \$20 application fee as early as they can before the deadline, which is one month prior to the semester in which the student expects to begin.
2. Students should request an official transcript from every institution they have attended. Students also might be required to provide a high school transcript or GED test scores. Most colleges do not make an admission decision until all the required documents are on file.
3. An evaluation of credits that will transfer will be enclosed with the acceptance letter. The written evaluation tells students which courses transferred and which courses did not transfer.
4. Students who have questions about the evaluation should contact the Office of Admissions and ask to speak with a transfer specialist. Many concerns can be eliminated if students understand why decisions were made. Students can appeal if they are not satisfied with the evaluation.

Rights as a Transfer Student

Students have the right to:

- A clear, understandable statement of an institution's transfer policy.
- A credit review and an explanation of why credits were or were not accepted.
- A copy of the formal appeals process. Usually the appeals procedure consists of:
 - a. Completing an appeals form. Students are encouraged to attach supplemental information to reviewers such as a syllabus, a course description or a reading list.
 - b. A department or committee reviews the appeals form.
 - c. Students receive notification, in writing, of the committee's decision.
 - d. Students then have the option of appealing the decision to the Vice President for Academic Affairs (Somsen Hall, Room 211).
- A review of their eligibility for financial aid or scholarships.

WSU Admission Requirements for Transfer Students

The following information applies to students who are transferring from a community college or a four-year college with regional accreditation for college-parallel courses:

- Students are admitted if they have completed 24 transferable academic semester hours and have a cumulative 2.40 GPA for all colleges attended.
- Students may be considered for admission to WSU if they have completed 24 transferable academic semester hours and have a cumulative GPA of 2.20 to 2.39 for all colleges attended. Students who meet these criteria must visit the campus and interview with a transfer specialist.
- Students with fewer than 24 transferable credits must meet the admission criteria for first-year students, including high school preparation requirements, class rank, and admissions test scores.

- Students receive credit for courses taken at accredited institutions in which the grades A, B, C, D, P, or the equivalents were attained.
- Students also may be considered for admission by special appeal if they are transfer students who do not meet the above requirements because of special and unique circumstances. See information about the appeals process on page 7.

Transfer students should be eligible to return to their former colleges or universities. An official transcript, including a statement of withdrawal if the student formally withdrew, is required from each college attended. Students should request the registrar at each college attended to send an official transcript directly to the WSU Office of Admissions. Students are subject to suspension if they fail to comply with the transcript requirement and are inadvertently admitted to the WSU.

Most credits earned at a community or junior college may be accepted in transfer (remedial classes are not transferable); however, to earn a bachelor's degree, a student must take 64 semester credits from a four-year institution. If students have a total of 64 semester credits earned at a community college, any credits exceeding those 64 semester credits are not counted toward the 128 credits required for a WSU baccalaureate degree. Transferred credits should have at least a "D" grade to transfer.

Some departments have higher standards for admission into their majors, and students may need to file special applications for those majors. Students should consult departmental sections of this catalog and contact academic departments for more detailed information.

University Studies and Minnesota Transfer

The Minnesota Transfer Curriculum is a cooperative transfer program in which all the public colleges and universities in Minnesota participate. If a new transfer student's former school certifies that he or she has completed all ten areas of emphasis of the Minnesota Transfer Curriculum, he or she is deemed to have satisfied the general education requirements of her or his new school. The ten areas of emphasis are communications, critical thinking, natural science, mathematics/logical reasoning, history and social/behavioral sciences, humanities and fine arts, human diversity, global perspective, ethical and civic responsibility, and people and the environment. Information about the Minnesota Transfer Curriculum is available online at www.mntransfer.org.

WSU's general education requirements comprise three areas within the University Studies requirements described on page 19 of this catalog: (1) the four basic skills—college reading and writing, oral communication, mathematics, and physical development and wellness; (2) the four arts and sciences core area requirements—humanities, natural science, social science, and fine and performing arts; and (3) the four unity and diversity requirements—critical analysis, science and social policy, global or multicultural perspectives, and contemporary citizenship or democratic institutions. A current list of courses that meet these requirements can be viewed online at www.winona.edu/registrar/university_studies_requirements.htm. The Flag requirements in University Studies are not considered part of general education. Therefore, a transfer student who has satisfied all ten goals of the Minnesota Transfer Curriculum has not necessarily completed all University Studies requirements. Student appeals of the WSU Transfer Coordinator's decisions regarding University Studies credit or course substitution will be forwarded to the University Studies Subcommittee for review and subsequent recommendation to the Academic Affairs Curriculum Committee.

If the former school of the student transferring into Winona State University certifies that she or he has completed some, but not all, of the ten areas of emphasis of the Minnesota Transfer Curriculum, then he or she will be deemed to have satisfied those WSU University Studies requirements indicated by the following table:

Former school certifies completion of requirements in Minnesota Transfer Curriculum area of:	Satisfies Winona State's University Studies areas of:
1. Communications	College Reading and Writing and Communications (Basic Skills)
2. Critical Thinking	Critical Analysis (Unity and Diversity)
3. Natural Sciences	Natural Sciences (Arts and Sciences Core)

4. Mathematics/Logical Reasoning	Mathematics (Basic Skills)
5. History and the Social and Behavioral Social Science	Social Science (Arts and Sciences Core)
6. Humanities and the Arts	Humanities; Fine and Performing Arts (Arts and Sciences Core)
7. Human Diversity	Global or Multicultural Perspectives (Unity and Diversity)
8. Global Perspective	Global or Multicultural Perspectives (Unity and Diversity)
9. Ethical and Civic Responsibility	Contemporary Citizenship or Democratic Institutions (Unity and Diversity)
10. People and the Environment	Science and Social Policy (Unity and Diversity)

WSU's physical development and wellness basic skill has no corresponding Minnesota Transfer Curriculum area of emphasis. Students transferring to Winona State will not be deemed to have completed this requirement unless the schools from which they transfer certify completion of the entire Minnesota Transfer Curriculum.

Students transferring from a college or university outside Minnesota or from a Minnesota institution that does not participate in the Minnesota Transfer Curriculum must complete any University Studies requirements that they have not fulfilled with courses accepted for transfer.

VETERANS' ASSISTANCE

Veterans Assistance Office
Somsen Hall, Room 106 (507-457-5109)

WSU is approved by the State Approving Agency for Veterans Training. Students should present their eligibility certificates to the Veterans Assistance Office when they enroll.

Policies and Procedures

1. Students' application for veterans' benefits can be submitted through the county Veterans Service Office or through WSU. Students must submit with the application a certified copy of their DD-214 form or a Notice of Basic Eligibility.
2. Students should submit both copies of their Certificate of Eligibility for WSU when they apply for admission.
3. Enrollment is certified only after students present their DD-214 forms to the Veterans Office (after they have been admitted to the University). Enrollment for full-time students is usually for the academic year. Summer sessions and/or workshops are separate enrollment periods. The date of students' enrollment is based on the school calendar, workshop dates or contract periods.
Note: A mixture of graduate and undergraduate credits is allowed only under special arrangements.
4. Students must report each change in academic load to the Veterans Assistance Office.

5. Payments of benefits: Allowances are paid on a monthly basis, conditional on students' satisfactory progress in an approved course and their conduct. Payments are released upon certification furnished by the school. Students must notify the Registrar's Office and the Veterans Assistance Office when they complete a course, drop a course or their course of training is interrupted.
6. Veterans with Dependents: The Veterans Administration (VA) requires students to submit certified copies of marriage certificates, birth certificates and/or adoption papers for their dependents before they can receive payments based on their marriage and dependents. They are paid a single rate until these documents are on file with the VA. The WSU Veterans Assistance Office and the county Veterans Services Officer can help expedite this procedure.
7. Re-enrollment: Students can re-enroll without a new Certificate of Eligibility. Notify the WSU Veterans Assistance Office.
8. Academic Load: Full-time training requires 12 S.H. of undergraduate credit or 9 S.H. of graduate credit. Three-fourths time training requires 9 S.H. of undergraduate credit or 7-8 S.H. of graduate credit. Half-time training requires 6-8 S.H. undergraduate credit or 6 S.H. of graduate credit.
9. Tutorial assistance: This program provides tutors to help students overcome a deficiency in any subject required for the satisfactory pursuit of an educational objective. It is available to Vietnam-era veterans. Contact the Veterans Assistance Office for detailed information.
10. Credit for military schools: Service schools and training are evaluated according to the recommendations of the American Council on Education's Guide to the Evaluation of Educational Experience in the Armed Services when students present an official DD-214 form to the Office of Admissions.
11. Waiver of physical education activity requirements: This requirement is waived if students have been on active duty for more than one year and they are pursuing a non-teaching degree. They must provide the Office of Admissions with an official copy of their DD-214 form.

CREDIT OR ADVANCED PLACEMENT BY EXAMINATION

All departments offer advanced placement credit to qualified students who achieve satisfactory scores of 3 or above on Advanced Placement Tests. For specific details, consult the Office of Admissions.

Students can be granted advanced standing of up to 24 hours of credit if they successfully complete the general examination of the College Level Examination Program (CLEP). Credits are granted for the following courses: Sociology 150, Psychology 210, Political Science 120, Marketing 315, Management 315, Economics 201 and Mathematics 120. Many departments also accept credit for successful completion of CLEP subject examinations.

CORRESPONDENCE COURSES

WSU does not offer correspondence courses. The University accepts correspondence courses from accredited colleges and universities.

PROOF OF IMMUNIZATION

Minnesota Law (M.S. 135A.14) requires that all students enrolled in public or private post-secondary school in Minnesota be immunized against diphtheria, tetanus, measles, mumps and rubella—allowing only for certain specified exemptions. See Student Health Service on page 32 for more information about the requirements related to immunizations and medical history.

TUITION AND FEES

Office of Student Accounts
Somsen Hall, Room 104 (507-457-5075)

TUITION

For the fall and spring semesters, undergraduate tuition for full-time students (12-18 credits) on the Winona campus and the ACEED campus is billed at a flat rate. Tuition for full-time students who are Wisconsin residents is also billed at a flat rate. Tuition for classes on the Rochester campus is billed on a per-credit basis (except for Wisconsin residents). All summer session courses and graduate courses are charged on a per-credit basis. To view current tuition and fees, go to www.winona.edu/billing.

ESTIMATED FEES

Note: All fees are subject to change.

Application Fee

A non-refundable fee of \$20 is required with any application for admission. Students who have previously been admitted to WSU and paid the application fee are not subject to this fee when they return to WSU.

Athletics Fee

The athletics fee is assessed to all students attending classes through the Winona and Rochester campuses. A committee consisting of members of the student senate and university administration determines the rates and the distribution of funds.

Course Fees

Course fees are assessed to all students attending courses that have additional course fees indicated in the class schedule. Rates are determined by the department chairperson and approved by the dean and the Vice President for Academic Affairs. Departments use course fees to pay for costs not normally incurred in everyday instruction (e.g., greens fees for a golfing course or a transportation fee for courses with a field trip component).

Health Service Fee

The health service fee is assessed to all students attending classes through the Winona campuses. A committee consisting of members of the student senate and university administration determines the rates and the distribution of funds.

Incidental Fees

Several small fees arise from non-course related matters such as health service, credit by examination fees, ID card replacement fees, parking permits, and library fines.

Insurance

Health insurance is available to all full-time students. Further details are available in the Counseling Center (Gildemeister Hall, Room 132).

Laptop Program Fee

All full-time students admitted as freshmen after spring 2000 are required to participate in the Laptop Program. Full-time transfer students are required to participate in the program if they are admitted with fewer than 90 completed credits as of fall 2002. Effective fall 2004, all full-time transfer students are required to participate in the Laptop Program regardless of the number of completed credits. (Students are considered to be full-time if they are enrolled in 12 semester hours or more.)

Students are required to continue in the program until they graduate or leave WSU. Part-time students participate in the program on a reduced basis; please consult with the Office of Admissions or the Office of Student Accounts for current information. Complete information on the laptop program is available at:

<http://www.winona.edu/tsc/programlaptop.htm>.

Late Payment Fee

Payment in full for all tuition, fees, and residence hall charges must be paid by the payment due date published in the current class schedule (at www.winona.edu/class_schedule). Any payment accepted after the payment due date will be assessed a late fee of \$30.00. Students are expected to pay all accounts to the University when they are due. Failure to receive a fee statement does not release the student from payment obligations. The University is authorized to withhold the issuance of diplomas and official transcripts of credits and to deny students further registration until all moneys due the University have been paid.

MSUSA Fee

The MSUSA fee is assessed to all students attending classes for college credit. The rates are determined by the Minnesota State University Student Association (MNUSA) and the state board office. Funds are used by the Minnesota State University Student Association.

Residential College Fee

The Residential College fee is assessed to all students within the Residential College. The rates are determined by the university administration, and funds are used to provide additional programs for those in residence at the Residential College.

Student Life Fee

The student life fee is assessed to all students attending classes through the Winona and Rochester campuses. A committee consisting of members of the student senate and university administration determines the rates and the distribution of funds. Areas receiving funds include the student senate, university clubs, and the *Winonan*.

Technology Fee

The technology fee is assessed to all students attending classes for credit. The rate is determined by the university administration, and funds are used to support the student computer labs and academic computer services.

Union Facility Fee

The union facility fee is assessed to all students attending classes through the Winona campus. The rate is determined by the university administration and the state board office. Funds are used to finance the construction, maintenance, and daily operation of the student union building.

REFUND POLICY

If a student's course schedule is reduced for the convenience of the University, the tuition shall be adjusted without penalty. Students dropping classes must inform the Registrar's Office using the official drop procedures (see page 18).

Students who withdraw from the University should obtain Application for Refund forms from the Registrar's Office (Somsen Hall, Room 114). See page 28 for other considerations and implications of withdrawing from the University. Students who withdraw from the University or who drop one or more credits will receive a tuition refund according to the refund schedule that follows; refunds on activity fees will be calculated on the same basis as tuition.

Refunds are not given for textbooks and materials. Used books may be sold at the University Bookstore during the last week of each term.

NSU TUITION REFUND SCHEDULES

Terms at least 10 weeks in length:

Withdrawal Day	Withdrawing	Credit Drops
Up to and including 6th class day of term or 1 day after 1st class session, whichever is later	100%	100%
7th through 10th class day of term	75%	None
11th through 15th class day of term	50%	None
16th through 20th class day of term	25%	None
After 20th class day of term	None	None

Terms 3 to 10 weeks in length:

Withdrawal Day	Withdrawing	Credit drops
Up to and including 3rd class day of term or 1 day after 1st class session, whichever is later	100%	100%
4th and 5th class day of term	100%	None
6th through 10th class day of term	50%	None
After 10th class day of term	None	None

Terms of fewer than 3 weeks in length:

Withdrawal Day	Withdrawing	Credit drops
Up to and including 1 day after 1st class session	100%	100%
After 1 day after 1st class session	None	None

Enrollment for a single 1- 2- or 3-day session or less:

Prior to session beginning	100%	100%
After session has begun	None	None

ESTIMATED TEXTBOOKS

Textbooks costs range between \$300 and \$400 per term. Books can be purchased at the WSU Bookstore or other locations.

ESTIMATED ROOM AND BOARD

Payments for residence hall services and meal services are made each semester. Current information about the cost of room and board can be found at www.winona.edu/billing. For general information, see Housing and Dining on page 15.

RESIDENT STATUS

As a state-assisted institution, WSU's primary function is making higher education available to residents of Minnesota. A higher tuition rate, therefore, is charged to residents of other states or nations. Students can get information about regulations and criteria that determine their residence status from the Office of Admissions (Somsen Hall, Room 106).

If a student is initially classified as a non-resident but believes that he/she has achieved residency, the student can request a change of status by filing a State of Residence form with the Office of Admissions.

Wisconsin, North Dakota, & South Dakota Tuition Reciprocity

Undergraduate or graduate students who live in Wisconsin, North Dakota, or South Dakota can submit the Student Application for Resident Fee Status form, which provides them with a tuition rate similar to what their home state charges. All high schools in Wisconsin, North Dakota, and South Dakota have the necessary form; the form is also available in the WSU Office of Admissions. Approval is granted for one year and is effective as long as the student is enrolled each semester (summer sessions are excluded). Students must re-apply for reciprocity tuition if they leave WSU for more than one academic year.

Midwest Student Exchange Program: Kansas, Michigan, Missouri, & Nebraska.

For students who are residents of Kansas, Michigan, Missouri, or Nebraska, the tuition rate is 150% of the resident rate. The rate represents a typical savings of over \$2,000 per year for undergraduate students.

ESTIMATED TOTAL MINIMUM EXPENSES FOR UNDERGRADUATE STUDENTS

Note: All financial information is subject to change by action of the Minnesota State Colleges and Universities Board.

	2002-2003 Resident Per Semester	2002-2003 Non-Resident Per Semester	2003-2004 Resident Per Semester	2003-2004 Non-Resident Per Semester
Tuition (16 semester hours)	\$1,635.00	\$3,580.00	\$1,715.00	\$3,760.00
Laptop Program	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00
Fees	\$ 302.25	\$ 302.25	\$ 302.25	\$ 302.25
Residence Halls - Board and Room	\$1,950.00	\$1,950.00	\$2,030.00	\$2,030.00
Total Average Student	\$4,387.25	\$6,332.25	\$4,547.25	\$6,592.25

FINANCIAL AID

Student Financial Aid Office
Somsen Hall, Room 108 (507-457-5090)

Students can get advice and counsel about their long- and short-term plans for financing their education in the Student Financial Aid Office. Students who are entering WSU for the first time or who are transferring to WSU may contact the Director of Financial Aid for information about loans, scholarships, grants, and part-time employment. (See page 10 for general information about tuition, fees, and other financial information. Current tuition and fees may be viewed at www.winona.edu/billing.)

In general, financial aid administered by the University is awarded after applicants meet eligibility criteria and establish need. A student must be enrolled or accepted for admission as a regular student in an eligible academic program for the purpose of earning a degree, be in good academic standing, and maintain satisfactory academic progress to be considered for financial aid. Awards are usually made for one academic year and are disbursed at the beginning of each semester.

STUDENTS' RIGHTS AND RESPONSIBILITIES

Students have the right to know:

- The cost of attendance.
- The refund policy for students who withdraw.
- What financial assistance is available from federal, state, and institutional sources.
- Procedures and deadlines for submitting applications for financial aid.
- How financial aid recipients are selected.
- How financial aid eligibility is determined, including all resources the Financial Aid Office considers available to the student.
- How and when funds will be disbursed.
- An explanation of each type of award received.
- For any student loan received: the interest rate, total amount to be repaid, when repayment begins, the length of the repayment period, and the cancellation or deferment provision of the loan.
- For any Work Study job: a description of the job, the hours to be worked, the rate of pay, and how and when they will be paid.
- The criteria used to determine satisfactory academic progress for financial aid purposes.

Students are responsible for:

- Reading directions thoroughly, completing all application forms accurately, and complying with any deadlines.
- Providing any supplemental information or documentation required by the Financial Aid Office or other agency, if applicable.
- Reading, understanding, and keeping copies of any forms they are required to sign.
- Repaying any student loans they receive.
- Attending entrance and exit interviews as required if they receive student loans.
- Notifying the Financial Aid Office of any changes in enrollment or financial status (including any scholarships or grants received from outside sources). Changes of address and enrollment status must also be reported to the lender for students who have a loan.
- Satisfactorily performing the work agreed upon in a Work Study job.
- Knowing and complying with all requirements for continuation of financial aid, including satisfactory academic progress requirements.

APPLICATION PROCEDURE

To initiate the process, students should complete a Free Application for Federal Student Aid (FAFSA) form, using information from their completed tax return, and submit it as soon as possible after January 1. Awards to new students are made as soon as possible after the student is admitted to the University; awards to continuing students are made at the end of each academic year (in May). Certain programs have limited funding, while others are entitlement programs and have funds available throughout the year. FAFSA forms are available from any high school counselor and in the WSU Student Financial Aid Office.

WSU-Rochester Center

WSU students attending the Rochester Center should submit their FAFSA forms to Winona State University. A financial aid advisor is available to meet with students on the Rochester campus weekly on Wednesdays.

SATISFACTORY PROGRESS FOR FINANCIAL AID RECIPIENTS

Federal and State regulations require that all financial aid recipients maintain satisfactory progress. The intent of this requirement is to encourage all aid recipients to advance steadily toward the completion of their degree. The minimum standards required to receive financial aid apply to all academic work at Winona State University, whether financial aid was received at the time or not. Satisfactory progress is evaluated yearly in May. The minimum requirements to receive financial aid are outlined below.

Minimum Satisfactory Progress Standards

Grade Point Average

Students are required to have a WSU 2.0 GPA at the end of each yearly evaluation period (i.e., May). See Page 26 for information on the computation of cumulative GPA.

Credit Completion

- Students must satisfactorily complete 67% of WSU credits attempted. Only WSU courses and credits are used in monitoring the 67% completion rate.
- For purposes of monitoring this satisfactory progress standard, WSU courses in which the student receives grades of A, B, C, D, F, W (withdrawal), P (pass), NC (no-credit), I (incomplete), IP (in progress), Z (no grade reported), HA (Honors) and HB (Honors) are considered to be credits attempted.
- WSU courses in which students receive grades of A, B, C, D, P, HA and HB are counted as satisfactorily completed for purposes of monitoring this satisfactory progress standard.
- Students may not exceed 192 credits attempted for their first baccalaureate degree and 43 credits for a graduate degree. WSU and transfer credits are used in monitoring this satisfactory progress standard.
- An additional 64 WSU credits will be funded for students obtaining a second baccalaureate degree.

Repeated Courses

When a student repeats a course, only the last grade received and credits earned are counted in the GPA and as completed credits for this standard. However, the credits are considered to have been attempted each time the course is taken.

Withdrawal

If a student withdraws from the University before financial aid disbursement, the student does not receive any aid since no progress has been made toward a degree. The student must pay incurred expenses from his or her own funds. Standard university refund policies and procedures are followed when a student withdraws from WSU for any reason during the term after student aid has been disbursed. Withdrawal credits are considered credits attempted for purposes of monitoring the satisfactory progress standard. See page 28 for a discussion of the factors students should consider before deciding to withdraw from the University.

Credit by Examination

These credits are included in this satisfactory progress standard, but they are not used in determining enrollment status for financial aid disbursements.

WSU/SMU Cooperative Program, Studies Abroad, and Minnesota State University Common Market Programs

These programs are included in this standard according to the policies of the University. See page 30 for further information on these programs.

Consortium Agreement

If a WSU student earns credits at another university that has a consortium agreement with WSU, the credits are treated as transfer credits.

Audit Courses

Courses that are audited do not count as credits attempted or credits earned; audited courses are not funded.

Non-Degree Credit Courses

Courses in this category are considered attempted for purposes of monitoring this satisfactory progress standard.

Students below the Minimum Standards

At the end of each regular academic year (i.e., May), students who have filed the FAFSA form for the next academic year will be reviewed.

Subsequent applications will be reviewed as they are received. This review will consist of all WSU courses and credits through the most recently completed term. Those who fail to meet the GPA requirement or complete 67% of their attempted WSU credits, will be notified in writing that they are no longer eligible to receive financial aid effective fall semester and beyond. Students may receive aid in the summer term as a probationary term. No further processing of the student's aid application will take place. Any costs already incurred are the responsibility of the student, and arrangements must be made with Accounts Receivable.

Reinstatement of Aid

Students will be able to request reinstatement of aid after they have made up any deficiency and once again meet the minimum standards of satisfactory progress. Students should contact the Financial Aid Office for instructions regarding the procedures to be followed. Aid cannot be reinstated for a semester in which the student was academically ineligible.

Mitigating Circumstances

Students who have experienced a medical problem, a family or personal emergency, or other special circumstance, which affected their ability to maintain satisfactory progress may submit written reviews to the Financial Aid Satisfactory Progress Review Committee to have their progress reviewed for possible reinstatement of aid. To submit a review, the student must submit the following documentation to the Financial Aid Office:

1. Satisfactory Progress Review form (sent with letter).
2. Letter from the student explaining why she/he fell below standards and why her/his aid should be reinstated.
3. Third-party letter documenting the student's mitigating circumstances. Example: doctor, teacher or counselor.

Academic Standing

Students who do not meet the University's academic standards will be notified of their status by the Vice President for Academic Affairs. See page 27 for further information. Students who are not academically eligible to attend Winona State University are not eligible to receive financial aid. Academic appeals are processed by the Office of Advising and Retention.

GRANTS

Federal Pell Grant: A federal grant program available to undergraduate students on the basis of financial need. The Pell Grant processor notifies the students of their eligibility by sending them the Student Aid Report (SAR).

Minnesota State Grant Program: Available to qualified Minnesota residents on the basis of financial need. Students can get information about eligibility criteria and application procedures from any high school counselor or from the Financial Aid Office.

Federal Supplemental Educational Opportunity Grant: A federal grant available to undergraduate students who are eligible for a Pell Grant and demonstrate exceptional need.

Post-Secondary Child Care Program: The State of Minnesota provides funding for child care to students who meet certain income guidelines, are Minnesota residents, and who are not receiving MFIP (Minnesota Family Investment Program). Contact the Financial Aid Office for more information.

Bureau of Indian Affairs Grant: Grants are available to students with one-fourth or more Indian blood. Students who qualify can get more information and application forms by contacting the agency or area office serving their tribal group.

Rehabilitation Services: Students who have a disability may qualify for rehabilitation benefits that help defray college costs. Students who qualify should contact their high school counselor or local Division of Rehabilitation Services for detailed information.

LOANS

The loans listed below require repayment of the principal after a student leaves the University. In contrast to most commercial loans, some of the loans below are interest-free while the student is enrolled; others have interest accrual.

Subsidized Federal Stafford Loan: This need-based loan provides up to \$2,625 for first-year students, \$3,500 for sophomores, \$5,500 for juniors and seniors, and \$8,500 for graduate and professional students. The federal government pays the interest while the student is enrolled on at least a half-time basis and during a six-month grace period. The interest is variable, capped at 8.25%.

Unsubsidized Federal Stafford Loan: The terms and conditions are the same as those for Federal Stafford Loan, except that the borrower is responsible for interest that accrues while attending school. This loan program is available for students who do not qualify for a fully subsidized Stafford loan. Independent students may be eligible for higher loan limits.

Federal Perkins Loan: A need-based loan at 5% interest. Repayment and interest do not begin until after the student leaves school, and the loan may be partially canceled if the graduate obtains employment in certain areas according to the terms in the promissory note.

Student Educational Loan Fund (SELF): The Minnesota Higher Education Services Office provides loans for undergraduates and graduate students. Currently, first-year students and sophomores can borrow up to \$4,500 per year, juniors and seniors can borrow up to \$6,000 per year, and graduate students can borrow up to \$7,000. Students are eligible for SELF loans regardless of family income; however, the student must have a creditworthy co-signer. The interest rate is variable with a cap on increases and decreases at 2% for any 12-month period.

Federal PLUS Program: A loan program allowing parents of dependent students to borrow. Parents can borrow up to the cost of attendance less other financial aid the student receives. The interest rate is variable, capped at 9%.

Short-Term Loans: These loans are available to students for emergency expenses. For applications and more information, students should contact the Financial Aid Office.

EMPLOYMENT

Students can work up to 20 hours each week and earn a portion of their college expenses under the Federal Work Study Program, a program in which students can participate if they demonstrate financial need. The program pays minimum wage or more; students are paid twice a month. Most of the Federal Work Study Program jobs are located on-campus; however, students can work for approved off-campus, non-profit organizations or agencies. Eligibility for Work Study does not guarantee employment; although WSU tries to maximize the number of Work Study opportunities each year, there are typically more eligible students than available jobs.

Students who are Minnesota residents can participate in the State Work Study Program. Students must demonstrate financial need to be eligible for the program. Students are paid minimum wage or more and, like the federal program, they can work on- or off-campus. Work Study Program earnings are taxable. However, the earnings are not included in the total income when filing the FAFSA for future years.

Students who do not qualify for Work Study may still be able to find employment on campus in Student Help positions. These positions are not based upon the results of the financial aid application and are not considered student financial aid. A listing of available Work Study and Student Help jobs is available on the WSU website under "Students – Employment for Students."

SCHOLARSHIPS

See page 15 for information about scholarships awarded by the Financial Aid Office.

SCHOLARSHIPS

Scholarship Administration Office
Somsen Hall, Room 202 (507-457-5198)
www.winona.edu ("Alumni & Friends" "Scholarship Information")

In an effort to help students progress toward their goals and succeed, Winona State University has literally hundreds of scholarships. Students in nearly every academic discipline benefit from scholarship funds that come from a variety of sources, both on and off campus.

Some scholarships are open to all students. Many have eligibility criteria based on major field of study, academic standing, financial need, affiliation with a particular organization, or other criteria established by individual scholarship fund donors. The general categories of scholarships available through Winona State University are described in this section.

To assist students in finding and applying for scholarships for which they are eligible, the Scholarship Administration Office maintains a website with more information and a searchable database. Visit the WSU home page (www.winona.edu) and follow the "Alumni & Friends" link to "Scholarship Information."

WSU ACADEMIC SCHOLARSHIPS

The WSU Office of Admissions can provide students with information about WSU academic scholarships. Funds for these scholarships come from Winona State University and the Winona State University Foundation.

Outstanding Academic Honors Awards: This \$2,500 award recognizes outstanding academic achievement in high school and is available to any first-year student coming to WSU directly from high school. It is renewable the first 8 consecutive semesters for a total of \$10,000 if the student maintains a cumulative GPA of 3.50 while attending WSU continuously as a full-time student and completing at least 12 credits per semester. A student is eligible if he or she is in the top 5% of his or her graduating class and has an ACT composite of 32 or greater. Awards are based on the date the student is accepted for admission to the University. Students are encouraged to apply for admission early. Recipients are required to live on-campus during their first two years unless they live with a parent or guardian. First-priority awards are made in early November.

WSU Foundation Board Scholarships: The WSU Foundation annually awards scholarships of \$2,000 to four students coming to WSU directly from high school who rank in the top 5% of their high school graduating class and have an ACT composite of 28 or greater. An on-campus interview is required. Candidates are determined from a review of essays submitted to the WSU Foundation Board. The scholarship is renewable the first 8 consecutive semesters for a total of \$8,000 if the student maintains a cumulative GPA of 3.50 while attending WSU continuously as a full-time student and completing at least 12 credits per semester. Awards are based on the date when the student is accepted at WSU; therefore, students are encouraged to apply for admission early. Recipients are required to live on-campus during their first two years unless they live with a parent or guardian.

President's Honor Scholarships: The President's Honor Scholarships are awarded to first-year students coming to WSU directly from high school in the following categories:

- \$1,500 – Top 5% of graduating class and ACT 28 or SAT 1240
- \$1,000 – Top 10% of graduating class and ACT 27 or SAT 1210
- \$ 750 – Top 15% of graduating class and ACT 26 or SAT 1170

The scholarships are available for the first 8 consecutive semesters if the student continuously attends WSU as a full-time student, maintains a 3.50 cumulative GPA, and completes at least 12 credits per semester. President's Honor Scholarship recipients are required to live on-campus during their first two years unless they live with a parent or guardian. Early application for admission is encouraged.

Academic Awards: \$300 - \$500 awards are made to students graduating from high schools in Minnesota and Wisconsin. Students are eligible if

they are in the top 20% of their graduating class with a minimum ACT of 21 or have an ACT composite of 24 and are at least in the top half of class.

Awards are based upon the date when the student is accepted at WSU; therefore, students are encouraged to apply to WSU early.

Transfer Honor Scholarships: Students can apply for a Transfer Honor Scholarship if they are transferring to WSU and have a minimum GPA of 3.35 on a 4.00 scale. Application forms are available in the WSU Transfer Office.

RESIDENT TUITION SCHOLARSHIPS

The Resident Tuition Scholarship (RTS) awards resident tuition rates to new, non-resident, non-reciprocity first-year students. The scholarship can be viewed as a \$3,300 annual award and is renewable the first 8 consecutive semesters if the student maintains a cumulative GPA of 3.00 while attending WSU continuously as a full-time student and completing at least 12 credits per semester.

An RTS is automatically awarded to new students who meet the criteria above and who rank in the top 15% of their graduating class or have an ACT of 25, or an SAT total of 1100. Students are encouraged to apply to WSU early.

TALENT SCHOLARSHIPS (FINE ARTS AND ATHLETICS)

Students may apply for fine art scholarships if they are talented in art, music, speech or theater by contacting the chairperson of the appropriate WSU department. Students are encouraged to apply to WSU early. Students who are interested in intercollegiate sports should contact the appropriate head coach to be considered for athletic scholarships.

SCHOLARSHIPS AWARDED BY WSU DEPARTMENTS

Most WSU academic departments select recipients of WSU Foundation scholarships in their major fields with awards of \$100 to \$2,000. Students in good academic standing and majoring in the specific departments may apply for these scholarships. Students should contact the designated departments for information about application procedures and deadlines. The application process begins early in spring semester. A listing and searchable database of all academic department scholarships is available on the WSU website. From the main WSU home page (www.winona.edu) follow the "Alumni and Friends" link to "Scholarship Information."

For more information regarding WSU Foundation scholarships, including application dates and specific requirements, contact the Scholarship Administration Office, Somsen Hall, Room 202 (507-457-5198).

ALUMNI SOCIETY SCHOLARSHIPS

WSU Alumni Affairs Office
Somsen Hall, Room 206(507-457-5027)

The WSU Alumni Society awards six \$500 scholarships to first-year students coming directly from high school who are relatives of alumni. The applicant must be a child, a grandchild, a brother, a sister, or a ward of a WSU graduate, and they must be endorsed by their relative and a high school counselor. Applications are available in the WSU Alumni Office. Applications must be submitted by March 1.

CULTURAL DIVERSITY SCHOLARSHIPS

Cultural Diversity Office
Kryzsko Commons, Room 122 (507-457-5595)

The WSU Cultural Diversity Office coordinates minority scholarships, incentive grants, internships, and summer opportunity employment programs.

Academic Honors Scholarship

This \$2,000 award is available to high school seniors admitted to WSU with an ACT composite score of 25 or greater and in the top 25% of their graduating class. For renewal, recipients must earn a minimum of 12

credits each semester, maintain a minimum cumulative GPA of 3.00 at the end of each academic year, participate in two cultural diversity programs/activities each academic year, and meet with a staff member from the WSU Cultural Diversity Office.

Nellie Stone Johnson Scholarship

This scholarship program provides financial assistance (\$500-\$2,000) to minority union members and their families who wish to pursue an education at one of the Minnesota State Colleges and Universities (MnSCU system). To be eligible, an applicant must be a minority union member or the child, grandchild, or spouse of a minority union member. Applicants must meet the academic and admissions standards and be accepted by a Minnesota state college or university. Students must submit a written statement regarding their background and their educational and career goals; they must also submit two letters of recommendation. For renewal, recipients must maintain satisfactory academic progress, and they must satisfy other standards applied by the college or university.

3M MECA Program

The Minority Exposure to Corporate America (MECA) program is a unique initiative undertaken by Minnesota state universities and the 3M company in 1989 to provide corporate internships and scholarship support for multicultural students. The MECA program provides \$2,000 awards and paid internship for students majoring in a business or computer discipline who have achieved junior class standing at a Minnesota state university. To apply at the end of the sophomore year, the applicant must have a minimum cumulative GPA of 3.0. Students are expected to complete a 13-week paid internship at 3M during the summer between their junior and senior years.

Cultural Diversity Scholarship/Grant

The scholarships/grants in this category range from \$350 to \$1,100. They are available to students who are admitted to WSU with an ACT composite score of 21 or greater for incoming, first-year students or a minimum cumulative GPA of 2.5 for incoming transfer students. Recipients must earn a minimum of 12 credits each semester, maintain a minimum cumulative GPA of 2.5, participate in two cultural diversity programs/activities each academic year, and meet with a staff member from the WSU Cultural Diversity Office.

SCHOLARSHIPS AWARDED BY THE FINANCIAL AID OFFICE

The Financial Aid Office selects recipients for the scholarships listed below. Awards are based upon financial need and other criteria as determined by the scholarship donor. To apply for these scholarships, students must complete the FAFSA (Free Application for Federal Student Aid) form, which is available through the Financial Aid Office.

Scholarship amounts vary.

Charles and Ellora Alliss Foundation Scholarship
Etta Hudson Howell Scholarship
Ethel Gage Jessen Scholarship
Arthur & Liola (Zeller) Mattson Scholarship
Ella Tucker Scholarship
Winona County Bicentennial Scholarship

WSU Unrestricted Scholarship

List of Donors

L. L. Brown
Centennial
Harriet R. Choate
Elfie Christiansen
Josephine Flagg
Theda Gildemeister
Phillip Loughrey
William Markle
Beulah Norton
W. W. Norton
70th Year
Stephen H. Somsen
Louise Sutherland
World War Memorial

OTHER SOURCES OF SCHOLARSHIPS

In addition to scholarships from WSU and the WSU Foundation, a number of organizations offer scholarships to their members, employees, and relatives. Each year, WSU students receive thousands of dollars in scholarships from businesses, government agencies, civic groups, professional organizations, fraternities and sororities, foundations, religious groups, education associations, and military/veterans organizations. Directories of these scholarship sources are available from a public library, high school guidance counselor, or financial aid office.

HOUSING AND DINING

Office of Housing and Residence Life
Kryzsko Commons, Room 130 (507-457-5305)
www.winona.edu/housing

HOUSING

WSU provides an excellent university housing experience to our stakeholders in Winona with an equal focus on the following areas: student learning, outstanding service, leadership development, and development of a positive sense of community and connection to WSU.

The University does not offer a residential experience at WSU-Rochester Center. See page 36 for information about housing as it relates to the Rochester campus.

On-Campus Housing

WSU offers more than a place to sleep and study. WSU offers a total living and learning environment that supports our academic mission and promotes leadership and community development. Students enjoy a quality residential experience filled with activities and programs that extend learning beyond the classroom to include (1) recreational and social pastimes with friends from across the country and around the world and (2) abundant opportunities to expand their intellectual horizons and hone their leadership skills.

At WSU, we believe that living on campus should be a special and rewarding part of the student's education. The Housing and Residence Life staff members devote their time to providing resources, services, and

programs that ensure a stimulating and supportive atmosphere for every resident.

Throughout the school year, every residence hall sponsors high-quality programs that complement classroom learning and encourage leadership and citizenship. The programs—many of which are organized by hall residents—touch on different areas, such as diversity, career development, intellectual and creative enrichment, community service, and other issues important to students.

A full-time hall director resides in each residence hall; the majority of our hall directors hold Master's degrees in fields related to College Student Development. Hall directors provide supervision and leadership, working with a team of upper-class resident assistants (RAs) to create a comfortable, secure, and supportive environment for all students.

Resident Hall Council and Resident Assistants

In each hall, a Residence Hall Council offers opportunities for students to develop a variety of leadership and management skills. Comprised of students elected to various posts by their fellow residents, the Council is responsible for organizing the hall's educational and social activities and for encouraging students to take ownership of their hall. Council members attend regional and national conferences devoted to student leadership, and they host leadership conferences on campus. First-year students are strongly encouraged to get involved with their Hall Council;

new students may also find their leadership niche by running for one of the six Freshman Senator posts in the WSU Student Senate.

A well-trained and responsive team of RAs plays a key leadership role in the daily life of each hall. Selected through a rigorous application process, these upper-class students serve as peer advisors and counselors for residents, organize educational activities, and encourage participation in hall and campus activities.

Residence Halls

Eight residence halls allow WSU to house approximately 1,800 students (plus leased space in a traditional residence hall for an additional 200 students on the West Campus). See the Campus Map for names and locations of residence halls. While the specific housing options vary within each hall, students can expect to find the following in every WSU residence hall:

- A room fully furnished and wired for laptop computers, local telephone service, and hook-up for cable TV.
- Computer labs—both PC and Macintosh platforms—open 24 hours a day and a laser printer at the Hall reception desk for students' use.
- Areas conducive to group study.
- Fitness facilities—aerobic equipment and weights, TV lounges with big screens and lots of comfortable furniture, kitchen facilities for whipping up a snack or light meal, vending machines for those times when hunger strikes at odd hours, recently remodeled laundry rooms, and sports equipment and games to borrow.
- A secure environment. Campus security monitors the halls throughout the day and conducts "check-ins" for everyone after 11 p.m. Residence hall staff and campus security work diligently to make the halls safe.

For a description of each hall and the different options, request a copy of the Guide to Residence Hall Life or visit our website.

Applying for Housing

Payment for residence hall and meal services is made on a semester basis. See page 11 for an estimated total of the minimum expenses for undergraduate students. To view current room and board costs, go to www.winona.edu/billing.

Students are encouraged to apply for admission and housing as early as possible in the fall of their senior year in high school. Because housing assignments are based on the date we receive the student's application, applying early increases the student's chance of getting his/her first choice in hall preference. Students must first apply for admission to Winona State University and be accepted; the housing applications are sent to the student with WSU's acceptance letter.

To be guaranteed on-campus housing, students must meet both of the following deadlines:

1. Submit the housing application along with a \$20 fee by February 1st. WSU will then send the student a lease agreement.
2. Return the signed lease agreement with a down payment of \$150.00 by March 1st. The \$150 down payment is fully refundable should you decide not to attend WSU if you notify us in writing by May 1st. If you enroll in WSU, the \$150 will be deducted from your fall semester housing bill.

If students submit their housing application (with fee) after the above deadlines, we will accept the application, but cannot guarantee that a space in a residence hall will be available.

Off-Campus Housing

The Office of Housing and Residence Life provides an Off-Campus Referral Service (Kryzsko Commons, Room 130), which consists of listings provided by the landlords of apartments and other rental options. The information is available at the office from 8 a.m. to 4 p.m. each business day.

WSU makes no representation as to the kind, quality, or quantity of facilities available that are listed by the landlords. The University also does not control any changes to the information—cost and availability are subject to change by the landlords. WSU assumes no liability arising from relationships between students and landlords as a result of these listings. All questions should be addressed to the landlords.

The University does not own nor does it operate married housing facilities. Students wanting to apply for subsidized housing should contact the Housing and Redevelopment Authority of Winona, 165 E. 4th St., Winona, Minn. 55987.

CAMPUS DINING

Campus dining at WSU is an exciting and nutritious experience. We have two dining halls on campus, the Jack Kane Dining Center, located in Kryzsko Commons, and the Lourdes Dining Hall, located on the West campus. Built in 1994, the Jack Kane Dining Center follows a riverboat theme, providing an atmosphere that complements fine dining. The area hosts an upper-level mezzanine as well as a lower-level with a private dining area. The Lourdes Dining Hall, located on the main floor of Lourdes Hall, provides additional convenience for the students living on the West Campus. (See page 36 for information about dining options for the Rochester campus.)

Students on the meal plan can use their meal cards in either dining location. In addition to the two dining halls, students have the option of eating in the Kryzsko Commons Snack Bar (known as the Smaug) or the Lourdes Hall Snack Shop.

Meal Plan advantages include:

- All you care to eat – Unlimited portions available on all items except premium entrees.
- Grab & Go Lunches and Dinners – Available for students with work or class schedules that conflict with meal times.
- Under-the-Weather Trays – If students are ill and need to have a meal brought to them, they can arrange this service through the Residence Life Staff.

Presently, our food service offers a choice of three meal plans: 19, 14, or 10 meals per week. At designated times, meals may be "transferred" at the "Smaug". In addition, each meal plan includes \$85.00 in credit (Kryzsko Kash) to make purchases in the "Smaug" or dining halls. Changes of meal plans may be made during the week of final examinations or during the first week of classes each semester.

The Food Service Committee, comprised of students, provides input and suggestions to enhance WSU's campus dining experience.

Employment Opportunities

Campus dining also provides employment opportunities; it is one of the largest student employers on campus. Students who are interested in on-campus employment should contact the Campus Dining Office.

REGISTRATION AND ACADEMIC RECORDS

Registrar's Office
Somsen Hall, Room 114 (507-457-5030; fax: 507-457-5578)
www.winona.edu/registrar

The Registrar's Office is responsible for maintaining and safeguarding records of student academic performance; monitoring compliance with academic requirements; facilitating the scheduling of classes; managing the process of enrolling in courses and programs of the University; providing official transcripts and other documents to verify student achievement; maintaining an accurate catalog of all academic offerings; facilitating the transfer of student records between WSU and other institutions; and verifying compliance with federal and state regulations and with the expectations of agencies with which WSU or its students have obligations.

REGISTRATION

WSU offers classes in two 15-week semesters and in a 10-week summer term. Continuing students register for fall and summer classes during April of the previous academic year, and for spring classes during November. New students typically register for classes during June of the summer before their first fall semester. All course registration is performed electronically on the WSU website. Prior to registration in on-campus (Winona) classes, new and returning students must satisfy the admissions requirements and be officially enrolled in WSU. See page 6 for an explanation of the admissions policies and procedures for new and returning students. When new students' applications have been approved and processed, WSU sends each student a Warrior ID number and a PIN number.

ADVISING

Each semester, WSU schedules an Advising Period (see Academic Calendar). During this period, students who are enrolling in on-campus (Winona) classes must meet with their advisors (see page 29). In addition to providing academic advising, the advisor gives the student an access code that the student must use, together with the Warrior ID number and the PIN number, to initiate the WSU Web Registration procedure. The access number is good only for creating or modifying a class schedule for the next semester. (Students on the Rochester campus and those registering for extension classes are not required to have an access code.)

WEB REGISTRATION

The order of registration for continuing students is determined by the number of academic credits they have completed. Students with the greatest number of credits register first. All instructions for registering, including the schedule of registration "windows" during which students may register, are posted in the class schedule (www.winona.edu/class_schedule). The Registrar strongly advises students to print a copy of their updated schedule any time they use the Web Registration system to add or delete classes, and to maintain a personal folder of all records of academic progress. (See page 29 for more information on academic advising.)

Students should keep the paper copy of their schedule until grades are reported at the end of the semester. If there is any problem with a student's registration or bill, the student will be asked for the printed schedule.

EXTENSION CLASSES

Students can enroll in Extension classes without being formally admitted to the University or without filing an Intent to Return form. To register in an extension class, the student may go to the WSU website and follow the Web Registration instructions. Web Registration requires the student to enter his/her Warrior ID number and PIN number. Students who have not received these numbers can contact the Extension Office in Somsen Hall, Room 109 (507-457-5080) for assistance. Students who are

unable to register on the website may register by submitting an Extension Class Registration form to the Extension Office.

ATTENDANCE POLICY

Students are required to attend the first meeting of all classes in which they are registered. See page 25 for more details on this policy. If a student wishes to withdraw from a class, the student is responsible for formally dropping the class (see page 18). Students must not assume that their instructor will cancel their registration for a class even if the class is closed (i. e., full).

CHANGES IN CLASS SCHEDULE

Change the Grading Method of a Class

At the time of registration, students must indicate whether they are taking a course for letter grade, audit, or pass/no credit if the course permits these grading options. If students wish to modify their choice of grade type, they must request the change by the published drop/add deadline. Audited courses cannot be used to satisfy graduation, certification, or licensure requirements. To request a change, students should go to the WSU website and follow the directions under Web Registration.

Add a Class

For the first four instructional days of the semester, students may add a class using the Web Registration process. After the fourth instructional day of the semester (or after the first class meeting for evening classes), students must obtain the permission of the instructor for each class to be added.

To add a class that is labeled "permission of instructor required" or to request permission to enroll in a class that is closed, students must contact the instructor and request permission to enroll. If the instructor approves the student's request, the student may then register for the class. To register, the student should either follow the Web Registration "Add" process or submit a Class Permit form, depending on whether the instructor enters permission in the computer or signs a Class Permit form.

Arranged Classes

An "arranged class" is a course that is listed in the WSU Catalog, but not scheduled to be offered during a particular semester. Such a course may be made available at the discretion of the faculty member, department chairperson, and academic dean. To apply for an "arranged" class, students must be fully matriculated with an established GPA at WSU of 2.00 or higher. They should request an application from the Registrar's Office and obtain approvals from the academic dean and academic department. When the "arranged" class has been added to the University's course schedule, the student must then register for it in the usual fashion.

Independent Study or Internships

To apply for an independent study course or an internship, a student must be fully matriculated with an established GPA at WSU of 2.00 or higher. The student should consult the academic department to find out about any additional GPA requirements for internships. A special application form, available in the Registrar's Office, must be submitted to the appropriate academic dean according to announced deadlines (see Academic Calendar). Because an independent study or an internship is an academic course, the student must register for it once the special application form has been approved, either by using the Web Registration procedure or by submitting an application to the appropriate office (Registrar's Office, Somsen Hall, Room 114 or the University Center Rochester). See page 25 for further information about independent study and internships.

Drop a Class

To drop a class, students should follow the instructions under Web Registration on the WSU website. All drop requests must be submitted by the published drop/add deadline (see Academic Calendar). If a student stops participating in classes without formally withdrawing, a failing grade will be recorded. Students should understand the impact that dropping a class can have on their business office account, their academic progress and eligibility for financial aid. See page 28 for more information about dropping classes.

ACADEMIC RECORDS

Student Privacy Policies

WSU complies with the Federal Family Educational Rights and Privacy Act (FERPA) and the Minnesota Government Data Practices Act. Based on these two acts, students are afforded certain rights with regard to their education records. Specifically, students have the right to:

- Inspect and review their education records within 45 days of the date that the University receives the student's request for access.
- Request correction of records the student believes to be inaccurate, misleading, or in violation of his/her privacy rights.
- Withdraw consent to disclosure of "directory information" as defined in the following policy statement:

Pursuant to the Minnesota Government Data Practices Act, Minnesota Statute Section 13.32, Subdivision 3; and the Family Educational Rights and Privacy Act, 20 USC 1232g et seq. 1974, Winona State University gives notice that the following directory information will be released upon request: student name, address (permanent and local), telephone number (permanent and local), date and place of birth, major and minor fields of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, most recent previous education agency or institution attended, residence, classification, date of WSU graduation, class schedule and photograph.

Any student who objects to the release of all or any part of the directory information on file in his or her name must notify the Registrar's Office, in writing, that he or she does not wish to have such information released. This request will be honored, and all, or any specified portion of the information, which the student requests not to be released, will be held confidential.

WSU may disclose any of the directory information without prior written consent unless the student submits written notification to the contrary.

A complete statement of WSU's implementation of the FERPA policy and a definition of all pertinent terms are available at www.winona.edu/handbook/universitypolicies.htm under the heading, "Data Privacy."

Name or Address Change

Students should notify the Registrar as soon as possible concerning any change of name or address to ensure that WSU's academic records are accurate and that mail is forwarded properly. Students may submit name and address changes via the WSU website, or they may request the necessary forms from the Registrar's Office. Students who are candidates for graduation should also make the same name or address changes on the Application for Graduation. The Registrar's staff does not automatically update that form.

Final Grades

At the end of the semester, final grades are available to students on the WSU website. To view grades, students access the Web Registration procedure and click on "Check Term Grades." Grades are available as soon as they are entered in the database. The student's current cumulative GPA also appears on the screen; however, it is not updated each time a grade is entered; rather, it is updated nightly.

Although grade reports are not automatically mailed to students at the end of a semester, students may request that a transcript be mailed to them after the semester grades have been recorded. Grades will be available on the WSU website a week to 10 days before transcripts are mailed.

Transcripts of Credit

Upon the student's written request, the Registrar's Office will issue either an unofficial transcript or an official transcript (i.e., embossed with the University seal and a copy of the Registrar's signature). Requests must be signed. In general, students and advisors use unofficial transcripts on campus. Official transcripts are sent to other educational institutions, businesses, and other organizations. Transcripts are issued free of charge.

Transcripts may be requested in person at the Registrar's Office, by United States mail, or by fax. Official transcripts are processed within two to three business days. Unofficial transcripts may be requested at the Registrar's Office for pick-up the next day. When a transcript is given directly to the student, it is stamped "Issued to Student"; students must show WSU ID to pick up transcripts.

Credit Transfers from WSU

Universities and other colleges accept academic courses, undergraduate and graduate, completed at WSU when those courses are applicable to a curriculum the student chooses and meet prescribed scholastic standards. See page 8 for further information about credit transfer as a new or returning WSU student.

Application for Graduation

The requirements for graduation with Associate of Arts and baccalaureate degrees are listed on page 24. Candidates for graduation should review the requirements specified for their major/minor, and submit an Application for Graduation to the Registrar's Office at least two semesters before they expect to graduate. Students are not permitted to participate in commencement unless they have completed all degree requirements.

Applications are processed in the order in which they are returned to the Registrar's Office; students should allow a four-week minimum for application processing and notification. Three weeks before graduation, a list of candidates is posted on the Registrar's Office's bulletin board. Candidates should review the list to confirm that they have been approved for graduation. Students must notify the Registrar immediately if their names do not appear on the list even though they are candidates for graduation.

Candidates are expected to attend commencement. Candidates should notify the Registrar's Office if they are unable to participate in commencement for some unavoidable reason. A candidate who does not attend commencement but who has completed all degree requirements will be considered nevertheless to have graduated.

Graduation for any particular semester is final 10 working days after the end of the semester. Degrees are posted on student transcripts at the end of the fall semester, spring semester, and the second summer session.

ACADEMIC POLICIES & UNIVERSITY REQUIREMENTS

Office of the Vice President for Academic Affairs
Somsen Hall, Room 211 (507-457-5010)
www.winona.edu/academics.html

The Academic Affairs office oversees all academic matters for the University, which include maintaining the curriculum and making it available to students, assuring the quality of instruction, administering the academic policies and requirements of the University, managing enrollment, and maintaining a stimulating learning environment.

Policy changes: Administrative and committee actions may change policies that affect students at any time. Students are responsible for complying with changes as they are reported either in the student newspaper (the Winonan) or in announcements posted on the Registrar's Office bulletin board (Somsen Hall, Room 114) or on the University's website (www.winona.edu).

UNIVERSITY REQUIREMENTS

Students progress toward an associate (2-year) or a baccalaureate (4-year) degree by completing courses that satisfy University Studies requirements. Students in baccalaureate programs must also satisfy the requirements of an academic major and may take required courses in a minor, or related field. Students also commonly take elective courses for personal interest or enrichment that do not satisfy requirements in any of these three areas but that, nevertheless, are applied toward the total number of course credits required for graduation.

Obviously, however, excessive accumulation of elective courses can delay graduation. Some academic choices lead unavoidably to that end. For example, a student who changes academic goals by transferring from another school or by changing majors may accumulate courses that can only be counted as electives. If a student changes from one curriculum to another within the University, the student must meet requirements of the newly chosen curriculum even though the total number of credits earned exceeds the total minimum for graduation.

On the other hand, some courses may apply to both teacher licensure and a university requirement or may satisfy more than one university requirement simultaneously. Careful academic planning, with the help of an advisor (page 29), can take advantage of such overlaps to satisfy multiple goals within the time span of a normal undergraduate degree.

Required for A.A.	Required for B.A. or B.S.	
		Developmental Courses
46 Credits	46 Credits	University Studies, including: Basic Skills — 12 credits Arts and Sciences Core — 22 credits Unity and Diversity — 12 Credits
	12 Credits	Flag Requirements — 12 credits
	47 Credits Minimum	Major Minor
18 Credits	Variable	Electives
64 Credits	128 Credits	TOTAL CREDITS

Non-Degree Credit

A small number of courses cannot be used to satisfy university requirements or applied toward graduation. These include:

- Developmental courses (course numbers below the 100-level)†
- Audited courses (see page 25)
- Vocational courses (not available at WSU but sometimes taken at another school)
- Courses taken for Continuing Education credit (CEU) (See page 30)
- Courses in which the student has received a failing grade. (Some departments require a grade of "C" or better in courses applied toward the major.)

† Developmental courses such as English 099 and Math 050 meet a student's educational needs, but carry only non-degree credit, which counts toward financial aid and athletic eligibility but does not count toward graduation requirements. The grade received in a developmental course is not used in computing the term or cumulative GPA.

UNIVERSITY STUDIES PROGRAM (USP)

The University Studies Program (46 semester hours) provides a broad base of skills and knowledge to equip students for informed, responsible

citizenship in a changing world. It, thereby, distinguishes a college degree from a technical or occupational training program certificate. The program provides opportunities for students to evaluate their cultural and social inheritance critically, to think scientifically in both the natural and social spheres, to think beyond the boundaries of their own culture, and to understand the expressive arts. It also enhances reasoning, analytic, and communication skills that students will need to perform well in a wide range of occupations and postgraduate programs. Finally, the program provides the opportunity for students to explore how an understanding of the connections among these diverse bodies of skill and knowledge enhance their ability to live well and ethically in the contemporary world.

Page 20 provides an overview of the University Studies subject areas and semester-hour requirements. Page 21 lists the courses approved for University Studies credit at the time this catalog was published. The list of approved courses is continually updated as additional or new courses are approved for various levels of the University Studies Program. The most up-to-date list of courses is available at www.winona.edu/registrar/university_studies_requirements.htm. Students are expected to check all course descriptions carefully to determine prerequisites.

All students, including transfer students, must complete the University Studies requirements in order to graduate from WSU:

- Transfer students who have satisfied specific goals of the Minnesota Transfer Curriculum, as identified in the Admissions section of this catalog (page 8), will be considered to have satisfied the equivalent components of the University Studies Program.
- Transfer students who have received an Associate of Arts degree from a community or technical college have automatically satisfied the basic skills, arts and sciences core, and unity and diversity components of University Studies but must, nevertheless, complete the University Studies Program flag requirements at WSU.
- Transfer students who have received an A.S. or A.A.S. degree from a community college or university can normally anticipate that they will meet the WSU University Studies requirements once they have completed 40 or more semester credits. Those 40 hours must include humanities, the natural sciences and social sciences (as defined by WSU) and course work equivalent to the courses required in the basic skills.

Credit Transfers from WSU

The Minnesota Transfer Curriculum is a cooperative transfer program in which all the public colleges and universities in Minnesota participate. If Winona State University certifies that a student transferring to another participating college or university has satisfied all ten areas of emphasis of the Minnesota Transfer Curriculum, then the other school will give the student credit for fully satisfying their general education requirements. The ten areas of emphasis are communications, critical thinking, natural science, mathematics/logical reasoning, history and social/behavioral sciences, humanities and fine arts, human diversity, global perspective, ethical and civic responsibility, and people and the environment. Information about the Minnesota Transfer Curriculum is available at www.mntransfer.org.

WSU's general education requirements comprise three areas within the University Studies requirements described on page 20 of this catalog: (1) four basic skills—college reading and writing, oral communication, mathematics, and physical development and wellness; (2) four arts and sciences core area requirements—humanities, natural science, social

science, and fine and performing arts; and (3) four unity and diversity requirements—critical analysis, science and social policy, global or multicultural perspectives, and contemporary citizenship or democratic institutions. A current list of courses that meet these requirements can be viewed online at www.winona.edu/registrar/university_studies_requirements.htm.

If a student, transferring from WSU to another school that participates in the Minnesota Transfer Curriculum, has completed some, but not all, of the University Studies Program requirements, then he or she will be certified as having completed those areas of emphasis indicated by the following table:

Satisfied Winona State's requirements in University Studies areas of:	Certified as having completed Minnesota Transfer Curriculum (MNTC) areas of:
College Reading and Writing and Oral Communications (Basic Skills)	Communications
Mathematics (Basic Skills)	Mathematics/Logical Reasoning
Physical Development and Wellness (Basic Skills)	Does not satisfy any MNTC area
Humanities and Fine and Performing Arts (Arts and Sciences Core)	Humanities and Fine Arts
Natural Science (Arts and Sciences Core)	Natural Sciences
Social Science (Arts and Sciences Core)	History and the Social and Behavioral Sciences
Critical Analysis (Unity and Diversity)	Critical Thinking
Science and Social Policy (Unity and Diversity)	People and the Environment
Multicultural Perspectives (Unity and Diversity)	Human Diversity
Global Perspectives (Unity and Diversity)	Global Perspective
Contemporary Citizenship or Democratic Institutions (Unity and Diversity)	Ethical and Civic Responsibility
Science and Social Policy (Unity and Diversity)	People and the Environment

Successful completion of University Studies Program flagged requirements will not result in certification of completion of Minnesota Transfer Curriculum areas of emphasis. Students transferring to a college or university outside Minnesota or to a Minnesota institution that does not participate in the Minnesota Transfer Curriculum may have their transcripts evaluated on a course-by-course basis.

An Additional Requirements course is a University Studies course that is required in the major/option and is outside the major/option department. In the Course Descriptions in this catalog, additional requirements are noted in the major/option course descriptions with an asterisk [*]. Grades and credit hours earned in additional requirement courses are not calculated into a student's major GPA.

Using University Studies Courses to Meet Graduation Requirements

1. Students may use University Studies courses toward meeting the requirements in any minor requiring the course.
2. Students may use basic skills courses to satisfy both University Studies and major requirements.
3. Students may use courses in the arts and sciences core to meet both University Studies and major/option requirements only if they are Additional Requirements courses.

4. Students may use unity and diversity courses to satisfy both University Studies and major requirements.
5. Students may use flag courses to satisfy both University Studies and major requirements. Flag courses will usually be in the student's major or minor program. All flag courses require the relevant basic skills course(s) as prerequisites (e.g., the "College Reading and Writing" Basic Skill course is a prerequisite for writing flag courses), although departments and programs may require additional prerequisites for flag courses.

University Studies Components

BASIC SKILLS (12 S.H.)	Objective	Credit
College Reading and Writing (ENG 111)	Increase students' critical reading, thinking, and writing skills. Help students develop a mature writing style; establish foundation for the reading/writing done in later college courses. ENG 111 should be taken during the first year of college.	4 S.H.
Communication Studies (CMST 191)	Develop skill in expressing ideas effectively and interacting with others in dyadic and group contexts. Students should take CMST 191 during their first two years of college.	3 S.H.
Mathematics	Develop an appreciation of the uses and usefulness of mathematical models of our world as applied in a variety of specific contexts. Should be taken during the first year, but no later than the student's 3rd semester.	3 S.H.
Physical Development and Wellness	Provide knowledge and practical skills in lifetime physical activity, health awareness, and wellness. Courses complement and enhance students' educational foundation by learning how to live a healthy lifestyle.	2 S.H.
ARTS AND SCIENCES CORE (22 S.H.)		
Humanities	Provide a framework for understanding the nature and scope of human experience. Courses explore the search for meaning and value in human life by examining its expression in cultural forms and texts, literature and the arts.	6 S.H.

Natural Science	Provide students the tools to understand and apply the methods by which scientific inquiry increases our understanding of the natural world.	7 S.H.
Social Science	Help students to understand and explain the economic, political, psychological, and sociological perspectives regarding human behavior.	6 S.H.
Fine and Performing Arts	Courses offer opportunities for creative expression. Courses develop basic skills and aesthetic awareness in tandem with a fundamental understanding of artistic traditions and contemporary expressions.	3 S.H.
UNITY AND DIVERSITY (12 S.H.)		
Critical Analysis	Develop critical thinking or analytic problem-solving skills, including the ability to identify sound arguments and distinguish them from fallacious ones.	3 S.H.
Science and Social Policy	Promote students' understanding of the interrelated concerns of society and the sciences. Courses integrate issues related to one of the sciences with the social and government policy decisions that stem from these issues.	3 S.H.
Global or Multicultural Perspectives	Global Perspectives: To improve students' understanding of the growing inter-relatedness of nations, people, and the environment. Multicultural Perspectives: To develop students' understanding of diversity within and between societies.	3 S.H.
Contemporary Citizenship or Democratic Institutions	Contemporary Citizenship: To provide students with the ability to participate as effective citizens in a democratic, multicultural, and global society. Democratic Institutions: To help students understand basic concepts of social justice, the common good, and the legitimate scope of government in a democratic and pluralistic society.	3 S.H.
FLAG REQUIREMENTS (12 S.H.)		
Writing Flag	(upper-division requirement) Reinforce the outcomes specified for the basic skills area of writing. Courses emphasize writing as essential to academic learning and intellectual development.	6 S.H.
Oral Flag	Complete the process of providing WSU graduates with the knowledge And experience required to become highly competent communicators by the time they graduate.	3 S.H.
Mathematics/Statistics or Critical Analysis	Mathematics/Statistics: To provide students with significant practice in applying prerequisite mathematics or statistical knowledge. Critical Analysis: To provide students with significant practice in rigorous argument comparable to what a student is expected to receive in a mathematics/statistics-flagged course.	3 S.H.

Approved USP Courses

BASIC SKILLS (12 S. H.)

COLLEGE READING & WRITING (4)
ENG111 College Reading and Writing (4)

ORAL COMMUNICATION (3)

CMST 191 Fundamentals of Speech Communication (3)

MATHEMATICS AND STATISTICS (3)

100 Survey of Math
110 Finite Mathematics (MATH 110)
120 Precalculus
130 Matrix Algebra
140 Applied Calculus
150 Math for Earth & Life Sciences I
155 Math for Earth & Life Sciences II
160 Calculus I
165 Calculus II
110 Fundamentals of Statistics (STAT 110)

PHYSICAL DEVELOPMENT AND WELLNESS (2)

Health and Human Performance

204 Personal and Community Health
205 Nutrition for Lifetime Wellness

Physical Education and Recreation (PER)

PER 100, 101, 102, 103, 104, 112, 116, 118, 120, 122, 123, 128, 134, 135, 136, 137, 139, 140, 141, 142, 144, 199, 214, 239

ARTS & SCIENCES CORE (22 S.H.)

HUMANITIES (6 S.H.)

Art

109 Introduction to Art
221 Art History I
222 Art History II
224 American Art

Communication Studies

261 Public Speaking
280 Nonverbal Communication
283 Introduction to Rhetorical Studies
289 Gender and Communication

English

120 Introduction to Literature

Foreign Languages

101 Elementary French I
102 Elementary French II
101 Elementary German I
102 Elementary German II
101 Elementary Spanish I
102 Elementary Spanish II

History

120 Western Civilization to 1500
121 Western Civilization 1500-1815
122 Western Civilization 1815-Present
150 United States History to 1865
151 United States History Since 1865

Humanities

140 Approaches to Film

Music

- 109 Introduction to Music
- 113 Women in Music
- 122 History of Rock Music

Philosophy

- 120 Introductory Philosophy
- 201 Classical Philosophy
- 230 Moral Theory
- 240 Philosophy of Science
- 260 Problems in Philosophy
- 270 Philosophy of Religion
- 280 Philosophy of Art
- 301 Early Modern Philosophy
- 302 Contemporary Philosophy

Theatre And Dance

- 119 Play Reading
- 210 Theatre History and Dramatic Literature I

NATURAL SCIENCE (7 S.H.)

Biology

- 117 Human Biology
- 118 General Biology
- 201 Human Anatomy
- 203 Natural History
- 211 Anatomy and Physiology I
- 212 Anatomy and Physiology II
- 241 Basics of Life
- 242 Organismal Diversity

Chemistry

- 100 Chemistry Appreciation
- 108 Introduction to General Chemistry
- 208 General, Organic, and Biochemistry I
- 209 General, Organic, and Biochemistry II
- 212 Principles of Chemistry I
- 213 Principles of Chemistry II

Geoscience

- 100 Minnesota's Rocks and Waters
- 105 Astronomy
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FLAG REQUIREMENTS (12 S.H.)

When this catalog went to print, the University was in the process of identifying courses to satisfy the flag requirements. For the most recent list of these courses, see www.winona.edu/registrar.

MAJOR/MINOR REQUIREMENTS

In addition to University Studies requirements, all students in B.A. or B.S. degree programs must complete requirements for an academic major or specialization. The major provides the student with in-depth practical and theoretical knowledge in a particular area of study. Many majors or areas of specialization offer students alternative paths of study or options. Students are also encouraged to pursue their interests by taking elective courses related to their major. Some degree programs require the student to complete a minor.

To declare a major, minor, or licensure program, complete the following steps:

1. Determine what major/minor program you wish to pursue. Check the program descriptions in this catalog to determine the major/minor program requirements. Because requirements may have changed since this catalog was printed, you are advised to consult with the Registrar's Office and the department offering the major or minor before making academic decisions.
2. If the major/minor program you wish to pursue is not listed in the current catalog, consult with the appropriate academic department to determine program requirements.
3. Complete the Declaration/Change to Major/Minor/Licensure Program form, and submit it to your major department, your academic advisor, or the Registrar's Office. When you declare (or change) your major/minor/licensure program, you must conform to the requirements effective on the date indicated on the Declaration/Change to Major/Minor/Licensure Program form.

Program requirements must be completed within seven years after declaring or changing a major/minor/certification. If the seven-year limit expires before the student completes the program requirements, the student must then complete the program requirements effective on the day after the seven-year limit expired.

GRADUATION REQUIREMENTS

Four-Year Graduation Guarantee

The offer of a Four-year Graduation Guarantee is extended to "first-time-in-college" students who declare certain majors at the time of matriculation. If the student signs a guarantee and complies with its terms and conditions, the student is assured graduation after completing four years of full-time study. If a student signs a guarantee and complies with the conditions but does not receive a diploma, WSU promises that the student can complete any remaining required courses tuition-free. For more information, contact the appropriate department or college dean.

For information on whether the major you intend to declare participates in the Four-year Graduation Guarantee Program, contact the Admissions Office (Somsen Hall, Room 106).

Associate of Arts Degree (2-Year)

To be eligible for graduation, the student must satisfy the following requirements:

1. Complete a minimum of 64 credit hours.
2. Complete at least 16 of the 64 credit hours at WSU.
3. Complete the University Studies requirements except for the Flag Requirements. (Note: Effective fall semester 2001, University Studies requirements replaced the program previously known as General Education requirements.)
4. Accumulate an overall "C" average (2.00 GPA or higher).
5. Be enrolled at WSU during the semester of graduation.
6. Submit a completed Graduation Application to the Registrar's Office at least two semesters before you expect to graduate. See page 18 for the detailed application, approval, and notification procedures.

Baccalaureate Degrees (4-Year)

To be eligible for graduation, a student must satisfy the following requirements:

1. Complete a minimum of 128 credit hours.
2. Complete at least 30 of the 128 credit hours in residence during the junior and senior years combined. Residence credit is credit for classes taught by WSU faculty as well as credit earned under the Minnesota State University Common Market Program; it does not include credit by examination.

3. Complete the University Studies requirements. Note: Effective fall semester 2001, University Studies requirements replaced the program previously known as General Education requirements.
4. Accumulate an overall "C" average (2.00 GPA).
5. Be enrolled at WSU during the semester of graduation.
6. Bachelor of Science (teaching) candidates must complete the Professional Education Sequence, including student teaching.
7. Complete, with a "C" average, either of the following:
 - a. A broad major of 47 credit hours or more. (With a broad major, a minor is not required.)
 - b. A major of fewer than 47 credit hours and a minor or a second major.

Certain departments require students to earn a "C" or better in each course within their major/minor or to earn a "C" or better in specific courses in their major/minor. Students should consult with the department offering the major or minor for any additional GPA requirements.

You cannot have a minor, option or concentration that consists wholly of courses that are required in a major or option in which you are earning a degree.

You can use a course to meet requirements in any major, minor, option or concentration requiring the course. However, you may not use a course in your major to meet arts and sciences core requirements unless it is an additional requirement (see page 20). Credit earned in a course counts only once toward the minimum 128 semester credits required for graduation.

The major GPA does not include grades earned in additional requirements courses. (For more information, see page 20.)

If the major has more than one option or concentration, the minor requirement may not be fulfilled with a second option or concentration in that major. However, a student may take a major and a minor in the same department, unless the department prohibits that practice.

8. Submit an Application for Graduation to the Registrar's Office. See page 18 for more details about how to apply for graduation.

Notes:

1. No degree is awarded until all grades are finalized; "I" or "IP" grades cannot remain on the permanent record.
2. The student has the final responsibility for selecting and registering in courses that meet curriculum requirements.

Dual Degrees

If a student completes two majors that fall under different degrees (for example, Bachelor of Arts and Bachelor of Science), only one degree is posted to the student's academic record unless the student completes 30 semester hour credits at WSU after the first degree is posted. The student may choose which degree is posted; however, if the student completes a Bachelor of Science (teaching) major and wishes to get a teaching license, the student is encouraged to have that degree posted.

If a student returns after graduation from WSU to earn an additional (different) bachelor degree at WSU, the student must complete a minimum of 30 additional credits for the second degree. If a student completes another major but does not complete the additional 30 credits, the major is recorded on the permanent record, but the additional degree is not recorded nor is another diploma awarded. The student receives only one diploma for each degree earned.

Teaching Degree Requirements for Post-Baccalaureate Students

A Bachelor of Arts graduate who holds a degree from WSU or another accredited institution may qualify for teacher licensure by complying with the following requirements:

1. Complete the Professional Education Sequence (including student teaching in the major field). The student must have a minimum of a "C" grade in each course in the Professional Education Sequence before he/she is allowed to student teach.

Anyone applying for a Minnesota teacher's license must complete a course that covers the effects of drugs and alcohol and an approved course in human relations. Also, Minnesota and Wisconsin both require verification of scores that meet the State Department of Children, Families and Learning's minimum levels in the reading, writing, and mathematics components of the PRAXIS I test (PFST). Minnesota also requires qualifying scores on exit exams called PRAXIS

- II in the content of all areas in which the teacher will be licensed, and on a test of the principles of teaching and learning. Wisconsin and other states have specific requirements for certification in addition to the completion of WSU's Professional Education Sequence. Contact the Registrar's Office (Somsen Hall, Room 114) for more information about teacher certification.
- 2. Complete one of the Bachelor of Science teaching majors with a GPA of 2.50-2.75 in the major as required by the major department.
- 3. Earn a cumulative GPA of 2.75. (All previous college and university credit, except vocational program credit, will be included in computing the cumulative GPA.)
- 4. Students should consult with the department offering the major for any additional GPA requirements. For more information about dual degrees or majors, see page 24.

ALTERNATIVES FOR EARNING ACADEMIC CREDIT

In addition to taking courses described in this catalog, students may make progress toward academic and career goals by:

- 1. Participating in special learning activities described in the section entitled Special Academic Resources (e.g., study abroad; WSU Cooperative Program with St. Mary's University; Minnesota State University Common Market program; Adult, Continuing Education and Extension) (page 29.)
- 2. Exercising alternatives such as credit by examination, independent study, internships, which are described in this section.

Credit By Examination

If students can satisfy the requirements of a course by a written or oral examination, they may be able to get credit by departmental examination without formally enrolling in a particular course. This policy allows students to receive credit if they have completed equivalent study at a non-accredited school or if they can present evidence of independent study and related work experience. Students cannot use this process to repeat a course to improve a grade.

To be eligible, the student must be fully matriculated with a minimum 2.00 GPA at WSU and enrolled at the University during the semester in which a credit by examination is requested. To apply, the student should request a Credit by Examination form from the Registrar's Office (Somsen Hall, Room 114) and obtain the necessary approvals from the academic dean and department offering the course to be credited.

Substitution of a Course

A student may request that a particular course be substituted for a course required in the student's major or minor. The course to be substituted may be one that the student has completed at WSU or at another college/university; it should carry the same credit and level as the course it is to replace. For example, if a student completed a 3-credit course entitled "Business Law I"; he/she may ask to have it substitute for the required course at WSU entitled "Legal Environment of Business." To request a course substitution, students should request an application from the Registrar's Office (Somsen Hall, Room 114), and obtain approvals from the academic department offering the course.

Audited Courses

The auditing procedure permits a student to attend a course without performing graded work. An audited course appears on the student's transcript, but carries no academic credit. Audited courses cannot be used to satisfy graduation, certification, or licensure requirements. Courses pursued on an audit basis must be declared and processed during the registration period. A decision to change from a graded basis to an audit basis must be finalized by the published add/drop deadline for the semester. Regular tuition charges apply. See page 17 for registration information.

Independent Study

Projects beyond the scope or range of any courses offered at WSU can be pursued as independent study at the discretion of the appropriate faculty member, department chairperson, and dean.

To be eligible, the student must be fully matriculated with an established cumulative GPA at WSU of 2.00 or higher. Students must apply for independent study according to announced deadlines (see Academic Calendar) and register for the course during the designated registration period. See page 17 for registration information.

Internships

Internships provide students academic credit for a supervised on-the-job work experience. Students apply the knowledge and skills learned in an academic setting to a professional work environment. A number of departments offer specific courses granting internship credits. Students must be fully matriculated to enroll in an internship. WSU policy indicates that students must have a minimum GPA of 2.0 to enroll in an internship; however, some departments require a higher minimum GPA.

University policy limits 12 internship credits per semester and 16 internship credits in total that may apply toward a degree. In cases where combined internship credits in a major and/or minor will exceed 16 credits, a maximum of 21 semester credits may be applied toward graduation. However, individual departments may set a maximum number of credits awarded for internships.

Students should refer to the appropriate department listing for specific internship details, including minimum GPA, prerequisites, and credit limitations. Internships are offered on a pass/no credit basis, except 3 semester credits may be taken for a grade with approval of the department and appropriate dean. See page 17 for registration information.

GRADING AND CREDIT POLICIES

Credit Load

One hour of credit is granted for one lecture or class period of 50 minutes per week for 15 weeks. Laboratory classes, internships, practica, and other special courses typically offer fewer credits per hour of instructional time. Most courses are credited with 3 or 4 semester hours. To be considered full-time, a student must take a minimum of 12 credit hours per semester. Students who wish to enroll in more than 19 semester credits must obtain prior approval from the academic dean.

The University may restrict the number of credits in which a student can enroll if it determines that previous low scholarship, out-of-school obligations, or similar factors might interfere with satisfactory performance of the student's obligations. The University may restrict a student from registering if the student fails to follow proper registration procedures.

To complete degree requirements in four years (8 semesters), students must earn an average of 16 semester credit hours each semester. For more information about the four-year graduation guarantee, see page 24.

Class Attendance

In order to improve students' access to classes they need and want, the faculty has adopted a policy that requires student attendance at the first meeting of all classes. The purpose of this policy is to identify students who have decided to drop a particular class as early as possible so that students who want to enroll in that class will be able to do so.

Students are required to attend the first meeting of all classes in which they are enrolled. If a student wishes to continue in a class but is unable to attend the first class meeting due to circumstances beyond his/her control, the student should notify the instructor or academic department before the first class meeting. If a student wishes to withdraw from a class, the student is responsible for dropping the class (page 28).

An instructor may choose to cancel a student's registration if the student fails to attend the first class meeting of a closed (i. e., full) class; however, the instructor is not required to do so. The student must not assume that the instructor will cancel his/her registration for a class, even if the class is closed. If the instructor cancels the student's registration, a notice will be sent to the student's permanent address.

Other than this policy regarding attendance at the first meeting of a class, the University has no overall policy governing class attendance. Each instructor establishes and announces an attendance policy and has the responsibility and authority for enforcing it.

Grading System

Work in any course is evaluated in accordance with the following system of letter grades:

A – Excellent	F – Failing	W – Withdrawal
B – Very Good	NC – No Credit	V – Audit
C – Average	I – Incomplete	IP – In Progress
D – Below Average	P – Pass	H – Honors

The notation "Z" on an unofficial transcript indicates that no final grade has been reported.

Grade Point Average (GPA)

Each semester hour of credit attempted receives honor points according to the following:

- Each A credit = 4 honor points
- Each B credit = 3 honor points
- Each C credit = 2 honor points
- Each D credit = 1 honor point
- Each F credit = 0 honor points

The GPA is computed by dividing the total number of honor points by the total number of credits attempted. The frequently referred to "C" average is a 2.00 grade point average. The major and minor GPAs do not include Additional Requirements (i.e. University Studies courses outside the major department that are required courses in certain majors; see page 20). Although courses taken on a pass/no credit basis grant credit toward graduation, the credit does not affect the GPA.

Only those courses and credits taken at WSU count in the computation of GPAs for probation and suspension decisions.

Incomplete Grades

An "Incomplete" is reserved for special cases in which the student, for reasons beyond his/her control, is unable to finish an important assignment or other required coursework by the end of the semester, though the student is passing in all other aspects. An "Incomplete" cannot be used to gain time to perform "extra credit" work to improve a potentially low course grade.

Students should complete the prescribed requirements of the course before mid-term of the next semester. Once the requirements are satisfied, the instructor will submit a completed Change of Grade/Incomplete form to the Registrar's Office. The Registrar must receive a grade to replace the "I" by mid-term day of the next semester. If an "I" is not replaced with a grade within the specified time, the incomplete grade automatically becomes a failing grade. If an "IP" is not replaced with a grade before the student completes graduation requirements, it becomes a failing grade.

Repeated Courses

When a student repeats a course, he/she must take the course on a regular graded basis (i.e., letter grade). When a student repeats a course, only the last grade received and credits earned are included in the GPA computation. If the student withdraws (W) while repeating a course, the original grade is included in the GPA computation.

At registration, the student must submit the appropriate forms to the Registrar's Office, indicating that a particular course is being repeated. Without this notification, the student's academic records may be adversely affected. Students should be aware that repeating courses will slow their academic progress and may delay graduation, because they will only receive credit for the most recent offering of the course. Once a baccalaureate degree has been awarded, the student cannot repeat any course to improve his/her GPA.

Pass/No Credit Courses

The University's pass/no credit (P/NC) grading classification enables students to enroll in unfamiliar or difficult academic subjects without fear of jeopardizing their GPA. It is intended to introduce students to lifelong learning—learning that does not include the traditional reward or penalty of a grade.

Although courses taken on a P/NC basis grant credit toward graduation, the credit does not affect the cumulative GPA. When the course is completed, either P (pass) or NC (no credit) is entered in the student's permanent record. P is interpreted as equivalent to an A, B, C or D letter grade. If the student receives a "grade" of NC, the course can be repeated; however, it must be repeated for a letter grade, and the grade will be included in the student's GPA (see above).

Departments designate which courses they require or permit to be taken on the P/NC basis. Major, minor or professional courses generally are not included, but a department chairperson may approve an exception. The department may permit the course to count toward the major/minor requirements if a student selects a major or minor after taking a course in the department on a P/NC basis.

Students cannot take more than six P/NC credits per semester except for student teaching and internships. The six credits include both optional P/NC classes and classes in which P/NC grading is mandatory.

Additionally, the total number of credits for graduation may not include more than 32 Pass credits. Optional P/NC courses, mandatory P/NC courses, student teaching and/or internships all are counted in the 32-credit limitation. For optional P/NC courses, the student must decide, by the last day of the drop/add period, whether the course is being taken on a P/NC basis. See page 17 for more information about declaring/changing the grading method for a course.

Final Examinations

A final examination is required for every course taught at WSU. The course instructor determines the content of the final examination. Students can find out when an exam is to be given by going to www.winona.edu/class_schedule and clicking on the link to the appropriate semester's exam schedule. Exams are scheduled according to the following guidelines:

- Examinations for 1- or 2-credit courses are given during the last regularly scheduled class period prior to the first day of the final examination schedule.
- Examinations for courses of more than 2 credits are scheduled according to the day the class first meets for lecture each week.
- Evening class final exams adhere to the published schedules for evening classes. All other classes follow the day class schedule.
- Some classes may begin at times other than regularly scheduled start times. Final exams for these classes will be held at the examination time scheduled for the class period in which the start time of the class falls (for example, a class beginning at 9:00 a.m. Tuesday/Thursday will have its final exam at the time scheduled for 8:00 – 9:20 a.m. Tuesday/Thursday classes).

The published final examination schedule must be adhered to strictly. An exam cannot be rescheduled for a time other than shown in the published schedule, although an individual student and his/her instructor may mutually agree prior to the final examination on a personal exception if special circumstances warrant the student taking the exam before the scheduled time. Final examination days are required duty days for faculty. The appropriate academic deans will take necessary steps to enforce the above policies.

GRADE APPEAL POLICY

The evaluation of student performance in courses and the reporting of appropriate grades are faculty responsibilities. However students sometimes feel that their academic work has been evaluated unfairly. The process for student appeals of grades is as follows:

1. Any student who considers appealing a grade will confer with the instructor, within the first 10 academic calendar days of the next term (excluding summer terms), in an attempt to resolve the dispute. If the student and the faculty member come to agreement, the process ends.
2. If the student and the faculty member do not come to agreement, then the student may file a written grade appeal, using the Grade Appeal form, which is available in the Registrar's Office and at the University Center Rochester student services desk. The written appeal must be sent to the chairperson of the Grade Appeal Committee within 30 academic calendar days of the next term, and a copy of the appeal to the Vice President for Academic Affairs. A Hearing Committee, which is a subcommittee of the Grade Appeals Committee, will review the case as presented by the student and the faculty member. Both parties are entitled to assistance and advice from members of the academic community in presenting their case to the subcommittee. The Hearing Committee may recommend that the instructor do one of the following:
 - a. Make no change in the grade
 - b. Re-evaluate the student's academic work
 - c. Change the grade

The finding of the Hearing Committee is final. It will be conveyed to the student, the instructor, the Vice President for Academic Affairs, and the chairman of the Grade Appeals Committee. Within seven (7) calendar days, the course instructor will inform the student, Grade Appeal Committee chairperson, and the Vice President for Academic Affairs of the action taken regarding the Hearing Committee's recommendation. The instructor is not obligated to comply with the recommendation of the Hearing Committee.

ACADEMIC PROGRESS

Classification of Students

Based on credit hours completed, students are classified as follows:

	CREDIT HOURS
Freshman	0 - 29
Sophomore	30 - 59
Junior	60 - 89
Senior	90+

Freshmen are not eligible to enroll in courses numbered in the 400-level. In order to make continuous progress toward a four-year degree, a student must take an average of 16 credits per semester. A "freshman," therefore, is usually a first-year student; a sophomore is usually a second-year student, and so forth. Because a student's credit load in any semester may vary from the average, classification by credit hours is a more informative indicator of progress toward a degree than time spent in school.

Satisfactory Progress

To maintain good academic standing, a student must have a minimum WSU cumulative GPA of 1.75 for the first 15 degree credits attempted (including any credits attempted at other schools) and 2.00 thereafter. The cumulative GPA used to determine satisfactory progress is based solely on courses attempted and grades earned at WSU.

The satisfactory progress requirements that are used to determine eligibility for financial aid are more stringent than the requirement listed in this section (page 12).

Academic Honors

WSU offers many opportunities for students to achieve academic honors including the Dean's List and Graduation with Honors. Students are encouraged to take advantage of the various department-level and university-level opportunities to earn recognition of their academic excellence and achievements.

WSU belongs to several national fraternities that recognize scholarship and a commitment to service, including Alpha Lambda Delta (first-year students with 3.5 GPA), Golden Key International Honor Society, and the National Residence Hall Honorary Society.

Honor Societies

Some academic departments have joined national honors societies, and other departments are in the process of doing so. If your major is not included in the following list, contact the chairperson of your department to learn what activities are underway regarding honor societies.

Biology	Beta Beta Beta
Communications Studies	Lambda Pi Eta
Mathematics	Pi Mu Epsilon
Nursing	Sigma Theta Tau
Political Science	Pi Sigma Alpha
Psychology	Psi Chi
Social Work	Alpha Delta Mu

Department Honors Programs

Some departments have honors programs with specific requirements for admission and an honors thesis project. Departments offering honors programs include biology, history, nursing, and psychology. It is the university's expectation that the number of departments offering departmental honors will increase over the next few years.

Dean's List

Undergraduate students are included on the Dean's List if they complete 12 semester hours or more for a grade at WSU (not including pass/no credit) during any one semester and achieve a grade point average of 3.50 or higher.

Graduation With Honors

- Cum Laude Overall GPA between 3.250 and 3.499
- Magna Cum Laude Overall GPA between 3.500 and 3.749
- Summa Cum Laude Overall GPA between 3.750 and 4.000

All courses from all institutions are used in computing honors. To be considered for honors, however, the student's WSU GPA must be 3.25 or higher. In addition, a minimum of 30 semester hours must have been completed in residence during the student's junior and senior years to be

eligible for graduation with honors. For the commencement ceremony, honors are calculated by using credits and grades as of the end of the previous term of enrollment.

Academic Warning and Suspension

To remain enrolled in the University, students must be in good academic standing at the end of each academic year. A Notice of Academic Warning is sent to any student who is not in good academic standing at the end of the fall semester of each academic year. If, at the end of the spring semester, the student's cumulative GPA is below the minimum required for good academic standing, the Vice President for Academic Affairs will suspend the student. Students newly admitted to the University in the spring semester are not subject to suspension until the following spring semester.

Once a student is suspended, he/she can submit a written appeal for readmission. If the written appeal is denied, the student can appeal in person to the Academic Review Committee. If the appeal is granted, the student is eligible to return during the next academic year. Instructions for submitting an appeal are included in the Notice of Suspension.

Re-Admission after Suspension

If the student does not appeal a suspension or if the appeal is denied, the student must comply with the following suspension policy regarding university enrollment. The student cannot enroll:

- For one semester after receiving the first Notice of Suspension.
- For a full academic year after receiving a second Notice of Suspension.
- For two full academic years after being suspended three or more times.

A student may enroll in courses at WSU during the summer sessions although he/she has been suspended. Students who have returned to the University after complying with the suspension policy, but who do not return to good academic standing within the academic year in which they re-enroll, are subject to suspension again at the end of the academic year. For answers to specific questions regarding the suspension policy or procedures, contact the Advising and Retention Center (Phelps Hall, Room 126).

Academic Pardon

The purpose of the academic pardon policy is to grant students a one-time pardon for past failures and to allow them to resume their college careers with a realistic possibility of completing a degree. Academic pardon may be attractive for a student who has left WSU with a very low GPA, gained life experience, and returned after an extended absence to resume degree work. If the student has not yet applied for graduation, he or she may request that grades earned during a specified period of the previous undergraduate career be held aside during calculation of an adjusted cumulative grade point average, as described below.

Approval of academic pardon has the following consequences:

1. The cumulative GPA will be recalculated. The new GPA will be based on courses completed after the student was readmitted. Grades and credits attempted during the period for which academic pardon has been approved will not be used in calculating the cumulative GPA printed on transcripts and in determining whether graduation requirements have been met.
2. Courses in which the student received a grade of "C" or above prior to being readmitted will be used for academic credit but not used in calculating the GPA.
3. The following statement will appear on transcripts of the student's academic record: "This student was granted Academic Pardon under the WSU Academic Pardon Policy. All WSU courses with a grade of "C" or above taken prior to readmission and granting of academic pardon were given academic credit, but were not used in the calculation of the WSU GPA."
4. Grades the student received during the period of academic pardon will remain unchanged as a permanent part of the student's academic record, and will be printed on all transcripts of that record.
5. The student must meet all major/program requirements in effect at the time he/she was readmitted.
6. The student is not eligible for academic honors at graduation (i.e. Cum Laude, Magna Cum Laude, Summa Cum Laude).

DROPPING CLASSES

Note: Students should be aware that dropping classes may slow their academic progress and may delay graduation.

When students register for classes, the University reserves seats in those classes for them, and prepares course syllabi and other materials for their use. Because course availability is limited, a student's registration may also prevent other students from taking a particular class. Therefore, registration in classes obligates each student to pay tuition and other fees unless she/he drops those classes before the "drop-without-tuition-obligation" deadline.

The drop-without-tuition-obligation deadline is the sixth day on which classes are offered in the fall and spring semesters, and the third day on which classes are offered in a summer session. Classes that begin in the middle of a fall or spring semester or a summer session and classes that meet only once a week must be dropped before the second class meeting in order to avoid a tuition charge. The drop-without-tuition-obligation deadline for short courses (three days or less) is the first class meeting. Specific drop/add dates are listed in the academic calendar.

Classes dropped before the drop-without-tuition-obligation deadline are not recorded on transcripts of the student's academic record. Classes dropped between that deadline and the final withdrawal deadline are recorded on transcripts of the student's academic record with a grade symbol "W" (meaning withdrew). Credits in courses with the "W" symbol are not included in the computation of GPAs.

MnSCU expects WSU to charge tuition and fees based on enrollment, not on attendance. Therefore each student's tuition charge will be based on all courses in which she/he is enrolled after the drop-without-tuition-obligation deadline, even if the student has never attended those classes.

In order to increase the numbers of students served, WSU allows instructors to drop students who do not attend the first class meeting. However instructors may drop students from closed classes only, and they are not required to drop students from closed classes. Therefore, students are responsible for dropping any class that they have decided not to take. Students must not assume that someone else will take care of it for them.

Students may drop classes using either the WSU website or staff assistance:

- If you use the website, always print a copy of your schedule after you have finished dropping classes. The printed copy should confirm that the internet transaction was completed. Also, your computer screen should display a message indicating that the transaction was successfully completed. If it does not, the transaction was probably not successful.
- If you use staff assistance, always ask the staff person for a copy of your schedule.

WITHDRAWAL

If a student intends to transfer from WSU to another school, it is best to do so at the end of a semester in order to present a complete academic record to the new school and to avoid losing the financial investment and the effort committed to a semester in-progress. WSU recognizes, however, that this is not always possible.

Deciding whether to Withdraw

If you are thinking about withdrawing in the middle of the semester, you owe it to yourself to be well informed and to consider all the consequences. Use the following checklist as you ponder this decision:

- Talk to your academic advisor. She/he will remember your academic and career objectives and be a willing ear to listen to your concerns. Your advisor will also be able to help you plan for completing your college education at a later time.
- Make an appointment to see one of the staff members in the Advising and Retention office (Phelps Hall, Room 129; 457-5600).
- If you are having academic difficulty in one or more of your classes, check out the Academic Skills Center (Phelps Hall, Room 125; 457-5543); Academic Assistance Center (Library, Room 301); or Student Support Services (Howell Hall, Room 133; 457-5465). See page 29 for more information about specific services available and eligibility for these services.
- If you are not sure that you have chosen a major or career path that is right for you, visit the Career Services office (Gildemeister Hall, Room 110; 457-5340).
- If you are experiencing personal problems, help is available in the Counseling Center (Gildemeister Hall, Room 132; 457-5330).

- If you are experiencing illness, go to Student Health Services (Maxwell Hall; 457-5160).
- If you are having trouble paying tuition and fees, you may be able to work out a payment plan with the Accounts Receivable office (Somsen Hall, Room 104; 457-5076).
- If you are living on campus and are having problems with your roommate or accommodations, contact your Residence Assistant, Residence Hall Director, or the Housing and Residence Life office to find out what changes can be made (Kryzsko Commons, Room 130; 457-5305).

Withdrawing from the University

If, after exploring your options, you decide to leave the University, here is a checklist of things you should do:

- Be sure to drop your classes, either on the WSU website or with the assistance of staff members: on-campus (Winona) classes, Registrar's Office (Somsen Hall, Room 114; 457-5030); Rochester classes, UCR Service Desk (285-7100); extension classes, ACEED (Somsen Hall, Room 109; 457-5080).
- If you are leaving the University for only a semester or two, pick up an Intent to Return/Application for Readmission form at one of the registration offices above. Complete it and submit it at least one month before you plan to register for classes for your first term back.
- Check with the Accounts Receivable office (Somsen Hall, Room 104; 457-5076) to make sure your account is paid in full or to inform yourself of the balance on your account and the University's collections policies.
- If you are leaving in the middle of the semester and have received financial aid through the University, find out in the Accounts Receivable office whether you will be expected to return any of the aid you have received.
- If you are living in a campus residence, formally check out of your room with your Residence Assistant or the Residence Hall Director. You may withdraw from the University (drop all of your classes) anytime during the semester until the final withdrawal deadline. If you withdraw from the University within a few weeks after the drop-without-tuition-obligation deadline, you will receive a partial refund of tuition and fees, based on the date of your withdrawal, and in accordance with a pro-rated refund schedule (page 10). Each term's pro-rated refund schedule is published on the WSU website.
- If you withdraw during the term and receive financial aid through the University, you may be expected to return part of it, corresponding to the portion of the semester in which you are not enrolled. If you plan to return to Winona State, or transfer to another school, leaving in the middle of the term may make you ineligible to receive government-sponsored financial aid in the future.

ACADEMIC INTEGRITY POLICY

At WSU, academic integrity is based on honesty. The University community requires that work produced by students represents their personal efforts and requires that they properly acknowledge the intellectual contributions of others.

WSU students are required to adhere to the University's standards of academic integrity. The following are examples, not intended to be all inclusive, of types of behavior that are unacceptable and will be viewed as violations of the academic integrity policy.

Examples of Academic Integrity Violations

- **Cheating:** Using or attempting to use unauthorized materials in any academic exercise or having someone else do work for you. Examples of cheating include looking at another student's paper during a test, bringing a "crib sheet" to a test, obtaining a copy of a test prior to the test date, or submitting homework borrowed from another student.
- **Deception and misrepresentation:** Lying about or misrepresenting your work, academic records, or credentials. Examples of deception and misrepresentation include forging signatures, falsifying application credentials, and misrepresenting group participation.
- **Enabling academic dishonesty:** Helping someone else to commit an act of academic dishonesty. This would include giving someone else an academic assignment with the intent of allowing that person to copy it or allowing someone else to cheat from your test paper.
- **Fabrication:** Refers to inventing or falsifying information. Examples of fabrication include "drylabbing" (inventing data for an experiment you did not do or did not do correctly) or making references to sources you did not use in academic assignments.

- **Multiple submission:** Submitting work you have done in previous classes as if it were new and original work. Although faculty may be willing to let you use previous work as the basis of new work, they expect you to do new work for the class. Students seeking to submit a piece of work to more than one class should seek the permission of both instructors.
- **Plagiarism:** Using the words or ideas of another writer without proper acknowledgment, so that they seem as if they are your own. Plagiarism includes behavior such as copying someone else's work word for word, rewriting someone else's work with only minor word changes, and/or summarizing someone else's work without acknowledging the source.

Due Process

Due process refers to the concept of fair treatment. Students accused of violating the academic integrity policy have the following due process rights:

1. Oral or written notice of the charges from the faculty member.
2. An explanation of the evidence against the student.
3. An opportunity for the student to present his/her side of the story.
4. Notice of sanction(s) imposed (such as lowering a grade, failing the course, dismissal from a program, etc.).
5. An opportunity to appeal the sanction(s).

Students accused of academic dishonesty have the right to appeal a faculty member's sanction to the Grade Appeal Committee. In cases involving accusation of academic dishonesty, the committee will make a recommendation to the appropriate academic dean rather than to the instructor, as is usually the case with standard grade appeals (page 26). The academic dean's (or designee's) decision is final.

Academic sanction appeals must be received in writing within five class days or, in the case of break periods, within five class days after returning from a break. A time extension may be granted upon request to the Grade Appeal Committee. Failure to submit a timely appeal, or request for extension, constitutes a waiver of any right to request an appeal. The written appeal must be based on one or more of the following reasons:

1. The evidence from the meeting between the faculty and the student does not support the outcome.
2. There are new or newly discovered facts not brought out in the original meeting, which may substantially affect the outcome.
3. There was a procedural error, which could have substantially affected the outcome of the meeting.
4. The sanction was excessively severe.

There may be circumstances when it may be appropriate for a more severe sanction(s) other than the academic sanction. The dean of the college(s) (or designee) where the alleged violation(s) occurred, in collaboration with the WSU Conduct Officer (or designee), will make the decision as to whether the case will be heard as a behavior discipline and be referred to the Student Affairs Office to be processed under the guidelines of the WSU Student Conduct Policy. Students found responsible for violation(s) processed under the WSU Student Conduct Policy face disciplinary sanctions (such as probation, suspension, etc.).

Information pertaining to the WSU Student Conduct Policy can be obtained in the Student Affairs Office (Kryzsko Commons, Room 129) or website (www.winona.edu/studentaffairs).

SPECIAL ACADEMIC RESOURCES

ACADEMIC ADVISING

Advising and Retention Center
Phelps Hall, Room 126 (507-457-5600)
www.winona.edu/advising

WSU's academic advising system is designed to help students make well-informed decisions. Students are ultimately responsible for being aware of the policies and requirements that affect their academic progress and for making appropriate decisions about choosing courses and a major, as well as other academic matters. Because this is a vital responsibility, the University offers the guidance of experienced professionals, through whom students learn about university objectives, requirements, support services, activities, and policies. As a result of advising, students should understand themselves better and learn to use resources to meet their specific educational needs.

Each student is assigned an advisor. Students who have declared a major are assigned an advisor in the department of their declared major. New students who have not declared a major are assigned to their orientation instructor for advising. Prior to each registration, the student must meet with the advisor to discuss course selection and obtain an access code for web registration. Students are encouraged to meet with their advisors at other times as well to discuss academic and career goals.

To get the greatest benefit from advising, each student should maintain a file of documents related to his or her academic progress and should bring the file to advising appointments. At a minimum, the file should include a copy of the student's Personal Data Form (PDF) and a current unofficial transcript. The file may also contain copies of drop/add requests, appeals, applications, records of academic recognition, or correspondence. The PDF can be accessed and printed from the "Students" section of the WSU website by clicking on "WINTRANET" to log in. If the PDF does not list an advisor, the student should contact the department offering his/her major to request an advisor. Students who have not declared a major should report to the Advising and Retention Center for assistance.

NEW STUDENT ORIENTATION

Advising and Retention Center
Phelps Hall, Room 126 (507-457-5155)
www.winona.edu/advising/orientsch.htm

To assist new students in their transition into the University, WSU offers an orientation course for incoming first-year students. This course introduces students to services, activities, expectations, and opportunities at WSU and provides them with the means to network with other students, faculty, and staff. The Advising and Retention Center notifies incoming first-year students as to the dates, times, and locations of this orientation course, OR 100 Introduction to Higher Education (1 S.H.).

ACADEMIC SUPPORT SERVICES

ACADEMIC SKILLS CENTER

Phelps Hall, Room 125 (507-457-5543)
www.winona.edu/academicsskillscenter

In the Academic Skills Center, students can get help with study skills, reading efficiency, basic mathematics, science, and English skills. Students can also get help in developing time management skills; preparing for tests; and increasing their skills in listening, note-taking, and using references. To register for tutoring, students should contact the Academic Skills Center or visit the website.

ACADEMIC ASSISTANCE CENTER

Library, Room 301
www.winona.edu/advising/aac/

Free academic assistance is available without an appointment in the Academic Assistance Center (AAC), which is a peer-tutorial program designed to help students improve academically. Students can view information about the Academic Assistance Center and other helpful WSU resources by accessing the AAC web address above.

STUDENT SUPPORT SERVICES

Howell Hall, Room 133 (507-457-5465)

Student Support Services include tutoring, academic advising, counseling and helping students choose a major. Students are eligible if they meet either of the following criteria: low income, first-generation college student, or disabled. Students may obtain more information about the program by visiting the Student Support Services office. This is a federally funded program; services are free.

OTHER ACADEMIC RESOURCES

COOPERATIVE PROGRAM: WSU-ST MARY'S UNIVERSITY

Registrar's Office
Somsen Hall, Room 114 (507-457-5030)

The cooperative program between WSU and St Mary's University of Minnesota (SMU) allows full-time, undergraduate WSU students to take classes at SMU and pay tuition for the credits at WSU. Participating students are required to take a minimum of 9 credits at WSU the semester in which they enroll in this program unless the department chairperson or the appropriate college dean approves an exception. To obtain information about participating in the program, students should contact the Registrar's Office.

If the student decides to take a course at SMU, he/she must get a permit, which requires the approval of the student's advisor and the Registrar's Office. Then the student must present the permit to the SMU Registrar's Office for processing and return the approved permit to the WSU Registrar's Office.

MINNESOTA STATE UNIVERSITY COMMON MARKET PROGRAM

Registrar's Office
Somsen Hall, Room 114 (507-457-5030)

Under the Student Exchange Program, a WSU student may attend other Minnesota state universities—one institution for a maximum of one semester—up to a total of three semesters at three different institutions. By doing so, students may take advantage of curriculum and program specialties as well as different intellectual and social climates. The home university considers credits earned under the program as "resident credit."

When students apply, they list the courses they want to take and usually include several alternate choices. The Common Market Director at the receiving institution notifies the student whether or not his/her request can be met. The student indicates his/her choice of housing on the application form, and the request is referred to the housing office at the receiving university. Assistance also is given in transferring financial aid.

To participate in the Common Market Program, students must be fully matriculated, must have attended WSU for at least two consecutive semesters, and must have at least a 2.00 GPA. Catalogs, class schedules, and application forms are available in the Registrar's Office.

STUDY ABROAD

Residential College/Study Abroad Office
Lourdes Hall, Room 156 (507-453-2517)

A variety of Study Abroad options are available for students who are interested in broadening their university experience and enhancing their resumes by including a living and learning experience in a foreign country. In addition to programs sponsored by WSU, students may select programs through other universities. Programs vary in location, length, cost, admission requirements, application deadlines, and focus; therefore, it is important to receive the most recent and detailed information. Early and careful planning for Study Abroad is important to ensure that students are able to maximize the academic and cultural benefit of the experience. All WSU-sanctioned programs that are one semester or more carry 12-15 credits per semester. (Short-term study and tours carry fewer credits.) To obtain preliminary information about Study Abroad, students may contact the Student Answer Center in Kryzsko Commons (457-2456). Information is also available in the Study Abroad office.

ADULT, CONTINUING EDUCATION AND EXTENSION (ACEED)

Somsen Hall, Room 109 (507-457-5080)
www.winona.edu/aceed

Adult Entry Program

WSU established the Adult Entry Program in an effort to serve the educational needs of adult students within its service area, on and off campus. The program is for adults wanting to pursue an Associate of Arts or a baccalaureate degree.

This unique and innovative program provides the opportunity for an assessment and review of prior learning acquired through informal education or life/work experience. WSU validates credits earned; the credits apply toward a degree program. For more information, contact the ACEED office.

Continuing Education

Continuing Education provides non-credit courses as well as courses offering continuing education units (CEUs). CEU courses and activities are taught by WSU faculty, community resource persons, or visiting experts. The courses frequently fulfill specialized learning needs identified by businesses and organizations. The CEU provides a standard measure for non-credit learning (1 CEU = 10 contact class hours) and is used for record keeping but is not the same as an academic degree credit. The CEU is recorded on the student's transcript and can serve as verification for continuing education activities.

Contact the ACEED office to get detailed information about CEU offerings or to discuss how WSU may be able to provide learning resources for your organization.

Customized Training

WSU works closely with the business community to provide continuing education for their employees. Individual courses and programs are designed to meet the needs of the company and can be delivered on-site at the business or on-campus. Courses may be offered for credit or non-credit. For more information regarding customized training and education programs, contact the ACEED office.

Extension Program

In addition to its regular programs, WSU offers a variety of on-campus and off-campus learning experiences for residents in the area. These courses may be undergraduate or graduate classes, and may be suitable for those seeking a degree or personal enrichment. Credit offerings also may be developed that provide specialized learning experiences to schools, industries, agencies and interested groups. Instruction for extension courses includes regularly scheduled evening, weekend and daytime classes taught by WSU faculty; specially scheduled workshops and seminars; educational travel opportunities; and credit options for workshops and/or conferences scheduled by outside agencies.

Students are permitted to enroll in an undergraduate extension class without having been admitted to the University. However, graduate students must complete a WSU application form. All extension courses can apply toward appropriate degree programs. For more information, contact the ACEED office.

Senior Citizen Programs

All senior citizens who are legal residents of Minnesota (reciprocity is not available) can take WSU courses by special arrangement and within legislative limitations. A one-time only fee of \$20 is required for admission to this program.

A person is considered a senior citizen if he/she reached the age of 62 before the beginning of any semester in which he/she will be enrolling in a course. Students can register for courses on a no-credit basis at no cost, or they can register for credit on a fee basis, which requires a service charge of \$20.00 per credit hour (amount subject to change). Enrollment is on a space-available basis. Classes are scheduled during the day at convenient locations throughout the City of Winona. For registration details, contact the ACEED office.

Elderhostel: WSU offers Elderhostel, a week-long residential learning experience, for anyone 55 years or older. Elderhostel is a non-profit organization committed to high quality, affordable, educational opportunities for older adults.

Learning Club: WSU ACEED also sponsors the Learning Club, a local, non-profit organization dedicated to the continuing education of people who have retired or are near retirement age. It capitalizes on the strengths and characteristics of older learners by offering programs that are selected and often taught by the club's membership. Club activities are geared specifically to interests of people who are retired. It is education that is challenging yet leisurely, fun and exciting.

STUDENT SERVICES

Office of the Vice President for Student Affairs and Facilities
Kryzsko Commons, Room 129 (507-457-5300)
www.winona.edu/studentaffairs

The Student Affairs office provides students with a living/learning environment that appreciates diversity, is challenging and supportive, and promotes the development of students through integrated curriculum and co-curriculum. With an outstanding and committed team of student personnel specialists, the Student Affairs organization assists students in achieving their academic and personal potential while enjoying their WSU experience through a variety of student-centered programs, services, activities, and work experiences.

In addition, the Facilities team provides professional services to students, faculty, and staff by managing the maintenance and operation of the University facilities; they provide a safe and clean living, learning, and work environment.

SERVICES

Career Services

Gildemeister Hall, Room 110
<http://career.winona.msus.edu/>

Career Services assists seniors, graduate students, and alumni seeking full-time employment; juniors and seniors seeking internships; and first- and second-year students seeking career direction. Equipment is available for students to use in preparing their interactive, multimedia electronic portfolio known as "WINGS." We also have computer terminals available for students to use in registering on our website or updating their information on the website.

Students can also interact with employers through career fairs, job fairs, and on-campus interviews. Career Services also provides a referral service distributing students' electronic resumes to employers and allowing employers to access students' resumes directly through our website. The Director of Career Services also provides small group and individual advising.

The office is open from 8:00 a.m. to 4:30 p.m. during the academic year and 7:30 a.m. to 4:00 p.m. during the summer. Students can access job openings or update their resumes via the internet 24 hours a day, seven days a week from the comfort of their computers. Employment information and graduate follow-up results are available in the office as well as on our website. Students are encouraged to register early in their senior year to take full advantage of the services offered through Career Services.

Counseling Center

Gildemeister Hall, Room 132 (507-457-5330)

The Counseling Center provides short-term counseling to currently enrolled students. These services are provided at no cost to the student. The counseling center is staffed by a full-time office manager, three professional counselors, and graduate student interns.

Services provided include personal counseling, career counseling, and outreach. The information exchanged during the counseling process is confidential. No information will be released without the student's written permission, and students are advised of the limitations of this confidentiality. Students should call the Counseling Center or stop by between 8:00 a.m. and 4:30 p.m. to schedule an appointment.

International Services and Cultural Diversity

International Services: Kryzsko Commons, Room 130 (507-457-5303)
Cultural Diversity: Kryzsko Commons, Room 122 (507-457-5595)

As we look to the future, WSU is committed to serving the needs of international, multicultural, and diverse students by providing opportunities for students to "come together" in a spirit of respect and cooperation to learn from one another and share the ideals espoused by Dr. Martin Luther King Jr. As a result, the International Student Office, the Cultural Diversity Program, and the Cross Cultural Outreach Program are part of a unique and recently reorganized structure focusing

on the promotion of a diverse climate that facilitates awareness, respect and understanding of issues relating to race, ethnicity, culture, gender, age, beliefs, sexual orientation, ability levels, socio-economic status, and religion. In addition to the focus on educating everyone for life in a multicultural society, the International Services and Cultural Diversity program provides specialized assistance for diverse students both inside and outside of the United States.

Multicultural Students and Diverse Students: Specialized services are available to enhance success at the University, including information on admission, scholarships, and financial aid. Counseling and advising, academic success programs, personal problem-solving, leadership development, and participation in campus organizations are also integral parts of the services available.

International Students: Information and advice are available regarding admission to the University, scholarships, immigration concerns, Friendship Family Program, orientation programs, insurance requirements, employment regulations for F-1 and other visa holders, English language offerings, and personal problem solving.

Cultural Outreach Program: Both international and multicultural students are offered scholarship opportunities for participation in the Cultural Outreach Program, which focuses on educating children, college students and adults, in addition to bringing together people who would otherwise not have the opportunity to meet one another. The Cultural Outreach Program is an educational and collaborative component, which encourages hands-on learning that will increase a student's cultural competence in a global society.

Disability Resource Center

Howell Hall, Room 136 (507-457-2391, voice or 507-457-2409, TTY)
Fax: 507-457-5155; e-mail: drc@winona.edu
www.winona.edu/disabilityservices

In accordance with Section 504 of the federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Winona State University endeavors to make reasonable adjustments in its policies, practices, services and facilities to ensure equal opportunity for qualified persons with disabilities to participate in all educational programs and activities. A person with a disability is defined as:

- A person with a physical or mental impairment that substantially limits one or more major life activities. This includes care for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working.
- A person who has a disability, has a record of the disability, or is regarded as having the disability.

A student requiring special accommodation or auxiliary aids must apply for such assistance through the Office of Disability Services. The ADA Coordinator will respond to concerns about inequality of access or opportunity. Proof of disability from a competent authority will be required, as well as information regarding specific limitations for which accommodation is requested. Reasonable accommodations are the services that are necessary to provide equal access in an academic setting. Examples of possible accommodations may include priority registration, testing accommodations, note taking assistance, interpreter services, tape-recorded lectures, photocopying, writing/ scribing assistance, lab assistance, adaptive equipment, or taped textbooks.

A qualified person is one who has a disability and who meets the essential academic eligibility requirements for the WSU program or activity in which the individual seeks to participate. In order to receive academic accommodations, the person must identify/self-disclose his/her educational needs.

- Approval of accommodations is based on adequate supporting documentation of a disability.
- Qualified disabled students must meet the same academic requirements as all students on campus.
- An accommodation is not reasonable if it compromises the essential elements of a course or lowers academic standard.
- A request may be denied if it fundamentally alters a course or program or is an undue hardship for WSU.
- Some of the auxiliary aids may be provided by another agency such as Reading for the Blind or Dyslexic and National Library Service.

- Certain accommodations, such as course modifications or substitutions, may take up to one semester to be provided. Further information is available in the Student Disability Handbook, which is available in the Office of Disability Services or online at www.winona.edu/disabilityservices/handbooks/student/shandbook.html.

Maxwell Children's Center

Maxwell Hall, Room 102
(507-457-5368 or 507-457-2744)

The Maxwell Children's Center operates under the auspices of the College of Education, and it provides childcare services and educational programs for children of students, faculty/staff, and the community. The center serves children from six weeks to 12 years of age. The center is open from 7:15 a.m. to 5:30 p.m., Monday through Friday, twelve months a year, excluding university holidays and part of each semester break. Children may be enrolled on either a part-time or full-time basis. Information about fees is available at the center.

The Maxwell Children's Center is an active contributor to many aspects of campus life. It provides the WSU community with benefits that include:

- An affordable, inclusive, and developmentally appropriate environment for all children.
- A valuable classroom setting for university students seeking a variety of Minnesota teaching licensures and other experiences with children. WSU students work as student staff; they also serve as practicum/field experience students.
- A model program for regional early childhood professionals. WSU students who have children are strongly urged to contact the Children's Center as soon as they are admitted to WSU because the center's services are in high demand.

Health Insurance

All full-time students may purchase health insurance through the MnSCU Injury and Sickness Insurance Plan. For detailed information, contact one of the following offices: International Services Office (Kryzsko Commons, Room 130), Health Services Center (Maxwell Hall), or Counseling Center (Gildemeister Hall, Room 132). Information is also available at www.student-resources.net.

Media Services

Howell Hall, Room B3 (507-457-5110)
www.winona.edu/mediaservices/

Media Services strives to promote a stimulating learning environment by helping to move technology into the classrooms. The Media Services staff provide student ID cards, access to the university's media collection, and equipment. They also offer video and audio duplication services, color copier services, and graphics presentation services. For additional information concerning support offered by Media Services, visit the website above, or call the office.

Parking Services

Sheehan Residence Hall, (507-457-5062)
<http://www.winona.edu/parking>
e-mail to: pk@vax2.winona.edu

Parking permits are required in all University parking lots on the Winona campus with the exception of metered spaces in the silver Kryzsko lot and metered spaces on Johnson Street. The requirement for permits includes all students who have state-issued handicapped permits. Information about how to obtain a visitor permit is available from Parking Services. For the Winona campus, the application process for parking permits starts April 1 to be effective the next school year. If applications exceed the parking spaces available, spring and fall drawings are held. If space becomes available after the drawing, permits are sold on a first-come, first-serve basis. If no permits are available, applicants' names are put on a waiting list. For more details and information about the cost of parking permits on the Winona campus, contact Parking Services.

Security Services

Main Floor, Sheehan Residence Hall (507-457-5555)
www.winona.edu/security

WSU Security is responsible for the physical security of all residence halls and academic buildings throughout the University. Campus security employs approximately 40 students to perform security-related duties. Security provides 24-hour coverage of the campus. (Campus security officers are easily identified by their yellow shirts and/or blue jackets.) Additionally, the City of Winona Police Department patrols and responds to calls on campus 24 hours a day throughout the year.

Campus Security works to ensure the safety of students, staff, faculty and University property. Campus Security is available 24 hours a day and works proactively to prevent crime. Statistics regarding campus climate for safety and security are available in the Office of Student Affairs.

Annually, WSU publishes a Campus Security Report; see page 34 for more information.

Student Answer Center (SAC)

Kryzsko Commons, Lower Level (507-457-2456)
<http://faq@winona.edu>
e-mail: SAC@winona.edu

When students are not sure where to go for answers to their questions, they can start with Student Answer Center (SAC). SAC is open Monday through Thursday from 8:00 am to 6:00 pm and Friday from 8:00 am to 4:30 pm. Students may also call SAC for an immediate response or, after hours, leave a voice mail for a response the next business day. If students prefer, they may e-mail questions (see above), or they may access the list of frequently asked questions on the SAC website (see above). SAC can handle a variety of requests; for example, SAC can print WSU bills for students, give out advisor information, complete change of address forms and declaration of major forms. SAC is the first stop for students interested in Study Abroad and is the one-stop resource for Winona State University students and guests.

Student Health Service

West Wing of Maxwell Hall (507-457-5160)

The Health Service facility is staffed by physicians, nurse practitioners, registered nurses, a medical technologist, and a medical records clerk. Services include:

- Medical examinations and consultations for illness, injury and other medical concerns
- Laboratory services
- Mantoux tests and other immunizations
- Physical exams for sports, employment or travel
- Allergy injections (students must supply their own serum)
- Contraceptive counseling and prescriptions
- Health education materials including pamphlets, videos and consultation, which enable students to develop a lifestyle that will reduce their risk of disease and injury.
- Smoking cessation program

The student health fee pays for most of the services provided during regular office hours. There are charges for medications, laboratory tests, and some medical procedures and supplies. Emergency care is available evenings and weekends at Community Memorial Hospital (855 Mankato Avenue).

Pre-Enrollment Medical Examination

Each student must complete a medical history report and submit it to the Student Health Service. All new students get the form at registration, or the health service mails it upon request. The form can be completed without a physical exam or a physician's signature. However, the University recommends and encourages a physical exam be done.

Notes:

1. For students who are planning to participate in athletics, a physical exam is mandatory and must be completed after July 1. A special form is available from the Athletic Department.
2. Health records for transfer students are not sent automatically with transcripts from other colleges; transfer students must specifically request the records. Students must complete the Report of Medical History for the WSU Student Health Service.

Proof of Immunization

Minnesota Law (M.S. 135A.14) requires that all students enrolled in a public or private post-secondary school in Minnesota be immunized against diphtheria, tetanus, measles, mumps and rubella—allowing only for certain specified exemptions. Records must be on file with the Student Health Service. The law also requires that all students, in order to remain enrolled, must submit their immunization information to the Student Health Service within 45 days of the beginning of the term. Forms are available in the Student Health Service office.

STUDENT ACTIVITIES

The hub of student activities is the Student Center at Kryzsko Commons. This facility has venues such as the campus dining center, patio, private dining rooms, convenience store, Pizza Hut, Blimpie, and vending options. Conference rooms are available to students for informal gatherings. The Student Center is located on the main level, and it hosts pocket billiards, a ping-pong area, student lounges, and a television-viewing center. The WSU Bookstore is also on the main level. The Director of Auxiliary Enterprises and the Director of Student Activities work with student committees to coordinate social, cultural, and recreational programs. Activities include movies, dances, guest speakers, concerts, river excursions, banquets, art exhibits and other special events.

More than 100 student clubs and organizations represent a wide variety of interests. These clubs encompass academic, athletic, cultural, political, religious, and social interests. Each organization provides service activities to benefit its members, the campus, and the community. The Alliance of Student Organizations Committee (ASO) is the central organization to which all University clubs belong.

Student Clubs and Organizations

Academic Clubs
 Accounting Association
 American Advertising Federation
 American Criminal Justice Association
 American Marketing Association
 American Sign Language Club
 American Society Personnel Association
 Art Club
 Association of Student Paralegals
 Association of Worksite Health Promotion
 Biology Club
 Business Education/Office Systems Administration Club
 Chemistry Club
 Cogito X (Philosophy)
 College Communicators of Today Club
 Communication Studies Club
 Computer Science Club
 Council for Exceptional Children
 Criminal Justice Club
 Early Childhood Club
 English Club
 Exercise Science Club
 Finance Club
 Flying Club
 Geology Club
 German Club
 Historical Association
 Health Educators for Promotion and Education (HOPE)
 HP48 Users Club
 International Association of Business Communicators
 Management Information Systems Association
 Mass Communication Club
 Mathematics/Statistics Club
 Medical Science Association
 Minnesota Nursing Student Association
 Music Educators National Conference
 National Constitution Society for Collegiate Journalists
 Peer Mentor Program
 Physics Club
 Political Science Association
 Press Photographers Association
 Professional Educators of Physical Activity
 Psi Chi Honor Society/Psychology Club
 Society for the Advancement of Management

Society for the Advancement of Materials and Process Engineering
 Society for Collegiate Journalists
 Society for Human Resources Management
 Society of Plastic Engineers
 Student Association of
 Social Workers
 Student Health Association
 Student Minnesota Education Association
 Students in Free Enterprise
 Student Support Organization for MSUSA
 Sociology Club
 Therapeutic Recreation Club

Special Interest Clubs

Amnesty International
 BACCHUS
 Chess Club
 Child Care
 Circle K (College Kiwanis)
 College Republicans
 Debate Society
 Democratic Farm Labor
 Disabilities Awareness Club
 Environmental Club
 Gay/Lesbian Alliance for Dignity
 Habitat for Humanity
 Hall of Fame
 Non-Traditional Student Organization
 Nursery School
 Peer Alcohol Consultation and Education
 Pep Band
 Results
 Rotaract (College Rotary)
 RPSIG (role playing)
 Solbeat (Drum Club)
 Student Alliance for Gender Equality
 Students for Choice
 Students Opposed to Abortion
 United Nations
 Youth Mentor Program

Campus Organizations

Alliance of Student Organizations
 Ambassadors
 Grievance Board
 Homecoming Committee
 Inter-Residence Hall Council
 Judicial Board
 Student Senate
 University Programming Activities Committee (UPAC)

Cultural Clubs

African Club
 Asian American Club
 Bangladesh Forum
 Black Cultural Awareness
 Hispanic Club
 Hmong Student Club
 International Student Club
 Malaysian American Chapter
 Muslim Student Organization
 Native American Heritage and Awareness
 Palestinian American Club

Fine Arts Clubs

Brass Ensemble
 Chamber Choir
 Choral Union (University and community)
 Concert Band
 Concert Choir
 Dance Society
 Grub Street Club (English Guild)
 Forensics (speech team)
 Jazz Club
 Madrigal Singers
 Opera Workshop
 Percussion Ensemble
 Symphonic Wing Ensemble

Symphony Orchestra
University String Quartet
Wenonah Players (theatre)
Woodwind Ensemble
Woodwind Quintet
Writer's Bloc

Communications

KQAL-FM Radio (campus)
Satori (library publication)
Bravura (lab newspaper)
The Winonan (newspaper)

Religious Clubs

Campus Crusade for Christian Student Fellowship
Christians in Action
Cooperative Campus Ministry
Fellowship of Christian Athletes
InterVarsity Christian Fellowship
Lutheran Campus Center
Lutheran Student Fellowship
Muslim Student Organization
Newman Center (Catholic)
United Campus Ministries
WELS Lutheran Campus Ministry

Honorary Fraternities

Alpha Delta Mu (Social Work)
Alpha Lambda Delta Alpha Epsilon Rho (Broadcasting)
Alpha Omega Honore (Honors)
Delta Sigma Pi (Business)
Golden Key InterNational
Honor Society
Sigma Theta Tau (Nursing)

Fraternities and Sororities

Delta Phi Epsilon
Phi Theta Chi
Pi Lambda Phi
Sigma Sigma Sigma
Tau Kappa Epsilon
Zeta Chi Theta
Inter-Greek Council
Panhellenic Association

Intramural Athletics

Aerobics
Badminton
Basketball
Flag Football
Floor Hockey
Racquetball
Soccer
Softball
Tennis
Volleyball
Water Aerobics
Weight Training

Athletic Clubs

Bowling
Cheer Team (co-ed)
Cricket Club
Cycling Club
Dance Team
Fencing
Karate
Nordic Ski Club
Racquetball
Rugby (women's and men's)
Running Club
Ski/Snow Board Club
Soccer (men's)

Strength Club
Tai Chi
Ultimate Frisbee (women's and men's)
Volleyball
Water Polo Club

POLICIES AND REGULATIONS

Affirmative Action Office

Somsen Hall, Room 202B
(507-457-5008 or 507-457-5013)

The Affirmative Action Officer (AAO) provides information and investigates complaints of discrimination or harassment based upon gender, race, religion, national origin, age, color, creed, economic or marital status, mental or physical disability, sexual orientation or affectional preference, handicap or veteran status. The AAO also investigates concerns regarding sexual harassment at WSU. These confidential services are available by appointment or on a walk-in basis. Call the AA Office for more information or to make an appointment.

Crime Awareness and Campus Security Act

WSU Security Services
Sheehan Hall, (507-457-5555)
www.winona.edu/security/crime_report_wsu.html

WSU recognizes that providing the safest environment possible is an integral element of the University's educational mission and annually publishes a Campus Security Report that is available to everyone. This report provides statements of policy for a broad range of safety and security programs, including crime prevention programs and reporting, personal safety, community relations, environmental safety, enforcement authority and response, and a 3-year statistical review of designated crimes on campus. A printed copy of this report may be obtained, at no charge, from WSU Security Services office or from the website above.

Student Conduct

Office of Student Affairs, Conduct Officer
Kryzsko Commons, Room 130 (507-457-5300)

The University's conduct policy and related policies, which express expectations of behavior and provide for the protection of the rights of students, are listed in the Class Schedule, which can be accessed at www.winona.edu/class_schedule. Policies can be found (1) at www.winona.edu/studentaffairs, (2) in the online Student Handbook at www.winona.edu/handbook, or (3) by contacting the Office of Student Affairs. Students are responsible for being aware of all student policies and regulations and for complying with them. Behavior that is threatening to the safety or welfare of oneself or others, or that is harassing or discriminatory in nature, will be reviewed promptly by the University and, after due process, is subject to University sanctions. The student code of conduct does not replace or reduce the requirements of civil or criminal laws.

If assistance with a complaint or additional information is needed, contact the Student Conduct Officer through the Office of Student Affairs.

Student Right to Know Act

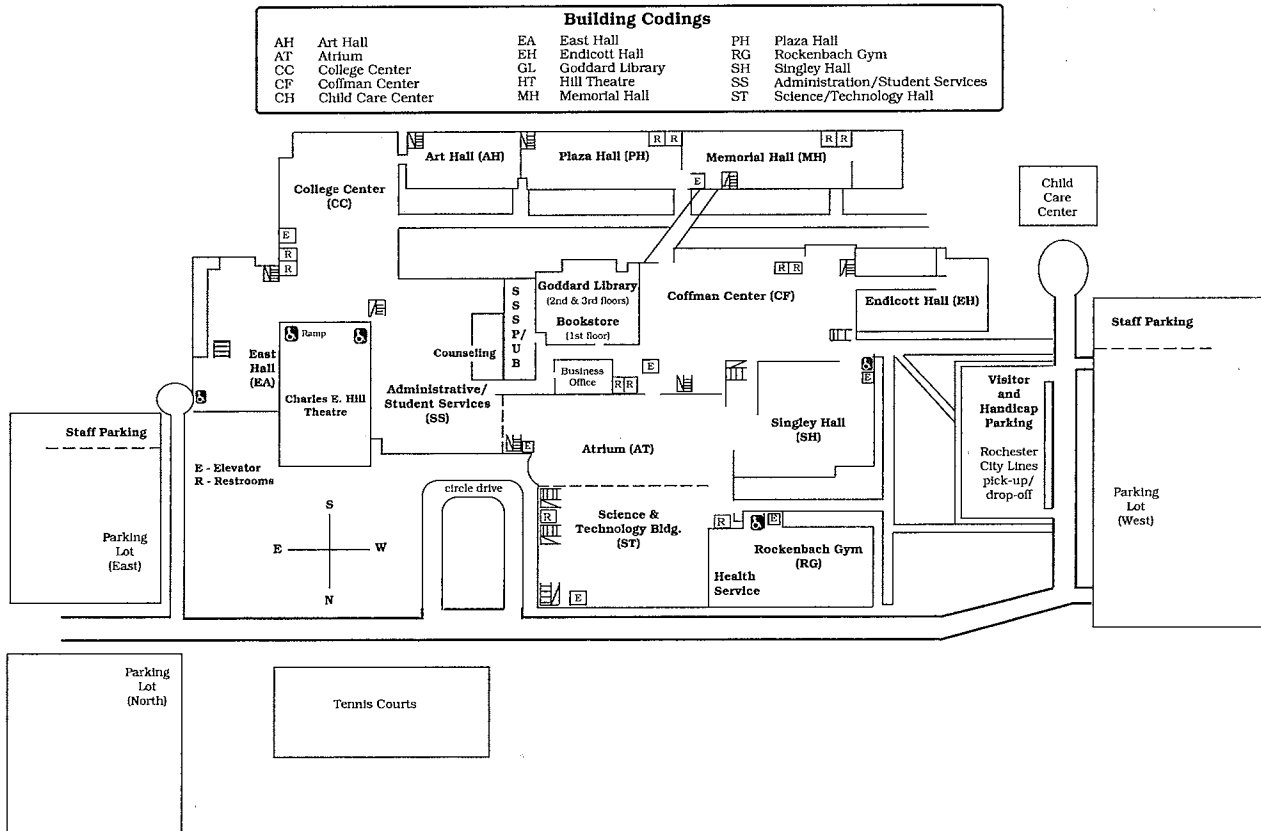
Institutional Research
Maxwell Hall, Room 205 (507-457-5004)

In compliance with the federal Student Right to Know Act, WSU tracks the rates at which full-time students complete bachelor's degrees from the University, within a specified period of time. This information is available on request from the Institutional Research Office.

WSU-ROCHESTER CENTER

ROCHESTER CAMPUS MAP

Rochester Community Technical College • University of Minnesota Rochester Center
 • Winona State University - Rochester Center



PROGRAM OVERVIEW

Office of the Director, WSU-Rochester
 SS210 UCR (507-285-7100)

Since 1917, Winona State University has served students in Rochester and the surrounding area. In 1993, Winona State University, along with the University of Minnesota and Rochester Community and Technical College, collaborated to create the University Center at Rochester (UCR). The Greater Rochester Area, which UCR serves, has a population of over 100,000 people; area residents have a high level of education attainment, and they are highly receptive to the lifelong learning opportunities offered by WSU-Rochester and the other institutions. WSU-Rochester serves approximately 2,000 students per year.

Because it is located in the City of Rochester, UCR has unique opportunities to collaborate with IBM, Mayo Clinic, and the Rochester School District to offer specialized classes in computer science, the health professions, and education.

Faculty

All program areas offered at WSU-Rochester are staffed with residential faculty who live and work in the Rochester area. In addition, WSU faculty members, who commute from the main campus, teach some classes.

Computer Facilities

The center is equipped with state-of-the-art technology for interactive television and computer systems that link UCR students with main campuses and the world. The computer facilities consist of four teaching computer labs, two open computer labs, and a shared computer lab. All labs allow students access to mainframes on the Winona campus. Beginning fall 2002, laptop computers will be required for full-time students who have accumulated 90 semester hours or fewer.

Library

WSU-Rochester students have access to both the UCR Goddard Library and the University Library on the main campus. WSU-Rochester's library holdings are integrated into UCR's Goddard Library holdings of over 57,000 volumes. This arrangement provides students with an extensive resource of reference and research material on the WSU-Rochester campus. In addition, students may request overnight courier service to the main campus library for articles and books; they may also do online searches using the PALS and Luminet systems.

WSU-ROCHESTER DEGREES/PROGRAMS

2+2 Undergraduate Programs	Graduate Programs
Accounting	Master of Science in Counselor Education: <ul style="list-style-type: none"> • Community Counseling • Professional Development • School Counseling
Business Administration	
Computer Information Systems	Master of Science in Nursing: <ul style="list-style-type: none"> • Advanced Practice Nursing Major • Adult/Family Nurse Practitioner • Clinical Nurse Specialist • Nurse Administrator • Nurse Educator • Collaborative Master's Program with University of Minnesota with emphasis in Public/Psych/Mental Health Nursing
Computer Science	Master of Science in Education
Education: K – 6 with Middle School Communication Arts and Literature 5-8 Specialty	Master of Science in Educational Leadership: <ul style="list-style-type: none"> • Elementary School Leadership • Secondary School Leadership • General School Leadership
Education: K - 6 with Middle School Social Studies 5-8 Specialty	Educational Specialist Degree: <ul style="list-style-type: none"> • Elementary School Leadership • Secondary School Leadership • General School Leadership
Nursing (Generic Option)	
Nursing (RN Option)	
Professional Studies (General Option)	
Psychology (Option A)	
Social Work	

WSU-Rochester cooperates with Rochester Community and Technical College (RCTC) to offer complete educational programs to the area. Through the 2+2 Program, students can complete 11 baccalaureate degree programs by transferring lower-division credits from RCTC and completing upper-level courses at the WSU-Rochester Center. At the WSU-Rochester campus, students can complete numerous undergraduate minors and five graduate degrees within 16 different graduate programs. (For more information about the graduate programs, see the WSU Graduate Catalog.) Program descriptions for the undergraduate 2+2 Programs are listed in alphabetical order, starting on page 37.

Special Programs

- WSU cooperates with the University of Minnesota in offering a master's degree in teaching leadership and cooperates with Mayo Clinic in offering a master's degree in nurse anesthesia.
- National Technological University (NTU): Through a cooperative agreement with IBM, WSU is administering graduate courses in engineering and computer science. All NTU classes are taught through satellite delivery, and the courses originate from over 35 participating universities.
- Non-Credit Programs: WSU-Rochester cooperates with community and professional groups, and WSU's Department of Adult, Continuing Education and Extension (ACEED) to provide non-credit continuing education programs.
- Adult Entry Program: This program is designed for mature students who have never attended college or who are returning to college. Counselors are available in Rochester on a regular basis to assist adult students seeking a college education. Under this program, college credit may be awarded for life/work experience. (See Adult, Continuing Education and Extension on page 30 for more information.)

ADMISSIONS

For general information about admission to WSU, see page 6.

Campus Visits

Students are encouraged to visit the WSU-Rochester campus any time. For more information about programs and services, call 800-366-5418 or 507-285-7100.

FINANCIAL AID

Students should request an Application for Financial Aid when they apply for admission.

Counseling is available for students concerning long- and short-term plans for financing their education. Representatives from the WSU Financial Aid Office are available at WSU-Rochester on a weekly basis (Wednesdays). Preliminary information is available at WSU-Rochester.

HOUSING AND DINING

WSU-Rochester Center, along with its UCR partners, Rochester Community and Technical College (RCTC) and University of Minnesota-Rochester (UM-R) is considered a commuter campus. However, a variety of housing options are available in the Rochester area, including furnished and unfurnished apartments, efficiencies, single room rentals and houses. RCTC has a listing of housing information available for students. In addition, Professional Property Management is a local independent agency, which also provides information on housing for UCR students. Students may obtain housing information from both of these sources at the UCR Information Desk.

WSU-Rochester Center's cafeteria is located on the third floor of the College Center. In addition to the cafeteria, food and beverage vending machines are available throughout the campus complex. Microwaves for student use are also available in the cafeteria, as well as in some vending machine areas.

REGISTRATION AND ACADEMIC RECORDS

Students can enroll in WSU-Rochester classes without being formally admitted or filing an Intent to Return form. For more general information about registration and academic records, see page 17.

Student Disclosure Policy

At the UCR campus, Winona State University shares administrative tasks and other functions with RCTC and the University of Minnesota. Educational records of students taking classes at the UCR campus may be made available to employees of these other two institutions while the student is attending the UCR campus if access is necessary for the employee to provide services to the student.

STUDENT SERVICES

Career Services

Career Services staff schedule appointment dates on the Rochester campus during the academic year for individual advising. Students may request appointments by calling Student Services at 507-285-7100. In addition, students may register online with Career Services to access announcements of employment and internship opportunities as well as career search information; they can also create online resumes to be referred to potential employers via the internet.

Counseling

Counseling services are available through WSU-Rochester. Staff members are professional counselors with extensive academic experience in counseling.

International Student Services

Staff from the International Student Office make frequent visits to the WSU-Rochester Center. Students may schedule appointments by calling Student Services at 507-285-7100.

Parking Services

Students will be charged a \$1.50 parking fee per credit with a maximum parking fee of \$22.50 per semester. This fee will automatically be added to students' semester billing for tuition and fees. No parking permit will be issued. "Yellow" lots are for student parking.

Joint WSU-RCTC Services

Other areas of student support, such as services to disabled students and childcare, are coordinated by WSU-Rochester staff members.

2+2 ACCOUNTING

RCTC & WSU

First two years: A.S. degree in Liberal Arts & Studies at RCTC

Second two years: B.S. degree in Accounting at WSU

I. GENERAL EDUCATION REQUIREMENTS40 Credits

Courses must be selected from those approved to satisfy the competencies of Minnesota Transfer Curriculum (MNTC) Goals 1, 3, 4, 5, 6. Consult the RCTC catalog listings to determine the specific courses that apply to areas below.

Goal 1: Written and Oral Communication.....11 Credits

ENGL 1117, 1118 or	Reading & Writing Critically I & II	8 Credits
ENGL 1917, 1918	Reading & Writing Critically I & II: Honors	8 Credits
SPCH 1114	Fundamentals of Speech	3 Credits

Goal 2: Critical Thinking – Met by any Course In MNTC 1-10 Goals

Goal 3: Natural Science.....3 Credits

Choose one course with a lab that meets MNTC in biology, chemistry, earth science or physics.

Goal 4: Mathematics.....3-5 Credits

MATH 1119 OR	Applied Calculus for Business Majors	3 Credits
MATH 1127	Calculus I	5 Credits

Goal 5: History and Social Sciences.....11 Credits

ECON 2214	Principles of Microeconomics	4 Credits
ECON 2215	Principles of Macroeconomics	4 Credits
3 credits from anthropology, geography, history, political science, psychology, or sociology.		

Goal 6: Humanities and Fine Arts.....6 Credits

Choose from two different areas: art, English literature, foreign language, humanities, journalism, music, philosophy, speech/theatre.

Additional General Education Requirements.....4-6 Credits

Choose elective credits from Goals 1, 3, 4, 5, 6.

II. HEALTH AND HUMAN PERFORMANCE.....3 Credits

Any combination of health and/or physical education activity courses (1100-1199).

III. BUSINESS CORE REQUIREMENTS.....21 Credits

BUS 2217	Financial Accounting	4 Credits
BUS 2218	Managerial Accounting	4 Credits
BUS 2212	Business & Economic Statistics	4 Credits
BUS 2227	Business Law I	3 Credits
BUS 2234	Computerized Accounting	3 Credits
BUS 2201	Principles of Marketing	3 Credits

Total Credits.....64 Credits

Note: The award of this A.S. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).

MAJOR REQUIREMENTS AT WSU:

Accounting.....22 Credits

ACCT 311	Intermediate Accounting I	4 Credits
ACCT 312	Intermediate Accounting II	3 Credits
ACCT 330	Accounting Information Systems	3 Credits
ACCT 361	Intermediate Man./Cost Accounting	3 Credits
ACCT 413	Advanced Financial Accounting	3 Credits
ACCT 421	Introduction to Taxation	3 Credits
ACCT 471	Auditing I	3 Credits

Business Administration.....18 Credits

BUSA 311	Business Law II	3 Credits
DIS 320	Intermediate Business Statistics	3 Credits
DIS 362	Management Information Systems	3 Credits
MGMT 325	Organizational Dynamics	3 Credits
MGMT 495	Strategic Management	3 Credits
POM 334	Production Operation Management	3 Credits

Economics/Finance.....3 Credits

FIN 360	Corporate Finance	3 Credits
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Major Electives.....9 Credits

Any 300-400	ECON elective	3 Credits
300-400	ACCT electives	6 Credits

Open Electives.....12 Credits

Total Credits.....64 Credits

Required for a Bachelor of Science (B.S.) Accounting.....128 Credits

2+2 BUSINESS ADMINISTRATION

RCTC & WSU

First two years: A.S. degree in Business Administration at RCTC

Second two years: B.S. degree in Business Administration at WSU

I. GENERAL EDUCATION REQUIREMENTS.....40 Credits

Courses must be selected from those approved to satisfy the competencies of Minnesota Transfer Curriculum (MNTC) Goals 1, 3, 4, 5, 6. Consult the RCTC catalog listings to determine the specific courses that apply to the areas below.

Goal 1: Written and Oral Communication.....11 Credits

ENGL 1117, 1118 or	Reading & Writing Critically I & II	8 Credits
ENGL 1917, 1918	Reading & Writing Critically I & II: Honors	8 Credits
SPCH 1114	Fundamentals of Speech	3 Credits

Goal 2: Critical Thinking – Met by any Course in MNTC 1-10 Goals

Goal 3: Natural Science.....3 Credits

Choose one course with a lab that meets MNTC in biology, chemistry, earth science or physics.

Goal 4: Mathematics.....	3-7 Credits
MATH 1113 OR Finite Math with College Algebra	3 Credits
MATH 1115 and 1117 OR College Algebra (3 credits) and Pre-Calculus (4 credits)	
MATH 1119 Applied Calculus for Business and Economics	3 Credits

Goal 5: History and Social Sciences.....	11 Credits
ECON 2214 Principles of Microeconomics	4 Credits
ECON 2215 Principles of Macroeconomics	4 Credits
3 credits from anthropology, geography, history, political science, psychology or sociology.	

Goal 6: Humanities and Fine Arts.....	6 Credits
Choose from two different areas: art, English literature, foreign language, humanities, journalism, music, philosophy, speech/theatre.	
Additional General Education Requirements.....	2-6 Credits
Choose elective credits from Goals 1, 3, 4, 5, 6.	

II. HEALTH AND HUMAN PERFORMANCE.....	3 Credits
Any combination of health and/or physical education activity courses (1100-1199)	

III. BUSINESS CORE REQUIREMENTS.....	21 Credits
BUS 2217 Financial Accounting	4 Credits
BUS 2218 Managerial Accounting	4 Credits
BUS 2212 Business & Economic Statistics	4 Credits
BUS 2227 Business Law I	3 Credits
BTEC 2350 Microcomputer Business Applications	3 Credits
BUS 2201 Principles of Marketing	3 Credits

Total Credits.....	64 Credits
Note: The award of this A.S. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).	

MAJOR REQUIREMENTS AT WSU:

Business Administration.....	24 Credits
BUSA 311 Business Law II	3 Credits
DIS 320 Intermediate Business Statistics	3 Credits
DIS 362 Management Information Systems	3 Credits
MGMT 315 Principles of Management	3 Credits
MGMT 317 Management of Human Resources	3 Credits
MGMT 325 Organizational Dynamics	3 Credits
MGMT 495 Strategic Management	3 Credits
POM 334 Production Operation Management	3 Credits

Economics And Finance.....	3 Credits
FIN 360 Corporate Finance	3 Credits

Major Electives.....	15 Credits
Any 300-400 DIS or POM elective	3 Credits
Any 300-400 MGMT elective	3 Credits
Any 300-400 International Business/Management course OR an International Course from the Departments of Accounting, Business Administration, Economics and Finance, or Marketing.	
Any 300-400 BUSA, DIS, MGMT, or POM Elective	3 Credits
Any 300-400 elective from the Departments of Accounting, Business Administration, Economics and Finance, or Marketing	

Open Electives.....	22 Credits
Total Credits.....	64 Credits
Required for a Bachelor of Science (B.S.) Business.....	128 Credits

2+2 COMPUTER INFORMATION SYSTEMS

RCTC & WSU

First two years: A.S. degree in Liberal Arts at RCTC
Second two years: B.S. in Computer Science at WSU

I. GENERAL EDUCATION REQUIREMENTS.....	40 Credits
Courses must be selected from those approved to satisfy the competencies of Minnesota Transfer Curriculum (MNTC) Goals 1, 3, 4, 5, 6. Consult the RCTC catalog listings to determine the specific courses that apply to the areas below.	

Goal 1: Written and Oral Communication.....	11 Credits
ENGL 1117, 1118 or Reading & Writing Critically I & II	8 Credits
ENGL 1917, 1918 Reading & Writing Critically I & II:	
Honors	8 Credits
SPCH 1114 Fundamentals of Speech	3 Credits

Goal 2: Critical Thinking – Met by any Course in MNTC Goals 1-10

Goal 3: Natural Science.....	3 Credits
Choose one course with lab, from the following four areas: biology, chemistry, earth science or physics.	

Goal 4: Mathematics.....	11 Credits
MATH 2218 Discrete Mathematics	4 Credits
MATH 1119 Applied Calculus for Business & Economics	3 Credits
MATH 2208 OR Fundamentals of Statistics	4 Credits
BUS 2212 Business and Economic Statistics	4 Credits

Goal 5: History and Social Sciences.....	6 Credits
ECON 2214 Principles of Microeconomics	4 Credits
Choose from the following disciplines, with a minimum of 2 credits from one area: anthropology, geography, history, political science, psychology, sociology.	

Goal 6: Humanities and Fine Arts.....	6 Credits
Choose from two different areas: art, English literature, foreign language, humanities, journalism, music, philosophy, speech/theatre.	

Select additional course from Goals 1, 3, 4, 5, 6	
to meet 40 credit hours.....	3 Credits

II. HEALTH AND HUMAN PERFORMANCE.....	3 Credits
Any combination of health and or physical education activity courses (1100-1199)	

III. COMPUTER CORE REQUIREMENTS:.....	23 Credits
COMP 1150 Computer Science Concepts	3 Credits
COMP 2243 Programming & Problem Solving	4 Credits
COMP 2247 Algorithms and Data Structure	4 Credits
Note: Students are encouraged to begin taking WSU Computer Science courses concurrently after completing the above core requirements.	
COMP 2233 OR Structured COBOL	4 Credits
COMP 2297 Programming in RPG	4 Credits
BUS 2217 Principles of Accounting I	4 Credits
BUS 2218 Principles of Accounting II	4 Credits

Total Credits.....	66 Credits
Note: The award of this A.S. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).	

MAJOR REQUIREMENTS AT WSU:

Computer Science Core.....	13 Credits
CS 301 Discrete Structures for Computer Science	3 Credits
CS 341 Advanced Data Structures	4 Credits
CS 351 Introduction to Assembler & Architecture	3 Credits
CS 410 Software Engineering	3 Credits

Computer Information Systems Option B Requirements.....	12 Credits
CS 385 Applied Database Management Systems	3 Credits
CS 470 System Design with CASE Tools	3 Credits
MGMT315 Principles of Management	3 Credits
MKTG 300 Principles of Marketing	3 Credits

Computer Information Systems Option B Electives.....	12 Credits
Choose 12 credits from the following list of courses:	
CS 405 Operating Systems	3 Credits
CS 411 Software Testing	3 Credits
CS 412 Networking and Telecommunications	3 Credits
CS 413 Advanced Networking & Telecommunications	3 Credits
CS 415 Principles of Programming Languages	3 Credits

CS 425	Numerical Analysis	4 Credits
CS 435	Theory of Computation	3 Credits
CS 440	Theory of Algorithms	3 Credits
CS 445	Artificial Intelligence	3 Credits
CS 466	Topics: General Computing Applications	1-3 Credits
CS 467	Topics: Information Systems Applications	3 Credits
CS 485	Database Systems Design	3 Credits
CS 491	Practicum in Computer Science	6 Credits

Note: Only 3 credits will count in major.

Open Electives.....	25 Credits
Total Credits.....	62 Credits

Required for a Bachelor of Science (B.S.)
Computer Information Systems.....128 Credits

2+2 COMPUTER SCIENCE

RCTC & WSU

First two years: A.S. degree in Liberal Arts at RCTC

Second two years: B.S. in Computer Science at WSU

I. GENERAL EDUCATION REQUIREMENTS.....40 Credits

Courses must be selected from those approved to satisfy the competencies of Minnesota Transfer Curriculum (MNTC) Goals 1, 3, 4, 5, 6. Consult the RCTC catalog listings to determine the specific courses that apply to the areas below.

Goal 1: Written and Oral Communication.....11 Credits

ENGL 1117, 1118 OR	Reading & Writing Critically I & II	8 Credits
ENGL 1917, 1918	Reading & Writing Critically I & II: Honors	8 Credits
SPCH 1114	Fundamentals of Speech	3 Credits

Goal 2: Critical Thinking – Met by Any Course in MNTC Goals 1-10

Goal 3: Natural Science.....3 Credits

Choose one course with lab, from the following four areas: biology, chemistry, earth science or physics.

Goal 4: Mathematics..... 14 Credits

MATH 2218	Discrete Mathematics	4 Credits
MATH 1127	Calculus I	5 Credits
MATH 1128	Calculus II	5 Credits

Goal 5: History and Social Sciences.....6 Credits

Choose from the following disciplines, with a minimum of 2 credits from two areas: anthropology, economics, geography, history, political science, psychology, sociology.

Goal 6: Humanities and Fine Arts.....6 Credits

Choose from two different areas: art, English literature, foreign language, humanities, journalism, music, philosophy, speech/theatre.

II. HEALTH AND HUMAN PERFORMANCE.....4 Credits

Any combination of health and or physical education activity courses (1100-1199)

III. COMPUTER CORE REQUIREMENTS:.....11 Credits

COMP 1150	Computer Science Concepts	3 Credits
COMP 2243	Programming & Problem Solving	4 Credits
COMP 2247	Algorithms and Data Structure	4 Credits

Note: Students are encouraged to begin taking WSU computer science courses concurrently after completing these core requirements.

Open Electives.....9 Credits

Total Credits.....64 Credits

Note: The award of this A.S. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).

MAJOR REQUIREMENTS AT WSU:

Computer Science Core.....13 Credits

CS 301	Discrete Structures for Computer Science	3 Credits
CS 341	Advanced Data Structures	4 Credits
CS 351	Introduction to Assembler & Architecture	3 Credits
CS 410	Software Engineering	3 Credits

Computer Science Option A Requirements.....14 Credits		
CS 371	Object Oriented Design and Development	3 Credits
CS 405	Operating Systems	3 Credits
CS 415	Principles of Programming Languages	3 Credits
CS 435	Theory of Computation	3 Credits
PHYS 332	Computer Organization	2 Credits

Computer Science Option A Electives.....21 Credits

Choose 21 credits from the following list of courses:

CS 385	Applied Database Management Systems	3 Credits
CS 411	Software Testing	3 Credits
CS 412	Networking and Telecommunications	3 Credits
CS 413	Advanced Networking & Telecommunications	3 Credits
CS 420	Computer Architecture	3 Credits
CS 425	Numerical Analysis	4 Credits
CS 430	Computer Graphics	3 Credits
CS 440	Theory of Algorithms	3 Credits
CS445	Artificial Intelligence	3 Credits
CS 450	Compilers	3 Credits
CS 465	Topics: Computing Theory	1-3 Credits
CS 466	Topics: General Computing Applications	1-3 Credits
CS 476	Distributed System: Concept and Design	3 Credits
CS 485	Database Systems Design	3 Credits
CS 491	Practicum in Computer Science	6 Credits
Note: Only 3 credits will count in major.		
PHYS 333	Microprocessor Electronics	4 Credits

Open Electives.....16 Credits

Total Credits.....64 Credits

Required for a Bachelor of Science (B.S.) Computer Science...128 Credits

2+2 ELEMENTARY EDUCATION W/MIDDLE SCHOOL COMMUNICATION ARTS & LITERATURE 5-8 SPECIALTY

RCTC & WSU

First two years: A.A. degree in Liberal Arts at RCTC

Second two years: B.S. teaching degree in Elementary Education with Middle School Communication Arts & Literature at WSU

I. GENERAL EDUCATION REQUIREMENTS.....41- 47 Credits

Courses must be selected from those approved to satisfy the competencies of Minnesota Transfer Curriculum (MNTC) Goals 1-10. Consult the RCTC catalog listings to determine the specific courses that apply to the areas below. Some courses may be used to meet a goal in 1-6 and one goal in 7-10. All ten goal areas must be met.

Goal 1: Written and Oral Communication.....14 Credits

ENGL 1117, 1118 or	Reading & Writing Critically I & II	8 Credits
ENGL 1917, 1918	Reading & Writing Critically I & II: Honors	8 Credits
(Note: Minimum grade of B in one of the two is required.)		
SPCH 1114	Fundamentals of Speech	3 Credits
(Note: Minimum grade of B is required.)		
SPCH 2214	Strategies of Human Connections	3 Credits

Goal 2: Critical Thinking – Met by Any Course In MNTC Goals 1-10

Goal 3: Natural Science.....6 Credits

A minimum of two courses with labs, from the following four areas: biology, chemistry, earth science or physics.

Goal 4: Mathematics.....3-6 Credits

This requirement is met in one of two ways:

MATH 1111	Contemporary Concepts in Mathematics	
	(minimum grade of "C" required) AND	3 Credits
MATH 1112	Mathematical Reasoning OR	
MATH 1113 or higher math course	(minimum grade of "C" required)	3 Credits

Goal 5: History and Social Sciences.....9-12 Credits

SOC 2627 Exceptionality 2 Credits
Choose from the following disciplines with a minimum of 2 credits from three different areas: anthropology, economics, geography, history, political science, psychology.

The following courses that fit in this goal area are NOT required but strongly recommended since they contain material that is in the content area exam that will be taken prior to licensure: GEOG 1614, HIST 1624 or HIST 1625.

Goal 6: Humanities And Fine Arts.....9 Credits

ENGL 2297	Children's Literature	3 Credits
SPCH 1125	Oral Interpretation	3 Credits

Choose from the following disciplines with a minimum of 2 credits from the following areas: art, foreign language, humanities, journalism, music, philosophy.

Select a course that meets Goals 7, 8, 9, and 10 if any of these goals have not been met by the courses used to meet Goals 1, 3, 4, 5, and 6.

II. HEALTH AND HUMAN PERFORMANCE.....4 Credits

Any combination of health and or physical education activity courses (1100-1199)

HLTH 1111 or	Health Education	3 Credits
HLTH 1132	Drug Use and Abuse	3 Credits

III. ELECTIVES.....13-19 Credits

Total Credits.....64 Credits

Note: The award of this A.A. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).

MAJOR REQUIREMENTS AT WSU:

License Requirements.....10 Credits

MTEd 125	Mathematics for Elementary Teachers	4 Credits
PER 200	Teaching Elementary Physical Education	3 Credits
HHP 320	Health Education in Elementary Schools	3 Credits

Note: Students must demonstrate educational technology competence before doing student teaching. See Education advisor.

Professional Education Sequence and Teaching Methods.....54 Credits

EDUC 304	Human Development and Learning	4 Credits
EDUC 308	Human Relations and Student Diversity	3 Credits
EDUC 311	Instructional Planning & Assessment	3 Credits
EDUC 449	Middle School Philosophy, Organization & Planning	3 Credits
EDUC 459	Professional Educator	3 Credits
EDUC 328	Reading and Language Arts I	3 Credits
EDUC 329	Reading and Language Arts II	3 Credits
EDUC 330	Literacy for Second Language Learners	3 Credits
EDUC 333	Teaching Social Studies in Elementary School	3 Credits
EDUC 334	Teaching Mathematics in Elementary School	3 Credits
EDUC 335	Teaching of Science & Environmental Studies in Elementary School	3 Credits
MUS 320	Music for Elementary Teachers	3 Credits
ART 300	Elementary Art Education	3 Credits
EDUC 464	Student Teaching	14 Credits

Total Credits.....64 Credits

Required for a Bachelor of Science (B.S.) Elementary Education with Middle School Communication

Arts & Literature 5-8 Specialty128 Credits

2+2 ELEMENTARY EDUCATION W/MIDDLE SCHOOL SOCIAL STUDIES 5-8 SPECIALTY

RCTC & WSU

First two years: A.A. degree in Liberal Arts at RCTC

Second two years: B.S. teaching degree in Elementary Education with Middle School Social Studies 5-8 Specialty at WSU

I. GENERAL EDUCATION REQUIREMENTS.....51-58 Credits

Courses must be selected from those approved to satisfy the competencies of Minnesota Transfer Curriculum (MNTC) Goals 1-10. Consult the RCTC catalog listings to determine the specific courses that apply to the areas below. Some courses may be used to meet a goal in 1-6 and one goal in 7-10. All ten goal areas must be met.

Goal 1: Written and Oral Communication.....11 Credits

ENGL 1117, 1118 OR	Reading & Writing Critically I & II	8 Credits
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ENGL 1917, 1918	Reading & Writing Critically I & II: Honors	8 Credits
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(Note: Minimum grade of "B" in one of the two is required.)

SPCH 1114	Fundamentals of Speech	3 Credits
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(Note: Minimum grade of "B" is required.)

Goal 2: Critical Thinking – Met by any Course in MNTC 1-10 Goals

Goal 3: Natural Science.....6 Credits

A minimum of two courses with labs, from the following four areas: biology, chemistry, earth science or physics.

Goal 4: Mathematics.....3-6 Credits

This requirement is met in one of two ways:

MATH 1111	Contemporary Concepts in Mathematics (minimum grade of "C" required) AND	3 Credits
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MATH 1112	Mathematical Reasoning OR	
MATH 1113 or higher math course (minimum grade of "C" required)		3 Credits

Goal 5: History And Social Sciences.....22-26 Credits

ECON 1101	Introduction To Economics	3 Credits
GEOG 1614	Human Geography	3 Credits
HIST 1613	Foundations of Western Civilizations OR	4 Credits
HIST 1614	Europe In The Modern Ages	3 Credits
HIST 1624	U.S. History to 1865	4 Credits
HIST 1625	U.S. History 1865 to Present	4 Credits
SOC 1614	Introduction To Sociology	3 Credits
SOC 2627	Exceptionality	2 Credits
ANTH 1612	Cultural Anthropology OR	3 Credits
HIST 1631	Modern Asian Civilization OR	3 Credits
SPAN 1001	Introduction to Hispanic Cultures (Goal 6)	3 Credits

Goal 6: Humanities And Fine Arts.....9 Credits

ENGL 2297	Children's Literature	3 Credits
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Choose from the following disciplines with a minimum of 2 Credits from three different areas: art, English literature, foreign language, humanities, journalism, music, philosophy, speech/theatre.

Select a course that meets Goals 7, 8, 9, 10 if these goals have not been met by the courses used to meet Goals 1, 3, 4, 5, 6.

II. HEALTH AND HUMAN PERFORMANCE.....4 Credits

Any combination of health and or physical education activity courses (1100-1199)

HLTH 1111 or	Health Education	3 Credits
HLTH 1132	Drug Use and Abuse	3 Credits

III. ELECTIVES.....2-9 Credits

Total Credits.....64 Credits

Note: The award of this A.A. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).

MAJOR REQUIREMENTS AT WSU:

License Requirements.....10 Credits

MTEd 125	Mathematics for Elementary Teachers	4 Credits
PER 200	Teaching Elementary Physical Education	3 Credits
HHP 320	Health Education in Elementary Schools	3 Credits

Note: Students must demonstrate educational technology competence before doing student Teaching. See Education advisor.)

Professional Education Sequence and Teaching Methods.....54 Credits

EDUC 304	Human Development and Learning	4 Credits
EDUC 308	Human Relations and Student Diversity	3 Credits
EDUC 311	Instructional Planning & Assessment	3 Credits
EDUC 449	Middle School Philosophy, Organization & Planning	3 Credits
EDUC 459	Professional Educator	3 Credits
EDUC 328	Reading and Language Arts I	3 Credits
EDUC 329	Reading and Language Arts II	3 Credits
EDUC 330	Literacy for Second Language Learners	3 Credits
EDUC 333	Teaching Social Studies in Elementary School	3 Credits
EDUC 334	Teaching Mathematics in Elementary School	3 Credits

EDUC 335	Teaching of Science & Environmental Studies in Elementary School	3 Credits
MUS 320	Music for Elementary Teachers	3 Credits
ART 300	Elementary Art Education	3 Credits
EDUC 464	Student Teaching	14 Credits

Total Credits.....64 Credits

Required for a Bachelor of Science (B.S.) Elementary Education with Middle School Social Studies 5-8 Specialty.....128 Credits

2+2 NURSING (GENERIC OPTION)

RCTC & WSU

First two years: A.A. degree in Liberal Arts & Studies at RCTC.

Second two years: B.S. degree in Nursing at WSU.

I. GENERAL EDUCATION REQUIREMENTS.....60 Credits

Courses must be selected from those approved to satisfy the competencies of Minnesota Transfer Curriculum (MNTC) Goals 1-10. Consult the RCTC catalog listings to determine the specific courses that apply to areas below. Some courses may be used to meet a goal in 1-6 AND one goal in 7-10. All ten goals must be met.

Goal 1: Written and Oral Communication.....11Credits

ENGL 1117, 1118 OR	Reading & Writing Critically I & II	8 Credits
ENGL 1917, 1918	Reading & Writing Critically I & II: Honors	8 Credits
SPCH 1114	Fundamentals of Speech	3 Credits

Goal 2: Critical Thinking – Met by any Course in MNTC 1-10 Goals

Goal 3: Natural Science.....20 Credits

*BIOL 1217	Anatomy and Physiology I	4 Credits
*BIOL 1218	Anatomy and Physiology II	4 Credits
*BIOL 2021	General Microbiology	4 Credits
*CHEM 1117	General, Organic and Biological Chemistry I	4 Credits
*CHEM 1118	General, Organic and Biological Chemistry II	4 Credits

Goal 4: Mathematics.....4 Credits

MATH 2208	Fundamentals of Statistics	4 Credits
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Goal 5: History and Social Sciences.....16 Credits

*PSYC 2618	General Psychology	4 Credits
*PSYC 2626	Human Growth & Development	3 Credits
*SOC 1614	Introduction to Sociology	3 Credits
*SOC 2612	Marriage and the Family across the Life Span	3 Credits

3 credits from one of the following areas: anthropology, geography, history, political science.

Goal 6: Humanities and Fine Arts.....9 Credits

Choose from the following disciplines with a minimum of 2 credits from three different areas: art, English literature, foreign language, humanities, journalism, music, philosophy, speech/theatre.

Select a Goal 7, 8, 9, 10 course if these areas have not been met by Goals 1, 3, 4, 5, 6.

II. HEALTH AND HUMAN PERFORMANCE.....4 Credits

Any combination of health and/or physical education activity courses (1100-1199)

III. NURSING CORE REQUIREMENTS.....3 Credits

*NUTR 1211	Principles of Nutrition	3 Credits
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Total Credits.....67 Credits

Note: The award of this A.A. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).

* Indicates prerequisite courses; 7 of the 10 prerequisite courses must be completed prior to applying to the WSU Nursing Program.

MAJOR REQUIREMENTS AT WSU:

Nursing.....		55 Credits
NURS 300	Caring Skills I	2 Credits
NURS 301	Caring Skills II	2 Credits
NURS 320	Caring Concepts I	3 Credits

NURS 321	Caring Concepts II	3 Credits
NURS 330	Role Development I	3 Credits
NURS 331	Role Development II	3 Credits
NURS 345	Health Assessment I	3 Credits
NURS 346	Health Assessment II	2 Credits
NURS 360	Pharmacology	1 Credit
NURS 366	Pathophysiology	3 Credits
NURS 375	Nursing Research, Theory and Technology	3 Credits
NURS 400	Emerging Health Care Systems	2 Credits
NURS 411	Nursing of Adults and Their Families	2 Credits
NURS 413	Nursing of Families Experiencing Mental Illness	2 Credits
NURS 421	Nursing of Childbearing Families	2 Credits
NURS 422	Nursing of Childrearing Families	2 Credits
NURS 423	Role Development III	4 Credits
NURS 433	Role Development III Seminar	1 Credit
NURS 471	Community Health Care	2 Credits
NURS 472	Leadership/Management in Nursing	2 Credits
NURS 474	Role Development IV	4 Credits
NURS 484	Role Development IV Seminar	1 Credit
NURS 491	Capstone Experience in Role Synthesis	3 Credits

Nursing Major Electives.....5 Credits

5 credits of upper-division electives (300-400 level courses); 2 of these credits must be nursing electives.

Open Electives.....4 Credits

Total Credits.....64 Credits

Required for a Bachelor of Science (B.S.) Nursing.....128 Credits

2+2 IN PSYCHOLOGY

RCTC & WSU

First two years: A.A. degree in Liberal Arts at RCTC

Second two years: B.A. degree in Psychology at WSU

I. GENERAL EDUCATION REQUIREMENTS.....40 Credits

Courses must be selected from those approved to satisfy the competencies of the Minnesota Transfer Curriculum (MNTC) Goals 1-10. Consult the RCTC catalog listings to determine which courses satisfy the areas listed below. Some courses may be used to meet a goal in 1-6 AND one goal in 7-10. All ten goal areas must be met.

Goal 1: Written and Oral Communications.....11 Credits

ENGL 1117, 1118 OR	Reading & Writing Critically I and II	8 Credits
ENGL 1917, 1918	Reading & Writing Critically I and II: Honors	8 Credits
SPCH 1114	Fundamentals of Speech	3 Credits

Goal 2: Critical Thinking – Met by Any Course in MNTC 1-10 Goals

Goal 3: Natural Sciences.....6 Credits

A minimum of two courses with labs from the following areas: biology, chemistry, earth science, physics.

Goal 4: Mathematics3 Credits

MATH 1111	Contemporary Concepts in Mathematics	3 Credits
MATH 2208	(Optional) Course is needed in major; PSY 231 at WSU could be taken.	

Goal 5: History And Social Sciences.....9 Credits

PSYC 2618	General Psychology	3 Credits
PSYC 2626	Developmental Psychology	3 Credits

Choose from the following disciplines with a minimum of 2 credits from each of three different areas: anthropology, economics, geography, history, political science, sociology.

Note: The B.A. in Psychology requires a minor; if a minor in Sociology is desired, the following courses should be taken.

SOC 1614	Introduction to Sociology	3 Credits
SOC 1616	Social Problems	3 Credits

Goal 6: Humanities And Fine Arts.....9 Credits

Select a Goal 7, 8, 9, 10 course if these areas have not been met by the courses used to meet Goals 1, 3, 4, 5, 6.

II. HEALTH AND HUMAN PERFORMANCE.....4 Credits

Any combination of health and/or physical education activity courses (1100-1199)

III. ADDITIONAL REQUIREMENTS.....3-4 Credits

Choose one course from the following list in either computer science or mathematics:

COMP 1112	Introduction to Computers with Applications	3 Credits
COMP 1150	Computer Science Concepts	3 Credits
COMP 2243	Programming and Problem Solving	4 Credits
MATH 1113	Finite Math with College Algebra	4 Credits
MATH 1115	and 1117 College Algebra, 3 cr & Pre-Calculus, 4 cr OR Math 1119 Applied Calculus for Business and Economics, 3 cr OR	
Math 2218	Discrete Mathematics, 4 cr OR Math 1127 Calculus I, 4 cr	

IV. Electives.....16-17 Credits

Total Credits.....64 Credits

Note: The award of this A.A. degree waives WSU University Studies requirements, not including the Flag Requirements (page 21).

MAJOR REQUIREMENTS AT WSU:

Psychology.....	29-32 Credits
PSY 231 (if MATH 2208 at RCTC was not taken) Statistics	3 Credits
PSY 308 Experimental Psychology	5 Credits
PSY 350 Psychological Testing and Measurement	3 Credits
PSY 434 History and Systems of Psychology	3 Credits

Psychology electives to complete the major.....18 Credits

Credits to Complete Minor and Open Electives.....32-35 Credits

Total Credits.....64 Credits

Required for a Bachelor of Arts (B.A.)

Psychology with a Minor.....128 Credits

2+2 IN SOCIAL WORK

RCTC & WSU

First two years: A.A. degree in Liberal Arts at RCTC

Second two years: B.S. degree in Social Work at WSU

I. GENERAL EDUCATION REQUIREMENTS.....42 Credits

Courses must be selected from those approved to satisfy the competencies of the Minnesota Transfer Curriculum (MNTC) Goals 1-10. Consult the RCTC catalog listings to determine which courses satisfy the areas listed below. Some courses may be used to meet a Goal in 1-6 AND one Goal in 7-10. All ten goal areas must be met.

Goal 1: Written and Oral Communications.....11 Credits

ENGL 1117, 1118 OR Reading & Writing Critically I and II	8 Credits
ENGL 1917, 1918 Reading & Writing Critically I and II: Honors	8 Credits
SPCH 1114 Fundamentals of Speech	3 Credits

Goal 2: Critical Thinking - Met by Any Course in MNTC 1-10 Goals

Goal 3: Natural Sciences.....7 Credits

BIOL 1110 Human Biology	4 Credits
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A second course with lab from the following areas: biology, chemistry, earth science, physics.

Goal 4: Mathematics3 Credits

MATH 1111 Contemporary Concepts in Mathematics 3 Credits
MATH 2208 (Optional) Either MATH 2208 or PSY 231 at WSU is required.

Goal 5: History and Social Sciences.....12 Credits

PSYC 2618 General Psychology	3 Credits
PSYC 2626 Developmental Psychology	3 Credits
SOC 1614 Introduction to Sociology	3 Credits

A minimum of 3 credits from one of the following disciplines: anthropology, economics, geography, history, political science.

Goal 6: Humanities And Fine Arts.....9 Credits

Choose from the following disciplines with a minimum of 2 credits from each of three different areas: art, English literature, foreign language, humanities, journalism, music, philosophy, speech & theater.

Select a course that meets Goals 7, 8, 9, 10 if any of these goals have not been met by courses used to meet Goals 1, 3, 4, 5, 6.

II. HEALTH AND HUMAN PERFORMANCE.....4 Credits

Any combination of health and/or physical education activity courses (1100-1199)

III. ELECTIVES.....18 Credits

Note: Concurrent enrollment at WSU in spring term of the final year at RCTC.

SOCW 340 Introduction to Social Work	3 Credits
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SOCW 350 Field Experience	3 Credits
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Total Credits.....64 Credits

Note: The award of this AA degree waives all WSU University Studies requirements not including the Flag Requirements (page 21).

MAJOR REQUIREMENTS AT WSU:

Social Work.....49-52 Credits

PSY 231 OR Statistics	3 Credits
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STATS 110 Fundamentals of Statistics	3 Credits
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Note: If MATH 2208 was taken at RCTC, neither of the above is required.

SOCW 340 Introduction to Social Work	3 Credits
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SOCW 350 Field Experience	3 Credits
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SOCW 365 Social Work Practice I - Ethics and Interviewing	3 Credits
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SOCW 370 Human Behavior in the Social Environment	3 Credits
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SOCW 380 Social Welfare Policy I	3 Credits
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SOCW 385 Social Work Practice II - Families and Groups	3 Credits
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SOCW 390 Social Work Research Process and Skills	3 Credits
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SOCW 400 Social Work Practicum Preparation	4 Credits
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SOCW 410 Analysis of Social Welfare Policy II	3 Credits
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SOCW 415 Social Work Practice III - Org. and Communities	3 Credits
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SOCW 475 Social Work Senior Practicum	12 Credits
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SOCW 480 Integrative Social Work Seminar	3 Credits
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SOC 423 Race Relations	3 Credits
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Open Electives.....12-15 Credits

Total Credits.....64 Credits

Required for a Bachelor of Science (B.S.) Social Work.....128 Credits

THE COLLEGES & UNDERGRADUATE PROGRAMS

The major sections that follow provide a detailed description of the academic programs offered at WSU:

- Description of the five colleges that make up the University: College of Business, College of Education, College of Liberal Arts, College of Nursing and Health Sciences, and College of Science and Engineering.
- Program descriptions (including pre-professional, professional sequences, and special academic programs) listed alphabetically by department or program name.

For each program, this section indicates what undergraduate majors, minors, program options, and licensure programs are available; it describes program-specific academic and graduation requirements. This section also includes descriptions of all courses offered in each program. Course descriptions consist of:

- **Course Number.** The course number indicates the level at which the course should be taken. Generally, first-year students take 100-level courses; sophomores, 200-level; juniors, 300-level; and seniors, 400-level. Students are required to limit course selection to courses not more than one level above their class standing. First-year students are not permitted to enroll in 400-level courses.

Undergraduate students who need 12 or fewer semester credits to complete all baccalaureate degree requirements may request permission from the Director of Graduate Studies to take courses for graduate credit to complete a regular course load during the semester of graduation. However, undergraduate students may not enroll in courses at the 600-level or 700-level.

- **Content Description.** A brief description of subject matter gives students an idea of what to expect in the course.
- **Prerequisites.** A prerequisite is either a course that must have been completed previously or a notice that the instructor's permission is required prior to enrolling in the course.
- **Frequency of Offering.** Course descriptions often indicate how often the course is offered.
- **Grading Method.** If a course is offered on a grade-only or pass/no credit-only basis, that status is included in the course description. A department's general pass/no credit policy is included in its listing of program requirements. Students should check the policy before enrolling in a course on a pass/no credit basis.

PROGRAM/COURSE DESCRIPTIONS

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COLLEGE OF BUSINESS

Ken Gorman, Dean
Somsen Hall, Room 309 (507-457-5014)

MISSION

The mission of the College of Business is to provide quality undergraduate business programs designed to prepare students to live, lead, work, and grow professionally and personally in the 21st century. The college is committed to the continuous improvement of teaching and learning; instructional development and applied scholarship; and service to public, private and professional organizations, and businesses. The College of Business serves the educational and professional needs of southeast Minnesota, offering undergraduate programs in Winona and Rochester, while attracting students from other areas of Minnesota and the upper Midwest.

Our programs are designed to help students:

- Secure a basic education in the social sciences, natural sciences, and humanities.
- Acquire the broad knowledge essential to understand the global, diverse environment in which business operates.
- Develop an appropriate specialization within the College of Business.
- Use effective written and oral communication skills, quantitative skills, critical thinking and problem-solving skills, and ethical behavior.
- Understand the ever-increasing pace at which social, economic, and technological changes are occurring and be prepared to deal with those changes.
- Develop an understanding of the importance of continuous improvement and lifelong learning.

Departments in the college use quality indicators and assessment techniques to ensure educational excellence; follow principles for good practice in undergraduate education; conduct periodic program reviews as required by MnSCU; and solicit input from stakeholders—the students, alumni, and businesses.

DEPARTMENTS

Accounting, Administrative Information Systems, Business Administration, Economics and Finance, Marketing

UNDERGRADUATE DEGREES OFFERED BY THE COLLEGE OF BUSINESS

Bachelor of Arts	Major	Minor
Economics	X	X
Bachelor of Science		
Accounting	X	X
Business Administration	X	X
Business (teaching)	X	
Business Law		X
Finance		
Option A	X	
Option B	X	
Human Resources Management	X	
International Business		X
Management		X
Management Information Systems	X	X
Marketing	X	X
Production and Operations Management		X
Training and Development		X

COLLEGE OF EDUCATION

Carol Anderson, Dean
Gildemeister Hall, Room 135 (507-457-5570)

MISSION

The College of Education's basic mission is to provide continuing leadership and excellence in preparing classroom teachers, counselors, administrators, and other educational professionals. It accomplishes its mission by offering baccalaureate, licensure, and selected graduate programs to prepare professionals for public and private schools in the region.

Specifically, the College's mission is to provide the knowledge, skills, professionalism, and practice necessary to enable students to perform with excellence as educational professionals in the service region, state, and nation. The College endeavors to provide students with appropriate field experiences in the region, throughout Minnesota and other states. Further, it provides opportunities for cross-cultural and international awareness through both general education and professional work.

Faculty members in the College are committed to the serious study of education and the promotion of professional standards to foster innovation in professional preparation.

DEPARTMENTS

Counselor Education, Education, Educational Leadership, Physical Education and Recreation, Special Education.

Note: The department of Educational Leadership offers graduate-level educational specialist programs; it does not offer undergraduate programs. See the Graduate Catalog for more information.

ADMISSION AND GRADUATION STANDARDS

Refer to the appropriate department for details. For a checklist of the University graduation requirements, see page 24.

ACCREDITATION AND PROFESSIONAL MEMBERSHIP

WSU is accredited by the National Council for Accreditation of Teacher Education (NCATE). All teacher education and school counselor programs have been approved by the Minnesota Board of Teaching. In addition, several programs have received national recognition from the following professional organizations: National Association for the Education of Young Children, National Council of Teachers of English, Association for Childhood Education International, Council for Exceptional Children, National Council for the Social Studies, and the National Council of Teachers of Mathematics.

The Counselor Education programs are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and NCATE. Programs in the Department of Educational Leadership are also accredited by NCATE and approved by the Minnesota Department of Children, Families, and Learning (CFL). The College of Education is a member of the American Association of Colleges for Teacher Education and the Minnesota Association of Colleges for Teacher Education.

PARTNERSHIPS

The College of Education and the Professional Education Unit are committed to active and equal partnerships with local schools and other educational organizations as demonstrated by the following ongoing partnerships including, but not limited to:

- The Teacher Education Partnership with 13 school districts in the Hiawatha Valley Education District.
- Urban Teacher Education Partnership with 6 schools, including the West Side Schools of Excellence and Four Seasons A+ of the Saint Paul Public Schools, and five State Universities.
- A student teaching exchange program with Fort Valley State University (Fort Valley, Georgia).

- Minnesota Council for the Advancement of Accomplishing Teaching with Education Minnesota and MnSCU State Universities.
- Teacher exchanges of university faculty and school district faculty.
- Graduate Induction Program with Rochester Public Schools.

HONOR SOCIETIES AND STUDENT ORGANIZATIONS

Academically accomplished students are recognized by WSU chapters of the professional honor societies Kappa Delta Pi and Alpha Omega Upsilon. Pre-professional students may join student chapters of professional organizations: Education Minnesota Student Program, Student Council for Exceptional Children, Student International Reading Association, Student Association for Supervision and Curriculum Development, and the Therapeutic Recreation/Recreation Club.

MAXWELL CHILDREN'S CENTER

The Maxwell Children's Center provides a living laboratory of child development and exemplary practice for students in professional education programs at WSU. Future teachers have opportunities to work with and observe children from birth through school age on campus. The Children's Center is an important part of the College of Education and the Professional Education Unit and keeps the learning and development of children at the forefront of our professional education programs. In addition to experiences at the Maxwell Children's Center, students in professional education programs in the College of Education are in schools and other professional settings throughout their programs. Teacher education majors can expect to spend time in Pre K-12 classrooms every semester while they are in the program and as early as their second semester on campus. Recreation majors culminate their programs in an internship of their choosing after a variety of professional experiences within their major courses.

UNDERGRADUATE DEGREES OFFERED BY THE COLLEGE OF EDUCATION

	Teaching Major	Non-Teaching Major	Non-Teaching Minor
Bachelor of Science			
Adventure Tourism			X
Coaching			X
Dance (THAD/PER co-op)			X
Early Childhood Education (Birth to Grade 3)	X		
K-6 with Middle School Communication Arts and Literature 5-8 Specialty	X		
K-6 with Middle School Math 5-8 Specialty	X		
K-6 with Middle School Science 5-8 Specialty	X		
K-6 with Middle School Social Studies 5-8 Specialty	X		
K-6 with Pre-Primary Specialty (Age 3 to Grade 6)	X		
Physical Education	X		
Recreation, Tourism and Therapeutic Recreation			
Option A, Recreation and Tourism		X	
Option B, Therapeutic Recreation		X	
Special Education			
Developmental Disabilities	X		
Learning Disabilities	X		

GRADUATE DEGREES OFFERED BY THE COLLEGE OF EDUCATION

See the Graduate Catalog for program descriptions and other pertinent information.

Educational Specialist

- Elementary School Leadership
- Secondary School Leadership
- General School Leadership

Master of Science Degrees

Counselor Education

- Professional Development
- Community Counseling
- School Counseling

Education

- Education (K-12)
- Learning Disabilities Concentration
- Developmental Disabilities Concentration

Educational Leadership

- Elementary School Leadership
- Secondary School Leadership
- General School Leadership

Advanced Licensure Programs

- EBD (Emotionally/Behaviorally Disturbed) offered cooperatively with the University of Minnesota
- Learning Disabilities
- Developmental Disabilities
- Principal/Assistant Principal
- Superintendent/Assistant Superintendent

COLLEGE OF LIBERAL ARTS

Joe Gow, Dean
Minne Hall, Room 206 (507-457-5017)

MISSION

The mission of the College of Liberal Arts is to offer degree programs in the arts, humanities, and social sciences as well as in specialized professional and occupational areas. The College also seeks to provide a comprehensive base of liberal studies as the foundation of all degrees. These two facets of the mission translate into the two major responsibilities for faculty members:

- Providing a broad array of quality programs in the liberal arts and related professional fields.

- Providing the majority of the University Studies curriculum to all WSU students.

The specific missions for the College of Liberal Arts are:

1. Develop a depth of knowledge in a primary liberal arts discipline.
2. Develop breadth through knowledge and appreciation of the arts, humanities, and social sciences beyond one's primary discipline.
3. Provide an intellectual, social, and cultural atmosphere for the development of self-education and lifelong learning.
4. Make individuals aware of the rights and responsibilities they have to themselves and a democratic society.
5. Prepare individuals to meet the career challenges of a rapidly changing and multicultural society.

6. Contribute to the development of basic and applied knowledge in the liberal arts fields.

FACULTY

Over 80 percent of the liberal arts faculty members have terminal degrees in their fields from prominent universities. Many are widely known for their scholarly and creative efforts as well as for their excellence as teachers.

CAREER OPPORTUNITIES

The opportunities for career education within the College of Liberal Arts are many and varied. The B.A. degrees in all the College's disciplines provide opportunities for employment or preparation for advanced degree work in those areas. B.S. (teaching) degrees educate students for careers in teaching art, music, speech/theatre, English, foreign languages, and social science. Departments within the College of Liberal Arts offer specific professional preparation in such areas as criminal justice, mass communication, paralegal, public administration, and social work.

Equally important in career planning is the fact that a liberal arts education provides students with career skills that are useful in many professions not listed above, but including business, law, and medicine. These skills have general applicability, and they provide considerable vocational choice and career flexibility.

INTERNSHIPS

Most departments have internship opportunities that enable students to gain practical experience in their major discipline. Interested students should contact the appropriate department for information about internships.

SCHOLARSHIPS

In addition to general university scholarships, several departments have scholarships for students majoring in these areas. Such scholarships are available in art, music, sociology/social work, theatre and forensics. Contact the appropriate department for more details.

DEPARTMENTS

Art, Communication Studies, English, Foreign Language, Global Studies, History and Paralegal, Mass Communication, Music, Philosophy, Political Science, Psychology, Sociology and Social Work, Theatre and Dance, and Women's Studies.

FACILITIES

The majority of the liberal arts faculty offices and facilities are located in Minne Hall or the Performing Arts Center. The Art Department is located in Watkins Hall, the Foreign Language Department is in Somsen Hall, and the Psychology Department is in Phelps Hall. The Mass Communication Department has additional facilities in Phelps Hall.

UNDERGRADUATE DEGREES OFFERED BY THE COLLEGE OF LIBERAL ARTS

Bachelor of Arts	Major	Minor
Communication Studies		
Communication Studies Option	X	X
Organizational Communication Option	X	
Dance (THAD/PER co-op)		X
English	X	X
First Combining Major	X	
Second Combining Major-Writing Option	X	
Writing Option	X	X
Creative Writing Option		X
French	X	X
Geography		X
German	X	X
Global Studies		X
Graphic Design	X	

History	X	X
History of Art		X
Intercultural Communication		X
Law and Society	X	
Mass Communication		X
Advertising Option	X	
Broadcasting Option	X	
Journalism Option	X	
Photojournalism Option	X	
Public Relations Option	X	
Music		X
Liberal Art Option	X	
Performance Option	X	
Philosophy		X
Political Science		X
Option A, General	X	
Option B, International Studies	X	
Professional Studies		X
General Option	X	
General Aviation Maintenance Option	X	
Psychology		X
Option A	X	
Option B	X	
Sociology	X	
General Option		X
Gerontology Option		X
Spanish	X	X
Studio Art	X	X
Theatre	X	X
Women's Studies		X
Bachelor of Science	Major	Minor
Art (teaching)	X	
Communication Arts and Literature (teaching)	X	
French (teaching)	X	
German (teaching)	X	
Music		X
Business Emphasis	X	
Music Education (teaching)	X	
Paralegal		
Option A	X	
Option B	X	
Public Administration	X	X
Social Science/History (Secondary teaching)	X	
Social Work	X	
Sociology: Criminal Justice		
Law Enforcement Option	X	
Corrections Option	X	
Spanish (teaching)	X	

GRADUATE DEGREES OFFERED BY THE COLLEGE OF LIBERAL ARTS

Master of Arts – English
Master of Science – English

See the Graduate Catalog for program descriptions and other pertinent information.

COLLEGE OF NURSING AND HEALTH SCIENCES

Timothy M. Gaspar, Dean
Stark Hall, Room 301A (507-457-5122)

MISSION

The College of Nursing and Health Sciences provides quality undergraduate and graduate programs in nursing and the health sciences. These programs are designed to graduate caring, ethical, competent and progressive professionals who are sensitive to diversity and prepared to work with clients through health promotion, prevention of health problems and care during illness. In addition to its professional programs, the College seeks to promote health awareness at WSU. The college's educational environment supports lifelong wellness in the individual, the University, the community and global society.

ACCREDITATION

All undergraduate and graduate nursing programs are fully accredited (1998-2006) by the National League for Nursing Accrediting Commission, 61 Broadway-33rd Floor, New York, NY 10006. The undergraduate nursing major holds approval by the Minnesota Board of Nursing. In addition, all nursing programs have preliminary approval by the Commission on Collegiate Nursing Education (CCNE), One Dupont Circle, NW, Suite 530, Washington, DC 20036. CCNE exclusively accredits baccalaureate and higher degree programs in nursing.

The Department of Health and Human Performance, exercise science major-athletic training major holds full accreditation by the Commission for Accreditation of Allied Health Education Programs (CAAHEP). All health education programs have continuing accreditation by the National Council for Accreditation of Teacher Education (NCATE) and approval by the Minnesota Board of Teaching.

SCHOLARSHIP AND COMMUNITY SERVICE

The College supports faculty and student scholarship/research within the University and with educational partners in the region. Faculty hold joint appointments or consultant roles with agencies such as Gundersen-Lutheran Medical Center and Mayo-Franciscan Skemp in La Crosse, WI; Mayo Department of Nursing in Rochester, MN; Community Memorial Hospital in Winona, MN; Central Lutheran Church Parish Nursing, Winona, MN; Olmsted County Public Health Services, Rochester, MN; the University of West Indies School of Nursing, Kingston, Jamaica, West Indies. Faculty also collaborate with major clinical education partners on local, regional and national funded projects.

Community service is demonstrated in many ways within and outside of the University. Faculty hold practice appointments in the student health service on campus; manage the cardiopulmonary rehabilitation program on campus; lead the parish nursing service for Central Lutheran Church in Winona, MN; direct research in the human performance laboratory on campus; and collaborate with major affiliates on local, regional and national service-learning projects.

FACULTY

A majority of the faculty hold doctoral degrees earned at prominent universities throughout the United States. In addition, other professional experts with graduate degrees in nursing and the health sciences in the region support the learning environment in the classroom and practica/internship/clinical sites. All faculty hold appropriate/required licensure and/or certifications in their respective discipline, maintain their clinical excellence, and are recognized for their expertise among their faculty/practice colleagues.

FACILITIES

The Department of Health and Human Performance is located on the Winona campus in Memorial Hall. The Department of Nursing provides two locations for undergraduate nursing—Stark Hall on the Winona campus and the WSU-Rochester Center in Rochester. The Generic Option is offered at both sites, and the RN Option is delivered primarily from the Rochester site. The Master's Program in Nursing is located at the WSU-Rochester Center. (See the Graduate Catalog for information on the Master's Program in Nursing.)

DEPARTMENTS

Nursing, Health and Human Performance

UNDERGRADUATE DEGREES OFFERED BY THE COLLEGE OF NURSING AND HEALTH SCIENCES

Bachelor of Science	Non-Teaching Major	Teaching Major
Health and Human Performance		
School and Community Health Education	X	X
Public Administration Option	X	
Exercise Science		
Athletic Training Option	X	
Cardiopulmonary Rehabilitation Option	X	
Worksite Health Promotion Option	X	
Nursing		
Nursing – Generic Option	X	
Nursing – RN Option (RN-to-MS Professional Pathway)	X	

GRADUATE DEGREES OFFERED BY THE COLLEGE OF NURSING AND HEALTH SCIENCES

Master of Science – Advanced Practice Nursing

There are four focus areas from which students may choose:

- Nursing Administrator
- Nursing Educator
- Clinical Nurse Specialist
- Adult or Family Nurse Practitioner

See the Graduate Catalog for program descriptions and other pertinent information.

COLLEGE OF SCIENCE AND ENGINEERING

Nancy Jannik, Dean
Stark Hall, Room 201A (507-457-5585)

MISSION

The mission of the College of Science and Engineering is to provide high-quality undergraduate education and degrees in science, engineering and mathematics in order to meet the needs of WSU students. In fulfilling that mission, the College offers four-year curricula leading to the Bachelor of Arts and Bachelor of Science degrees.

The College also serves students intending to transfer to other institutions for professional programs or post-graduate study after meeting some or all of their pre-professional requirements at WSU.

DEPARTMENTS

Biology, Chemistry, Computer Science, Engineering, Geoscience, Mathematics and Statistics, Physics

RESEARCH AND COMMUNITY SERVICE

The College supports student and faculty research, industrial interaction, and community service. To further these goals, the College has established centers, under faculty supervision, which provide unique student employment opportunities in "real-world" research and problem-solving:

- **Southeast Minnesota Analytical Service (SEMAS):** SEMAS serves local and regional cities, counties, businesses and corporations that need analytical testing of water, industrial products and chemicals. Chemistry majors work year-around in the SEMAS as laboratory technicians and assistants.
- **Center for Applied Statistics and Process Improvement (CASPI):** CASPI provides instructional courses, workshops, and seminars in applied statistics and process improvement for both the public and private sector. The center also provides consulting services to local and regional companies.
- **Composite Materials Technology Center (COMTEC):** COMTEC tests manufactured materials and products for numerous local and regional companies needing quality assurance and specification testing. The Center also serves as a working laboratory for instruction and engineering research.
- **Educational Technology Center (ETC):** The Educational Technology Center assists educators in using state-of-the-art educational technology to enhance interactive learning. The ETC supports not only WSU faculty and teacher education majors, but also local and regional K-12 schools. It is organized within the Physics Department.
- **Large River Studies Center (LRSC):** The LRSC provides students with the opportunity to conduct research on large river ecosystems and associated bodies of water. The LRSC also is responsible for disseminating information about the upper Mississippi River and other large river ecosystems to local, regional and scientific communities. It is administered through the Biology Department.
- **Southeastern Minnesota Water Resources Center:** The Southeastern Minnesota Water Resources Center facilitates continuing development and implementation of water resource planning in WSU's service region. The center gathers, stores and processes data related to groundwater and surface water, and makes the data available to governmental agencies throughout the southeastern part of the state. It is administered through the Geoscience Department.

INTERNSHIPS

Students are encouraged to include internships as part of their course of study. Internships provide valuable work experience with potential employees such as governmental agencies or corporations. Most internships are taken in the senior year under a WSU faculty member's supervision.

PROGRAM PREREQUISITES

All degree programs in the College assume that students have taken proper college preparatory courses in high school including at least three years of mathematics. It is recommended that students have at least one year each of high school biology, chemistry and physics. High school science and mathematics deficiencies can be remedied by taking equivalent courses at WSU.

UNDERGRADUATE DEGREES OFFERED BY THE COLLEGE OF SCIENCE AND ENGINEERING

Bachelor of Arts	Major	Minor
Biology		X
Mathematics	X	X
Bachelor of Science		
Airway Science Aviation		X
Biology		
Allied Health Option	X	
Cell and Molecular Option	X	
Ecology Option	X	
Environmental Science Option	X	
Biochemistry		X
Chemistry		
Option A	X	X
Option B	X	X
Environmental Science Option	X	
Chemistry (teaching)	X	
Composite Materials Engineering		
Chemical Option	X	
Mechanical Option	X	
Computer Science		X
Option A, Computer Science	X	
Option B, Computer Information Systems	X	
Cytotechnology	X	
Earth Science (teaching)	X	
Electronics		X
Geoscience		X
Environmental Science Option	X	
Geology Option	X	
Water Resources Management Option	X	
Life Science (teaching)	X	
Mathematics Education Option†		X
Mathematics: Secondary Teaching	X	
Mathematics: Statistics Option	X	X
Medical Technology	X	
Physics		X
Option I	X	
Option II Applied Nuclear Science	X	
Option III Electronics	X	
Physics (teaching)	X	

†The State of Minnesota no longer issues teaching licenses for Bachelor of Science minors.

Bold →

ACCOUNTING

Somşen Hall, Room 323A (507-457-5860)
Hurley (Chairperson)

FACULTY

J. Lawrence Bergin, Professor; B.S., M.B.A., Northeastern University; 1981 -
Brian Briggs, Associate Professor; B.S., University of Connecticut; M.S., Northeastern University; 1979 -
James F. Hurley, Associate Professor; B.S., M.A., Ph.D., University of Nebraska; 1983 -
Frederic Ihrke, Professor; B.S., Bemidji State University; M.B.T., University of Minnesota-Twin Cities; J.D., William Mitchell College of Law; 1981 -
Gloria McVay, Assistant Professor; B.S., M.B.A., Minnesota State University-Mankato; Ph.D., University of Kentucky; 2000 -
Larry Sallee, Professor; B.S., University of Wisconsin-Superior; M.B.A., University of Wisconsin-La Crosse; D.B.A., U.S. International University; Certified Public Accountant (CPA); Certified Management Accountant (CMA); 1985 -
Richard Schneider, Professor; B.B.A., Wisconsin State University-Eau Claire; M.S., Arizona State University; Certified Public Accountant (CPA), 1974-80; 1981 -

PURPOSE

The basic purpose of the accounting program is to prepare students for careers in business and government, with emphasis on preparation for professional certification.

PASS/NO CREDIT (P/NC) COURSES

Except for internships and practica, students must take all courses in their major, minor, options, concentrations, and licensures on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted in the accounting course descriptions. Courses offered on a pass/no credit only or grade only basis are so designated in the course descriptions.

GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for accounting majors/minors are as follows:

1. Complete all coursework and satisfy all other WSU requirements for a B.S. in Accounting.
2. Complete a minimum of 15 credit hours of 300/400-level ACCT courses at WSU.
3. Achieve a grade of "C" or better in each course listed under B.S. Major—Accounting.
4. At either the beginning or end of the last semester of undergraduate work, have a minimum of a 2.50 overall GPA and a 2.50 GPA in ACCT courses.
5. Complete a minimum of 50% of the College of Business credits required for the accounting major at WSU.
6. Sixty-four non-business credits are required for the accounting major. The statistics courses (six semester credits maximum) and economics courses (nine semester credits maximum) required for the accounting major may be counted toward the 64 non-business credits.

ROCHESTER CENTER

The department's major is available through the 2+2 Program at the Rochester Center. See page 36 for the articulation of the 2+2 in Accounting program.

B.S. MAJOR – ACCOUNTING (79–80 S.H.)

(No Minor Required)

Accounting majors must earn a "C" or better in accounting prerequisite courses in order to take the next course. All courses are offered each semester unless otherwise noted in the course descriptions.

REQUIRED COURSES (70–71 S.H.)

Accounting (31 S.H.)

- 211 Financial Accounting Principles (3)
- 212 Managerial Accounting Principles (3)
- 220 Accounting Computer Applications (3)
- 311 Intermediate Accounting I (4)
- 312 Intermediate Accounting II (3)
- 330 Accounting Information Systems (3)
- 361 Intermediate Man./Cost Accounting (3)
- 413 Advanced Financial Accounting (3)
- 421 Introduction to Taxation (3)
- 471 Auditing I (3)

Economics/Finance (9 S.H.)

- * ECON 201 Principles of Microeconomics (3)
- * ECON 202 Principles of Macroeconomics (3)
- FIN 360 Business Finance (3)

Business Administration (24 S.H.)

- DIS 220 Business Statistics (3)
- DIS 320 Intermediate Business Statistics (3)
- BUSA 301 Business Law I (3)
- BUSA 311 Business Law II (3)

- MGMT 325 Organizational Dynamics (3)
- DIS 362 Management Informational Systems (3)
- MGMT 495 Strategic Management (3)
- POM 334 Production and Operations Management (3)

Marketing (3 S.H.)

- 300 Principles of Marketing (3)

Mathematics (3-4 S.H.)

- * 140 Applied Calculus (3) OR 160 Calculus I (4)

ELECTIVES (9 S.H.)

- Any ECON elective (3)
- 300/400-Level ACCT electives (6)

B.S. MINOR – ACCOUNTING (22 S.H.)

REQUIRED COURSES (19 S.H.)

- ACCT 211 Financial Accounting Principles (3)
- ACCT 212 Managerial Accounting Principles (3)
- ACCT 220 Accounting Computer Applications (3)
- ACCT 311 Intermediate Accounting I (4)
- ACCT 421 Introduction to Taxation (3)
- BUSA 291 Legal Environment of Business (3) OR
- BUSA 301 Business Law I (3)

ELECTIVES (3 S.H.)

- Any accounting course

* Course may be used to satisfy certain University Studies requirements.

ACCOUNTING COURSE DESCRIPTIONS

211 - Financial Accounting Principles—3 S.H.

Study of topics in financial accounting including the accounting cycle, forms of business organizations, assets, liabilities, owner's equity, and financial statement preparation and analysis. Examples are drawn from service, merchandising and manufacturing organizations. Prerequisite: WSU math proficiency.

212 - Managerial Accounting Principles—3 S.H.

The study of managerial accounting principles including cost behavior, job order costing, process costing, cost-volume-profit relationships, contribution costing, standard costs, relevant costs and budgets. Additional topics may include the Statement of Cash Flows and financial statement analysis. Prerequisite: ACCT 211.

220 - Accounting Computer Applications—3 S.H.

"Hands-on" experience with Excel, Power Point, and "real world" accounting applications software, including significant work with a general ledger package. Prerequisite: ACCT 211.

311 - Intermediate Accounting 1—4 S.H.

Major emphasis on financial accounting. Review of basic financial statements. Development of accounting principles and procedures related to assets (cash, receivables, investments, inventories, plant and equipment, intangibles, and the time value of money). Prerequisite: ACCT 212. Additional prerequisites or concurrent enrollment in ACCT 220. Not open to students in their first year of college study.

312 - Intermediate Accounting 2—3 S.H.

Development of accounting principles and procedures related to liabilities, owner's equity, revenue recognition and special topic areas such as pensions and leases. Prerequisite: ACCT 311.

330 - Accounting Information Systems—3 S.H.

A study of the principles underlying the design and installation of accounting systems and survey of methods of processing data, with an emphasis on internal control. Prerequisite: ACCT 311 and DIS 362.

340 - Governmental and Other Not-For-Profit Accounting—3 S.H.

This course is designed to analyze the funds and account groups used by state and local units of government. Also covered are accounting methods and procedures used by hospitals, colleges and universities, voluntary health and welfare organizations, and other not-for-profit organizations. Prerequisite: ACCT 211.

361 - Intermediate Managerial/Cost Accounting—3 S.H.

Cost accounting fundamentals including long-term planning, control, cost allocation, quantitative analysis and behavioral considerations in systems design. Prerequisite: ACCT 212 and ECON 201.

380 - Topics and Issues in Accounting—1-4 S.H.

An analysis of current topics, trends, issues and software relevant to the milieu of accounting. The subject matter can vary by semester and is typically announced in advance by the instructor. This course may be repeated as topics change. Prerequisite: instructor's permission. Not offered every year.

398 - Internship—1-7 S.H.

Credits are not counted in the accounting major, but as general elective credits. Prerequisite: concurrent enrollment in ACCT 399. P/NC only.

399 - Internship Problem—1-3 S.H.

Prerequisite: minimum 2.50 GPA and instructor's permission. The student should have substantially completed the College of Business core courses, Intermediate Accounting 1 and other specific accounting courses depending on the type of internship. See the Department Internship Coordinator for specific requirements. Grade only. Credits may only be counted as general elective credits.

413 - Advanced Financial Accounting—3 S.H.

This course includes the study of business combinations resulting from acquisitions of assets of stock, foreign currency transactions, and partnership accounting. Prerequisite: ACCT 312.

414 - Advanced Financial Accounting Topics—3 S.H.

A study of selected financial accounting topics including SEC regulations, bankruptcy, trusts and estates, reporting for segments and interim financial periods, and branch accounting. Prerequisite: ACCT 312. Not offered every year.

416 - Accounting Theory—3 S.H.

A study of the foundations, statements, analyses and evolution of the various accounting theories including those by the FASB, AICPA, AAA, IMA and other organizations. A review of the research studies and search for accounting principles and postulates that has occurred in the current century. Prerequisite: ACCT 312. Not offered every year.

421 - Introduction to Taxation—3 S.H.

A study of the history of taxation, the formation and application of federal tax law, and the basic methods and procedures of tax research. The course emphasizes the individual income tax, but also introduces the student to the taxes applicable to other entities. Tax preparation using the computer is also a significant component of the course. Prerequisite: ACCT 212 and ECON 202. Grade only.

422 - Advanced Taxation—3 S.H.

A study of the federal tax law applicable to C corporations, S corporations, partnerships, estates and trusts. In addition to income tax law, the course also addresses the major issues relating to the transfer of property through gifts and the estate. Methods and procedures of tax research also are stressed in the course. Prerequisite: ACCT 421. Grade only. Offered yearly.

423 - Tax Planning—3 S.H.

This survey course provides an overview of the tax laws and their interrelationships in a way that has proven interesting, enlightening and profitable to taxpayers, managers, tax planners and defenders. Prerequisite: ACCT 421 or instructor's permission. Not offered every year.

424 - International Taxation—3 S.H.

This course focuses on the complex tax issues involved in transnational transactions. It addresses major tax treaties, jurisdictional issues, problems of tracing income flow, and fluctuations in currency valuations and other pertinent subject matter. Prerequisite: ECON 202. Not offered every year.

462 - Advanced Managerial/Cost Accounting—3 S.H.

An in-depth study of advanced topics in cost planning and control. A review of cost and managerial accounting literature and research. Prerequisite: ACCT 361. Offered yearly.

471 - Auditing I—3 S.H.

Auditing I covers the basic processes and procedures of financial statement auditing, including practical application. Auditing standards, ethics, and legal liability are covered. Prerequisite: ACCT 220, ACCT 312, and DIS 220.

472 - Auditing II—3 S.H.

This course explores other types of auditing while delving more deeply into issues facing the profession. Numerous auditing cases are analyzed, with a focus on oral and written communication skills. Prerequisite: ACCT 471. Not offered every year.

490 - Independent Studies in Accounting—1-3 S.H.

Offers the advanced student an opportunity to do additional reading and/or research in areas of special interest. Prerequisite: instructor's permission. Total credits may not exceed 6.

ADMINISTRATIVE INFORMATION SYSTEMS

Business Education (Teaching)
 www.winona.edu/ais/
 Somsen Hall, Room 319 (507-457-5165)
 J. Karjala (Chairperson)

FACULTY

Jeanette Karjala, Professor; B.A., M.A., Western Washington University, Bellingham; Ph.D., University of North Dakota (ND); 1992 –

PURPOSE

The department prepares students to meet the professional requirements for teaching business education subjects to students in grades 5-12 and in post-secondary schools. In addition, a core of courses in business equips students for business careers. A minor in training and development provides students with knowledge and skills to become trainers in business or institutional training and development settings.

A primary department goal is to provide the depth of knowledge and competencies required for promotion and career advancement, in addition to basic entry-level proficiencies. All programs are designed specifically with a balanced curriculum of general knowledge and specialized skills.

The following program alternatives are available to students:

- Bachelor of Science: Business Education (Teaching)
- Bachelor of Science: Training and Development Minor

GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for business education (teaching) majors/minors are as follows:

- Completion of all course work required for the major.
- Overall GPA of 2.50 or better in the major
- Overall GPA of 2.75 or better

VOCATIONAL-TECHNICAL COLLEGE TRANSFER POLICY

Students who have completed a one- or two-year business program at a vocational school may apply for a transfer of approved business credits. Students' transcripts are evaluated by AIS faculty. (Refer to page 7 for information about transfer of vocational credits.) This transfer policy applies only to students majoring in business education (teaching).

TEACHING MAJORS

Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to these requirements in the Effective Educator Handbook, or see the education program requirements on page 87.

The AIS Department recommends for student teaching only those students who have a minimum 2.75 overall GPA and a 2.5 GPA in the major. See admission requirements for teacher education on page 87.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in their major, minor, options, concentrations, and licensures on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted in the course descriptions. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

B.S. MAJOR BUSINESS EDUCATION (Teaching)

64 S.H. (No Minor Required)

REQUIRED COURSES (57 S.H.)

Administrative Information Systems (36 S.H.)

- 203 Document Production and Procedures (3)
- 215 Personal Finance (3)
- 218 Job Search Strategies (2)
- 320 Publication Design and Presentation Technology (3)
- 330 Business Information Processing (3)
- 333 Business Communication (3)
- 335 Information Resource Management (3)
- 340 Integrated Information Systems Applications (3)
- 360 Interpersonal Business Relations (3)
- 401 General Methods (2)
- 402 Basic Business Teaching Methods (1)
- 403 Keyboarding Teaching Methods (1)
- 404 Administrative Information Systems Teaching Methods (1)
- 405 Accounting Teaching Methods (1)
- 435 Information Systems/Personnel Management (3)
- 490 Capstone Seminar (1)

Accounting (6 S.H.)

- 211 Financial Accounting Principles (3)
- 212 Managerial Accounting Principles (3)

Economics and Finance (9 S.H.)

- ECON 201 Principles of Microeconomics (3)
- ECON 202 Principles of Macroeconomics (3)
- FIN 360 Corporate Finance (3) OR
- FIN 201 Introduction to Finance (3)

Business Administration (3 S.H.)

- 291 Legal Environment of Business (3)

Marketing (3 S.H.)

- 300 Principles of Marketing (3)

RECOMMENDED ELECTIVES (7 S.H.)†

Administrative Information Systems

- 336 Information Services Seminar (1)
- 350 Quality of Work Life (3)
- 410 Administrative Communication (3)
- 412 Team Building (1-3)
- 440 Training and Employee Development (3)
- 441 Training Techniques and Media (3)
- 470 Seminar in Training and Education for Business (1)

† Other electives may be taken with approval from the student's advisor.

* Course may be used to satisfy certain University Studies requirements.

B. S. MINOR – TRAINING AND DEVELOPMENT 24 S.H.

REQUIRED COURSES (15 S.H.)

Administrative Information Systems (9 S.H.)

- 410 Administrative Communication (3)
- 440 Training and Employee Development (3)
- 441 Training Techniques and Media (3)

Education (3 S.H.)

- 442 The Adult Learner (3)

Management (3 S.H.)

- 427 Management Development (3)

Note: See the course description for MGMT 427 for prerequisites. For business education (teaching) major and training and development minors, AIS 335 and 435 satisfy the prerequisites.

FOUNDATION REQUIREMENTS (9 S.H.)

- AIS 320 Business Information Processing (3) OR
- DIS 202 Microcomputers in Business (3)
- AIS 360 Interpersonal Business Relations (3)
- AIS 435 Information Systems/Personnel Management (3) OR
- MGMT 317 Management of Human Resources (3)

AIS COURSE DESCRIPTIONS

201 - Keyboarding-2 S.H.

Beginning keyboarding proficiency as a basic skill for computer-related communications, keyboarding mastery, proofreading and skill building. Not open to students who have successfully completed a high school keyboarding course. Offered each semester.

202 - Introduction to Word/Information Processing-3 S.H.

Knowledge and application of word processing, spreadsheet and database software for personal use. Includes problem-solving and production using integrated software. Prerequisite: AIS 201 or equivalent. Offered yearly.

203 - Document Production and Procedures-3 S.H.

Beginning document production and administrative procedures using word processing, database, spreadsheets, presentation technology, and voice recognition software. Includes introduction to Windows, Internet, and email. Prerequisite: AIS 202 or equivalent. Offered yearly.

206 - Administrative Procedures-3 S.H.

Administrative procedures and methods for implementing the administrative support function.

215 - Personal Finance-3 S.H.

For all students. Units focus on the major personal financial planning problems that individuals and families encounter. Emphasis on using the activity involved with personal financial planning as a framework for developing effective money management practices. Consumer units include budgets, banking, tax strategies, investments, credit, insurance, real estate, interest, pensions, and estate and retirement planning. Offered each semester.

218 - Job Search Strategies-1-2 S.H.

An examination of job search strategies with emphasis on the written and oral communications necessary to market one's potential. Special focus on developing a competitive resume, effective job application correspondence, follow-up correspondence and interviewing techniques. Offered each semester.

320 - Publication Design and Presentation Technology-3 S.H.

Intermediate design principles for print-based documents and computer-generated outputs such as word processing, database, spreadsheets and use of presentation and voice recognition technology. Publishing features will be used to enhance materials graphically for more effective communication. Prerequisite: AIS 202 or equivalent. Offered yearly.

330 - Business Information Processing-3 S.H.

Expert concepts of word processing, database, spreadsheets and use of presentation and voice recognition technology. Provides a vocabulary and understanding of computers in business, including business application software. Prerequisite: AIS 202 or equivalent. Offered yearly.

332 - Business Report Writing-1-2 S.H.

Principles and practices for effective written reports. Emphasis on a functional writing style applied to routine, periodic and analytical reports. Includes formal reports based on secondary and primary

research methods.

333 - Business Communication-3 S.H.

The application of a functional writing style to produce effective business communications: memos, correspondence, and short informal reports. Includes basics of communication management, communication technology, intercultural business communication and collaborative organizational writing. Offered yearly.

335 - Information Resource Management-3 S.H.

A study of information and image media systems, and the structures and functions related to the planning, controlling, organizing and leadership activities of the information and image systems manager. Image media as information storage include paper, micrographics, computer-output microfilm, electronic and other forms of information generation, recording, and storage. Focuses on image technology, computer-based records management systems, archival management, forms design, control policies and procedures, legal retention requirements, disaster prevention and recovery, information value and security, and information as a critical organizational asset. Offered yearly.

336 - Information Services Seminars-1 S.H.

A series of seminars to include such topics as time management, administrative workplace layout, interpersonal relations, microcomputer applications in the administrative area, active listening, and applied problem-solving.

340 - Integrated Information Systems Applications-3 S.H.

Information management systems concepts for the user and/or designer of information systems; systems analysis design system outputs, inputs, data files, methods and procedures, and systems and procedures analysis. Includes software applications. Overview and introduction to networking technologies and foundations of local area networks. Prerequisite: AIS 202 or equivalent. Offered yearly.

350 - Quality of Work Life-3 S.H.

Focuses on a quality of work life approach to diversity in the workplace including gender, cultural, age, social, racial and ethnic differences. Examines professional and interpersonal dynamics within organizational cultures, human resource values and politics. Includes leadership styles and career enhancement strategies. An experiential approach to attitudinal and professional development. Offered alternate years.

360 - Interpersonal Business Relations-3 S.H.

Confronting and coping with interpersonal problems specific to the business environment. Focus is on strategies for managing productive work relationships. Includes leadership styles, power and authority, listening and feedback skills, conflict resolution, relating to minority groups, and multi-cultural business relationships. Offered yearly.

397 - Information Services Internship-3 S.H.

Practical administrative management work experience in a supervised workplace setting. Contact AIS Department chairperson for requirements. Offered each semester. P/NC only.

398 - Training & Development Internship-3 S.H.

An on-the-job supervised work experience in training and development. Contact AIS Department chairperson for requirements. Offered each semester. P/NC only.

399 - General Internship-1-6 S.H.

On-the-job supervised work experience in administrative information systems. Credit applies to general electives, not to major credits/requirements. Contact AIS Department chairperson for requirements. Offered each semester. P/NC only.

401 - General Methods-2 S.H.

A course for business teacher preparation in the methods and materials of business education. Topics include philosophical foundations of business education, general curriculum trends, and instructional design. Open only to AIS Department teaching majors. Recommended prerequisites: EDUC 305 and EDUC 312. Offered yearly. Grade only.

402 - Basic Business Teaching Methods-1 S.H.

A course for business teacher preparation in the methods and materials of basic business education. Focuses on the refinement of teaching abilities and competencies required in the teaching of business law, consumer education, general business and economics. Open only to AIS Department majors/minors. Recommended prerequisites: EDUC 305 and EDUC 312. Offered yearly. Grade only.

403 - Keyboarding Teaching Methods-1 S.H.

A study of teaching strategies for keyboarding instruction. Teaching practices are related to theories of learning and the psychology of skillbuilding. Techniques of planning, classroom management, motivation, evaluation and grading; the utilization of keyboarding

software packages. Open only to AIS Department majors/minors. Recommended prerequisites: AIS 201 or equivalent, EDUC 305 and EDUC 312. Offered yearly. Grade only.

404 - Administrative Information Systems Teaching Methods-1 S.H.
A study of methods, materials, strategies, and theories related to teaching administrative information systems subjects. Emphasis is placed on planning, testing, grading and teaching procedures as they relate to the electronic administrative support work areas. Open only to AIS Department majors/minors. Recommended prerequisites: EDUC 305 and EDUC 312. Offered yearly. Grade only.

405 - Accounting Teaching Methods-1 S.H.
A study of strategies for teaching accounting. Teaching practices are related to theories of learning and include specific techniques of classroom management, motivation, planning, evaluation, grading and utilization of accounting software packages. Open only to AIS Department majors/minors. Recommended prerequisites: EDUC 305 and EDUC 312. Offered yearly. Grade only.

410 - Administrative Communication-3 S.H.
Leadership communication for personnel at all organizational levels. An emphasis on spoken communication includes such topics as persuasive proposals, presentations, case analysis, meeting management, the visual briefing and multimedia and communication technology applications. Offered yearly.

412 - Team Building-1-3 S.H.
Introduces teamwork concepts and skills as a collaborative approach to improved performance. Covers structural and process attributes of teams with the objective of enhancing team leader and participant effectiveness; focuses on designing and implementing an effective system blending individual and team performance. Team participation skills applied to collaborative class activities. Offered yearly.

434 - Word/Information Processing for Paralegals-3 S.H.
Knowledge of word/information processing in the paralegal profession. Includes information processing software and legal research using the Internet. Prerequisite: basic keyboarding proficiency. Offered yearly. Grade only. Not open to AIS majors.

435 - Information Systems/Personnel Management-3 S.H.
The study of effective management for the information function in organizations and principles of administrative personnel management. Focuses on the feasibility, design, justification, implementation and evaluation of administrative information systems. Administrative policies and procedures applied to personnel issues, recruitment and hiring, performance appraisal, employee productivity, and managerial communication. Prerequisite: AIS 330. Offered yearly.

440 - Training and Employee Development-3 S.H.
An overview of the training and development field with an emphasis on the systems approach to training program design. Focuses on the key phases of training program development: reassessment, needs analysis, design implementation and evaluation. Includes the principle of instructional design using the experiential learning approach. Offered yearly.

441 - Training Techniques and Media-3 S.H.
Instructional techniques, methods and multimedia to use for effective employer-based learning delivery systems. Topics include trainer styles, training structures and formats, instructional presentation skills, training aids and technology, and computer-based training. A skills-based approach to effective training for adult learners. Offered yearly.

470 - Seminar in Training and Education for Business-1-3 S.H.
Specific subject matter is arranged by the AIS Department. May be repeated when offered with different subject matter content and title. Offered yearly.

480 - Independent Studies in Training and Education for Business-1-3 S.H.

Reading and/or research in relevant areas of a student's special interest. Prerequisite: instructor's permission.

490 - Capstone Seminar-1 S.H.
A synthesis of major course work and internship experiences for seniors in AIS programs. A comprehensive analysis and compilation of students' learning outcomes; a culminating experience and evaluation of indicators that demonstrate students' success in achieving program learning outcome goals. Offered yearly.

ART

Watkins Hall, Room 204 (507-457-5395)
www.winona.edu/art
Plummer, (Chairperson)

FACULTY

Seho Park, Professor; M.A.T., Whitworth College; M.F.A., Ph.D., University of Minnesota-Twin Cities; 1988 -
Anne Scott Plummer, Associate Professor; B.F.A., Rhode Island School of Design; M.F.A., Claremont Graduate School; 1990 -
Dominic Ricciotti, Professor; B.F.A., Washington University, St. Louis; M.A., City University of New York-Hunter College; Ph.D., Indiana University; 1985 -
Don L. Schmidlapp, Professor; B.F.A., University of Kansas; M.F.A., Indiana University; 1981 -

PURPOSE

The Department of Art offers two degree programs:

- Bachelor of Arts degree with either the Studio Option or the Graphic Design Option
- Bachelor of Science degree in Art Teaching, which leads to eligibility for teacher certification in the State of Minnesota for grades K-12

All art courses beyond the 100-level have prerequisites that must be fulfilled before subsequent classes may be taken. During their first two years, students complete the required series of foundation courses that introduce them to basic visual problems, preparing them for advanced work. During their final two years, students complete courses in specialized, media areas of the art curriculum. These offer more intensive experiences, in consideration of the student's capabilities and interests. Each successive course in a given media area builds upon earlier achievements; instruction becomes more individualized as students search for more personal means of expression.

Studio and classroom instruction at all levels is enhanced by the changing series of exhibitions in Watkins Gallery and the student gallery, and by presentations by visiting artists and guest lecturers. Majors and minors, as well as interested non-majors, are urged to join the regularly scheduled field trips to art museums and galleries in nearby cities, organized by both faculty and the student Art Club.

CAREER OPPORTUNITIES

The art curriculum develops students' problem-solving skills and prepares graduates with communication skills that are applicable to a variety of career paths. WSU art graduates have careers in teaching, in museums and art centers, and in a broad range of business enterprises. B. S. Art (Teaching) majors are prepared for teacher certification in the State of Minnesota (grades K-12). Graduates with the B. A. Graphic Design Option find employment in private, public, and non-profit sectors, designing for a wide range of media, including print and web-based functions or working in closely related fields such as photography. Some B. A. Art Studio majors continue their education, pursuing advanced degrees in fine art or art history. The Master of Fine Art degree qualifies the graduate to teach at the college level.

* Course may be used to satisfy certain University Studies requirements.

ADVISING

Each art major meets regularly with an art department faculty advisor, who assists in preparing the student's program of study. (Students may select or change advisors.) Majors are required to consult with their advisors before registration each semester. Suggested course programs for each semester of the student's four-year residency are available from all art advisors and from the art department office.

New and transfer students are encouraged to attend the orientation meeting in the fall semester. This meeting presents information critical to a successful college career in art.

TRANSFER STUDENTS

Art majors transferring from other institutions must complete a minimum of 15 semester credit hours in art in residence at WSU at the upper division (300/400-level classes).

GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for art majors/minors are as follows:

- B. A. students must earn a minimum grade of "C" in each studio art course and have a GPA of 2.50 in all studio and art history courses and a 2.50 overall GPA.
- Teaching majors in the B. S. program must maintain a 2.75 overall GPA and a 2.75 GPA in all art education, studio, and art history courses.

JUNIOR PORTFOLIO REVIEW

During their third year of study, art majors in all three programs submit for review a group of works completed at that point. This provides the art faculty with a means of assessing the overall quality of student performance. Students who neglect to comply with the review shall not graduate with an art degree. For more specific information about this requirement, majors should attend the orientation meeting in the fall of each year and consult with their advisors.

SENIOR EXHIBITIONS

Capstone exhibitions featuring the accomplishments of graduating seniors in all three programs are held in Watkins and Weber galleries each spring. One show includes work by all seniors. Students compete to participate in the other exhibition(s). The art faculty chooses several students for a select show(s) based on superior achievement. Each of these students exhibits a larger number of works than possible in the all-senior exhibition.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in their major, minor, concentrations, and licensures on a grade-only basis. The P/NC option is available to students who are not art majors or minors; these students may elect the P/NC option for all 100-level art courses and for other courses as specified in the course descriptions. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions. (All prerequisites must be met before a student enrolls in a particular course.)

B.A. MAJOR – STUDIO ART OPTION

48 S.H. (No Minor Required)

REQUIRED COURSES (30 S.H.)

- 114 2-D Design (3)
- 115 3-D Design (3)
- 118 Drawing I (3)
- 217 Painting I (3)
- 218 Drawing II (3)
- 221 Art History I (3)
- 222 Art History II (3)
- 228 Sculpture I (3)
- 439 Later Twentieth Century Art (3)
- 444 Senior Seminar (3)

ELECTIVES (18 S.H.)

One 400-level art history course (beyond the required ART 439) (3 S.H.):

- 435 Italian Renaissance (3) OR
- 437 Nineteenth Century Art (3) OR
- 438 Early Twentieth Century Art (3)

Two 2-course sequences in an area of concentration as follows (12 S.H.):

Art History: Any two art history courses (above the 100-level) in addition to ART 439 and the required elective course (6 S.H.) OR

- Graphic Design: 311 (3) and 411 (3) OR
- Painting: 317 (3) and 417 (3) OR
- Drawing: 318 (3) and 418 (3) OR
- Ceramics: 320 (3) and 420 (3) OR
- Sculpture: 328 (3) and 428 (3) OR
- Printmaking: 330 (3) and 430 (3)

One additional upper-division studio elective. This may be continued study in a sequence area, or it may be in a different medium. (3 S.H.)

B. A. MAJOR – GRAPHIC DESIGN OPTION

66 S.H. (No Minor Required)

Graphic Design for the Digital Age: An Interdisciplinary Program of the Art, Mass Communication, and Marketing Departments

Purpose

The Graphic Design Option is an interdisciplinary program based in the Art Department. Course work is also required in both the Mass Communication and Marketing departments; upper-division course work is integrated among all three departments. Building on a foundation in design, drawing, studio arts, and art history, students work with current graphic design software, gaining experience in web and e-commerce design and print design. Upper-division students specialize in their areas of interest, working with teams of marketing and advertising students, simulating reality in the workplace. The capstone experience includes an internship in the graphic design field with an area or regional business.

REQUIRED COURSES (63 S.H.)

Art (45 S.H.)

- 114 2-D Design (3)
- 115 3-D Design (3)
- 118 Drawing I (3)
- 218 Drawing II (3)
- 217 Painting I (3)
- 221 Art History I (3)
- 222 Art History II (3)
- 330 Printmaking I (3)
- 311 Graphic Design I (3)
- 411 Graphic Design II (repeated two times) (9)
- 439 Later Twentieth Century Art (3)
- 444 Senior Seminar (3)
- 399 Graphic Design Internship (3)

Note: Senior Seminar (ART 444) is taken with a graphic design faculty member.

Mass Communication (12 S.H.)

- 110 Visual Communication (3)
- 175 Mass Communication Computer Applications (3)
- 215 Photocommunication (3)
- 260 Advertising (3)

Marketing (3 S.H.)

- 300 Principles of Marketing (no prerequisites required)

Communications Studies (3 S.H.)
266 Professional Communication Skills (3)

ELECTIVE (3 S.H.)

- * ENG 120 Introduction to Literature (3) OR
- * ENG 121 Major British and American Fiction (3) OR
- * ENG 125 Masterpieces of Short Fiction (3) OR
- * ENG 131 Masterpieces of American Fiction (3)

RECOMMENDED ADDITIONAL ELECTIVE

MKTG 341 E-Commerce

B. S. MAJOR – ART (Teaching)

51 S.H. (No Minor Required)

PURPOSE

The teaching major prepares graduates for Minnesota certification in art (K-12) and is offered in conjunction with the College of Education. Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. For a list of the Professional Education Sequence, see page 87 of this catalog, the Effective Educator Handbook, or refer to the Education Advising website at www.winona.edu/education/advising.

REQUIRED COURSES (45 S.H.)

- 114 2-D Design (3)
- 115 3-D Design (3)
- 118 Drawing I (3)
- 120 Intro to Ceramics (3) OR 320 Ceramics I (3)
- 217 Painting I (3)
- 218 Drawing II (3)
- 221 Art History I (3)
- 222 Art History II (3)
- 228 Sculpture I (3)
- 300 Elementary Art Education (3)
- 402 Psychology of Art and Art Education (3)
- 410 Secondary Art Education (3)
- 412 Multimedia Crafts (3)
- 439 Later Twentieth Century Art (3)
- 444 Senior Seminar (3)

ELECTIVES (6 S.H.)

Choose one of the following two-course sequences in a medium (6 S.H.):

- Graphic Design: 311 (3) and 411 (3) OR
- Painting: 317 (3) and 417 (3) OR
- Drawing: 318 (3) and 418 (3) OR
- Ceramics: 320 (3) and 420 (3) OR
- Sculpture: 328 (3) and 428 (3) OR
- Printmaking: 330 (3) and 430 (3)

B.A. MINOR – STUDIO ART

21 S.H.

REQUIRED COURSES (12 S.H.)

- 109 Introduction to Art (3)
- 114 2-D Design (3)
- 115 3-D Design (3)
- 118 Drawing I (3)

ELECTIVES (9 S.H.)

The student may choose any art or art history course above ART 110 to complete the nine semester hours, provided prerequisites are met.

B. A. MINOR – HISTORY OF ART

24 S.H.

The history of art minor is a program of study with a focus on the art of the nineteenth and twentieth centuries in Europe and America.

REQUIRED COURSES (12 S.H.)

- 221 Art History (3)
- 222 Art History II (3)
- 224 American Art (3)
- 439 Later Twentieth Century Art (3)

ELECTIVES (12 S.H.)

At least two of the following three courses (6-9 S.H.)

- 435 Italian Renaissance Art (3)
- 437 Nineteenth Century Art (3)
- 438 Early Twentieth Century Art (3)

The remaining elective(s) are to be chosen from one or two of the following groups (3-6 S.H.)

- 433 Independent Study (in art history) (3)

No more than one of the following studio courses:

- 114 2-D Design (3)
- 115 3-D Design (3)
- 118 Drawing I (3)

No more than one of the following cognate courses in English or history:

- ENG 223 Classical Mythology (3)
- ENG 224 The Bible as Literature (3)
- HIST 120 Western Civilization to 1500 (3)
- HIST 121 Western Civilization 1500-1815 (3)
- HIST 122 Western Civilization 1815 to Present (3)
- HIST 125 Classical History (3)
- HIST 150 United States History to 1865 (3)
- HIST 151 United States History Since 1865 (3)

ART COURSE DESCRIPTIONS

109 - Introduction to Art—3 S.H.

Non-chronological investigation of forms, expressive languages, functions and contexts of the visual arts throughout history up to the present. Cultural values and differences involving Western and some non-Western regions, and issues of gender, race and ethnicity are among the concerns of the course.

110 - Experiencing Art—3 S.H.

Introductory course for the non-major that includes an experiential, hands-on, art-making component. Elements and principles of design, styles, cultural and gender contexts, materials and techniques, content, meaning, and expression are all investigated in a non-chronological historical and contemporary context.

114 - 2-D Design—3 S.H.

Introduction to fundamental design concepts in the art process. Experiments and problems in abstract compositions.

115 - 3-D Design—3 S.H.

Foundation experience in manipulating materials in three-dimensional space. Broad range of basic materials, tools, and techniques used to solve problems in creating objects and spaces.

118 - Drawing I—3 S.H.

An examination of fundamental concepts in the art of drawing, while students acquire basic studio skills. This course develops visual perception, aesthetic judgment and sound studio practice. May include work from the nude model.

120 - Introduction to Ceramics—3 S.H.

An introduction to basic ceramic techniques for art minors, B. S. art teaching majors, and non-art majors.

128 - Introduction to Sculpture—3 S.H.

An introduction to basic sculpture techniques for art minors and non-art majors.

130 - Introduction to Printmaking—3 S.H.

An introduction to basic printmaking techniques for art minors and non-art majors.

135 - Introduction to Watercolor—3 S.H.

Painting with watercolor and other water-soluble materials, used alone or in combination. Prerequisites: ART 114 and ART 118 or instructor's permission.

* Course may be used to satisfy certain University Studies requirements.

217 - Painting I—3 S.H.

Beginning studio practice in oil and/or acrylic media. Students explore basic problems of form and space on a two-dimensional surface using traditional and contemporary methods. Visual analysis of historic and contemporary work is employed extensively in this course and is designed to broaden and facilitate the examination of form and technique in painting. Prerequisites: ART 114 and ART 118.

218 - Drawing II—3 S.H.

Continued experience in drawing in a variety of media with emphasis upon thematic problems and on the human figure, including the nude model. Prerequisite: ART 118. Grade only.

221 - Art History I—3 S.H.

The first of two courses in a year-long survey of the history of art, beginning with the Prehistoric Era and continuing through Antiquity and the Middle Ages. Emphasis on the formal and cultural foundations of Western Art. Grade only.

222 - Art History II—3 S.H.

The second half of the year-long survey of the history of art extends from the Renaissance period through the modern age. The survey concludes with developments just prior to World War II. Prerequisite: ART 221. Grade only.

224 - American Art—3 S.H.

Survey of the visual arts in the United States from the Colonial Era through the Great Depression. Emphasis on the emergence and evolution of American art traditions as indicative of national experience. Grade only.

228 - Sculpture I—3 S.H.

Introduction to sculpture for art majors and minors. Modeling, carving, fabrication and/or casting techniques used to explore abstract sculptural form as well as forms from nature and the model. Sculptural ideas investigated with the aid of slides, lectures, demonstrations and critiques. Prerequisite: ART 115. Grade only.

252 - Survey of Women Artists—3 S.H.

Lecture/discussion course surveying the history of European and American women artists from the 12th century to the present. Social and cultural environments for women in each era are considered, as well as individual artists' contributions to the history of art. A research paper is required. Core disciplinary course for women's studies minor. Grade only.

300 - Elementary Art Education—3 S.H.

Theories, processes and philosophy in visual arts education for prospective elementary classroom teachers are explored; experience with art processes and classroom procedures to develop potential teachers' artistic sensitivities, skills and thinking. Prerequisite: ART 109 strongly recommended; Junior or Senior standing. Student must be admitted to Teacher Education Program in order to register. Grade only.

311 - Graphic Design I—3 S.H.

Introduction to current concepts and practices in graphic design. Fundamentals, skills and creative thinking are emphasized in a series of exercises and problems. Design process, Gestalt principles, typography, types of artwork and layout are examined. Integrated use of Macintosh computer and graphics software. Prerequisites: ART 114, ART 118, and MCOM 175. Grade only.

317 - Painting II—3 S.H.

Continued intensive studio practice in oil and/or acrylic media, designed to expand and develop the student's skill and understanding in working with representational and abstract problems of form. Students are encouraged to initiate work in an individual direction and to engage in an ongoing study of relevant historic and contemporary painting, in addition to emerging trends. Prerequisite: ART 217 or instructor's permission. P/NC option.

318 - Advanced Drawing I—3 S.H.

Extensive studio practice in figure drawing. Emphasis in acquiring formal and technical proficiency using the drawing media. Development of the student's personal direction and expression through these media. Prerequisite: ART 218.

320 - Ceramics I—3 S.H.

Introduction to ceramics with an emphasis on clay materials and on hand building and wheel throwing techniques. Both vessel and sculptural concepts are explored with the aid of slides, lectures, demonstrations and critiques. Prerequisite: ART 115.

328 - Sculpture II—3 S.H.

Modeling, carving, fabrication and/or casting techniques are practiced. Students build on previous skills and identify personal aesthetic concerns. Formal and conceptual sculptural issues are explored with the

aid of slides, discussions and critiques. Prerequisite: ART 228. Grade only.

330 - Printmaking I—3 S.H.

Introduction to printmaking processes and the creation of "multiple" images. Experimental techniques, conceptualization and studio practice are emphasized. Prerequisites: ART 114 and ART 118. Grade only.

399 - Internship—1-3 S.H.

Work-related experience in appropriate settings such as museums, art centers, commercial offices or studios, and public relations offices. Credit hours to be arranged by a faculty member. May be used as a general art elective. Prerequisite: junior or senior standing only. May be repeated to a maximum of 9 credits.

402 - The Psychology of Art and Art Education—3 S.H.

Exploration of topics related to human behavior, and the production and appreciation of visual art forms. The prospective art teachers' understanding of the subject of art and effective instruction for K-12 learners are further concerns. Theories of perception, learning and the creative processes are examined as they pertain to visual thinking, aesthetic perception and judgment, artistic motivation, art concept learning, formal and semantic organization, artistic styles, cognitive development, instructional strategies, art teacher-learner dynamics, learning environment, and the evaluation of learning and process with media in studio art. Prerequisites: ART 109 recommended, ART 300 and junior standing. Grade only.

410 - Secondary Art Education—3 S.H.

An examination of programs in art education at the secondary level. Consideration of curricular and instructional problems related to teaching art in high school, review of research findings and designing exemplary programs in secondary art. Prerequisites: ART 300 and junior standing. Grade only.

411 - Graphic Design II—3 S.H.

Advanced problems in graphic design including advertising and publication design. Skills in conceptualization, illustration, computer applications, and layout/production are emphasized. High level of individual development expected. Portfolio preparation. Prerequisite: ART 311. Grade only. May be repeated to a maximum of 9 credits.

412 - Multi-Media Crafts for the Classroom—3 S.H.

An intensive and extensive art education laboratory experience affording the prospective art teacher familiarity with advanced art studio processes that produce craft outcomes across several media, including contemporary and experimental media. The learning content extends beyond the basic crafts processes introduced in ART 300. Prerequisite: ART 300. Grade only.

417 - Advanced Painting—3 S.H.

Continued intensive studio practice aimed at formal and technical proficiency in the use of paint. Students work to establish a meaningful direction in their painting, as they begin to identify individual interests concerning form and content. Students engage in an ongoing study of relevant artists' work, stylistic directions of the modern era and other recent trends including combined media. Preparation and exhibition of completed work is addressed at this level. Prerequisite: ART 317. Grade only. May be repeated to a maximum of 9 credits.

418 - Advanced Drawing II—3 S.H.

Intensive, individualized studio practice using the drawing media. Further development of the student's personal direction and expression through these media. Prerequisite: ART 318. May be repeated to a maximum of 9 credits.

420 - Ceramics II—3 S.H.

Development of the student's personal direction and expression through the ceramic medium. Increased involvement in clay body composition, glaze formulation, and firing techniques. Slides, critiques and readings in contemporary criticism supplement textbook reading. Prerequisite: ART 320. Grade only. May be repeated to a maximum of 9 credits.

428 - Advanced Sculpture—3 S.H.

Personal direction and expression are developed using any appropriate sculptural medium. Slides, critiques and readings in contemporary criticism contribute to the production of a cohesive body of work. Prerequisite: ART 328. Grade only. May be repeated to a maximum of 9 credits.

430 - Printmaking II—3 S.H.

Advanced printmaking processes, using a variety of techniques. Advanced conceptualization and drawing skills are required. Prerequisite: ART 330. May be repeated to a maximum of 9 credits. Grade only.

433 - Independent Study—1-3 S. H.

To be arranged with an instructor in studio, art history or art education. Prerequisites: to be determined by the instructor; junior standing. The permission and signature of the instructor, and the departmental stamp is required in order to register. May be repeated to a maximum of 9 credits. Grade only.

435 - Italian Renaissance Art—3 S.H.

The painting and sculpture of Italy from the late Gothic Era to about 1600. The major and some of the secondary schools, together with the innovations and achievements of individual masters, are emphasized. A research paper is required. Prerequisite: ART 222. Grade only.

437 - Nineteenth Century Art—3 S.H.

This course traces the transformations in European and American art beginning with the revolutionary period of the late 18th century. It culminates with the onset of European modernism in the final decades of the 19th century. A research paper is required. Prerequisite: ART 222. Grade only.

438 - Early Twentieth Century Art—3 S.H.

The historic period of modernist innovation in Europe between 1900 and the World War I era, including American responses, is examined. Concludes with developments up to the outbreak of World War II. A research paper is required. Prerequisite: ART 222. Grade only.

439 - Later Twentieth Century Art—3 S.H.

Emphasis on post-World War II modernism in the United States and on the increasing internationalism, stylistic pluralism and post-modernism marking the final quarter of the 20th century. A research paper is required. Prerequisite: ART 222. Grade only.

444 - Senior Art Seminar—3 S.H.

A broad range of topics is addressed through students' concurrent studio projects, studio critiques, readings in art criticism, discussion of contemporary art including recent or emerging trends and portfolio preparation. Studio projects will be preparing work for the Senior Exhibition(s) which, constitute the department's capstone experience. Prerequisite: Senior standing, B.A. and B.S. majors.

BIOLOGY

Pasteur Hall, Room 215, (507) 457-5270

<http://bio.winona.msus.edu>

Reuter (Chairperson), DeLong (Director of Large River Studies Center), Ragsdale (Director of Medical Technology), Thompson (Director of Cytotechnology)

FACULTY

Kimberly M. Bates, Assistant Professor; B.S., University of Massachusetts-Amherst; M.S., Ph.D., University of Missouri-Columbia; 1997 -

Steven Berg, Professor; B.S., Pacific Lutheran University; Ph.D., Purdue University; 1986 -

Emmanuel Brako, Professor; B.V.M., University of Nairobi (Kenya); B.S., Tuskegee University, M.S., Ph.D., Louisiana State University and A & M College; B.V.M., University of Nairobi; 1989 -

David Dapkus, Professor; B.S., M.S., Ph.D., University of Minnesota-Twin Cities; 1974 -

Michael D. DeLong, Professor; B.S., University of Southern Mississippi; M.S., Memphis State University (TN); Ph.D., University of Idaho—Moscow; 1992 -

David Essar, Associate Professor; B.S., Ferris State College (MI); M.S., Ph.D., University of Iowa; 1992

Kimberly J. Evenson, Associate Professor; B.S., M.S., North Dakota State University, Fargo; Ph.D., University of Minnesota-Twin Cities; 1995 -

Carol Jefferson, Professor; B.A., St. Olaf College; Ph.D., Oregon State University; 1976 -

Neal Mundahl, Professor; B.A., Winona State University; M.S., Michigan Technological University; Ph.D., Miami University (Ohio); 1989 -

Frances Ragsdale, Associate Professor; B.S. Eastern Oregon State; M.S., Southeastern Louisiana University; Ph.D., University of Idaho, 1993 -

Lawrence Reuter, Professor; B.A., Saint Mary's College of Minnesota; Ph.D., Princeton University; 1979 -

Robin K. Richardson, Associate Professor; B.S., Michigan State University; M.S., Central Michigan University, Mt. Pleasant; Ph.D., University of Oklahoma, Norman; 1992 -

Edward Thompson, Associate Professor; B.A., Macalester College, St. Paul; Ph.D., Medical College of Wisconsin, Milwaukee; 1992 -

PROGRAMS AND CAREER OPPORTUNITIES

Majors

The Biology Department offers a biology major in which a WSU student may select one of four options: allied health, cell and molecular, ecology, or environmental science. Each of these options leads to a B.S. degree and allows for many career opportunities. One common career path uses the B.S. degree to gain admittance to graduate studies in disciplines such as biology, biochemistry, medicine, physical therapy, dentistry and veterinary medicine. Another frequently followed career path uses the B.S. degree to gain industrial placement in the rapidly expanding bio-industrial and allied health areas, or other more traditional areas such as wildlife and environmental management.

The Biology Department offers a life science major, a program of study primarily intended for students preparing for teaching at the middle school and secondary levels. Although the life science major is designed specifically for teaching, the degree has sufficient breadth and flexibility to allow many of the same career options as the biology major.

The Biology Department provides majors in medical technology and cytotechnology. (See separate program listings under Medical Technology and Cytotechnology in this catalog.) Students interested in the medical technology and cytotechnology majors should contact the Director of Medical Technology or the Director of Cytotechnology as soon as possible after arriving on campus.

Minor and Pre-Professional Sequences

The Biology Department sponsors a biology minor and Pre-Professional Sequences. Pre-Professional sequences are not degree programs (i.e., major or minor) at WSU. The Pre-Professional programs are

preparatory for a degree at another college or university. Nine such programs are offered through the Biology Department:

- Pre-Dental Hygiene
- Pre-Dentistry
- Pre-Medicine (Allopathic and Osteopathic)
- Pre-Mortuary Science
- Pre-Optometry
- Pre-Physician Assistant
- Pre-Physical Therapy
- Pre-Podiatry
- Pre-Veterinary Medicine

For the specific program requirements, see the Pre-Professional Sequences section in this catalog).

GENERAL PROGRAM REQUIREMENTS

First-year students in all the various biology majors start with Basics of Life (BIOL 241) and Organismal Diversity (BIOL 242), which cover the breadth of biology. As sophomores, students take General Ecology, Cell Biology and Genetics. Once this five-course sequence is completed, students begin to take coursework that is specific for their chosen options or majors. All upper-division elective courses in the department require, as prerequisites, the five courses of the first-year/sophomore core. A capstone research project is required of all biology majors, except medical technology and cytotechnology majors. The common core of chemistry, physics and mathematics courses in all the biology options and majors facilitates a change of major or option within the Biology Department.

* Course may be used to satisfy certain University Studies requirements.

The requirements for the various biology options and majors are not necessarily identical with the requirements for admission to graduate school. For example, students expecting to attend graduate/medical/veterinary school or those interested in industrial placement should take one year of calculus, at least one course in computer science, two semesters of organic chemistry and one semester of biochemistry. Internships are encouraged.

Students interested in careers in physical therapy are advised to plan on receiving a four-year baccalaureate degree under the allied health option of the biology major. Most physical therapy programs now award only graduate degrees and thus require a college B.S. degree for admission.

For the qualified and interested student, the Biology Department sponsors a Biology Honors Program, which allows for a distinguished baccalaureate degree. Also, the Biology Department is home for the Gamma Delta Chapter of the Beta Beta Beta Biological Honor Society. See the Biology website for more information.

Every student graduating with a degree in a biology option is required to complete a capstone research experience. This research must be supervised by a member of the biology faculty or someone approved by the Biology Department. Students are encouraged to meet with their advisors to discuss research projects and to identify a research advisor during the second semester of their junior year. Additional capstone information is located at <http://bio.winona.msus.edu/biolhp/sprg/bio-caps.htm>.

PASS/NO CREDIT COURSES

Biology 117, 118 and 400 must be taken for letter grade only. Biology majors and minors must take all required and elective courses for letter grade only. Students in other majors can take biology courses other than 117, 118 or 400 on a P/NC basis. Courses offered on a pass/no credit only or letter grade only basis are so designated in the course descriptions.

HONORS IN BIOLOGY PROGRAM

Philosophy

Any science can be described as having two major aspects: (1) an organized body of knowledge and (2) a formal way of adding new information to the existing body of knowledge. Thus, science is related to method and process, and it is not merely a collection of factual information. The Biology Department at WSU believes that students who desire advanced careers in biology need significant experiences that involve them directly in an intimate and meaningful process of biological inquiry. The Honors Program is designed to provide this enhanced opportunity to eligible biology majors.

Student Benefits

Students participating in the Honors in Biology Program will receive a number of benefits which will enhance their academic careers and which will improve their likelihood of success in the field of biology. These benefits include:

1. The opportunity for extensive "one on one" research direction under one or more biology department faculty members. The research activity allows students and faculty to become very well acquainted.
2. The ability of a faculty member to write highly specific and individual letters of recommendation on behalf of the student. These strong, distinctive letters will greatly improve the student's chances of acceptance into various graduate, medical, dental, physical therapy or other training programs. The letters will also improve students' chances of gaining employment after their college career.
3. The opportunity of the student to actually practice the process of real biological science. This research opportunity is the mark of a high quality science education at a selective institution.
4. The opportunity to satisfy biology elective requirements by taking Biology 499 (Undergraduate Research) for 3 credits.
5. The opportunity to satisfy biology elective requirements by taking up to 2 credits of Biology 495 (Seminar in Biology).
6. The opportunity to apply for and to possibly receive a modest stipend from the department or the university grants office.
7. Students who are admitted into the Honors in Biology Program and successfully complete the process will, upon graduation:
 - Have their official transcripts stamped with the words "Graduated with Honors in Biology"
 - Have their transcript show the title of their honors thesis
 - Have their graduation status (Honors in Biology) indicated on the graduation program

Eligibility

To be eligible for the Honors in Biology Program, a student must:

1. Be a biology (any option) or a life science major
2. Have completed the biology core sequence (Basics of Life, Organismal Diversity, Ecology, Cell Biology and Genetics)
3. Have a 3.25 GPA both overall and within the major
4. Identify a WSU faculty member who is willing to serve as a research advisor to the student
5. Apply for and be granted admission into the Honors in Biology Program by the Biology Honors Committee

Completion

Students will be recognized as having successfully completed the Honors in Biology Program after satisfying the following requirements:

1. They will have completed one semester of Seminar in Biology (students are encouraged to participate in a seminar topic outside their area of research) and the Honors in Biology seminar offered in the spring.
2. They will have presented their research at a regional research symposium.
3. They will have submitted and received approval of an Honors Thesis in the appropriate format and style.

B.S. MAJOR BIOLOGY – ALLIED HEALTH OPTION

73 S.H. (No Minor Required)

BIOLOGY CORE COURSES (18 S.H.)

- 241 Basics of Life (4)
- 242 Organismal Diversity (4)
- 312 General Ecology (3)
- 308 Cell Biology (3)
- 310 Genetics (3)
- 307 Cell/Genetics Laboratory (1)

Note: BIOL 241 and 242 should be taken prior to BIOL 312, 307, 308, and 310. BIOL 308 should be taken prior to or concurrently with BIOL 307.

ALLIED HEALTH OPTION REQUIREMENTS (9 S.H.)

- 201 Human Anatomy (4)
- 323 General Physiology (5)

ALLIED HEALTH OPTION ELECTIVES (17 S.H.)

Courses totaling 17 semester hours to be chosen from any biology elective listed on page 60. Biology 399 does not count toward any biology major.

BIOLOGY CAPSTONE REQUIREMENT (3 S.H.)

- 499 Student Research (3)

OTHER REQUIRED COURSES (26 S.H.)

Chemistry (12 S.H.)

- * 212, *213 Principles of Chemistry I, II (8)
- 340 Organic Chemistry (4)

Note: Organic Chemistry 350 and 351 may be substituted for 340.

Mathematics (6 S.H.)

- * 150 Mathematics for the Earth and Life Sciences I (3)
- * 155 Mathematics for the Earth and Life Sciences II (3)

Physics (8 S.H.)

- * 201, 202 General Physics I, II (8)

Note: University Physics I and II (221, 222) may be substituted for General Physics I and II (201, 202).

B.S. MAJOR BIOLOGY – CELL AND MOLECULAR OPTION

71 S.H. (No Minor Required)

BIOLOGY CORE COURSES (18 S.H.)

- 241 Basics of Life (4)
- 242 Organismal Diversity (4)
- 312 General Ecology (3)
- 308 Cell Biology (3)

- 310 Genetics (3)
307 Cell/Genetics Laboratory (1)

Note: BIOL 241 and 242 should be taken prior to BIOL 312, 307, 308 and 310. BIOL 308 should be taken prior to or concurrently with BIOL 307.

CELL AND MOLECULAR OPTION REQUIREMENTS (14–15 S.H.)

- 400 Chemistry (Biochemistry I) (4)
430 Molecular Biology (3)

Two of the six courses listed below (7-8 S.H.):

- 445 Immunology (3)
431 Molecular Biology Lab (4)
409 General Microbiology (4)
309 Developmental Biology (3)
393 Animal Cell Culture (4)
394 Plant Tissue Culture, Principles and Application (4)

CELL AND MOLECULAR OPTION ELECTIVES (9–10 S.H.)

Courses totaling 9-10 semester hours to be chosen from any biology elective listed on page 60. Biology 399 does not count toward any biology major.

BIOLOGY CAPSTONE REQUIREMENT (3 S.H.)

- 499 Student Research (3)

OTHER REQUIRED COURSES (26 S.H.)

Chemistry (12 S.H.)

- * 212, *213 Principles of Chemistry I, II (8)

- 340 Organic Chemistry (4)

Note: It is recommended that students in this option take Chemistry 350 and 351 instead of 340.

Mathematics (6 S.H.)

- * 150 Mathematics for the Earth and Life Sciences I (3)

- * 155 Mathematics for the Earth and Life Sciences II (3)

Physics (8 S.H.)

- * 201, 202 General Physics I, II (8)

Note: University Physics I and II (221, 222) may be substituted for General Physics I and II (201, 202).

B.S. MAJOR BIOLOGY – ECOLOGY OPTION

71 S.H. (No Minor Required)

BIOLOGY CORE COURSES (18 S.H.)

- 241 Basics of Life (4)
242 Organismal Diversity (4)
312 General Ecology (3)
313 General Ecology Laboratory (1)
308 Cell Biology (3)
310 Genetics (3)

Note: BIOL 241 and 242 should be taken prior to BIOL 312, 313, 307, 308 and 310. BIOL 312 should be taken prior to or concurrently with BIOL 313.

ECOLOGY OPTION REQUIREMENTS (10–11 S.H.)

At least one course must be completed from each of the three following groups:

Group A – Organismal/Systematic Ecology

- 303 Biology of Algae and Fungi (4)
318 Invertebrate Zoology (4)
319 Vertebrate Biology (4)
320 Ornithology (4)
350 Plant Taxonomy (4)
360 Entomology (4)

Group B – Field and Quantitative Techniques

- 415 Ecology of Large Rivers (4)
335 Plant Ecology (4)
420 Limnology (4)
305 STAT Biometry (3)

Group C – Principles and Processes

- 315 Environmental Biology (3)
380 Evolution (3)

- 423 Ecosystem Ecology (3)

- 424 Biogeography (3)

- 425 Animal Behavior (3)

ECOLOGY OPTION ELECTIVES (13–14 S.H.)

Courses may be chosen from any biology elective listed on page 60. The required ecology option courses and elective ecology option courses must total 24 S.H. Biology 399 does not count toward any biology major.

BIOLOGY CAPSTONE REQUIREMENT (3 S.H.)

- 499 Student Research (3)

OTHER REQUIRED COURSES (26 S.H.)

Chemistry (12 S.H.)

- * 212, *213 Principles of Chemistry I, II (8)

- 340 Organic Chemistry (4)

Note: Organic Chemistry 350 and 351 may be substituted for 340.

Mathematics (6 S.H.)

- * 150 Mathematics for the Earth and Life Sciences I (3)

- * 155 Mathematics for the Earth and Life Sciences II (3)

Note: Students also are encouraged to take Biometry (305); Calculus I, II (MATH 160, 165) may be substituted for MATH 150, 155.

Physics (8 S.H.)

- * 201, 202 General Physics I, II (8)

Note: University Physics I and II (221, 222) may be substituted for General Physics I and II (201, 202).

B.S. MAJOR BIOLOGY:

ENVIRONMENTAL SCIENCE OPTION

124 S.H. (No Minor Required)

(Alliance with environmental science options of other departments is given under "Environmental Science" on page 100.)

UNIVERSITY STUDIES COURSES (30 S.H.)

Note: WSU was in the process of finalizing its new University Studies Program as this catalog went to print, and the interrelationships between the requirements of the University Studies Program and the requirements of the biology-environmental science option were not fully established. A number of courses required by the biology-environmental science option also satisfy requirements of the University Studies Program. Students should consult with their academic advisor for more information.

BIOLOGY CORE COURSES (18 S.H.)

- 241 Basics of Life (4)
242 Organismal Diversity (4)
312 General Ecology (3)
313 General Ecology Laboratory (1)
308 Cell Biology (3)
310 Genetics (3)

Note: BIOL 241 and 242 should be taken prior to BIOL 312, 313, 307, 308 and 310. BIOL 312 should be taken prior to or concurrently with BIOL 313.

ENVIRONMENTAL SCIENCE OPTION REQUIREMENTS (12 S.H.)

- 318 Invertebrate Zoology (4) OR 319 Vertebrate Biology (4)
335 Plant Ecology (4) OR 350 Plant Taxonomy (4)
315 Environmental Biology (3)
495 Seminar – Environmental Science (1)

ENVIRONMENTAL SCIENCE OPTION ELECTIVES (7 S.H.)

Courses totaling 7 semester hours to be chosen from:

- 303 Biology of Algae and Fungi (4)
318 Invertebrate Zoology (4)
319 Vertebrate Biology (4)
320 Ornithology (4)
335 Plant Ecology (4)
350 Plant Taxonomy (4)

* Course may be used to satisfy certain University Studies requirements.

- 360 Entomology (4)
- 380 Evolution (3)
- 405 Fishery Biology (3)
- 409 Microbiology (4)
- 415 Ecology of Large Rivers (4)
- 420 Limnology (4)
- 423 Ecosystem Ecology (3)
- 425 Animal Behavior (3)
- 442 Biogeography (3)

BIOLOGY CAPSTONE REQUIREMENT (3 S.H.)

- 499 Student Research (3)

OTHER REQUIRED COURSES (54–55 S.H.)

Chemistry (16 S.H.)

- * 212, *213 Principles of Chemistry I, II (8)
- 320 Environmental Chemistry (4)
- 340 Organic Chemistry (4)

Note: Organic Chemistry 350 and 351 may be substituted for 340.

Geoscience (12 S.H.)

- * 120 Dynamic Earth (4)
- * 130 Earth and Life Through Time (4)
- 240 Hydrogeology (4)

Mathematics (9 S.H.)

- * 150, *155 Mathematics for the Earth and Life Sciences I, II (6)
- 305 Biometry (3)

Note: Calculus I, II (MATH 160, 165) may be substituted for MATH 150, 155.

Physics (8 S.H.)

- * 201, 202 General Physics I, II (8)

Note: University Physics I & II (221, 222) may be substituted for

General Physics I, II (201, 202).

Two of the following three courses (6 S.H.)

- BUSA 451 Environmental Law (3)
- ECON 315 Environmental and Natural Resources (3)
- POLS 340 Environmental Policy (3)

One of the following six courses (3–4 S.H.)

- CHEM 425 Analytical Chemistry I (4)
- CHEM 435 Topics in Environmental Chemistry (3)
- GEOS 310 Non-Renewable Natural Resources (3)
- GEOS 225 Environmental Geoscience (3)
- GEOS 315 Surficial Processes and Soils (4)
- GEOS 420 Applied Hydrogeology (4)

BIOLOGY ELECTIVES

- 201 Human Anatomy (4)
- 303 Biology of Algae and Fungi (4)
- 305 STAT Biometry (4)
- 307 Cell Biology Laboratory (1)
- 309 Developmental Biology (3)
- 313 General Ecology Laboratory (1)
- 314 Plant Physiology (4)
- 315 Environmental Biology (4)
- 318 Invertebrate Zoology (4)
- 319 Vertebrate Biology (4)
- 320 Ornithology (4)
- 323 General Physiology (5)
- 327 Developmental Biology Laboratory (1)
- 335 Plant Ecology (4)
- 340 Virology (3)
- 350 Plant Taxonomy (4)
- 360 Entomology (4)
- 370 HPP Kinesiology and Biomechanics (3) (HPP 370 is an elective for Biology, Allied Health Option only.)
- 380 Evolution (3)
- 393 Animal Cell Culture (4)
- 394 Plant Tissue Culture, Principles and Application (4)
- 400 Individual Problems in Biology (1-3)
- 400 CHEM Biochemistry I (4)
- 401 CHEM Biochemistry II (4)
- 405 Fishery Biology (3)
- 409 General Microbiology (4)
- 410 Membrane Biology (4)
- 411 Protein Structure and Function (1)

- 415 Ecology of Large Rivers (3)
- 420 Limnology (4)
- 423 Ecosystem Ecology (3)
- 424 Biogeography (3)
- 425 Animal Behavior (3)
- 427 Advanced Topics in Biology (1-4)
- 430 Molecular Biology (3)
- 431 Molecular Biology Laboratory (4)
- 433 PSY Neuroscience (4)
- 441 Comparative Vertebrate Physiology (3)
- 445 Immunology (3)
- 446 Immunology Laboratory (1)
- 460 General Parasitology (3)
- 462 Parasitology (4)
- 470 Histology (4)
- 490 Issues in Biology (3)
- 495 Seminar in Biology (1)
- 496 Undergraduate Thesis (1)
- 499 Student Research (3)

B.S. MAJOR – LIFE SCIENCE (Teaching)

128 S.H. (No Minor Required)

Notes:

1. WSU was in the process of changing the requirements for University Studies at the time this catalog went to print. The Biology Department, in cooperation with other science departments and the College of Education, is developing a new Board of Teaching-approvable program, which will be implemented as soon as possible. Students should be aware that the program described below will be changing in the near future, and they will need to work closely with their academic advisor to ensure that they can graduate with a Board of Teaching-approved degree.
2. Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to these requirements in the Effective Educator Handbook, or see the Education section in this catalog (page 87).
3. Students majoring in biology life science must have both a 2.75 overall GPA and 2.50 GPA or higher in the major.

UNIVERSITY STUDIES COURSES (19 S.H.)

Note: WSU was in the process of finalizing its new University Studies Program as this catalog went to print, and the interrelationships between the requirements of the University Studies Program and the requirements of the life science major were not fully established. A number of courses required by the life science major also satisfy requirements of the University Studies Program. Students should consult with their academic advisor for more information.

BIOLOGY CORE COURSES (18 S.H.)

- 241 Basics of Life (4)
- 242 Organismal Diversity (4)
- 312 General Ecology (3)
- 308 Cell Biology (3)
- 310 Genetics (3)
- 307 Cell/Genetics Laboratory (1) OR
- 313 Ecology Laboratory (1)

Note: BIOL 241 and 242 should be taken prior to BIOL 312, 313, 307, 308 and 310. BIOL 308 should be taken prior to or concurrently with BIOL 307. BIOL 312 should be taken prior to or concurrently with BIOL 313.

LIFE SCIENCE REQUIREMENT (6 S.H.)

- 315 Environmental Biology (3)
- 499 Student Research (3) (This course also satisfies biology capstone requirement.)

LIFE SCIENCE ELECTIVES (9 S.H.)

At least 9 credits of approved elective courses to be chosen from any biology elective listed above. Biology 399 does not count toward any biology major. It is strongly recommended that the elective requirements be fulfilled from the following courses:

Animal Biology

- 201 Human Anatomy (4)

- 318 Invertebrate Zoology (4)
- 319 Vertebrate Biology (4)
- 320 Ornithology (4)
- 360 Entomology (4)
- 441 Comparative Vertebrate Physiology (3)

Plant Biology

- 303 Biology of Algae and Fungi (4)
- 314 Plant Physiology (4)
- 335 Plant Ecology (4)
- 350 Plant Taxonomy (4)

Microbiology

- 409 General Microbiology (4)

Note: Students should carefully choose electives with the aid of the life science advisor to ensure broad knowledge and skill in biology.

OTHER REQUIRED COURSES (76 S.H.)**Chemistry (12 S.H.)**

- * 212, *213 Principles of Chemistry I, II (8)
- 340 Organic Chemistry (4)

Note: Organic Chemistry 350 and 351 may be substituted for 340.

Education (38 S.H.)

- EDUC 305 Human Development and Learning (4)
- EDUC 308 Human Relations and Student Diversity (3)
- EDUC 312 Instructional Planning Assessment (3)
- EDUC 429 Secondary Reading and Teaching Strategies (4)
- EDUC 449 Middle School Philosophy, Organization and Interdisciplinary Planning (3)
- EDUC 459 The Professional Educator (3)
- EDUC 465 Student Teaching (12)
- HHP 204 Personal and Community Health (3)
- SPED 200 Human Exceptionality (3)

Geoscience (8 S.H.)

- * 120 Dynamic Earth (4)
- * 130 Earth and Life Through Time (4)

Mathematics (6 S.H.)

- * 150 Mathematics for the Earth and Life Sciences I (3)
- * 155 Mathematics for the Earth and Life Sciences II (3)

Physics (12 S.H.)

- * 201, 202 General Physics I, II (8)
- 311 Science Teaching Methods (4)

Note: University Physics I and II (221, 222) may be substituted for General Physics I and II (201, 202).

B.A. MINOR BIOLOGY (38 S.H.)**PREREQUISITES (3 S.H.)**

- * 150 Mathematics for the Earth and Life Sciences I (3)

REQUIRED COURSES (20 S.H.)**Biology (8)**

- * 241 Basics of Life (4)
- * 242 Organismal Diversity (4)

Chemistry (12)

- * 212 Principles of Chemistry I (4)
- * 213 Principles of Chemistry II (4)
- 340 Organic Chemistry (4)

Note: Organic Chemistry 350 and 351 may be substituted for 340.

ELECTIVES (15 S.H.)

Any course (required or elective) listed with the B.S. Biology major in any of the four options.

BIOLOGY COURSE DESCRIPTIONS

See Biology Department website (<http://bio.winona.edu>) for the latest course information and a schedule of alternate year courses.

104 - Conservation of the Environment—3 S.H.

Problems in the wise use of natural resources with emphasis on human impacts and sustainable living. Lecture only. Offered each semester.

117 - Human Biology—3 S.H.

An introductory study of the anatomy, physiology, development and heredity of the human for students who are not majoring in biology. Lecture only. Letter grade only. Offered each semester.

118 - General Biology—4 S.H.

A course that promotes critical thinking about the process of studying

living organisms. Students are exposed to a sampling of major living groups while utilizing the scientific method. Lecture and laboratory. Letter grade only. Offered each semester.

171 - Medical Terminology—1 S.H.

Scientific terminology as it applies to human and veterinary medicine, dentistry and related professions. Topics include the cardiovascular, skeletal, muscular, integumentary, urinary and reproductive systems. Independent study using tapes and study guide. Grade only. Offered each semester.

172 - Medical Terminology—1 S.H.

Scientific terminology as it applies to human and veterinary medicine, dentistry and related professions. Topics include the nervous, respiratory and digestive systems. Independent study using tapes and study guide. Grade only. Offered each semester.

173 - Medical Terminology—1 S.H.

Scientific terminology as it applies to human and veterinary medicine, dentistry and related professions. Topics include the endocrine system, blood and lymphatics, measurement, positions, colors, and miscellaneous words and medical specialties. Independent study using tapes and study guide. Grade only. Offered each semester.

201 - Human Anatomy—4 S.H.

A study of the human body from both systemic and regional perspectives, integrating microscopic and macroscopic information. Includes cat dissection as an example of mammalian anatomy and demonstrations of prosected cadavers. Prerequisites: CHEM 212, CHEM 213 and BIOL 241. Lecture and lab. Offered yearly.

203 - Natural History—4 S.H.

Ecology, life history, behavior and identification of plants and animals in local habitats including: forests, prairies, lakes and streams. Lecture, laboratory and field trips. Offered yearly.

204 - Elements of Anatomy and Physiology—4 S.H.

Introduction to the structure and function of the human body designed especially for physical education, recreation and health majors. Offered according to demand.

206 - Normal Nutrition—3 S.H.

Basic principles of nutrition and the nutritional needs of individuals at different age levels. Prerequisites: CHEM 208. Offered each semester.

209 - Microbiology—3 S.H.

Introduction to microbiology including study of prokaryotic, eukaryotic and viral microorganisms important to human health, microbial growth, microbial control, microbial nutrition and microbial cultivation. Lecture and laboratory. Prerequisites: CHEM 208 and CHEM 209 or CHEM 212 and CHEM 213 or equivalent. Offered yearly.

211 - Anatomy and Physiology I—4 S.H.

First course of a year-long sequence for students in Nursing and Health and Human Performance. Includes terminology and orientation of the body, basics of chemistry, cytology, histology, and the integumentary, skeletal, muscular and nervous systems. Lecture and laboratory. Offered yearly.

212 - Anatomy and Physiology II—4 S.H.

The second course of a year-long sequence for students in Nursing and Health and Human Performance. Includes structure and function of the endocrine, circulatory, immune, respiratory, digestive, urinary and reproductive systems; nutrition and metabolism; fluid and ionic balance. Lecture and laboratory. Prerequisite: BIOL 211. Offered yearly.

241 - Basics of Life—4 S.H.

One of two introductory courses, both of which are required of all biology majors. Introduces the basic life processes at the molecular, cellular, tissue and organismal levels. Prerequisites: none. Lecture and laboratory. Offered each semester.

242 - Organismal Diversity—4 S.H.

One of two introductory courses, both of which are required of all biology majors. Introduces ways in which organisms carry out basic life processes (e.g., gas exchange, nutrition) and interactions between organisms and their environment. Lecture and laboratory. Prerequisites: none. Offered each semester.

269 - Human Reproduction—3 S.H.

The biology of human reproduction. The aim of this course is to present a basic but comprehensive survey of many aspects of human reproduction. Topics include anatomy, physiology, biochemistry, normal and abnormal functions of all aspects of reproduction. Lecture and discussion. No prerequisite. Offered according to demand.

303 - Biology of Algae and Fungi—4 S.H.

A systematic, morphological and evolutionary overview of fungi, photo-

* Course may be used to satisfy certain University Studies requirements.

synthetic protists, and plants other than the Angiosperms. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

307 - Cell Biology Laboratory—1 S.H.

An experimental study of the cell as a biological unit. Use of histochemistry, spectrophotometry, electrophoresis, centrifugation, microscopy and statistics in analysis of ultrastructure, macromolecular organization and function of cell components in plants and animals. Prerequisites: BIOL 241, BIOL 242, BIOL 308 (or concurrent registration in BIOL 308), CHEM 340 or CHEM 350 (or concurrent registration in CHEM 340 or CHEM 350). Offered yearly.

308 - Cell Biology—3 S.H.

A study of the cell as a biological unit. Analysis of ultrastructure, macromolecular organization and function of cell components in plants and animals is emphasized. Lecture only. Prerequisites: BIOL 241, BIOL 242, and CHEM 340 or CHEM 350 (or concurrent registration in CHEM 340 or CHEM 350). Offered each semester.

309 - Developmental Biology—3 S.H.

A study of the mechanisms of the sequent changes that occur within organelles, cells, tissues, organs and organ systems of plants and animals during their life spans. Lecture only. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

310 - Genetics—3 S.H.

A survey of the principles of Mendelian, molecular, cytological, population and human genetics. Lecture only. Prerequisites: BIOL 241 and BIOL 242. Offered each semester.

312 - General Ecology—3 S.H.

Relationships between organisms and their environment with an emphasis on fundamental principles. Prerequisites: BIOL 241 and BIOL 242. Lecture only. Offered each semester.

313 - General Ecology Laboratory—1 S.H.

Laboratory and field studies of fundamental ecological principles. Prerequisites: BIOL 241 and BIOL 242. Co-requisite: BIOL 312. Offered yearly.

314 - Plant Physiology—4 S.H.

Physiological principles underlying the processes that occur in living plants: growth and development, water relations and mineral nutrition, transport, photosynthesis and metabolism. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

315 - Environmental Biology—3 S.H.

A study of human impacts on the natural environment. Modern conservation measures, pollution prevention and habitat management procedures are treated in depth. Lecture and field trips. Prerequisite: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

318 - Invertebrate Zoology—4 S.H.

Survey of invertebrate animals. Emphasis on structure, function, evolution and ecology of the major invertebrate groups. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

319 - Vertebrate Biology—4 S.H.

A study of the structure, function, evolution and taxonomy of all the groups of vertebrates. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

320 - Ornithology—4 S.H.

Structure, classification, behavior, distribution and identification of birds. Lecture, laboratory and fieldwork. Prerequisites: BIOL 308, BIOL 310, BIOL 312 and CHEM 212 or instructor's permission. Offered alternate years.

323 - General Physiology—5 S.H.

Lectures, demonstrations and laboratory exercises are designed to provide the basis for understanding physiological mechanisms and the functional organization of body systems. Topics may include muscle, nervous, cardiovascular, respiratory, urinary, digestive, endocrine, immune and reproductive systems. Prerequisites: BIOL 241, BIOL 242, BIOL 201 and CHEM 208, CHEM 209 or CHEM 212 and CHEM 213. Offered yearly.

327 - Developmental Biology Laboratory—1 S.H.

An experimental study of the mechanisms of changes that occur during embryonic development. Laboratory. Co-requisites: concurrent or previous enrollment in BIOL 309. Offered even years.

333 - Medical Laboratory Techniques—1 S.H.

Selected students participate in the every day operation of a hospital medical laboratory. Students must see their advisor four weeks prior to registration. May be repeated for credit. P/NC only. Offered spring semester.

335 - Plant Ecology—4 S.H.

A study of the interactions of plants with each other and their environment. Emphasis is on applied and theoretical physiological, population and community ecology. Lecture, fieldwork and laboratory. Prerequisites: BIOL 308, BIOL 310, BIOL 312 and BIOL 313. Offered alternate years.

340 - Virology—3 S.H.

Basic properties of viruses. Includes viral structure, assays, replication, diseases, genetic properties, mechanisms of interaction with cells, viral oncogenesis, and interference with viral multiplication. Lecture only. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

350 - Plant Taxonomy—4 S.H.

An introduction to the principles and practices of plant classification, systematics and identification, as applied to vascular plants with special emphasis on the local flora. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Lecture, laboratory and field trips. Offered alternate years.

360 - Entomology—4 S.H.

The largest group of organisms on earth is explored through personal collections, projects, lecture and laboratory exercises. Students sample morphology, life history strategies and the diversity of the group through lecture discussions and laboratory exercises. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

380 - Evolution—3 S.H.

Overview of principles and processes of biological evolution with emphasis on selection, variation and macroevolution. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

393 - Animal Cell Culture—4 S.H.

Introduction to basic and specialized techniques of animal cell culture. Techniques include aseptic technique, in vitro cell cultivation, cell enumeration, viability determination, hybridomas technique for monoclonal antibody production, cryopreservation, and cell cloning. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered yearly.

394 - Plant Tissue Culture, Principles and Application—4 S.H.

Basic plant tissue culture techniques. Use of these methods in commercial propagation of plants, production of disease-free plants and genetic improvement of ornamental and crop plants. Prerequisite: BIOL 308. Offered alternate years.

399 - Internship—1-12 S.H.

Supervised experiences at a government, industrial or research institution. Credits do not replace other required or elective courses in the Biology Major, but count as general elective credit. May be repeated up to 12 S.H. Only 3 S.H. may be taken for letter grade. Prerequisite: completion of required biology courses. Offered each semester.

400 - Individual Problems in Biology I—1-3 S.H.

An opportunity for the qualified advanced undergraduate student to work independently. Prerequisite: instructor's permission. May be repeated to a total of 3 S.H. Letter grade only. Offered each semester.

405 - Fishery Biology—3 S.H.

Examination of the concepts, methodologies and problems of modern-day fishery management. Lecture and fieldwork. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

409 - General Microbiology—4 S.H.

The anatomy, physiology, biochemistry, genetics, taxonomy and ecology of microorganisms, especially bacteria; includes applications to agriculture, medicine and industry. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and CHEM 340. Offered yearly.

410 - Membrane Biology—4 S.H.

Study of the structure and function of biological membranes. Includes detailed discussions of membrane preparation, membrane components, membrane carbohydrates, membrane transport and membrane bioenergetics. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310, BIOL 312 and CHEM 340. Offered according to demand.

411 - Protein Structure and Function—1 S.H.

An advanced study of protein primary, secondary, tertiary and quaternary structure using the data found in the National Institutes of Health Protein Data Bank, along with software for visualization and presentation of crystallographic data. Protein functions will be correlated with the structural features through primary literature, monographs and textbooks. Lecture and demonstration. Prerequisites: BIOL 308, and CHEM 340 or CHEM 350. Offered according to demand.

415 - Ecology of Large Rivers—4 S.H.

Examination of the geological, physical, chemical and biological characteristics of large river ecosystems. Includes review of several river systems with comparisons to the upper Mississippi River. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and BIOL 312 or instructor's

permission. Offered alternate years.

420 - Limnology—4 S.H.

Analysis of the geological, physical, chemical and biological aspects of inland waters. Lecture, laboratory and fieldwork. Prerequisites: BIOL 308, BIOL 310, BIOL 312 and CHEM 212 or instructor's permission. Offered alternate years.

423 - Ecosystem Ecology—3 S.H.

The structure and function of ecosystems including biochemical cycling, food webs and introduction to modeling. Lecture only. Prerequisites: BIOL 308, BIOL 310, BIOL 312, MATH 150 and MATH 155. Offered alternate years.

424 - Biogeography—3 S.H.

A study of the dynamics of ranges and distribution changes of plants and animals on earth, with emphasis on the evolutionary, ecological, geological, and climatic influences on dispersal, extinction, and diversification. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

425 - Animal Behavior—3 S.H.

A study of how and why animals behave in the ways they do. Special attention is given to the observation and description of behavior and to the ensuing questions of immediate causation, development, evolution and function of behavior. Lecture and demonstration. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered alternate years.

427 - Advanced Topics in Biology—1-4 S.H.

In-depth study of an emerging field or relevant issue of special interest to faculty or advanced students of biology. Lecture only, or lecture and laboratory. Topic announced in advance. May be repeated for credit as topics change. Prerequisites: BIOL 308, BIOL 310 and BIOL 312. Offered according to demand and staffing availability.

430 - Molecular Biology—3 S.H.

A study of the various molecular aspects of DNA, RNA, and protein structure, function, and expression. Topics include DNA replication, DNA transcription into RNA, RNA translation to protein, DNA repair mechanisms, plasmids and transposons, recombinant DNA and genetic engineering, and regulation of gene activity in prokaryotes and eukaryotes. Lecture only. Prerequisites: BIOL 308, BIOL 310, BIOL 312 and CHEM 340. Offered yearly.

431 - Molecular Biology Laboratory—4 S.H.

An intensive laboratory course introducing modern methods and instrumentation in molecular biology. Selected exercises in recombinant DNA technology, including DNA isolation and quantification, restriction enzyme analysis, gene cloning, Southern hybridization, DNA amplification via the polymerase chain reaction, DNA sequencing and introduction to sequence analysis software. Prerequisite: BIOL 430 or concurrent enrollment. Instructor's permission. Offered yearly.

441 - Comparative Vertebrate Physiology—3 S.H.

Lectures and demonstrations provide an understanding of physiological mechanisms in an evolutionary context. Focus will be on organismal physiology, but will also include mechanisms of interaction between the cellular, tissue, organ, and organismal levels. Topics include temperature, water and solutes, respiration/circulation, sensory/nervous systems, endocrinology/reproduction. Prerequisites: BIOL 241, BIOL 242, BIOL 312, BIOL 308 and CHEM 340 or CHEM 350. Offered alternate years.

443 - Urinalysis—1 S.H.

An introduction to the clinical study of human urine for students majoring in Medical Technology. The topics included are physiology, methodologies and test performance as well as clinical significance in the areas of urinalysis, cerebrospinal fluids and gastric analysis. Prerequisites: BIOL 308, BIOL 310 and CHEM 340. Grade only. Offered yearly.

444 - Hematology—2 S.H.

Study of blood and blood-forming tissues for Medical Technology majors. Includes development, cytology, immunocytology, histology and functions of all formed elements and plasma composition. Prerequisites: BIOL 241, BIOL 242, BIOL 308, BIOL 310 and CHEM 340 or CHEM 350. Offered yearly.

445 - Immunology—3 S.H.

An introduction to the theory and practice of modern immunology. Emphasis on the immune response in humans. BIOL 308, BIOL 310 and CHEM 340. Offered yearly.

446 - Immunology Laboratory—1 S.H.

This course will introduce students to the theory and application of modern immunological techniques. Topics included are antibody detection methods using precipitation, agglutination, ELISA, western blot analysis, dot blots, and immunoelectrophoresis. Other methods include SDS-PAGE, Affinity Chromatography, antigen preparation, protein analysis, T Cell isolation and others. Co-requisite: concurrent or previous enroll-

ment in BIOL 445. Offered yearly.

450, 451 - Medical Technology I and II—12 S.H. each

Laboratory Medicine. Courses and content to be determined by the Director of Laboratories, Educational Coordinator and staff of the affiliated hospital. Prerequisite: medical technology majors with senior standing. Grade only. Offered yearly.

452, 453 - Medical Technology III and IV—4 S.H. each

Laboratory Medicine. Courses and content to be determined by the Director of Laboratories, Educational Coordinator and staff of the affiliated hospital. Prerequisite: medical technology majors with senior standing. Grade only. Offered yearly.

460 - General Parasitology—3 S.H.

An introduction to the study of parasites of humans and domestic animals, and the etiology of associated pathologic states. This course is especially intended for students in the Medical Technology program. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310 and CHEM 340. Offered yearly.

462 - Parasitology—4 S.H.

This course will examine medically and veterinary important parasites of the world. Each parasite will be studied thoroughly to include details of taxonomic classification, host spectrum, geographic distribution, morphology, life cycle requirements, pathogenesis, control measures and public health significance. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310, and CHEM 340 or permission of instructor. Offered yearly.

470 - Histology—4 S.H.

A microscopic study of animal cells, tissues, and organs and correlating structure and function. Emphasis is placed on the mammal. Laboratory includes histotechniques for preparing sections and histochemical staining. Lecture and laboratory. Prerequisites: BIOL 308, BIOL 310, CHEM 212 and CHEM 213. Offered yearly.

481, 482 - Cytotechnology I and II—12 S.H. each

Cytotechnology clinical education. Courses and content to be determined by the Program Director, Educational Coordinator and staff of the affiliated clinical education facility. Prerequisites: cytotechnology major with senior standing. Grade only. Offered yearly.

483, 484 - Cytotechnology III and IV—4 S.H. each

Cytotechnology clinical education. Courses and content to be determined by the Program Director, Educational Coordinator and staff of the affiliated clinical education facility. Prerequisites: cytotechnology major with senior standing. Grade only. Offered yearly.

490 - Issues in Biology—3 S.H.

A course, intended for seniors, that promotes student understanding of the interrelated concerns of society and biology. Students will explore the social, ethical and political implications of current issues in biology. Next, students will analyze a specific issue, develop arguments and counter-arguments used by opposing positions, write a formal paper documenting at least two opposing views, and defend a position in a formal debate. Prerequisites: BIOL 308, BIOL 310, BIOL 312 and senior standing or permission of the instructor. Offered yearly.

495 - Seminar in Biology—1 S.H.

Students prepare an in-depth written paper and/or an oral presentation based on original biological literature, and learn to access and use scientific databases. May be taken twice for credit. Senior standing or instructor's permission required. Offered each semester.

496 - Undergraduate Thesis—1 S.H.

Students who have completed an extensive undergraduate research project (such as the projects completed by students in the Biology Department Honors Program) are given the opportunity to work closely with a professor in writing and editing their own undergraduate theses. The finished thesis is expected to be an example of excellent collegiate scholarship and writing in scientific style. The manuscript will correctly use and cite appropriate current literature. Prerequisite: instructor's permission. Offered each semester.

499 - Student Research—3 S.H.

An opportunity for an advanced biology student to work with a faculty member on an independent research project. Written report on results of research required. Prerequisites: BIOL 308, BIOL 310, BIOL 312 and instructor's permission. Offered each semester.

BUSINESS ADMINISTRATION

Somsen Hall, Room 324 (507-457-5170)
www.winona.edu/businessadministration/
Barbor (Chairperson)

FACULTY

Marzie Astani, Associate Professor; B.A., Tehran University; M.S., Ph.D., Iowa State University of Science and Technology; M.B.A., Central Michigan University; 1987 -
Sara Barbor, Professor; B.A., Earlham College; M.A., Ball State University; M.B.A., Ph.D., University of Kansas; 1988 -
JoEll W. Bjorke, Professor; B.S., St. Cloud State University; J.D., William Mitchell College of Law; 1981 -
Shashi Dewan, Professor; B.S., Malviya Regional Engineering College; M.B.A., Ph.D., Indian Institute of Technology; 1988 -
Edward A. Duplaga, Associate Professor; B.S., Bowling Green State University; M.B.A., Ph.D., University of Iowa; 2001 -
Joseph Foegen, Professor; B.B.A., M.B.A., Ph.D., University of Wisconsin-Madison; 1958 -
Mary Gander, Professor; B.A., M.S., Ph.D., University of Wisconsin-Madison; 1986 -
Judy M. Gernander, Professor; B.A., Mankato State University; J.D., University of Minnesota-Twin Cities; 1970 -
Patrick Paulson, Assistant Professor; B.S., M.S., Illinois Institute of Technology; J.D., Indiana University; 2000 -
Vartan Safarian, Professor; B.S., Pahlavi University; M.S., M.B.A., Indiana University; 1983 -
Kimberlee Snyder, Associate Professor; B.S., Kansas State University; M.B.A., PhD, New Mexico State-Las Cruces University, 2000 -
Sohail Subhani, Associate Professor; B.S., University of Karachi; M.B.A., Ph.D., University of Texas, Arlington; 2002 -
Marvin Wolfmeyer, Professor; B.S., University of Missouri-Columbia; M.S., Ph.D., University of Wisconsin-Madison; 1969 -
Pamela Wolfmeyer, Professor; B.A., Grinnell College; M.A., University of Wisconsin-Madison; 1969 -

PURPOSE

The basic purpose of the Business Administration programs is to prepare students for careers in administration of all types of organizations in the private, non-profit and public sectors. The management curriculum is designed to provide students with the tools to pursue professional careers in management of operating units or groups and more specialized areas such as human resources management. The management information systems major prepares students for the integration of information systems tools and technologies into various business areas.

GRADUATION REQUIREMENTS

1. Completion of all course work required for the major.
2. No more than two courses may be counted toward the major with a passing grade lower than "C." A course cannot be repeated more than twice.
3. Completion of a minimum 15 credit hours of 300/400-level courses from the Department of Business Administration at WSU.
4. None of the courses required for a major, minor, option or any of the concentrations may be taken on a P/NC basis.
5. Completion of a minimum of 50% of the business courses in the major from WSU.
6. Sixty-four non-business credits are required for all majors in the department. The mathematics, statistics (six semester credits maximum) and economics (nine semester credits maximum) required for the department majors can be counted toward the 64 non-business credits.
7. Meet all WSU graduation requirements. For a checklist of the University's graduation requirements, see page 24.

ROCHESTER CENTER

The department's major is available through the 2+2 Program at the Rochester Center. See page 37 for the articulation of the 2+2 in Business Administration program.

B.S. MAJOR – BUSINESS ADMINISTRATION

69 S.H. (No Minor Required)

UNIVERSITY STUDIES REQUIREMENTS

Mathematics (3 S.H.)

- * 110 Finite Mathematics (3) OR
- * 120 Precalculus (4) OR
- * 140 Applied Calculus (3)

REQUIRED COURSES (36 S.H.)

Accounting (6 S.H.)

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Business Administration (18 S.H.)

- DIS 220 Business Statistics (3)
- DIS 362 Management Information Systems (3)
- BUSA 301 Business Law I (3)
- MGMT 315 Principles of Management (3)
- MGMT 325 Organizational Dynamics (3)
- POM 334 Production & Operations Management (3)

Economics and Finance (9 S.H.)

- * ECON 201 Principles of Microeconomics (3)
- * ECON 202 Principles of Macroeconomics (3)
- FIN 360 Corporate Finance (3)

Marketing (3 S.H.)

- 300 Principles of Marketing (3)

BUSINESS ADMINISTRATION REQUIREMENTS (15 S.H.)

- BUSA 311 Business Law II (3)
- DIS 202 Microcomputers in Business (3)
- DIS 320 Intermediate Business Statistics (3)
- MGMT 317 Management of Human Resources (3)
- MGMT 495 Strategic Management (3)

ELECTIVES (15 S.H.)

Must be 300+ level courses

- DIS/POM Course (3)
- Management Course (3)
- International Business/Management (3) OR an international course from Accounting, Business Administration, Economics and Finance or Marketing (3)
- Any course from the Department of Business Administration (3)
- Any course from Departments of Business Administration, Accounting, Economics and Finance, or Marketing (3)

B.S. MAJOR – HUMAN RESOURCES MANAGEMENT

66 S.H. (No Minor Required)

UNIVERSITY STUDIES REQUIREMENTS

Mathematics (3 S.H.)

- * 110 Finite Mathematics (3) OR
- * 120 Precalculus (4) OR
- * 140 Applied Calculus (3)

REQUIRED COURSES (48 S.H.)**Accounting (6 S.H.)**

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Business Administration (18 S.H.)

- BUSA 291 Legal Environment of Business (3)
- DIS 202 Microcomputers in Business (3)
- DIS 220 Business Statistics (3)
- DIS 320 Intermediate Business Statistics (3)
- MGMT 315 Principles of Management (3)
- MGMT 495 Strategic Management (3)

Economics and Finance (9 S.H.)

- * ECON 201 Principles of Microeconomics (3)
- * ECON 202 Principles of Macroeconomics (3)
- FIN 360 Corporate Finance (3)

Marketing (3 S.H.)

- 300 Principles of Marketing (3)

Management (12 S.H.)

- 317 Management of Human Resources (3)
- 325 Organizational Dynamics (3)
- 417 Compensation (3)
- 467 Staffing and Evaluation (3)

ELECTIVES (15 S.H.)**Business Administration**

- MGMT 365 Independent Readings in Management (1-3)
- MGMT 377 Independent Readings in Human Resources (1-3)
- MGMT 387 Independent Readings in Labor Relations (1-3)
- BUSA 399 Internship Problems (3)
- MGMT 415 Theories of Management (3)
- MGMT 427 Management Development (3)
- MGMT 437 Labor Relations (3)
- MGMT 447 International Labor Relations (3)
- MGMT 457 Problems in Management of Human Resources (3)
- MGMT 477 International Human Resources Management (3)
- BUSA 486 Independent Studies in Business (1-3)

Administrative Information Systems

- 440 Training and Employee Development (3)

Economics

- 420 Labor Economics (3)

OTHER ELECTIVES

Related courses offered by other departments may be taken. A list of acceptable courses is available in the department office for human resources management majors. All 15 elective credits must be in 300+ level courses.

B.S. MAJOR – MANAGEMENT INFORMATION SYSTEMS

78 S.H. (No Minor Required)

UNIVERSITY STUDIES REQUIREMENTS**Mathematics (3 S.H.)**

- * 110 Finite Mathematics (3) OR
- * 120 Precalculus (4) OR
- * 140 Applied Calculus (3)

Recommended Natural Science (3 S.H.)

- * CS 150 An Overview of Computer Science (3)

BUSINESS CORE (39 S.H.)**Accounting (6 S.H.)**

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Business Administration (21 S.H.)

- BUSA 291 Legal Environment of Business (3)
- DIS 220 Business Statistics (3)
- DIS 320 Intermediate Business Statistics (3)
- DIS 362 Management Information Systems (3)
- MGMT 325 Organizational Dynamics (3)
- MGMT 495 Strategic Management (3)
- POM 334 Production and Operations Management (3)

Economics and Finance (9 S.H.)

- * ECON 201 Principles of Microeconomics (3)
- * ECON 202 Principles of Macroeconomics (3)
- FIN 360 Corporate Finance (3)

Marketing (3 S.H.)

- 300 Principles of Marketing (3)

REQUIRED DIS COURSES (12 S.H.)

- 312 Business Computer Programming (3)
- 342 Advanced Business Computer Applications (3)
- 452 Management of Telecommunication Systems (3)
- 482 Management of Information Technology (3)

REQUIRED COMPUTER SCIENCE COURSES (14 S.H.)

- 234 Algorithms and Problem Solving I (4)
- 250 Algorithms and Problem Solving II (4)
- 385 Applied Database Management Systems (3)
- 410 Software Engineering (3)

REQUIRED MATHEMATICS COURSES (4 S.H.)

- 210 Discrete Mathematics and Foundations (4)

ELECTIVES (6 S.H.)**Decision and Information Systems**

- DIS 332 Business Programming Tools (3)
- DIS 340 Management Science (3)
- POM 464 Project Management (3)
- DIS 462 Decision Support Systems (3)
- DIS 492 Topics in MIS (3)
- BUSA 399 Internship Problems (3)

Computer Science

- 412 Networking and Telecommunications (3)
- 413 Advanced Networking and Telecommunications (3)
- 371 Object-Oriented Design & Development (3)
- 445 Artificial Intelligence (3)
- 467 Topics in Information Systems Applications (3)
- 470 Systems Design and CASE Tools (3)
- 476 Distributed Systems: Concepts and Applications (3)
- 485 Database Systems Design (3)

B.S. MINOR – BUSINESS ADMINISTRATION

33 S.H.

REQUIRED COURSES (33 S.H.)**Accounting (6 S.H.)**

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Business Administration (15 S.H.)

- BUSA 291 Legal Environment of Business (3)
- DIS 202 Microcomputers in Business (3)
- DIS 220 Business Statistics (3)
- MGMT 315 Principles of Management (3) OR
- MGMT 325 Organizational Dynamics
- POM 334 Production & Operations Management (3)

Economics and Finance (9 S.H.)

- * ECON 201 Principles of Microeconomics (3)
- * ECON 02 Principles of Macroeconomics (3)
- FIN 360 Corporate Finance (3)

Marketing (3 S.H.)

- 300 Principles of Marketing (3)

B.S. MINOR – BUSINESS LAW

24 S.H.

REQUIRED COURSES (12 S.H.)**Accounting (6 S.H.)**

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Business Administration (6 S.H.)

- 301 Business Law I (3)
- 311 Business Law II (3)

* Course may be used to satisfy certain University Studies requirements.

ELECTIVES (12 S.H.)

Accounting

421 Introduction to Taxation (3)

Business Administration

101 Introduction to Law and the Legal Process (3)

376 Topics in Business (1-3)

Note: Topics requires prior written approval from department chairperson.

411 International Business Law (3)

421 Consumer Law (3)

431 Real Estate Law (3)

441 Health Law (3)

491 Seminar in Business Law (3)

The following courses require written approval from department chairperson:

Political Science

320 Constitutional Law (3)

420 Administrative Law (3)

Philosophy

325 Philosophy of Law (3)

Additional courses may be used with prior written approval from department chairperson.

B.S. MINOR – INTERNATIONAL BUSINESS

30-33 S.H.

This international business minor provides in-depth coverage of issues and concepts related to the operations and management of international business. The program's courses focus on the international business environment, and management and control of international/multinational operations and resources. The objective is to provide insight into the environmental issues surrounding the global operations of business.

REQUIRED COURSES (12 S.H.)

ECON 404 International Economics (3) OR

ECON 415 International Economic Development (3)

FIN 440 International Finance (3)

MGMT 455 International Business (3)

MGMT 475 Seminar in International Management (3)

MKTG 331 International Marketing (3)

Foreign Language (9-12 S.H.)

A minimum of three semesters in a single foreign language. The foreign language requirement may be applied toward the University Studies requirements.

ELECTIVES (9 S.H.)

ACCT 424 International Taxation (3)

BUSA 411 International Business Law (3)

ECON 404 International Economics (3)

ECON 415 International Economic Development (3)

MGMT 447 International Labor Relations (3)

MGMT 477 International Human Resources Management (3)

B.S. MINOR – MANAGEMENT

30 S.H.

REQUIRED COURSES (12 S.H.)

At least one course from each of the following four sections:

Organizational Component

MGMT 315 Principles of Management (3)

MGMT 317 Management of Human Resources (3)

MGMT 325 Organizational Dynamics (3)

MGMT 415 Theories of Management (3)

MGMT 417 Compensation (3)

MGMT 427 Management Development (3)

MGMT 437 Labor Relations (3)

MGMT 457 Problems in Management of Human Resources (3)

MGMT 467 Staffing and Evaluation (3)

Operational Component

POM 334 Production/Operations Management (3)

POM 344 Purchasing (3)

POM 424 Management of Technology (3)

POM 434 Quality and Productivity Management (3)

MGMT 435 Managing for Quality (3)

POM 464 Project Management (3)

International Component

MGMT 447 International Labor Relations (3)

MGMT 455 International Business (3)

MGMT 475 Seminar in International Business (3)

MGMT 477 International Human Resources Management (3)

Integrated Component

MGMT 425 Small Business Management (3)

MGMT 495 Strategic Management (3)

ELECTIVES (18 S.H.)

Any additional 18 S.H. from the above list.

B.S. MINOR – MANAGEMENT INFORMATION SYSTEMS

21 S.H.

REQUIRED COURSES (12 S.H.)

DIS 202 Microcomputers in Business (3)

DIS 312 Business Computer Programming (3)

DIS 342 Advanced Business Computer Applications (3)

DIS 362 Management Information Systems (3)

ELECTIVES (9 S.H.)

DIS 332 Business Programming Tools (3)

DIS 340 Management Science (3)

DIS 452 Management of Telecommunication Systems (3)

DIS 462 Decision Support Systems (3)

DIS 482 Management of Information Technology (3)

DIS 492 Topics in MIS (3)

POM 464 Project Management (3)

B.S. MINOR – PRODUCTION AND OPERATIONS MANAGEMENT

(24 S.H.)

REQUIRED COURSES (15 S.H.)

DIS 220 Business Statistics (3) OR

STAT 210 Statistics (3)

POM 334 Production and Operations Management (3)

POM 414 Production Planning and Control (3)

POM 434 Quality and Productivity Management (3)

POM 464 Project Management (3)

ELECTIVES (9 S.H.)

BUSA 399 Internship Problems (3)

DIS 340 Management Science (3)

POM 344 Purchasing (3)

POM 444 Operations Strategy (3)

DIS 462 Decision Support Systems (3)

POM 494 Current Topics in POM (3)

STAT 320 Statistical Quality Control (3)

STAT 321 Industrial Design of Experiments I (3)

STAT 350 Design of Samples and Surveys (3)

BUSINESS ADMINISTRATION COURSE DESCRIPTIONS

BUSA: Business Administration

DIS: Decision and Information Systems

MGMT: Management

POM: Production and Operations Management

Note: All courses except BUSA 101,106 and 398 are offered on a grade-only basis.

BUSA: Business Administration

101 - Introduction to Law and the Legal Process—3 S.H.

A study of the law as part of a liberal education. Included are historical background, court systems and jurisdiction, criminal and civil procedure, common law, statutory law, administrative law, contracts, torts, family law, alternate dispute resolution, and remedies. Not open to those having 15 or more credits in business.

106 - Introduction to Business—3 S.H.

Develops broad, beginning understanding of business institutions, functions, practices and problems. Provides survey of basic national institution for non-majors. Not open to those having 15 or more credits in business.

291 - Legal Environment of Business—3 S.H.

An introduction to the legal environment of business including dispute resolution systems and regulations affecting managerial decision making. Grade only.

301 - Business Law I—3 S.H.

Legal background, contracts, criminal law, bailments, carriers, agency, torts, sales and commercial paper. Grade only.

311 - Business Law II—3 S.H.

Partnerships, corporations, bankruptcy, secured transactions, real and personal property, trusts and estates, and antitrust, securities, insurance, trademark, copyright, employment law, wills and consumer protection. Prerequisite: BUSA 301 or instructor's permission. Grade only.

326 - Business and the Future—3 S.H.

Using mainly World Future Society materials, a combination of lectures, student presentations and discussion tries to stimulate a time-frame for strategic planning, longer than what is traditional for American managers, to enhance competitiveness, stimulate creative thinking and innovation, and in so doing, to broaden horizons and career potential of graduates. Prerequisite: Junior or Senior status or instructor's permission. Grade only.

376 - Topics in Business—1-3 S.H.

An analysis of current topics issues relevant to the milieu of business. The subject matter to be offered each semester is announced in advance by the department. May be repeated as topics change. Grade only.

398 - Internship—1-9 S.H.

Credits will not be counted in Business Administration Major, but as general elective credits. Prerequisite: concurrent enrollment in BUSA 399. P/NC only.

399 - Internship Problems—3 S.H.

Prerequisite: courses that must be completed prior to an internship vary by program. See department for list of requirements. Minimum 2.0 GPA. Grade only.

411 - International Business Law—3 S.H.

A study of a variety of transnational business transactions and applicable legal regulations. Prerequisite: BUSA 291 or BUSA 301. Grade only.

421 - Consumer Law—3 S.H.

A study of the major issues affecting consumers. Included are sales practices, warranties, advertising, credit extension, rates and disclosure requirements, collections, remedies, and housing. Prerequisite: BUSA 291 or BUSA 301. Grade only.

431 - Real Estate Law—3 S.H.

An analysis of the legal system and real property, including the transfer of real estate, land use and regulations, landlord, tenant, estates and interests in real estate, and financing of the real estate transaction. Prerequisite: BUSA 311. Grade only.

441 - Health Law—3 S.H.

A discussion of the issues of concern to the health care professional including regulation of health care quality through licensure, institutional quality control programs and the tort system; access to health care; control of health care costs through regulation, competition, and antitrust; respect for personhood in the professional-patient relationship; advanced care directives, assisted suicide, and surrogate parenting. Prerequisite: BUSA 301. Grade only.

451 - Environmental Law—3 S.H.

A legal study of a broad range of domestic and international environmental issues. Analysis of the environmental policy perspectives of NEPA, RCRA, CERCLA, Clean Air Act, Clean Water Act, Wetland Development, and Acid Rain. Prerequisite: BUSA 301. Grade only.

486 - Independent Studies in Business—1-3 S.H.

Offers the advanced student an opportunity to do additional reading and/or research in areas of special interest. Prerequisite: instructor's permission. Total credits may not exceed 6 S.H. Grade only.

491 - Seminar in Business Law—3 S.H.

An advanced analysis of current legal issues. Focus of the course to be determined by the instructor and announced in class schedule. Senior standing. Enrollment limited. Grade only.

DIS: Decision and Information Systems**202 - Microcomputers in Business—3 S.H.**

An introduction to some of the more commonly used software packages for business decision-making. Spreadsheet, business graphics, database and integrated software are introduced. Grade only.

220 - Business Statistics—3 S.H.

Elementary business statistics including descriptive measures, elementary probability, sampling of distributions, and statistical inference. Prerequisites: MATH 110, MATH 120, MATH 140 or instructor's permission. Grade only.

312 - Business Computer Programming—3 S.H.

A structured approach to business systems development and programming using 3GL/4GL. Problem solving techniques with emphasis on business applications, including sequential and random access file processing. Grade only.

320 - Intermediate Business Statistics—3 S.H.

A continuation of Business Statistics I, including Chi-Square Tests, regression and correlation, and analysis of variance. Prerequisite: DIS 220 or instructor's permission. Grade only.

332 - Business Programming Tools—3 S.H.

Introduction to advanced programming tools. The student will document, compile, test and debug business application problems using new application development tools and techniques. Prerequisite: DIS 312 or instructor's permission. Grade only.

340 - Management Science—3 S.H.

Quantitative analysis of management decision-making problems using a systematic and scientific approach, in particular, application of quantitative and decision models including linear and dynamic programming, distribution and network models, inventory models, queuing theory, Markov analysis and simulation. Prerequisite: DIS 320 or instructor's permission. Grade only.

342 - Advanced Business Computer Applications—3 S.H.

The focus of this course is on the development and management of business database systems. It provides the theoretical concepts as well as practical approaches to planning, development, test and documentation of business database systems. Project planning and control approach is used to relate database administration to information systems management. Students are required to develop, implement, and evaluate a business database system. Prerequisite: DIS 312 or instructor's permission. Grade only.

362 - Management Information Systems—3 S.H.

An introduction to basic concepts of Management Information System design, implementation and control. Application of computer-based MIS and decision models to business and management situations and problems. Prerequisite: DIS 202 or instructor's permission. Grade only.

452 - Management of Telecommunication Systems—3 S.H.

This course provides an understanding of basic concepts involved in management of data communications, teleprocessing, and networks. Topics covered in this course include a review of the history of data communications and communications networks, fundamental principles of managing data and voice communications and network security. Various commercial products are surveyed. The necessity of managing telecommunications in business is emphasized and issues in applying telecommunications in corporate environments are discussed. Also, the effects of regulatory environment in telecommunications industry are covered. Prerequisite: DIS 362. Grade only.

462 - Decision Support Systems—3 S.H.

This course focuses on complex management decision activities which require extensive use of information and modeling. It explores the application of computer-based management decision support systems to not only operational and control decisions but also to strategic and planning managerial decision-making activities. The conceptual framework as well as practical application of DSS is discussed. Prerequisite: DIS 362 and DIS 340 or instructor's permission. Grade only.

482 - Management of Information Technology—3 S.H.

This course introduces students to the current issues in information technologies mainly through case analysis. Different methods of dealing with the issues involved are discussed. Various systems in information technology are presented. The importance of management control is emphasized and multinational IT is covered also. Prerequisite: DIS 362, DIS 342, and DIS 452. Grade only.

492 - Topics in MIS—3 S.H.

The major focus of this course is on the advanced and complex concepts of Information Systems Technology. The objective is to provide perspective for adapting to Information Systems Technology. Key

conceptual frameworks of MIS, as well as cutting-edge business application development technologies are presented. Prerequisite: DIS 362. Grade only.

MGMT: MANAGEMENT

315 - Principles of Management—3 S.H.

Analysis of the functions performed by managers of all organizations, interpersonal implications and how current managerial problems are related. Prerequisites: ACCT 211 and ECON 201 or instructor's permission for non-business majors only. Grade only.

317 - Management of Human Resources—3 S.H.

Problems involved in developing an organization's human resources so that benefits to both the individual and the organization are maximized. Study of the responsibilities of personnel workers in industry. Prerequisites: ACCT 211, ECON 201 and MGMT 315 or instructor's permission for non-business majors only. Grade only.

325 - Organizational Dynamics—3 S.H.

Examination of different types of leadership skills used to resolve organizational problems and to achieve the goals of the organization. The behavioral sciences are stressed, with emphasis on leadership and motivation theories. Prerequisite: ACCT 211, ECON 201 or instructor's permission. Grade only.

365 - Independent Readings in Management—1-3 S.H.

To provide more background in management, three books of the student's choice (with concurrence of faculty advisor) are read for each credit desired. Primary source is WSU library. Chapter summaries and evaluations are requested for each book as well as an integrative report, comparing and contrasting each book with each other. Prerequisite: upper division status or instructor's permission. Limit of 9 credits of independent study per program. Grade only.

377 - Independent Readings in Human Resources—1-3 S.H.

To provide more background in human resources, three books of the student's choice (with concurrence of faculty advisor) are read for each credit desired. Primary source is WSU library. Chapter summaries and evaluations are requested for each book as well as an integrative report, comparing and contrasting each book with each other. Pre-requisite: upper division status or instructor's permission. Limit of 9 credits of independent study per program. Grade only.

387 - Independent Readings in Labor Relations—1-3 S.H.

To provide more background in labor relations, three books of the student's choice (with concurrence of faculty advisor) are read for each credit desired. Primary source is WSU library. Chapter summaries and evaluations are requested for each book as well as an integrative report, comparing and contrasting each book with each other. Prerequisite: upper division status or instructor's permission. Limit of 9 credits of independent study per program. Grade only.

415 - Theories of Management—3 S.H.

Study of various modern theories of management and organization. Application of these theories to actual management situations is also examined. Prerequisite: MGMT 315. Grade only.

417 - Compensation—3 S.H.

Issues, theories, and policies in the areas of wage and salary administration and employee compensation. Prerequisites: ACCT 211, ECON 201, ECON 202, MGMT 315 and MGMT 317 or instructor's permission. Grade only.

425 - Small Business Management—3 S.H.

Explore, investigate and analyze small businesses and their management practices. Develop business plans and feasibility studies of small business. Study all operational and managerial aspects of small business operations. Extensive usage of case study methods. Prerequisites: DIS 220 and MGMT 315 or instructor's permission. Grade only.

427 - Management Development—3 S.H.

This course focuses on management development and its applications in organizations. It will cover the basics of development including determination if a development problem exists, needs assessment, establishing objectives, choice of development techniques, evaluations of programs and means for successful implementation in an organization. Prerequisite: MGMT 315 and MGMT 317 or instructor's permission. Grade only.

435 - Managing for Quality—3 S.H.

An overview of the philosophy and principles of Total Quality Management (TQM), in general, and of Deming's approach in particular. Many of the most important contributors to the quality literature and movement are studied within the historical context of the development of Quality Management philosophy, methods and technology. An overview

of the basic tools and methods of TQM is given with applications. Prerequisites: POM 334, MGMT 315 and senior standing or instructor's permission. Grade only.

437 - Labor Relations—3 S.H.

Examination of labor organization structure, conflict, and practice, including the scope of major labor legislation, and the practical differences between labor and management, both public and private sector, over wages, hours and working conditions. Prerequisites: MGMT 315 and MGMT 317 or instructor's permission. Grade only.

447 - International Labor Relations—3 S.H.

A study of foreign labor movements and analysis of current and historical problems confronting labor movements. Prerequisites: ACCT 211, ECON 201, ECON 202, MGMT 315 and MGMT 317 or instructor's permission. Grade only.

455 - International Business—3 S.H.

A study of how managing abroad differs from managing at home, from both strategic and operations oriented perspective. Prerequisite: MGMT 315 or instructor's permission. Grade only.

457 - Problems in Management of Human Resources—3 S.H.

Controversial, practical situations involving people at work are examined with an eye to giving greater insight into the complexities of working effectively with others within immediate work groups and beyond. Prerequisite: ACCT 211, ECON 201, MGMT 315 and MGMT 317 or instructor's permission. Grade only.

467 - Staffing and Evaluation—3 S.H.

Personnel Staffing and Evaluation. Examination of personnel staffing and evaluation including EEO and Affirmative Action requirements. Areas covered will include recruitment, selection, job analysis, and performance appraisal. Prerequisite: ACCT 211, ECON 201, DIS 220, MGMT 315 and MGMT 317 or instructor's permission. Grade only.

477 - Seminar in International Management—3 S.H.

A study of how and why Multinational Organizations need to adapt their management tasks and practices to different International settings, that they operate in. The course will incorporate the study and intensive discussion of latest literature and case studies in this field. Prerequisite: MGMT 315 or instructor's permission. Grade only.

477 - International Human Resources Management—3 S.H.

This course focuses on issues involved in international human resource management. It will review adaptations that human resources management must make to work in today's global environment. Prerequisites: MGMT 315 or MGMT 325, and MGMT 317, or consent of instructor. Grade only.

495 - Strategic Management—3 S.H.

An advanced, integrative course for senior business administration majors. Uses cases to stress interrelationships of all functional areas, organization life stages, strategy development and policy formation. Prerequisite: completion of core requirements and senior standing. Grade only.

POM: PRODUCTION AND OPERATIONS MANAGEMENT

334 - Production and Operations Management—3 S.H.

An analytical approach to manufacturing and service organizations covering such topics as: competitive priorities, total quality management, operations strategy, inventory management, production and project planning and control, partnership, total productive maintenance, and logistics. Prerequisite: DIS 220. Grade only.

344 - Purchasing—3 S.H.

A study of purchasing management. Includes objectives, procedures, organization, ordering techniques, inventory control, vendor selection, price, equipment procurement, legal aspects, make or buy, and purchasing department reports. Prerequisite: POM 334. Grade only.

414 - Production Planning and Control—3 S.H.

Study of computer-based systems and procedures for production planning and control in operations management. Primary emphasis is on developing a general model for manufacturing planning and control systems, with secondary emphasis on advanced topics in the following areas: material requirements planning, Just-in-Time, theory of constraints, and scheduling. Prerequisite: POM 334. Grade only.

424 - Management of Technology—3 S.H.

This course addresses issues relevant to the management of technological changes in manufacturing and service operations. Recent advancements in computerization and automation necessitate a system's view of the operations function, with particular emphasis on the link between technology, operations, and marketing strategies. Prerequisite: POM 334. Grade only.

434 - Quality and Productivity Management—3 S.H.

Study of the principles of quality and productivity management is the main subject of this course. Emphasis is placed on new and advanced concepts found in the U.S. and abroad, including such topics as systems thinking, reducing complexity, ISO 9000, and activity-based costing. Prerequisite: POM 334. Grade only.

444 - Operations Strategy—3 S.H.

This course is an application of production and operations management principles in real life situations. This is done through analysis of cases, with particular emphasis on linking operations strategy to marketing strategy. Prerequisite: POM 414. Grade only

464 - Project Management—3 S.H.

The questions of efficiency and effectiveness are addressed through analysis of the project management process and installation of project management methodologies. Different types of projects are presented that can best be attacked by different kinds of project management methodologies. Implementation risks of large-scale project processes are discussed in reference to various application areas, e.g., manufacturing and service operations, information system design, or engineering. Prerequisite: DIS 220. Grade only.

494 - Current Topics in POM—3 S.H.

This course will explore some of the latest techniques and concepts in POM. The objective of this course is to relate these techniques and concepts to a systems view of the operations function. Prerequisite: POM 334. Grade only.

CHEMISTRY

Pasteur Hall, Room 312 (507-457-5290)

<http://course1.winona.edu/chemistry/>

Ng (Chairperson), Franz (Director of S.E. MN Analytical Service)

FACULTY

Mark A. Engen, Associate Professor; B.S., Bemidji State University; Ph.D., Montana State University; 1997 -

Jeanne L. Franz, Associate Professor; B.A., Augustana College; Ph.D., University of Minnesota-Twin Cities; 1996 -

Sara M. Hein, Assistant Professor; B.S., University of Wisconsin-La Crosse; Ph.D.; University of Iowa; 2000-

Robert W. Kopitzke, Assistant Professor; B.S., M.S., Ph.D., Florida Institute of Technology; 1999 -

Charla S. Miertschin, Associate Professor; B.S. Abilene Christian University; Ph.D. Texas A&M University, 1993

Thomas W. Nalli, Professor; B.S., Union College (NY); M.S., Ph.D., University of Rochester; 1995-

C.B. William Ng, Professor; B.S., M.S., Ph.D., University of British Columbia; 1986 -

Jamie L. Schneider, Assistant Professor; B.S. Winona State University; Ph.D. University of Minnesota-Twin Cities; 2000 -

Bruce A. Svingsen, Professor; B.A., St. Olaf College; Ph.D., Michigan State University; 1987 -

PURPOSE

The Chemistry Department offers three Bachelor of Science majors to prepare students to enter business, industry, professional schools, graduate schools in chemistry and the environmental field. Students in these programs have ample opportunity for part-time employment in work related to chemistry either in the department or in local industry. They are encouraged to become involved in research being carried on by members of the department in preparation and characterization of novel inorganic compounds; synthesis of natural products; study of organic reaction mechanisms; analytical work and environmental studies for local industries and government; thermodynamics, kinetic, and quantum mechanical studies of multi-component systems; toxicology and drug metabolism; computer modeling in chemistry; and synthesis, characterization, and applications of polymers. The department also offers three minors in chemistry: biochemistry, polymer chemistry (Option B), and chemistry (Option A).

The Chemistry Department is home to the Southeast Minnesota Analytical Service (SEMAS), which provides educational opportunities through part-time employment. In addition, the department offers a B.S. chemistry (teaching) major for students wishing to teach chemistry. The major meets Minnesota teacher certification requirements. Wisconsin certification requires minor modifications. Students preparing for certification in other states should consult with the department to learn of any necessary modifications.

PRE-PROFESSIONAL SEQUENCES

The Chemistry Department sponsors Pre-professional Sequences, which are not degree programs (e.g., major or minor) at WSU. The programs are preparatory for a degree at another college or university. The Pre-Professional Sequences offered through the Chemistry Department are Pre-Medicine (Allopathic and Osteopathic) and Pre-Pharmacy. For detailed course descriptions, see Pre-Professional Sequences in this catalog.

ACCREDITATION AND MEMBERSHIP

The American Chemical Society (A.C.S.) has examined all aspects of the Department of Chemistry and has approved its overall program. A student completing the B.S. Chemistry Major, Option B will be "certified" by the A.C.S. as a professional chemist.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

* Course may be used to satisfy certain University Studies requirements.

B.S. MAJOR CHEMISTRY – OPTION A

63-67 S.H. (No Minor Required)

REQUIRED COURSES (57–61 S.H.)

Chemistry (41 S.H.)

- 212, 213 Principles of Chemistry I, II (8)
- 350, 351 Principles of Organic Chemistry I, II (9)
- 360 Chemical Information (2)
- 412, 413, 414, 415 Physical Chemistry & Lab I, II (9)
- 425, 426 Analytical Chemistry I, II (8)
- 450 Advanced Inorganic Chemistry I (4)
- 475 Seminar in Chemistry (1)

Note: Students should begin the math and chemistry sequences at the same time.

Mathematics (8-12 S.H.)

- * 120 Precalculus (4)
- * 160, *165, Calculus I, II (8)

Note: Precalculus 120 (4) may be omitted if a student has otherwise met the prerequisite for 160.

Physics (8 S.H.)

- * 221, 222 University Physics I, II (8)

ELECTIVES (6 S.H.)

Chemistry electives.

B.S. MAJOR CHEMISTRY – OPTION B

74-78 S.H. (No Minor Required)

(American Chemical Society certification will be given to students completing this option.)

REQUIRED COURSES (61–65 S.H.)

Chemistry (45 S.H.)

- 212, 213 Principles of Chemistry I, II (8)
- 350, 351 Principles of Organic Chemistry I, II (9)
- 360 Chemical Information (2)
- 400 Biochemistry I (4)
- 412, 413, 414, 415 Physical Chemistry & Lab I, II (9)
- 425, 426 Analytical Chemistry I, II (8)
- 450 Advanced Inorganic Chemistry I (4)
- 475 Seminar in Chemistry (1)

Note: Students should begin the math and chemistry sequences at the same time.

Mathematics (8-12 S.H.)

- * 120 Precalculus (4)
- * 160, *165, Calculus I, II (8)

Note: Precalculus 120 (4) may be omitted if a student has otherwise met the prerequisite for 160.

Physics (8 S.H.)

- * 221, 222 University Physics I, II (8)

ADDITIONAL REQUIREMENTS (5 S.H.)

- 430 Individual Problems in Chemistry (3)
- 451 Advanced Inorganic Chemistry II (2)

CHEMISTRY ELECTIVES (8 S.H.)

Chemistry 401, 410, 411, 417, 420, 427, 428, 436, 438, 439, 447, 470, 472

OTHER SUGGESTED ELECTIVES

Computer programming, biology, geology, German, and keyboarding.

B.S. MAJOR CHEMISTRY – ENVIRONMENTAL SCIENCE OPTION

92-93 S.H. (No Minor Required)

(Alliance with environmental science options of other departments is given under Environmental Science on page 100.)

CHEMISTRY CORE COURSES (29 S.H.)

- * 212, *213 Principles of Chemistry I, II (8)
- 350, 351 Principles of Organic Chemistry I, II (9)
- 412, 413 Physical Chemistry and Lab I (4)
- * 425, 426 Analytical Chemistry I, II (8)

ENVIRONMENTAL SCIENCE OPTION REQUIREMENTS (10 S.H.)

- * 320 Environmental Chemical Analysis (4)
- 436 Topics in Environmental Chemistry (3)
- 430 Individual Problems (2)
- 475 Chemistry Seminar (1)

ENVIRONMENTAL SCIENCE OPTION ELECTIVES (4 S.H.)

- 400 Biochemistry I (4)
- 401 Biochemistry II (3)
- 410 Polymer Chemistry (2)
- 414, 415 Physical Chemistry and Lab II (5)
- 420 Topics in Industrial Chemistry (2)
- 427 Topics in Instrumental Chemistry (2)
- 428 Chemical Separations (3)
- 450 Advanced Organic Chemistry (2)
- 470 Isotope, Nuclear and Radiochemistry (2)
- 475 Seminar in Chemistry or other advanced chemistry electives as approved by the Chemistry Department

OTHER REQUIRED COURSES (49–50 S.H.)

Biology (12 S.H.)

- * 241 Basics of Life (4)
- * 242 Organismal Diversity (4)
- 312, 313 General Ecology lecture and lab (4)

Geoscience (12 S.H.)

- * 120 Dynamic Earth (4)
- * 130 Earth and Life through Time (4)
- * 240 Hydrogeology (4)

Mathematics (8 S.H.)

- * 160, *165 Calculus I, II (8)

Physics (8 S.H.)

- * 221, 222 University Physics I, II (8)
- Two of the following three courses (6 S.H.)

- * BUSA 451 Environmental Law (3)
- * ECON 315 Environmental and Natural Resources (3)
- * PLSI 340 Environmental Policy (3)

One of the following eight courses (3-4 S.H.)

- BIOL 315 Environmental Biology (3)
- BIOL 335 Plant Ecology (4)
- BIOL 360 Entomology (4)
- BIOL 415 Ecology of Large Rivers (4)
- BIOL 420 Limnology (4)
- *GEOS 225 Environmental Geoscience (3)
- GEOS 310 Non-Renewable Natural Resources (3)
- GEOS 315 Surficial Processes and Soils (4)
- GEOS 420 Applied Hydrogeology (4)

B.S. MAJOR – CHEMISTRY (Teaching)

80 S.H. (No Minor Required)

The Chemistry Department, in cooperation with other science departments and the College of Education, has developed a new Minnesota Board of Teaching (BOT)-approved program. Students should be aware that the program described below may continue to change as the BOT considers changes to the Science Licensure programs. Students will need to work closely with their academic advisor to ensure that they will be able to graduate with a BOT-approved degree. Students graduating after September 1, 2001 must meet these new licensure requirements. The program outlined below will enable a student to apply for a 5-12 Science Licensure with a Chemistry Specialty.

In addition, the new licensure program needs to be fully aligned with the requirements of the new University Studies Program. Some courses included in the major program below may be approved for University Studies credit in the future. The Chemistry Department is working in cooperation with other secondary licensure programs and the Education Department to ensure that teacher licensure programs meet both BOT and University Studies requirements. Students should consult with their academic advisor for more information.

Notes:

1. Teaching majors must gain admission to the Education Program before they can enroll in Professional Education Sequence courses.
2. Teaching majors must take all courses in the Professional

Education Sequence in addition to courses in the content area listed below. EDUC 305 and EDUC 312 must be taken together in the same semester. Refer to the requirements in the Effective Educator Handbook, or see the Education Department section of this catalog (page 87).

- Students should consult with their academic advisor or the Department of Education Admissions Coordinator for more information.

REQUIRED COURSES (30 S.H.)

Chemistry (30 S.H.)

- 212, 213 Principles of Chemistry I, II (8)
- 320 Environmental Chemistry (4)
- 340 Organic Chemistry Survey OR
- 350 Principles of Organic Chemistry I (4)

Note: Only students planning to take 351 as one of the chemistry electives below should take 350.

- 360 Chemical Information (2)
- 412, 413 Physical Chemistry and Lab I (4)
- 425 Analytical Chemistry I (4)
- 430 Individual Problems (1)
- 431 Guided Study in Teaching Chemistry (2)
- 475 Seminar in Chemistry (1)

OTHER REQUIREMENTS (46 S.H.)

Biology (8 S.H.)

- * 241 Basics of Life (4)
- * 242 Organismal Diversity (4)

Geoscience (12 S.H.)

- * 105 Astronomy (4) OR
- * 110 Oceanography (4) OR
- * 115 Meteorology (4)
- * 120 Dynamic Earth (4)
- * 130 Earth Through Life and Time (4)

Mathematics (8 S.H.)

- * 160 Calculus I (4)
- * 165 Calculus II (4)

Physics (12 S.H.)

- * 221, 222 University Physics I, II (8) OR
- * 201, 202 General Physics (8)
- 311 Science Teaching Methods (4)

Health and Human Performance (3 S.H.)

- * HHP 204 Personal and Community Health (3)

Special Education (3 S.H.)

- * SPED 400 Education of Exceptional Children and Youth

ELECTIVES (4 S.H.)

Chemistry (4 S.H.)

Any 300 level or higher chemistry courses, or other advanced chemistry electives as approved by the Chemistry Department.

PROFESSIONAL EDUCATION SEQUENCE (32 S.H.)

EDUC 305, *308, 312, 429, 449, 459, 465 (student teaching)

B.S. MINOR CHEMISTRY – OPTION A

30-34 S.H.

REQUIRED COURSES (28–32 S.H.)

Chemistry (24 S.H.)

- 212, 213 Principles of Chemistry I, II (8)
- 350, 351 Principles of Organic Chemistry I, II (9)
- 412 Physical Chemistry (3)
- 425 Analytical Chemistry I (4)

Mathematics (4-8 S.H.)

- * 120 Precalculus (4)
- * 160 Calculus (4)

Note: Precalculus 120 (4) may be omitted if a student has otherwise met the prerequisite for 160. MATH 150 (3) and MATH 155 (3) can be used to satisfy 160 in this minor.

ELECTIVES (2 S.H.)

Chemistry electives

B.S. MINOR BIOCHEMISTRY

29 S.H.

REQUIRED COURSES (29 S.H.)

Chemistry (25 S.H.)

- 212, 213 Principles of Chemistry I, II (8)
- 350, 351 Principles of Organic Chemistry I, II (9)
- 400, 401, 402 Biochemistry (8)

Note: 340 Organic Chemistry (4) may be substituted for 350.

Mathematics (4 S.H.)

- * 120 Precalculus (4) OR
- * 160 Calculus I (4)

Note: Precalculus 120 (4) may be omitted if a student has otherwise met the prerequisite for 160. MATH 150 (3) and MATH 155 (3) can be used to satisfy 160 in this minor.

B.S. MINOR CHEMISTRY – OPTION B

27-31 S.H.

REQUIRED COURSES (27–31 S.H.)

Chemistry (23 S.H.)

- 212, 213 Principles of Chemistry I, II (8)
- 350, 351 Principles of Organic Chemistry I, II (9)
- 410 Polymer Chemistry (2)
- 411 Synthesis and Characterization of Polymers (2)
- 417 Intermediate Polymer Chemistry (2)

Note: 340 Organic Chemistry (4) may be substituted for 350.

Mathematics (4-8 S.H.)

- * 120 Precalculus (4)
- * 160 Calculus I (4)

Note: Precalculus 120 (4) may be omitted if a student has otherwise met the prerequisite for 160. MATH 150 (3) and MATH 155 (3) can be used to satisfy 160 in this minor.

CHEMISTRY COURSE DESCRIPTIONS

100 - Chemistry Appreciation—3 S.H.

Chemical concepts presented as lecture-demonstrations for students who wish to gain an appreciation of the chemical world. Meets University Studies requirements; not intended as preparation for other chemistry courses. Does not preclude taking any other chemistry courses for credit. No laboratory. Not open to students with credit in higher numbered chemistry courses. Offered each semester.

108 - Introductory General Chemistry—3 S.H.

Intended to introduce the students to chemistry. Two lectures and one two-hour laboratory/discussion period per week. For both University Studies and as a first course in chemistry for students who have not had high school chemistry and wish to prepare for entrance into other chemistry courses. Students completing this course may later elect CHEM 212 for credit or with the department's permission, they may go directly in to CHEM 213. Offered yearly.

204 - Unified Science I—3 S.H.

Physical and chemical aspects of nature. Designed for elementary education majors and others interested in a basic laboratory course. Not open to majors and minors in any of the sciences. Two hours lecture, four hours laboratory. Prerequisite: CHEM 100. Offered irregularly.

208 - General, Organic and Biochemistry I—3 S.H.

The first course in the introductory sequence (208, 209) in the principles of chemistry and the molecular basis for life; descriptive, theoretical and laboratory topics. Covers basic principles of inorganic and physical chemistry. Two lectures and one laboratory/discussion period per week. Recommended for pre-nursing, pre-agriculture, pre-forestry, and pre-fishery and wildlife students. This course should not be elected by students expecting to take CHEM 340, CHEM 350 or CHEM 400. Offered yearly.

209 - General, Organic and Biochemistry II—4 S.H.

The second course in the introductory sequence (208, 209) in the principles of chemistry and the molecular basis for life; descriptive, theoretical and laboratory topics. Covers organic and biochemistry. Three lectures and two laboratory/discussion hours per week. Recommended

* Course may be used to satisfy certain University Studies requirements.

for pre-nursing, pre-agriculture, pre-forestry, and pre-fishery and wildlife students. CHEM 209 cannot substitute for CHEM 213. This sequence should not be elected by students expecting to take CHEM 340, CHEM 350 or CHEM 400. Offered yearly.

212, 213 - Principles of Chemistry I, II—Each 4 S.H.

An in-depth study of the principles of chemistry including atomic structure, the chemical bond, solutions, thermodynamics, kinetics, acid-base theory, oxidation-reduction, complex ion equilibrium and electrochemistry. Organic and inorganic examples are used when appropriate throughout the courses, and a short unit on organic chemistry is included. Laboratory and lecture are coordinated. Prerequisite: high school intermediate algebra or concurrent enrollment in MATH 120 or a higher-numbered mathematics course. Offered yearly.

320 - Environmental Chemistry—4 S.H.

An introductory study of current environmental issues, emphasizing the chemistry and chemical interactions underlying these topics. The topics may include, but are not limited to global warming, depletion of stratospheric ozone, ground level air chemistry and air pollution, organic chemicals in the environment, toxic heavy metals, chemistry of natural waters, and energy production and its environmental consequences. Lecture and Laboratory. Prerequisite: one year of general chemistry or consent of instructor. Offered yearly.

340 - Organic Chemistry Survey—4 S.H.

A survey of the chemistry of organic compounds with emphasis on structure, properties, synthesis, and reactions of the major functional group families. Mechanisms of major reaction types are explored. Laboratory emphasizes separation techniques and synthesis. Prerequisites: CHEM 212 and CHEM 213. Not open to students who expect to take CHEM 350. Offered yearly.

341 - Organic and Polymer Chemistry—4 S.H.

An introduction to the organic chemistry of synthetic polymers. The introduction to nomenclature, properties, synthesis and characterization of organic compounds is followed by the application of these concepts to commercially important polymeric materials. Laboratories focus on the synthesis and characterization of addition and condensation polymers. Three lecture periods and one laboratory per week. Prerequisite: CHEM 213. Not open to students expecting to take CHEM 350, CHEM 351, and CHEM 410. Offered yearly.

350 (4 S.H.), 351 (5 S.H.) Principles of Organic Chemistry I, II

A thorough study of the chemistry of organic compounds, with emphasis on structure, properties, synthesis, purification, principles and mechanisms of reactions, instrumental methods, compound identification, and important biological and economic applications. Prerequisites: for 350, CHEM 212 and CHEM 213; for 351, CHEM 350 or CHEM 340 or CHEM 341 with instructor's permission. Offered yearly.

352 - Organic Chemistry—2 S.H.

A lecture-only course designed to follow CHEM 350 with emphasis on aromatics, spectroscopy, functional groups and other topics not covered in CHEM 350. Two lecture periods per week. Prerequisite: CHEM 350. Not open to students expecting to take CHEM 351. This course does not follow CHEM 351. Offered yearly.

354 - Characterization of Organic Compounds—2 S.H.

Using instrumental methods in the identification of organic compounds. Focus will be on gaining proficiency in instrument use and utilizing them in conjunction with various elucidation techniques. Prerequisite: CHEM 351 (or instructor's permission). Offered irregularly.

360 Chemical Information—2 S.H.

Finding chemical information by on- and off-line searching of data bases by computer and by hand-searching print-form reference works such as Chemical Abstracts, dictionaries, encyclopedias, index serials, formularies, treatises and review serials. Lecture topics will also include units on patents, institutional publications and the primary periodical literature. Includes chemical information retrieval from the Internet, the preparation of a bibliography on a chemical topic using exhaustive manual and computer searching of the world's literature. Prerequisite: Credit or concurrent enrollment in CHEM 340 or CHEM 350. Offered yearly.

399 - Chemistry Internship—1-6 S.H.

Supervised industrial, business or government experience designed by the WSU chemistry faculty advisor, the work supervisor and the student. Open only to the chemistry major or minor whose GPA in science and mathematics is 2.5 or better and who receives departmental approval. P/NC option available but only up to 4 S.H. may be taken for letter grade. Prerequisite: CHEM 425. Offered yearly.

400 (4 S.H.), 401 (3 S.H.) Biochemistry I and II

Introduction to the chemistry of living organisms; emphasis on the structure and function of proteins, carbohydrates, lipids, and nucleic acids; enzymatic catalysis, thermodynamics, control and integration of metabolic processes; nucleotide metabolism and expression and transmission of genetic information. Prerequisite: for 400, CHEM 340 or CHEM 350 and CHEM 412 (or instructor's permission); for 401, CHEM 400. Offered yearly.

402 - Biochemistry Laboratory II—1 S.H.

Experiments accompanying CHEM 401. Laboratory work should be taken concurrently with CHEM 401 but can be taken following successful completion of CHEM 401. Prerequisite: CHEM 400. Offered yearly.

410 - Polymer Chemistry—2 S.H.

An overview of polymer chemistry is presented. Major topics include polymerization reactions and kinetics, polymer morphology, polymer properties and polymer characterization. Prerequisite: CHEM 340 or CHEM 351 and CHEM 412 or ENG 345. Offered yearly.

411 - Synthesis and Characterization of Polymers—2 S.H.

Synthesis of polymers using traditional addition and condensation polymerization techniques and using more recently developed methods including ROMP and ATRP. Characterization of polymers will include viscometry, thermal analysis and spectroscopic methods. Prerequisite: CHEM 410. Offered every other year.

412 - Physical Chemistry I—3 S.H.

States of Matter and Equation of States. Thermodynamics of one component and multi-component systems. Equilibria. Computer applications. An introduction to quantum mechanics and spectroscopy. Prerequisites: one year each of college chemistry and physics, and credit or concurrent enrollment in Calculus. Offered yearly.

413 - Physical Chemistry Laboratory I—1 S.H.

Experiments accompanying CHEM 412. Laboratory work should be taken concurrently with CHEM 412 but can be taken following successful completion of the course. Computer applications. Prerequisite: CHEM 412. Offered yearly.

414 - Physical Chemistry II—3 S.H.

Quantum Chemistry. Chemical Kinetics: rate laws, mechanisms, temperature-dependence, catalysis. Boltzmann's distribution. Theories of reaction rates: collision model, transition state theory, diffusion & activation-controlled reactions, quantum mechanical tunneling, isotope effects. Properties of multi-component solutions. Electrochemistry. Statistical Mechanics. Prerequisite: CHEM 412. Offered yearly.

415 - Physical Chemistry Laboratory II—2 S.H.

Experiments accompanying CHEM 414. Laboratory work should be taken concurrently with CHEM 414 but can be taken following successful completion of the course. Prerequisite: CHEM 412. Offered yearly.

417 - Intermediate Polymer Chemistry—2 S.H.

This course focuses on methods for the controlled synthesis of polymeric materials. Strategies for controlling polymer molecular weight, polymer architecture, polymer microstructure and polymer composition will be studied and related to the ultimate goal of controlling polymer properties. These topics will be studied through readings and discussions of the current polymer literature. Prerequisite: CHEM 410. Grade only. Offered every other year.

420 - Topics in Industrial Chemistry—2 S.H.

Applications of chemistry in industry. The chemistry and technology of selected industrial processes. Prerequisite: CHEM 340 or CHEM 350. Offered every two or three years.

425, 426 - Analytical Chemistry I & II—Each 4 S.H.

A sequence of courses stressing modern analytical chemistry. A study of the theory and practice of the quantitative examination of chemical systems. CHEM 425 covers volumetric and fundamental visible spectrophotometric methods. CHEM 426 covers the instrumental methods of: UV-vis, emission, and AA spectroscopy, electrical methods and gas and liquid chromatography. Prerequisite: for 425, one year of chemistry; for 426, CHEM 425 and CHEM 412. Offered yearly.

427 - Topics in Instrumental Chemistry—1-2 S.H.

Selected topics from the principles and application of the instrumental methods of: IR, UV-vis and AA spectroscopy; NMR and mass spectrometry; gas and liquid chromatography. Prerequisite: organic and analytical chemistry and instructor's permission. Offered every two or three years.

428 - Chemical Separations—3 S.H.

A lecture and laboratory course addressing problems encountered in separating chemical species on both the analytical and production scale. Both theory and practice will be considered. Prerequisite: CHEM 425. Offered irregularly.

430 - Individual Problems in Chemistry—1-3 S.H.

An opportunity for the qualified advanced undergraduate to work independently on chemical research under the direction of a chemistry faculty member. A careful write-up of results is required. Time arranged. Prerequisites: 13 semester hours in chemistry and instructor's permission. May not be taken for more than 3 credits per semester; may be repeated to a total of 11 credits. Offered each semester.

431 - Guided Study in Teaching Chemistry—1-2 S.H.

An opportunity for the qualified teaching candidate to obtain practical knowledge and experience in techniques of planning and safely presenting chemical lecture demonstrations and in planning and safely carrying out student laboratory exercises. Prerequisites: one year of university chemistry; junior or senior standing. May be repeated to a total of 2 credits. Credits may not be applied toward "electives" category of other programs in chemistry. One credit offered each semester by arrangement.

436 - Topics in Environmental Chemistry - 3 S.H.

This course covers advanced topics in environmental chemistry. Topics studied will depend upon the interest of the class and may include topics such as acid rain, endocrine disruption, risk assessment, global warming, and bioaccumulation. Prerequisite: Chemistry 320 or instructor's permission. Offered every other year.

438 - Medicinal Chemistry—2 S.H.

An introductory course describing selected topics in the chemistry of synthetic and naturally occurring organic medicinals. Chemical structure and its relationship to biological activity. Lecture and problem-solving discussions. Prerequisite: CHEM 340 or CHEM 350. Offered every two or three years.

439 - Biochemistry of Drug Metabolism—2 S.H.

An advanced elective that emphasizes the qualitative and quantitative chemistry of drug metabolism. Topics covered include pharmacokinetics and pharmacodynamics, drug absorption, distribution and excretion, phase I and phase II biotransformation, principles of therapeutics, and toxicology. Prerequisites: CHEM 401 or CHEM 209 and instructor's permission. Offered every three years.

447 - Advanced Organic Chemistry—2 S.H.

Chemical kinetics, thermodynamics, stereochemical concepts and the use of isotopes are applied to organic reaction mechanisms. The study of

molecular orbital theory forms the basis for predicting reaction mechanisms. Lecture course. Prerequisites: CHEM 351 and CHEM 412. Offered every two or three years.

450 - Advanced Inorganic Chemistry I—4 S.H.

Descriptive and theoretical approaches to inorganic reactions and structures with emphasis on structural concepts including symmetry and group theory and molecular orbital theory. Laboratory work includes the preparation of various main group and transition metal compounds and use of modern instruments in characterizing these compounds. Prerequisite: CHEM 412. Offered yearly.

451 - Advanced Inorganic Chemistry II—2 S.H.

A continuation of the treatment of theoretical and descriptive inorganic chemistry introduced in CHEM 450. Prerequisites: CHEM 414 and CHEM 450. Offered yearly.

465 - History of Chemistry—1 S.H.

A chemistry course emphasizing the fascinating interplay of ideas during the development of the chemical body of knowledge. Prerequisite: one semester of organic chemistry. Offered irregularly.

470 - Isotope, Nuclear and Radiochemistry—2 S.H.

Introduction and basic treatment of the nucleus with emphasis on concepts in chemistry. Interactions of radiation with matter. Nuclear structure, stabilities and associated radioactive decay processes. Applications in nuclear reactors, particle accelerators, and medical therapies. Prerequisite: CHEM 412. Offered every two or three years.

472 - Quantum Chemistry and Spectroscopy—2 S.H.

Description of quantum mechanics and application to spectroscopy of atoms and molecules. Discussion of spectroscopic techniques includes detailed derivations of microwave, infra-red, Raman, electronic, NMR, and ESR spectra. Perturbation Theory and Group Theory are introduced to determine structure of polyatomic molecules. Prerequisite: CHEM 412. Offered every two or three years.

475 - Seminar in Chemistry—1 S.H.

Group discussions and papers presented in the field of chemistry. Prerequisite: 20 semester hours of chemistry. Offered yearly.

COMMUNICATION STUDIES

Performing Arts Center, Room 215 (507-457-5230)

www.winona.edu/communicationstudies

Reilly (Chairperson)

FACULTY

Emilie Falc, Assistant Professor; B.A., University of Illinois; M.A., Ph.D., Ohio University; 2001 -

Lisa Glueck, Associate Professor; B.A., M.A., Washington State University, Pullman; Ph.D., University of Wisconsin; 1993 -

Susan Hatfield, Professor; B.S., M.A., Miami University (OH); Ph.D., University of Minnesota-Twin Cities; 1981 -

Amy Hermodson, Assistant Professor; B.A., Concordia College; M.A., Michigan State University; Ph.D., University of Denver; 2000-

Kelly Herold, Associate Professor; B.C.S., Dickinson State University (ND); M.A., University of Northern Colorado, Greeley; Ph.D., University of

Southern Mississippi, Hattiesburg; 1996 -

Kathryn Kelley, Associate Professor; B.A., Rosary College, River Forest (IL); M.A., University of Michigan; Ph.D., University of Minnesota-Twin Cities; 1992 -

Daniel Lintin, Associate Professor; B.A., Buena Vista College; M.A., Ph.D., University of Minnesota-Twin Cities; 1994 -

Rita Rahoi-Gilchrest, Assistant Professor; B.A., University of Wisconsin; M.A., Ph.D., Ohio University; 2000 -

Edward Reilly, Assistant Professor; B.A., Northern Illinois University; M.A., University of Maine; Ph.D., Louisiana State University; 1997 -

PURPOSE

The Department of Communication Studies (CMST) provides academic and co-curricular experiences conducive to intellectual, professional and personal growth. The importance of communication competence is increasingly recognized as necessary to success in personal and professional spheres.

The department offers a major in organizational communication, a major and minor in communication studies, as well as a minor in intercultural communication. CMST also offers a teaching major with the English Department.

Graduates in communication studies are well prepared for employment in a service-oriented economy. Recent graduates enjoy careers in a variety of fields including training and development, consulting, personnel, human resource development, sales and teaching. A significant number of graduates also attend graduate school in areas of communication, counseling, student personnel and law.

The department supports active and successful co-curricular programs in forensics. Scholarships are available to new students in this activity. Communication studies majors and minors are encouraged to join the Communication Club, a co-curricular group of students and faculty who meet regularly for academic discussions and social activities.

SCHOLARSHIPS AND HONORS PROGRAM

Scholarships for juniors and first-semester seniors are available through a fund established in the name of Gary Evans. Applications are taken early in the spring semester.

The department offers an Honors Program. Students with a minimum overall GPA of 3.20 and a minimum major GPA of 3.60 are encouraged to see the department chairperson for details. A new chapter of Lambda Pi Eta, the honorary society of the National Communication Association, is being established.

PASS/NO CREDIT COURSES

Except for CMST 399 (Internship), CMST majors and minors must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. The P/NC option is available to non-majors except for CMST 191 and CMST 499. Courses offered on a pass/no credit only or grade only basis are so designated in the course descriptions.

GRADUATION REQUIREMENTS

Students declaring a major or minor in CMST should anticipate a minimum of four academic semesters (not including summer sessions) to complete CMST courses in sequence.

Students majoring in communication studies must earn a minimum GPA of 2.50 in their major; no grade below a "C" is accepted. These standards apply to both CMST courses and courses taken through other departments to fulfill CMST major requirements.

COMMUNICATION STUDIES MINORS

The Department of Communication Studies minors are designed especially for those students who recognize the importance of effective communication skills in their chosen careers. These minors should be of special interest to students majoring in business, education, history, mass communication, nursing, political science, psychology, and social work, and sociology; however, students from all majors will find the course sequence for the minor beneficial.

Students with a minor in communication studies are required to meet with their academic advisor every semester. Students majoring in communication studies may not minor in the department.

B.A. MAJOR – ORGANIZATIONAL COMMUNICATION OPTION

69 S.H. (No Minor Required)

REQUIRED COURSES (69 S.H.)

Foundations (9 S.H.)

- 281 Intercultural Communication (3)
- 282 Introduction to Communication Studies (3)
- 283 Introduction to Rhetorical Studies (3)

Competencies (9 S.H.)

- 261 Public Speaking (3)

One of the following:

- 196 Fundamentals of Interviewing (3)
- 266 Professional Communication Skills (3)
- 375 Argumentation and Advocacy (3)

One of the following:

- ENG 210 Advanced Expository Writing (3)
- MCOM 130 News Writing (3)

Theories (12 S.H.)

- 371 Discussion and Small Group Dynamics (3)
- 387 Interpersonal Communication (3)
- 389 Persuasive Communication (3)
- 466 Organizational Communication (3)

Tools (6 S.H.)

- 480 Communication Research Methods (3)

One of the following:

- 220 DIS Business Statistics (3)
- 231 PSY Statistics (3)
- * 110 STAT Fundamentals of Statistics (3) (Recommended)
- 210 STAT Statistics (3)

Capstone (3 S.H.)

- 485 Senior Seminar in Communication Theory (3)

Applications (9 S.H.)

- 399 Internship (6)

One of the following:

- 280 Nonverbal Communication (3)
- 287 Conflict and Communication (3)
- 289 Gender and Communication (3)
- 356 Communication Technology (3)
- 385 Health Communication (3)

Management (6 S.H.)

- 317 Management of Human Resources (3)
- 325 Organizational Dynamics (3)
- 335 Management of Work Teams (3)
- 427 Management Development (3)
- 457 Problems in Management of Human Resources (3)

Psychology/Sociology/Global Studies (6 S.H., two different areas)

- GS 400 Global Studies Seminar (3)
- PSY 325 Social Psychology (3)
- PSY 360 Personnel Psychology (3)
- PSY 425 Organizational Psychology (3)
- SOC 340 Social-Cultural Anthropology (3)
- SOC 423 Race Relations and Minority Groups (3)
- SOC 437 Sociology of Organizations (3)

Mass Communication (9 S.H.)

- 130 News Writing (if not selected as writing course) (3)
- 175 Mass Communication Computer Applications (3)
- 230 News Gathering (3)
- 240 Public Relations (3)
- 275 Publication Design (3)
- 330 Feature Writing (3)
- 340 Public Relations Cases (3)
- 345 Public Relations Writing (3)
- 347 Public Relations Practicum (3)
- 440 Public Relations Campaigns (3)

B.A. MAJOR – COMMUNICATION STUDIES OPTION

42 S.H. (Minor Required)

REQUIRED COURSES (39 S.H.)

Foundations (9 S.H.)

- 281 Intercultural Communication (3)
- 282 Introduction to Communication Studies (3)
- 283 Introduction to Rhetorical Studies (3)

Skills (9 S.H.)

- 261 Public Speaking (3)
- 210 ENG Advanced Expository Writing (3)

One of the following:

- 196 Fundamentals of Interviewing (3)
- 266 Professional Communication Skills (3)
- 375 Argumentation and Advocacy (3)

Theories (12 S.H.)

- 371 Discussion and Small Group Dynamics (3)
- 387 Interpersonal Communication (3)
- 389 Persuasive Communication (3)
- 466 Organizational Communication (3)

Tools (6 S.H.)

- 480 Communication Research Methods (3)

One of the following:

- DIS 220 Business Statistics (3)
- PSY 231 Statistics (3)

* STAT 110 Fundamentals of Statistics (3) (Recommended)

STAT 210 Statistics (3)

Capstone (3 S.H.)

485 Senior Seminar in Communication (3)

ELECTIVES (3 S.H.)

Any additional CMST course.

B.A. MINOR – COMMUNICATION STUDIES

21 S.H.

REQUIRED COURSES (21 S.H.)

Foundations (6 S.H.)

282 Introduction to Communication Studies (3)

283 Introduction to Rhetorical Studies (3)

Skills (3 S.H.)

261 Public Speaking (3)

Theories (12 S.H.)

371 Discussion and Small Group Dynamics (3)

387 Interpersonal Communication (3)

389 Persuasive Communication (3)

466 Organizational Communication (3)

B.A. MINOR – INTERCULTURAL COMMUNICATION

21 S.H.

REQUIRED COURSES (18 S.H.)

281 Intercultural Communication (3)

282 Introduction to Communication Studies (3) OR

283 Introduction to Rhetorical Studies (3)

285 Native American Rhetoric and Culture (3)

286 African American Rhetoric and Culture (3)

381 Advanced Intercultural and International Communication (3)

499 Independent Study (3) OR

GS 400 Global Studies Seminar (3)

ELECTIVES (3 S.H.)

GEOG 211 Economic Geography (3)

GEOG 213 Cultural Geography (3)

GEOG 223 Geography of the Orient (3)

GEOG 224 Geography of Africa (3)

GEOG 225 Geography of Latin America (3)

GEOG 233 Geography of the Middle East (3)

GS 200 Introduction to Global Studies

HIST 123 East Asian Civilization (3)

HIST 165 Latin American History (3)

HIST 170 African Civilization (3)

HIST 233 History of Mexico (3)

HIST 235 History of the American Indian (3)

HIST 320 North American Indian Civilization (3)

HIST 341 Modern Japan (3)

HIST 461 Latin American Social Revolution (3)

HIST 469 History of Brazil

MUS 115 Music of East and Southeast Asia (3)

MUS 116 Music of the Americas (3)

POLS 224 Politics and Society in Latin America (3)

POLS 226 Politics and Society in Africa (3)

POLS 270 Politics and Society in the Middle East (3)

POLS 332 European Political Systems (3)

POLS 335 Latin American Political Systems (3)

POLS 336 Post-Communist Political Systems (3)

POLS 337 Asian Political Systems (3)

POLS 390 Comparative Politics – Third World (3)

SOC 201 Scandinavian Culture (3)

SOC 340 Social-Cultural Anthropology (3)

SOC 423 Race Relations and Minority Groups (3)

B.S. MAJOR – COMMUNICATION ARTS AND LITERATURE (Teaching)

Requirements for major listed under English Department (page 97).

COMMUNICATION STUDIES COURSE DESCRIPTIONS

151 - Forensics Activities—1-2 S.H.

Concentrated laboratory course in a specific area of speech, closely coordinated with the WSU Forensics Program. May be repeated for a total of 6 S.H. Offered yearly.

190 - Speech Activities—1-2 S.H.

A concentrated laboratory course in a specific area of speech, closely coordinated with an instructor's current project. May be taken for a total of 3 S.H. Offered yearly.

191 - Fundamentals of Speech Communication—3 S.H.

Students develop interpersonal, small group and public speaking skills as well as an understanding of basic communication principles. Offered every semester. Grade only.

196 - Fundamentals of Interviewing—3 S.H.

The interview as a form of two-person communication. Emphasis on skills and strategies of interviewer and interviewee in a variety of situations (survey, journalistic, helping, employment, etc.). Course tailored to meet specific needs of students. Prerequisite: CMST 191. Offered yearly.

261 - Public Speaking—3 S.H.

Includes selection and organization of materials, delivery of common types of speeches, listening skills, and analysis and evaluation of presentations. Prerequisite: CMST 191. Offered every semester.

266 - Professional Communication Skills—3 S.H.

Exploration of the theory and skills necessary for effective communication in professional situations. Emphasis on interviewing, group meetings and oral communication including presentational speaking and use of presentational technology. Prerequisite: CMST 191. Offered yearly.

280 - Nonverbal Communication—3 S.H.

Theory and application. Emphasis on developmental perspectives of nonverbal communication and the various classes of nonverbal messages. Offered alternate years.

281 - Intercultural Communication—3 S.H.

Investigates cultural processes influencing communication. Principles of communication theory and practice applied to intercultural communication situations including co-cultures within the U.S. as well as other cultures of the world. Offered every semester.

282 - Introduction to Communication Studies—3 S.H.

Provides an overview of the basic communication theories applicable to a number of communication contexts (including small groups, interpersonal, organizational). This course moves beyond CMST 191 by emphasizing theories instead of skills. Offered every semester.

283 - Introduction to Rhetorical Studies—3 S.H.

Provides an introduction to the study of rhetoric and public address. The primary focus is on the manner in which people use communication to influence the behavior of others. It includes a broad survey of rhetorical theorists from Plato to the post modernists. Prerequisite: CMST 191 or sophomore standing. Offered every semester.

285 - Native American Rhetoric and Culture—3 S.H.

Examines Native American rhetoric. Included are speeches by Native Americans from first contact with whites to contemporary times. Offered alternate years.

286 - African-American Rhetoric and Culture—3 S.H.

A study of the history of African American rhetoric from the late 1700s to the present day. Offered alternate years.

287 - Conflict and Communication—3 S.H.

This course examines the impact of communication behaviors on conflict escalation and resolution. Principles of negotiation and conflict management are examined within the context of interpersonal, intercultural and international relationships. Offered alternate years.

289 - Gender and Communication—3 S.H.

A cultural approach to the study of males' and females' communication styles including language choice, creation of meaning, interpretation of reality, interaction patterns, nonverbal messages and metaphors. Explores the similarities and differences between the male and the female communication culture in a variety of interpersonal and situational contexts including families, organizations, peer groups, friendships and romantic relationships. Offered alternate years.

290 - Disability Communication and Culture—(3 S.H.)

Disability Communication and Culture provides a comprehensive review of communication-based research examining disability in the contexts of

* Course may be used to satisfy certain University Studies requirements.

interpersonal, organizational, and media with an emphasis in cultural communication differences. Offered alternate years.

356 - Communication Technology—3 S.H.

An investigation into how various communication technologies affect interpersonal, group, public and organizational communication. Topics include how technology affects the growth and development of interpersonal relationships, group relationships and productivity, organizational functions and learning. Offered alternate years.

371 - Discussion and Small Group Dynamics—3 S.H.

Use of discussion, participation and leadership to study interaction patterns and networks while gaining practical and theoretical perspectives upon small-group theory. Prerequisites: CMST 191, CMST 282 or instructor's permission for non-majors. Offered every semester.

375 - Argumentation and Advocacy—3 S.H.

The study of "reason-giving" as a process for decision-making and the creation of social knowledge. Participants in the class use research, discussion and practice in argumentative speaking and writing to develop critical thinking skills. Prerequisites: CMST 191 and CMST 282 or CMST 283 or instructor's permission for non-majors. Offered yearly.

381 - Advanced Intercultural and International Communication—3 S.H.

Continuation of CMST 281, but emphasizes how to handle communication breakdowns that occur because of different cultural norms, customs, attitudes and values. Valuable to those who plan to study, travel or work abroad. Prerequisite: CMST 281. Offered alternate years.

385 - Health Communication—3 S.H.

Health communication theory and systems-based research is examined as it relates to health care organizations. The process of internal and external organizational communication including health education, health care interviews, health care teams, health care ethics and client empowerment are studied. This class examines the uniqueness of health care organizations including informational flow and image creation as created by organization's instructors, administrators, practitioners and staff to promote client satisfaction and health. Prerequisite: CMST 282 or instructor's permission for non-majors. Offered alternate years.

387 - Interpersonal Communication—3 S.H.

Designed to promote effective interpersonal communication through the study of theories like self-perception, relationship development, and relationship deterioration. Topics may include conflict management, gender issues in communication, individual communication styles and maintaining relationships. Prerequisites: CMST 191, CMST 282 or instructor's permission for non-majors. Offered every semester.

389 - Persuasive Communication—3 S.H.

Introduces students to the theory and practice of persuasion and social influence. Source, message, receiver and environmental factors are studied, and their effects upon the persuasive process analyzed. Preparation of persuasive messages and campaigns required. Prerequisites: CMST 191, CMST 282 and CMST 283 or instructor's permission for non-majors. Offered every semester.

391 - Topics in Communication Studies—3 S.H.

An in-depth specific course. Topics vary. Prerequisite: CMST 282 or instructor's permission for non-majors. May be repeated with different topics. Offered on demand.

392 - Topics in Rhetorical Studies—3 S.H.

An in-depth study of topics of concern in rhetoric and public address. Topics vary. Prerequisite: CMST 283 or instructor's permission for non-majors. May be repeated with different topics. Offered on demand.

399 - Internship—1-12 S.H.

Supervised work experience designed by advisor, student and employer. Prerequisite: instructor's consent and a minimum major GPA of 2.50. P/NC only. Offered on demand.

461 - Political Communication—3 S.H.

History and analysis of great American rhetoric. Prerequisites: CMST 283 or instructor's permission for non-majors. Offered alternate years.

466 - Organizational Communication—3 S.H.

Designed particularly for communication major prospective teachers and those planning a business career. Facilitates understanding and promotes better communication in organizations. Emphasizes role of internal and external messages in the process of organizing, climate formation, culture and action. Prerequisites: Two of the following: CMST 371, CMST 387 and CMST 389, or instructor's permission for non-majors. Offered every semester.

480 - Communication Research Methods—3 S.H.

This course surveys the various qualitative and quantitative approaches commonly used in communication research, providing a foundation for application in a research project of students' choosing. Prerequisites: CMST 371 or CMST 389 and CMST 387 or CMST 466. Offered every semester.

485 - Senior Seminar in Communication Theory—3 S.H.

In-depth study and research on individually selected topics. The seminar and students' research projects build upon work begun in CMST 480. Prerequisite: CMST 480. Offered every semester.

493 - Teaching and Coaching Oral Communication - 3 S.H.

Assists prospective teachers in exploring techniques common to classroom instruction in oral communication. Emphasis on enhancing students' skills and knowledge, and assessing students' work. Involvement in coaching co-curricular speech, including organization and management of festivals and tournaments. Prerequisites: CMST 191, CMST 282, and EDUC 312. Offered yearly.

499 - Independent Studies in CMST—1-6 S.H.

Offers advanced students an opportunity to study independently in an area of special interest to them. May be repeated for a total of 6 semester hours. Prerequisite: instructor's permission. Offered on demand. Grade only.

COMPUTER SCIENCE

Watkins Hall, Room 103 (507-457-5385)

<http://cs.winona.edu>

Francioni (Chairperson)

FACULTY

Gary Bunce, Professor; B.S., North Dakota State University; M.A., Ph.D., University of New Mexico; 1971 -

Gerald W. Cichanowski, Professor; B.A., Winona State University; M.S., University of Minnesota; Ph.D., Michigan State University; 1983 -

Narayan Debnath, Professor; B.S., M.Phil., Calcutta University; M.S, Visva Bharati University; M.S., East Carolina University; M.S. Ohio State University; Ph.D., D.S.C., Jadavpur University; 1989 -

Joan Francioni, Professor; B.S., University of New Orleans; M.S., Ph.D., Florida State University; 1998 -

Sudharsan Iyengar, Professor; B.E., Burdwan University; M.S., Ph.D., Louisiana State University and A & M College; 1989 -

Chi-Cheng Lin, Assistant Professor; B.S., National Chiao-Tung University; M.S., University of Minnesota-Duluth; Ph.D., University of Pittsburgh; 1997 -

Eugene Lundak, Associate Professor; B.S., M.S., Winona State University; M.S., University of Evansville (Indiana); 1985 -

Hugh F. Ouellette, Professor; B.S., Western Montana College; M.A., University of Illinois; M.A., Ball State University; Ed.D., University of Northern Colorado; 1972 -

Paul Schumacher, Associate Professor; B.A., M.Ed., St. Mary's College of Minnesota; M.A.T., Stanford University; 1988 -

Gary Stroebel, Professor; B.S., M.S., Ph.D., University of Minnesota; 1993 -

Mingrui Zhang, Assistant Professor, B.S.E.E., Beijing University; M.S.C.S., Ph.D., University of South Florida; 1999-

PURPOSE

Computer science is an extremely dynamic discipline. Changes occur rapidly, not only in the computing technology available, but also in the computing needs of the community and the paradigms for teaching the science of computing. As such, the primary missions of the Computer Science Department are for both faculty and staff members to keep pace with the field, and to ensure a quality and up-to-date curriculum for our students. In support of this mission, the department offers courses in theoretical and applied computer science as well as computer science education. Courses can be taken selectively or as part of either a major or minor in Computer Science.

Computer science majors choose between two options: computer science and computer information systems. Both options require a core set of seven courses and are designed to give students a fundamental understanding of both theoretical and applied computer science. The Computer science option allows students to further study the technical and theoretical aspects of computer science in more depth, whereas the computer information systems option allows students to study computer science concepts in the context of business applications. In both options, juniors and seniors have the opportunity to work on independent projects with faculty in more specialized areas, such as digital image processing, computer assistive technology, embedded systems, database design and networking, as well as apply for internships with industry through the computer science practicum (CS 491).

SCHEDULING RECOMMENDATIONS

Until students are officially accepted as computer science majors, they are given provisional status and are assigned advisors in the same way as students who are accepted majors. Students interested in becoming a computer science major should ask to be assigned an advisor as soon as possible. All prospective and current computer science majors, including incoming first-year and transfer students, should consult a computer science advisor before registering.

ENTRANCE REQUIREMENTS

Before applying for entrance to a computer science major, students must complete the following courses with a "C" grade or better in each and must have a minimum GPA of 2.25 for the following three courses:

- CS 234 Algorithms and Problem Solving I
- CS 250 Algorithms and Problem Solving II
- MATH 210 Discrete Mathematics and Foundations

Applicants must have a minimum overall GPA of 2.25. In addition to these requirements, the student must meet with a department advisor and complete a department application form.

GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for Computer Science majors/minors are as follows:

1. Students must have an overall GPA of at least 2.50. The cumulative GPA for all computer science major and minor requirements and electives must be at least 2.50, and each course (except CS 491) must be completed with a grade of "C" or better.
2. At least 18 credit hours from non-core course requirements or electives, at or above the 300 level, must be earned from WSU. Courses taken through the Minnesota State University Common Market Program do not satisfy this requirement.

GRADUATION WITH HONORS

For graduation with honors in computer science, a student must:

1. Complete one of the following majors: computer science or computer information systems
2. Have an overall GPA of 3.0
3. Have a WSU computer science GPA of 3.25
4. Complete an honors project or thesis

The student must find a second reader for the project/thesis. Advisors and readers must be regular WSU faculty members unless a waiver is obtained from the Honors Committee. An advisor oversees a maximum of three honors students at a time. With the advisor, the student prepares and submits a proposal to the department's Honors Committee. Once the project is approved, the student completes the project/thesis and presents it to the advisor and the second reader. A copy of the project/thesis must be submitted to the department library.

REPEATED COURSE POLICY

Students are allowed to attempt a particular computer science course no more than three times. For the purpose of this policy, an "attempt" occurs each time a student's name appears on the final grade roster for a course.

PREREQUISITES

The prerequisites for computer science courses must be met with a "C" grade or better. Students who register for a course, but who have not met the prerequisites with a grade of "C" or better before the course begins, must drop the course.

PASS/NO CREDIT COURSES

Except for CS 491 (Practicum in Computer Science), students must take all courses for the major/minor on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

ROCHESTER CENTER

The department's majors and the minor are available through the 2+2 Program at the Rochester Center. See page 37 and 38 for the program articulation for the Computer Information Systems program and the Computer Science program.

COMPUTER SCIENCE PRACTICUM

WSU's computer science practicum provides computer science majors with experience in a non-academic setting. It is intended to serve as an introduction to an application environment as well as to solidify many of the concepts learned in the classroom. For these reasons, it is to be taken only by students who are nearing the end of their program of study and who have little or no previous work experience. For those students who are currently employed, the practicum must provide them with work experience that is substantially different from any previous or current work experience. Students must apply for the practicum and be approved before beginning the work experience in order to receive credit for the practicum.

B.S. MAJOR – COMPUTER SCIENCE CORE (25 S.H.) – Option A & B

Computer Science

- * 234 Algorithms and Problem Solving I (4)
- 250 Algorithms and Problem Solving II (4)
- 301 Discrete Structures for Computer Science (3)
- 341 Advanced Data Structures (4)
- 351 Introduction to Assembler & Architecture (3)
- 410 Software Engineering (3)

Mathematics

- * 210 Discrete Mathematics and Foundations (4)

OPTION A – COMPUTER SCIENCE

68 S.H. (No Minor Required)

OPTION A REQUIREMENTS (22 S.H.)

Computer Science

- 371 Object Oriented Design and Development (3)
- 405 Operating Systems (3)
- 415 Principles of Programming Languages (3)
- 435 Theory of Computation (3)

Mathematics

- * 160 Calculus I (4)
- * 165 Calculus II (4)

Physics

- 332 Computer Organization (2)

OPTION A ELECTIVES (21 S.H.)

Computer Science

- 385 Applied Database Management Systems (3)
- 411 Software Testing (3)
- 412 Networking and Telecommunications (3)
- 413 Advanced Networking and Telecommunications (3)
- 420 Computer Architecture (3)
- 425 Numerical Analysis (4)
- 430 Computer Graphics (3)
- 440 Theory of Algorithms (3)
- 445 Artificial Intelligence (3)
- 450 Compilers (3)
- 465 Topics: Computing Theory (1-3)
- 466 Topics: General Computing Applications (1-3)
- 476 Distributed System: Concepts and Design (3)
- 485 Database Systems Design (3)
- ** 491 Practicum in Computer Science (6)

Physics

- 333 Microprocessor Electronics (4)

** Only 3 credits may be applied to major or minor.

Option B – Computer Information Systems

68 S.H. (No Minor Required)

OPTION B REQUIREMENTS (31 S.H.)

Computer Science

- 385 Applied Database Management Systems (3)
- 470 System Design with CASE Tools (3)

Choose one of the two following courses:

- 240 COBOL Programming and File Processing (4) OR
- 241 RPG Programming and File Processing (4)

Mathematics

- * 140 Applied Calculus (3)

Statistics

- * 210 Statistics (3)

Accounting

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Economics

- * 201 Principles of Microeconomics (3)

Management

- 315 Principles of Management (3)

Marketing

- 300 Principles of Marketing (3)

OPTION B ELECTIVES (12 S.H.)

Computer Sciences

- 405 Operating Systems (3)
- 411 Software Testing (3)
- 412 Networking and Telecommunications (3)
- 413 Advanced Networking and Telecommunications (3)
- 415 Principles of Programming Languages (3)
- 435 Theory of Computation (3)
- 440 Theory of Algorithms (3)
- 445 Artificial Intelligence (3)
- 466 Topics: General Computing Applications (1-3)
- 467 Topics: Information Systems Applications (1-3)
- 485 Database Systems Design (3)
- **491 Practicum in Computer Science (6)

** Only 3 credits may be applied to major or minor.

B.S. MINOR—COMPUTER SCIENCE

(24 S.H.)

REQUIRED COURSES (18 S.H.)

Computer Science

- * 150 An Overview of Computer Science (3)
- * 234 Algorithms and Problem Solving I (4)
- 250 Algorithms and Problem Solving II (4)
- 351 Introduction to Assembler and Architecture (3)

Mathematics

- * 210 Discrete Mathematics and Foundations (4)

ELECTIVES (6. S.H.)

Chosen from computer science courses in the computer science major requirements or electives.

COMPUTER SCIENCE COURSE DESCRIPTIONS

115 - Using Personal Computers — 3 S.H.

This course is designed to provide students with a broad overview of uses of personal computers. Includes hands-on experiences; selection and use of software packages such as spreadsheets, data files, database management, statistics, personal management, education, and entertainment and Internet tools. Course does not count for major or minor elective credit.

130 - Introduction to BASIC Programming—3 S.H.

An introductory course in computer programming utilizing the VISUAL BASIC language. Intended for students in the life and social sciences, business, psychology and other disciplines. Covers file processing and other related tools.

150 - An Overview of Computer Science—3 S.H.

Course is designed for Computer Science majors and others who desire a survey of the field of computer science. Students are introduced to problem-solving, representations and abstractions, algorithms, models of computation, limits of computing, programming languages, software engineering, artificial intelligence, operating systems, networks, database management systems, computer ethics, and social implications of computing. Prerequisite: qualifying score on the mathematics placement exam or MATH 050.

155 - Introduction to CS Tools—1 S.H.

Course allows students to develop basic skills in the use of the hardware and software used in the Computer Science curriculum. Pass/no credit only. Offered according to demand.

210 - Computers in Society—3 S.H.

To help understand the societal implications of computer technology, this course exposes students to some of the basic scientific foundations of computer technology. This includes addressing such questions as: What happens when you hit a "submit" button on a Web form? What is going on when you "download" a file? How does a Web-search happen? Based on this technical perspective, the course looks at the ethical, social, historical, and political implications of the technology. Prerequisite: ENG 111.

231 – FORTRAN for Engineering and Science—3 S.H.

An introduction to computer programming in Fortran language with a structured programming approach. The course introduces the concepts of algorithms and problem solving, syntax and semantics of the language constructs, subprograms, files and elementary data structure. Programming applications are taken from engineering, mathematical and

physical sciences, and other scientific and numerical computations. Include use of software packages as needed in other disciplines. Prerequisite: MATH 120 or equivalent. The course is not applicable to computer science majors or minors.

234 - Algorithms and Problem Solving I—4 S.H.

An introduction to the major concepts of algorithm design and problem solving. Emphasis is on algorithm development, analysis and refinement. Programming strategies and elements of programming also are covered. Various practical applications of problem-solving are demonstrated. Includes formal labs. Prerequisite: qualifying score on the math placement test or MATH 120 or MATH 150. Recommended corequisite: Math 210.

240 - COBOL Programming and File Processing—4 S.H.

An in-depth study of structured program design utilizing the COBOL language. Topics include structured design, sequential and direct file processing, indexing, sorting, report writer and file organization. Emphasis is on sophistication, economy and efficiency of program design and execution. Prerequisite: CS 234. CS major credit for only one of the two - CS 240 or CS 241 - will be given.

241 - RPG Programming and File Processing—4 S.H.

An in-depth study of structured program design utilizing the RPG language. Topics include structured design, sequential and direct file processing, indexing, sorting, report writer and file organization. Emphasis is on sophistication, economy and efficiency of program design and execution. Prerequisite: CS 234. CS major credit for only one of the two - CS 240 or CS 241 - will be given.

250 - Algorithms and Problem Solving II—4 S.H.

A continuation of the problem solving and programming concepts introduced in CS 234. Applies the basic principles of software engineering to more complex problems. Topics include recursive problem solving, searching, sorting, and dynamic structures. Prerequisites: CS 234 and MATH 210. Recommended corequisite: CS 301.

297 - Microcomputer Organization—3 S.H.

This course examines microcomputers; what they are and what they can and cannot do; what is available in terms of models, equipment and cost. It also provides formal labs in organizing hardware, installing hardware and software, and programming microcomputers. May not be used to meet major/minor electives. Prerequisite: CS 234. Offered according to demand.

298 - UNIX & C Programming—3 S.H.

A survey of the C Language and UNIX operating system. Topics include syntax of the languages, usage conventions, accepted practices, history and philosophy. UNIX commands are compared to commands of other operating systems. Includes topics on IPC and RPC and sockets. May not be used to meet major/minor electives. Prerequisite: instructor's permission. Offered according to demand.

299 - Special Topics—1-3 S.H.

This course is intended to treat "special" topics at the sophomore level. This course will be offered in response to requests from local groups or industry. This course may not be used to meet major or minor requirements. (May be repeated for credit.) Prerequisite: instructor's permission.

301 - Discrete Structures for Computer Science—3 S.H.

Provides students with an introduction to applications of discrete mathematical structures to computer science. Topics include logic and proofs, set theory, relations, functions, complexity of algorithms, recursive definitions, recurrence relations, graphs, trees, counting methods, and discrete probability. Prerequisites: CS 234 and MATH 210.

341 - Advanced Data Structures—4 S.H.

A detailed study of more advanced data structures and algorithms, including concepts and techniques of design efficiency and complexity of algorithms and their lower bounds. Topics include search trees, hash functions, string searching, disjoint sets, internal and external sorting, graphs and graph algorithms, and different algorithm design technique. Prerequisite: CS 250 and CS 301.

351 - Introduction to Assembler and Architecture—3 S.H.

Components of a programming system. Introduction to machine language structures and computer architecture. Topics include: Von Neumann Model; data representation; macros; input/output; and subroutine linkage. Prerequisite: CS 250.

371 - Object Oriented Design and Development—3 S.H.

This course will cover fundamental topics in object oriented analysis, design, and development. An object oriented design methodology and

tool will be introduced and used. The course will use an object oriented development environment/language. Advanced features of object oriented languages will be covered. Students will be required to investigate issues in object-oriented systems and their implementation. Prerequisite: CS 341

385 - Applied Database Management Systems—3 S.H.

A study of basic Database Management Systems (DBMS) concepts. Topics include DBMS Models - Relational and object-oriented; study of query languages; study of existing DBMS; and data integrity, recovery, and concurrency control. Prerequisite: CS 250.

399 - Special Topics—1-3 S.H.

This course is intended to treat "special" topics at the junior level. It is anticipated that this course will be offered in response to requests from local groups or industry. This course may not be used to meet major or minor requirements. (May be repeated for credit.) Prerequisite: instructor's permission.

405 - Operating Systems—3 S.H.

Study of the principles and design techniques of operating systems. Topics include concurrent processes, scheduling, deadlocks, memory management, file and directory organizations and protection/security. Prerequisite: CS 341 and CS 351.

410 - Software Engineering—3 S.H.

The course deals with the current trends of software engineering principles and techniques for methodical construction of large, complex software-intensive systems. It follows the software life cycle from the requirement, specification, design, and testing phases. Topics include software process, project management, quality assurance, configuration management, formal specification techniques, design methodologies, testing and validation techniques, and object-oriented methodologies. Students are involved in a team project utilizing software engineering principles. Prerequisite: CS 250.

411 - Software Testing—3 S.H.

An introduction to various software testing techniques and analysis which has a sound theoretical basis. Class discussion will include software testing fundamentals and techniques for software test case design. Software testing methods such as functional testing, structural testing, mutation testing, and integration and system testing, including object-oriented software testing will be presented. Prerequisite: CS 410.

412 - Networking and Telecommunications—3 S.H.

This course studies telecommunications and computer networks. It begins by discussing data communications, computer interfaces, transmission media and error detection and correction. Wide area, metropolitan and local area networks are studied in the context of the International Standards Organization/OSI Model. Emphasis is placed on the physical, data link, network, transport and session layers. Prerequisite: CS 250 and one 300-level CS course.

413 - Advanced Networking and Telecommunications—3 S.H.

Advanced topics in computer networking are studied. Emphasis is on the TCP/IP protocol and topics such as security, common network applications, and network management. The course emphasizes an advanced lab where students build a network, learn how to use network management tools, and write network applications. Prerequisite: CS 412.

415 - Principles of Programming Languages—3 S.H.

A study of the principles of the design and implementation of higher-level programming languages. Topics include syntax, semantics, implementation issues, and specific features and strengths of languages. Alternative paradigms for describing computation are also covered. Students are introduced to the theoretical foundations of these paradigms and are given an opportunity to write programs in each of the paradigms. Prerequisite: CS 341.

420 - Computer Architecture—3 S.H.

Models of computing systems are studied. These include the Von Neumann model, multiprocessors, vector processors and others. Additionally, the components of these models are examined. Topics include the memory hierarchy, input/output systems and pipelining. Prerequisite: CS 351.

425 - Numerical Analysis—4 S.H.

Numerical solution of equations, numerical interpolation, differentiation and integration, numerical linear algebra, and numerical solution of differential equations with analysis and use of algorithms and related software. Prerequisite: CS 231 or 234 and MATH 260.

430 - Computer Graphics—3 S.H.

A study of computer graphics theories, algorithms, and techniques. Topics include display techniques, primitives and attributes, interactive

* Course may be used to satisfy certain University Studies requirements.

graphics, transformations, 3-D modeling and viewing, graphics package design, picture structure, lighting and shading, and color theory.

Prerequisite: CS 341.

435 - Theory of Computation—3 S.H.

This course explores the theoretical foundations of computer science. Topics include finite state automata and regular languages, context-free grammars, pushdown automata and context-free languages. Turing machines and recursively enumerable sets, computability and the halting problems, Chomsky hierarchy and undecidable problems. Prerequisite: CS 250 and CS 301.

440 - Theory of Algorithms—3 S.H.

Concepts and techniques of design efficiency and complexity of algorithms. Topics include principles of algorithm design (divide and conquer, backtracking, dynamic programming, greedy and local search); graph, numerical, pattern matching, and parallel algorithms; P, NP, and NP-complete problems. Prerequisite: CS 341.

445 - Artificial Intelligence—3 S.H.

A survey of the tools and theoretical constructs of artificial intelligence as implemented on computers. Emphasis is on the importance of good representations to model various kinds of intelligence. Topics include resolution theorem proving, heuristic and algorithmic search, game playing, natural language processing, expert systems, and neural networks. Prerequisite: CS 341.

450 - Compilers—3 S.H.

The course studies the principles, techniques and tools for compiler design and construction. Topics include lexical analysis, syntax analysis, parsing techniques, error recovery, semantic analysis, intermediate language, code generation, and optimization techniques. Students design and implement the phases of a compiler. Prerequisite: CS 415 or CS 435.

465 - Topics: Computing Theory—1-3 S.H.

Topics are selected from automata theory, the Turing Machine, combinatorics, etc. An in-depth view of a specific concept of computing is covered. Prerequisite: Junior or senior standing and instructor's permission. May be repeated for credit. Offered according to demand.

466 - Topics: General Computing Applications—1-3 S.H.

Topics are selected from general computing application areas. An in-depth view of a specific problem or technique is given. Topics may include statistical problems, the Simplex model, 0/1 knapsack, Divide and Conquer, etc. Prerequisite: Junior or Senior standing and instructor's permission. May be repeated for credit. Offered according to demand.

467 - Topics: Information System Applications—1-3 S.H.

Topics are selected from specific information systems or management information systems or management information systems applications and are oriented toward the user. Topics include linear programming, statistical packages, inventory systems, decision support, the transportation problem, project scheduling, queuing models, forecasting, and discrete simulation. Prerequisite: Junior or Senior standing and instructor's permission. May be repeated for credit. Offered according to demand.

470 - System Design with CASE/Tools—3 S.H.

System design with CASE tools: Analysis of Computer Information Systems, system life cycle, translation of a logical design with E-R diagrams, data flow diagrams, data dictionary and algorithm descriptions into a physical system design. Students work in small groups using CASE tools to design and generate the code for a system project. Prerequisite: CS 410.

476 - Distributed Systems: Concepts and Design—3 S.H.

Introduction to the theory and design principles used in the construction of distributed computer systems. Study of architectural foundations of networked systems, file servers and transportation handling, and security issues. Case studies of specific distributed systems. Prerequisite: CS 405.

481 - Computer Applications—1-3 S.H.

This is intended to be an off-campus course. The computer applications to be covered are determined by the requesting group or company in

conjunction with the computer science faculty. (Not open to computer science majors/minors.) May be repeated for credit. Offered according to demand.

485 - Database Systems Design—3 S.H.

The design and development of database management systems. Topics include relational object oriented database operations and implementation, query language development, normalization, database file management, deadlock handling, security and integrity problems, and distributed DBMS. Prerequisite: CS 385.

490 - Independent Problems in Computer Science—1-3 S.H.

An opportunity to continue the study of selected topics. Prerequisite: instructor's permission. Offered according to demand.

491 - Practicum in Computer Science—6 S.H.

Students work a minimum of 300 hours in an application environment under the supervision of a computer science professional. Open only to junior or senior declared CS or CIS majors who have satisfied specific requirements. Contact the Computer Science Practicum Coordinator, or visit the department web site, for more information on these requirements. Permission of coordinator is required. Pass/No Credit only. Only 3 S.H. apply to CS or CIS majors.

COMPUTER SCIENCE EDUCATION COURSE DESCRIPTIONS

321 - Computers in the Mathematics Curriculum—3 S.H.

This course is designed to provide future mathematics teachers with a broad overview of the uses of computers in the mathematics curriculum. The major emphasis is on selecting and evaluating courseware; using teacher utilities; role of programming and computer literacy in the mathematics curriculum. Prerequisite: MATH 165 and Junior or Senior standing. (A computer programming course is advised). Offered according to demand.

452 - Computer Applications in Elementary Education—3 S.H.

This course is specifically designed for pre-service and in-service elementary classroom teachers for the purpose of exploring selected areas of microcomputer applications in elementary education. The major goal of the course for each student is the acquisition of a positive attitude in the use of the microcomputer as a tool. To accomplish this goal, the student has direct experiences with computer-assisted instruction (CAI), computer managed instruction (CMI), information retrieval, programming languages, software evaluations and elementary computer literacy curriculums. Prerequisite: EDUC 300, EDUC 301 and EDUC 302. Offered according to demand.

480 - Computer Workshop—3 S.H.

Emphasis is on using microcomputers in education. Topics are selected from multimedia, authoring languages, LOGO (including turtle graphics), computer-assisted instruction (CAI), computer-managed instruction (CMI), information retrieval, text editing, educational software/courseware packages, software evaluation, computer curriculums, classroom organization and computer literacy. Prerequisite: instructor's permission. Can be repeated for credit. Offered according to demand.

481 - Computer Applications—3 S.H.

This is intended to be an off-campus course. The computer applications to be covered are determined by the requesting group or school district with the computer science faculty. (Not open to computer science majors/minors.) May be repeated for credit. Offered according to demand.

489 - Special Topics—3 S.H.

Experiences in computer science and computer science education for teachers of grades K-12. Prerequisite: instructor's permission. Offered according to demand.

COUNSELOR EDUCATION

Gildemeister Hall, Room 132 (507-457-5335 Fax: 507-457-5882)

www.winona.edu/counseloreducation

Ruiz (Chairperson)

FACULTY

Gaylia Borrer, Professor; B.S., Davis & Elkins College; M.S., West Virginia University; Ph.D., University of Iowa; 1989 -

Mary Fawcett, Assistant Professor; B.A., University of North Carolina; M.A., Appalachian State University; Ph.D., University of South Carolina; 1999 -

Tim Hatfield, Professor; B.A., Harvard University; M.Ed., Harvard Graduate School of Education; Ph.D. University of Minnesota; 1980 -

Nicholas Ruiz, Professor; B.A., Ph.D., University of Minnesota; 1989 -

Colin Ward, Assistant Professor; B.A., University of Northern Colorado; M.S., Winona State University; Ph.D., Oregon State University; 1998 -

PURPOSE

The department's major purpose is to provide quality education to persons seeking advanced study in counseling and related professions and to provide selected undergraduate and community service courses. The department offers elective courses for undergraduates; however, departmental concentrations lead only to the Master of Science degree. (See the Graduate Catalog for program descriptions.)

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

CHEMICAL DEPENDENCY COURSE OFFERINGS

Students interested in chemical dependency issues and practice may avail themselves of the several courses noted below and described in more detail in the counselor education course descriptions. Courses with asterisks (**) address subject matter required for certification as chemical dependency practitioners in Minnesota and Wisconsin, and courses without the asterisk are additional related courses.

- 220 Emotions and Behavior
- 432 Stress Management
- 491 Crisis Intervention Counseling
- ** 492 Chemical Dependency: Assessment
- ** 493 Chemical Dependency: Special Populations
- ** 496 Chemical Dependency: Causes and Symptoms
- ** 497 Chemical Dependency Counseling

Note: These courses alone do not automatically lead to certification as a chemical dependency practitioner. For more information, students should contact the Counselor Education Department.

COUNSELOR EDUCATION COURSE DESCRIPTIONS

200 - Career/Life Decision Making—3 S.H.

This course is designed to give students an opportunity to explore the skills, processes and information necessary to become actively and responsibly involved in their own college program planning as well as their longer-term career and life planning. P/NC only.

220 - Emotions and Behavior—3 S.H.

A study of the emotions and their effect on the behavior of the individual. Emphasis is placed on the management of feeling through constructive expression.

432 - Stress Management—3 S.H.

This course provides an introduction to important concepts, issues, skills and interventions related to the identification and management of personal stress.

436 - Sexual Issues for Helping Professionals—2 S.H.

This course is designed to prepare counselors and other helping professionals to deal with human sexuality as it relates to a broad spectrum of human relationships common in helping situations. The course facilitates increased awareness of one's own attitudes, feelings and judgments surrounding all areas of sexuality as well as introduces a basic body of knowledge and skills for treating sexual concerns of the client.

491 - Crisis Intervention Counseling—2 S.H.

All therapists or helpers at one time or another are called upon to deal with crisis. The purpose of this course is to provide students and helping professionals with a foundation for understanding crisis and with effective models for working with crisis.

492 - Chemical Dependency: Assessment—5-2 S.H.

This course looks at the assessment tools necessary 1) to identify the pre-chemically dependent person so that preventative steps may be taken; and 2) to detect the chemically dependent person at the earliest possible point so that intervention and treatment can occur when they are likely to be most effective.

493 - Chemical Dependency: Special Populations—5-2 S.H.

This course addresses special populations within chemical dependency counseling (e.g., women, adolescents, the aging). Focus is on the unique counseling issues for special populations.

494 - Multicultural Issues for Helping Professionals—5-2 S.H.

This course is designed to aid professionals in exploring and working through such concepts as oppression, cultural assimilation and cultural pluralism. The emphasis is on American minorities from a cross-cultural perspective.

495 - Workshop: Counseling Specialties—5-2 S.H.

The topics of these workshops vary. Announcements of the topics and any special enrollment issues are made in advance of the workshop offering.

496 - Chemical Dependency: Causes and Symptoms—2 S.H.

This course focuses on research and related information regarding the biological, environmental, social and psychological causes and symptoms of chemical dependency. Grade only.

497 - Chemical Dependency Counseling—2 S.H.

This course is designed for people who want to develop skills for counseling people with alcohol- and drug-related concerns. Focus is on learning the intervening process to be used with the drug-dependent person. Consideration also is given to working with the affected family members. Grade only.

498 - Death, Dying and Surviving—2 S.H.

This course is designed to help persons broaden their perspectives on death and loss as it affects all people. The focus is both personal in surveying one's own attitudes about death and professional in helping others through the grieving process.

* Course may be used to satisfy certain University Studies requirements.

CYTOTECHNOLOGY

Pasteur Hall, Room215F (507-457-5271)
http://bio.winona.msus.edu/biohp/acad_deg.htm

WSU DIRECTOR, CYTOTECHNOLOGY

Edward Thompson, Associate Professor; B.A., Macalester College, St. Paul; Ph.D., Medical College of Wisconsin, Milwaukee; 1992 –

ADJUNCT FACULTY

Mayo School of Health-Related Science, Rochester, MN

Jill Caudill, M.Ed., CT, (ASCP), Education Coordinator

John Goellner, M.S., Medical Director

Marshfield Medical Center, Marshfield, WI

Virginia R. Narlock, Ph.D., C.L.S. (ASCP) Program Director, Laboratory

George Rupp, M.D., Medical Director, Laboratory Education Programs

Donald Schnitzler, Education Coordinator, Cytotechnology

PURPOSE

The Cytotechnology Program is administered by the Biology Department and the College of Science and Engineering. It is a four-year course of study leading to the Bachelor of Science degree in Cytotechnology. The first three years are spent at WSU, where the student completes courses in the basic sciences of biology and chemistry as well as the WSU University Studies requirements. The fourth year is spent in a clinical setting at one of the Cytotechnology programs affiliated with WSU, where the student receives intensive training in the sub-disciplines and techniques of Cytotechnology.

Before they can apply for the year of clinical training, students must complete three years (96 semester hours) at WSU with a minimum grade point average of 3.00. Students should note that acceptance into the fourth year of clinical training is not automatic upon completion of the third year at WSU. The number of spaces each year in clinical training programs is limited, and there is significant competition for these spaces. Students are accepted by the clinical institutions based upon their academic achievement and their potential for a successful career as a cytotechnologist. The latter is determined through letters of recommendation from University faculty and a personal interview with faculty of the clinical institution.

During the clinical year, each student registers for the appropriate number of credits at WSU, and his or her progress is evaluated each semester. Upon successful completion of the clinical program, the student receives a certificate in cytotechnology and then is eligible to write the National Registry Examination given by the American Society of Clinical Pathologists (ASCP). If all WSU requirements have been completed, the student also is granted the degree of Bachelor of Science in Cytotechnology.

First-year students entering this program should consult with Dr. Thompson soon after their arrival on campus, and all cytotechnology students must meet with him for academic review and advising prior to registration for each semester. Dr. Thompson must approve all student schedules each semester.

B.S. MAJOR – CYTOTECHNOLOGY

81 S.H. (No Minor Required)

REQUIRED MAJOR AREA COURSES (32 S.H.)

BIOL 241	Basics of Life (4)
BIOL 242	Organismal Diversity (4)
BIOL 308	Cell Biology (3)
BIOL 310	Genetics (3)
BIOL 307	Cell Biology Laboratory (1)
BIOL 201	Human Anatomy (4)
BIOL 323	General Physiology (5)
BIOL 409	General Microbiology (4)
BIOL 470	Histology (4)

Note: BIOL 241 and 242 should be taken prior to BIOL 201, 307, 308, and 310. BIOL 308 should be taken prior to or concurrently with BIOL 307. BIOL 323 should be taken after BIOL 201. BIOL 409 and 470 should be taken after BIOL 308, 310 and 307.

MAJOR ELECTIVES (6 S.H.)

At least 6 S.H. chosen from the following courses:

BIOL 309	Developmental Biology (3)
BIOL 445	Immunology (3)
BIOL 460	Parasitology (3)
CHEM 340	Organic Survey (4)

ADDITIONAL REQUIREMENTS (11 S.H.)

Chemistry (7 S.H.)

* 208, * 209 General/Organic/Biochemistry (7)

Note: CHEM * 212 and CHEM * 213 may be substituted for CHEM * 208 and CHEM * 209.

Mathematics (4 S.H.)

* 120 Precalculus (4)

Note: MATH 150 and MATH 155 may be substituted for MATH 120.

CLINICAL EDUCATION (32 S.H.)

BIOL 481	Cytotechnology I (12)
BIOL 482	Cytotechnology II (12)
BIOL 483	Cytotechnology III (4)
BIOL 484	Cytotechnology IV (4)

Note: The clinical training can be completed at any approved clinical training site.

CYTOTECHNOLOGY COURSE DESCRIPTIONS

See specific program areas (i.e., biology, chemistry, and mathematics) in this catalog for descriptions of the courses cited for this major.

ECONOMICS AND FINANCE

Somsen Hall, Room 309 (507-457-5014)

Manrique (Chairperson)

Economics: Gallegos, Gieske, Hyle, Kauffman, Pevas, Salyards

Finance: Kesler, Murray, Wrolstad

FACULTY

Alejandro Gallegos, Professor; B.A., Instituto Tecnológico y de Estudios Superiores de Monterrey; M.A., Ph.D., University of Wisconsin-Milwaukee; 1988 -

Michael Gieske, Professor; B.S., Iowa State University of Science and Technology; 1972 -

Matthew Hyle, Professor; B.A., Indiana University; Ph.D., University of Maryland; 1988 -

Daniel E. Kauffman, Professor; B.A., St. Cloud State University; M.A., Ph.D., University of Nebraska; 1983 -

David W. Kesler, Professor; B.S., Pacific Lutheran University; M.A., M.B.A., University of Kansas; Ph.D., University of Wisconsin-Milwaukee; 1984 -

Gabriel Manrique, Professor; B.A., Ateneo De Manila University; M.A., Ohio University; Ph.D., University of Notre Dame; 1989 -

Michael Murray, Professor; B.A., University of South Florida; M.A., Ph.D., University of Notre Dame; 1986 -

Mary Ann Pevas, Professor; B.A., Dominican College; M.A., Manhattan College; Ph.D., University of Notre Dame; 1990 -

Donald M. Salyards, Professor; B.A., Graceland College; M.A., Ph.D., Kansas State University; 1975 -

Mark Wrolstad, Professor; B.A., Luther College; M.B.A., University of Florida; Ph.D., University of Colorado; 1989 -

PURPOSE

The purpose of the Economics and Finance programs is to develop highly employable professional business analysts and managers. Majors are provided with a firm understanding of the economy and its financial systems, the ability to conceptualize business issues, and the opportunity to develop quantitative and computer skills necessary to solve today's complex business problems. The department also seeks to provide graduates with the background necessary to pursue graduate degrees.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for economics and finance majors are as follows:

For Economics Majors

1. Completion of all coursework required for the major.
2. A grade of "C" or better in all courses counted toward the major.
3. Completion of at least 18 semester credits in economics courses offered by the Economics Program at WSU including ECON 499.

For Finance Majors

1. Completion of all coursework required for the major.
2. A grade of "C" or better in all courses counted toward the major.
3. Sixty-four non-business credits are required for finance majors. The mathematics, statistics (six semester credits maximum) and economics (nine semester credits maximum) credits required for the baccalaureate degree can be counted toward the 64 non-business credits.
4. A minimum of 50% of the business requirements for the finance major must be completed at WSU.

B.A. MAJOR – ECONOMICS

45-46 S.H. (Minor Required)

303 Intermediate Macroeconomics (3)

304 Money and Banking (3)

REQUIRED COURSES (27–28 S.H.)

Economics (18 S.H.)

- 201 Principles of Microeconomics (3)
- 202 Principles of Macroeconomics (3)
- 302 Intermediate Microeconomics (3)
- 303 Intermediate Macroeconomics (3)
- 304 Money and Banking (3)
- 499 Seminar in Economics (3)

Statistics/Quantitative Tools (9-10 S.H.)

Choose one of the following two courses:

- MATH *140 Applied Calculus (3) OR
- MATH *160 Calculus I (4)

Choose one of the following two courses:

- DIS 220 Business Statistics (3) OR
- STAT 210 Statistics (3)
- FIN 335 Forecasting Methods (3)

ELECTIVES (18 S.H.)

Additional credits at the 300 or 400 level in economics.

B.A. MINOR – ECONOMICS

24 S.H.

REQUIRED COURSES (15 S.H.)

- * 201 Principles of Microeconomics (3)
- * 202 Principles of Macroeconomics (3)
- 302 Intermediate Microeconomics (3)

ELECTIVES (9 S.H.)

Additional credits at the 300 or 400 level in economics.

B.S. MAJOR – FINANCE

66-67 S.H. (No Minor Required)

BUSINESS CORE (36–37 S.H.)

Mathematics (3-4 S.H.)

- * MATH 140 Applied Calculus (3) OR
- * MATH 160 Calculus (3)

Accounting (6 S.H.)

- * ACCT 211 Financial Accounting Principles (3)
- * ACCT 212 Managerial Accounting Principles (3)

Business Administration (15 S.H.)

- DIS 220 Business Statistics (3)
- BUSA 291 Legal Environment (3)
- POM 334 Production and Operations Management (3)
- DIS 312 Business Computer Programming (3)
- MGMT 325 Organizational Dynamics (3)

Economics and Finance (9 S.H.)

- * ECON 201 Principles of Microeconomics (3)
- * ECON 202 Principles of Macroeconomics (3)
- FIN 360 Corporate Finance (3)

Marketing (3 S.H.)

- MKTG 300 Principles of Marketing (3)

* Course may be used to satisfy certain University Studies requirements.

FINANCE MAJOR REQUIREMENTS (30 S.H.)

FINANCE CORE (15 S.H.)

ECON 303	Intermediate Macroeconomics (3)
FIN 335	Forecasting Methods (3)
FIN 377	Investments (3)
FIN 463	Cases in Financial Management (3)
FIN 421	Institutional Investment and Financial Markets (3)

OPTION A (15 S.H.)

For students planning to seek a career immediately after graduation. Five courses from the following list—at least two must be finance courses and at least one must be an economics course.

ACCT 311	Intermediate Accounting I
ACCT 421	Introduction to Taxation
DIS 320	Intermediate Business Statistics
DIS 340	Managerial Science
ECON 304	Money and Banking
ECON 320	Business and Government Relations
ECON 400	Public Finance: Taxation
ECON 404	International Economics
ECON 425	Managerial Economics
ECON 440	Industrial Organization
ECON 444	Public Finance: Expenditures
ECON 405	Monetary Theory and Policy
FIN 404	Commercial Bank Management
FIN 422	Portfolio Management
FIN 423	Derivative Securities
FIN 440	International Finance
FIN 471	Real Estate Finance
FIN 473	Real Estate Investment
MGMT 495	Strategic Management

OPTION B (15 S.H.)

For students planning to do advanced work in finance.

REQUIRED (9 S.H.)

FIN 422	Portfolio Management
FIN 423	Derivative Securities
STAT 310	Intermediate Statistics

OPTIONAL COURSES (6 S.H.)

Select two courses from the following list:

DIS 340	Management Science
ECON 405	Monetary Theory and Policy
ECON 425	Managerial Economics
FIN 440	International Finance
MATH 165	Calculus II (4)
MATH 210	Discrete Mathematics (4)
MATH 430	Operations Research: Linear Programming (4)
MGMT 495	Strategic Management
STAT 360	Regression Analysis (3)

ECONOMICS COURSE DESCRIPTIONS

Economics

201 - Principles of Microeconomics—3 S.H.

The private enterprise system, demand-and-supply and market interaction; business costs and prices, forms of competition, resource markets; the mixed economy. Recommended prerequisite: University Studies math requirement.

202 - Principles of Macroeconomics—3 S.H.

National income analysis; aggregate demand-and-supply; money and banking; business cycles, monetary and fiscal policy. Recommended prerequisite: University Studies math requirement.

203 - Principles of Economics III—3 S.H.

Economic growth; unions; poverty and insecurity; public spending and taxation; international trade and trade restrictions; gold and the balance of payments; comparative systems. Prerequisites: ECON 201 and ECON 202.

302 - Intermediate Microeconomics—3 S.H.

The theoretical approach to consumer demand, decision-making in the pricing and employment of resources under the major market classification, and the distribution of resources and production. Prerequisite: ECON 201.

303 - Intermediate Macroeconomics—3 S.H.

National income accounting and measurement; theory of the determination of national economic activity; economic growth; consumption; investment; government spending and net exports; design and effects of fiscal and monetary policies; inflation. Prerequisite: ECON 202.

304 - Money and Banking—3 S.H.

The nature and functions of money. Current definitions of the money supply and the process of money creation. The financial system and the central bank. The demand for money, interest rate determination, introduction to monetary policy. Prerequisites: DIS 220 or STAT 210 and ECON 201 and ECON 202.

315 - Environmental and Natural Resource Economics—3 S.H.

An introduction to the economics of natural resource management and environmental quality. Theory and policy in the use of nonrenewable and renewable resources, and in the control of pollution. Current issues in those areas are featured. Prerequisite: ECON 201 or instructor's permission.

320 - Business-Government Relation—3 S.H.

Government economic regulation of business including anti-trust legislation, natural monopoly regulation, and selected social regulation topics such as consumer product safety. Prerequisite: ECON 201.

398 - Internship—1-6 S.H.

Credits will not be counted in Economics Major, but as general elective credit. Prerequisite: Concurrent enrollment in ECON 399. P/NC only.

399 - Internship Problem—3 S.H.

Prerequisite: Junior status in Economics Major, 2.5 GPA and instructor's permission. Grade only.

400 - Public Finance: Taxation—3 S.H.

Structure and economic effects of U.S. tax revenue sources such as the personal income tax and corporate income tax; principles of economic incidence and optimal taxation; current issues in taxation. Prerequisite: ECON 201 or instructor's permission.

404 - International Economics—3 S.H.

Comparative advantage and modern trade theories. The impact of international trade on income distribution and growth, barriers to trade, economic integration, contemporary international marketing agreements, exchange rate determination, and balance of payments adjustments. Prerequisites: ECON 201 and ECON 202. Recommended prerequisites: DIS 220 or STAT 210.

405 - Monetary Theory and Policy—3 S.H.

The theory and practice of monetary policy in a modern open economy. This includes the microeconomic foundations of the demand for assets, including money; interrelationships between nonmonetary assets, money and rates of return; the ability of central banks to manipulate the money supply and influence economic activity; and the roles of public and private debt in monetary policy. Prerequisite: ECON 303 or ECON 304 or instructor's permission.

415 - International Economic Development—3 S.H.

A study of the past and current paths to economic growth and development of countries. The course will analyze the economic policies and performances of countries by using economic theory and economic and social data. Emphasis is on developing countries of the Third World, the newly industrialized countries and former socialist countries undergoing transition to a capitalist system. Prerequisites: ECON 201 and ECON 202.

420 - Labor Economics—3 S.H.

Economic theory relating to labor markets. Wage theory, bargaining models and contemporary labor issues considered. Prerequisites: ECON 201 and ECON 202 or instructor's permission.

425 - Managerial Economics—3 S.H.

Application of economic theory and related decision-making methods to problems faced by business firms. Prerequisites: ECON 201 and ECON 202 or instructor's permission.

440 - Industrial Organization—3 S.H.

A theoretical and empirical study of the economic structure, conduct and performance of industry. Topics include concentration, scale economies, entry barriers and collusive oligopoly practices. Topics are used to judge industrial performance relative to societal goals. Prerequisite: ECON 201.

444 - Public Finance: Expenditures and the Deficit—3 S.H.

A practical and theoretical approach to public expenditures. The theory of public goods; use of benefit-cost analysis; analysis of major spending programs; and the effect of the deficit on economic activity. Prerequisites: ECON 201 and ECON 202 or instructor's permission.

450 - Health Economics—3 S.H.

In-depth analysis of the market for health care services including the demand of health services, the supply of such services, alternative delivery modes, financing by individuals, government and third-party payers. Health care policy at the federal, state and local level is evaluated. Prerequisites: ECON 201 and ECON 202.

480 - Independent Studies in Economics—1-3 S.H.

Offers the advanced student an opportunity to do additional reading and/or research in areas of special interest. Prerequisite: instructor's permission. Total credits may not exceed 6.

499 - Seminar in Economics—3 S.H.

Advanced analysis of economic methods and problems. Specific focus of course is arranged by the instructor. Prerequisites: ECON 302 and ECON 303. Student must be either a major or minor in economics.

FINANCE**201 - Introduction to Finance—3 S.H.**

An introduction to the financial system in the U.S. including the role of the banking system in controlling the supply of money and interest rate determination, a primer on investments and an introductory discussion of international finance. Not open to those having 15 or more credits in business. Grade only.

335 - Forecasting Methods—3 S.H.

A study of the techniques and processes used in business forecasting. Primary emphasis is on univariate time series. Techniques studied include simple smoothing methods, decomposition methods, Box-Jenkins ARIMA method and regression. Prerequisites: MATH 140 or its equivalent and DIS 220 or its equivalent or instructor's permission. Grade only.

340 - Computer Applications in Finance—1 S.H.

A series of short courses in the effective use of the SAS System in a mainframe environment. Alternative course topics include basic data handling, regression analysis, forecasting techniques, survey tabulation and analysis, etc. Requires completion of several project assignments. May be repeated as topics change. Prerequisite: DIS 220 or its equivalent. Grade only.

360 - Corporate Finance—3 S.H.

The theory and practice of corporate finance, using the approaches and quantitative methods required of today's financial managers and decision-makers. Special emphasis on a theory of value, the determinants of risk, return and the opportunity cost of capital, applied to both real and financial assets, the study of leverage issues, the exploitation of market inefficiencies, and the development of various tools and economic reasoning which provide the basis for a wide range of corporate financial decisions. Prerequisites: ECON 201, ECON 202, ACCT 211, ACCT 212 and DIS 220 or its equivalent; and the math requirement of student's major. Grade only.

377 - Investments—3 S.H.

Investment policies affecting the individual and institutional investor. Includes the analysis and management of stocks, bonds, mutual funds and other investments, and the nature of security markets. Prerequisites: FIN 360 and mathematics requirement of student's major. Grade only.

398 - Internship—1-6 S.H.

Credits are not counted in finance major, but as general elective credit. Prerequisite: Concurrent enrollment in FIN 399. P/NC only.

399 - Internship Problem—3 S.H.

Prerequisite: completion of Business Core, 2.5 GPA and instructor's permission. Grade only.

404 - Commercial Bank Management—3 S.H.

An analysis of financial management issues of commercial banks and other financial institutions including institution performance, investments, asset/liability strategies, management of liquidity, securities, loans and other assets, and capital, deposits and other sources of funds. Prerequisite: FIN 360. Grade only.

421 - Institutional Investment and Financial Markets—3 S.H.

A study of portfolio management decision-making in this age of innovative global financial markets, new financial instruments and instantaneous worldwide communications. Prerequisites: FIN 360 and ECON 303. Grade only.

422 - Portfolio Theory and Security Valuation—3 S.H.

An in-depth study of modern portfolio theory and techniques for the valuation of securities including equity, debt and derivative securities. Special emphasis is placed on the contingent claims model for security valuation. Prerequisites: FIN 377 and computer requirement of student's major. Grade only.

423 - Derivative Securities—3 S.H.

The application and valuation of financial securities whose value is contingent on the value of other securities. The primary concentration is on option and futures contracts; however, application of the option valuation model to other areas of finance will also be introduced. Prerequisites: MATH 140 and FIN 360. Grade only.

440 - International Finance-3 S.H.

This course provides a comprehensive introduction to the world of financial management as it applies to multinational corporations and other firms that engage in international transactions. Topics include the nature of the international financial system, foreign exchange management, investment financing and risk management issues of concern to international businesses. Prerequisite: FIN 360. Grade only.

463 - Cases in Financial Management-3 S.H.

Case studies affecting the financial policies and position of the business unit. Analysis of financial problems, determination of alternatives, evaluation of alternatives and managerial decision-making. Prerequisites: FIN 360 and computer requirement of student's major. Grade only.

471 - Real Estate Finance-3 S.H.

The structure and operation of the primary and secondary mortgage markets, instruments, techniques and strategies in financing real property investments including developing projects. Prerequisite: FIN 360. Grade only.

473 - Real Estate Investment-3 S.H.

Development of the feasibility process, the major tool used in analysis of investment opportunities, with a view to determining highest and best use. Topics include market analysis, cash flow analysis, tax considerations, investment performance, risk analysis and passive investments in real estate. Prerequisite: FIN 360. Grade only.

480 - Independent Studies in Finance-1-3 S.H.

Offers advanced students an opportunity to do additional reading and/or research in areas of special interest. Prerequisite: instructor's permission. Total credits may not exceed 6. Grade only.

EDUCATION

Gildemeister Hall, Room 152 (507-457-5350 Fax: 507-457-5354)

Leicester (Chairperson)

www.winona.edu/education/advising

FACULTY

Richard Bowman, Professor; B.S. Ed., M.S. Ed., Ohio University, Athens; Ph.D., University of Toledo (OH); 1995 -
Robert Clay, Associate Professor; B.S., Bemidji State University; M.A., University of Northern Colorado; Ph.D., Colorado State University; 1990 -
Nancy Ann Eckerson, Assistant Professor; B.S., M.S., Minnesota State University - Mankato; Ph.D., Iowa State University; 2000 -
John Gustafson, Assistant Professor; B.A. Bemidji State University; M.A., California State University-Los Angeles; Ed.D.; University of South Dakota 1998 -
Donna Helble, Professor; B.A., Simpson College, Iowa; M.S., Winona State University; Ed.D., University of Northern Colorado; 1984 -
Mary Joyce, Associate Professor; B.A., College of St. Catherine; M.S., Winona State University; 1980 -
Jean Leicester, Professor; B.A., University of California-Berkeley; M.A., San Francisco State University; Ph.D., University of Colorado, Boulder; 1991 -
Celeste Matthews, Associate Professor; B.A., University of Arizona; M.Ed., University of Maryland; Ph.D., Penn State University; 1997 -
Melanie Reap, Assistant Professor, B.S., M.S., Texas A & M University; Ph.D., University of Oklahoma; 1999 -
James Reineke, Associate Professor; B.A., B.S., University of Minnesota-Twin Cities; Ph.D., Michigan State University; 1996 -
Janice Sherman, Professor; B.S., State University of New York-Buffalo; M.S., Colorado State University; Ed. D., University of North Dakota; 1989 -
Thomas Sherman, Professor; A.A. Paul Smith's College; B.S., State University of New York-Buffalo; M.Ed., Colorado State University; Ed.D., University of Colorado; 1989 -
Patricia Tolmie, Professor; B.S., M.S., Winona State University; Ph.D., University of Wisconsin-Madison; 1980 -
Penny Warner, Assistant Professor; B.S., M.S., University of Wisconsin; Ph.D., University of Minnesota; 2000 -
Maudie Williams, Professor; B.S., Fort Valley State College; M.S., Tuskegee Institute; Ed.D., University of Florida; 1989 -
Rod Winters, Assistant Professor, B.A., Central College; M.A., University of Northern Colorado; Assistant Professor, Ed.D., University of Northern Iowa; 1998 -

TEACHER EDUCATION OVERVIEW

The Education Department admits students to all teacher education programs and delivers courses in the professional education sequence required of all teaching majors. In addition, the department delivers all the coursework for elementary majors.

As a department, we seek to integrate into pre-service teacher education the knowledge, skills, and dispositions necessary to be an effective educator. This includes (1) a philosophy of education, (2) knowledge of the individual learner, (3) understanding of the opportunities, (4) objectives and responsibilities of schooling in a democratic society, (5) practice toward teaching effectively, and (6) the professionalism to work with others in promoting continual improvement of schools.

Teacher education program requirements outlined under each major are subject to change as Minnesota Board of Teaching licensure rules change. Check with your program advisor regularly for current program/licensure requirements.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in the major, minor, options, concentrations and licensures on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no-credit-only or grade-only basis are so designated in the course descriptions.

REPETITION OF COURSES

No Education Department course may be repeated more than once due to withdrawal or earning a grade less than "C."

INCOMPLETE GRADES

The grade of Incomplete ("I") may be granted at the discretion of the course instructor in special cases in which, for reasons beyond the student's control, all course assignments were not finished though the student is passing all other aspects of the course. The Incomplete must be resolved by the second week of the next semester in which the student enrolls for any course that serves as a prerequisite for other courses.

ROCHESTER CENTER

The following Education Department majors are available at the Rochester Center:

- K-6 Middle School with Communication Arts and Literature 5-8 Specialty
- K-6 Middle School with Social Studies 5-8 Specialty

All other majors are only available on-campus (Winona). See page 39 for the articulation of the 2+2 programs available on the Rochester Center campus.

LICENSURE

Minnesota Licensure

The State of Minnesota requires that all teacher education candidates for licensure shall:

- Hold a baccalaureate degree from a college or university that is accredited by the regional association for the accreditation of colleges and secondary schools
- Demonstrate the standards for effective practice for licensing of beginning teachers
- Verify the completion of an approved teacher preparation program
- Meet the prescribed scores on the Pre-Professional Skills Test (PPST) in reading, writing, and mathematics as set by the Minnesota Board of Teaching
- Meet the prescribed scores on the Principles of Learning and Teaching and a test of content knowledge in each area of licensure.

Teacher Licensure in Other States

Students interested in becoming certified to teach in states other than Minnesota must contact that state's Department of Education to obtain

licensure requirements. Most states will issue a temporary license to allow time to complete differences in their requirements. See the Registrar's Office regarding any changes in licensure requirements for particular states.

Licenses Offered at WSU

Early Childhood Education (Birth – Grade 3)

A teacher of early childhood education is authorized to design, implement, and evaluate developmentally appropriate learning experiences for young children from birth through grade 3 in a variety of early childhood or public school K-3 settings. The early childhood education teacher collaborates with families, colleagues, and related service personnel to enhance the learning of all young children.

K-6 with Pre-Primary Specialty (Age 3 to Grade 6)

A teacher with this license is certified to design, implement, and evaluate developmentally appropriate learning experiences for young children from age three through grade 6 in a variety of school settings. Teachers collaborate with families, colleagues, and related service personnel to enhance the learning of young children.

K-6 Middle School with a Content Specialty (K-8)

A teacher with this license is certified to design, implement, and evaluate developmentally appropriate learning experiences for children in kindergarten through grade 6. A K-6 teacher with content specialty also designs, implements, and evaluates learning experiences in a specific content area in grades 6 through 8 and collaborates with families, colleagues, and related service personnel to enhance the learning of school-aged children and youth.

SECONDARY TEACHING MAJORS

Note: Majors are required to complete the Professional Education Sequence in addition to their major content course requirements. See below.

Secondary (Grades 5-12)

- B.S. Major - Business Education (Teaching)
- B.S. Major - Chemistry (Teaching)
- B.S. Major - Communication Arts and Literature (Teaching)
- B.S. Major - Earth Science (Teaching)
- B.S. Major - Life Science (Teaching)
- B.S. Major - Mathematics (Teaching)
- B.S. Major - Physics (Teaching)
- B.S. Major - School and Community Health Education (Teaching)
- B.S. Major - Social Science/History (Teaching)

K-12

- B.S. Major - Art (Teaching)
- B.S. Major - French (Teaching)
- B.S. Major - German (Teaching)
- B.S. Major - Music (Teaching)
- B.S. Major - Physical Education (Teaching)
- B.S. Major - Spanish (Teaching)
- B.S. Major - Special Education

Professional Education Sequence for Secondary Majors (32 – 36 S.H.)

These courses require admission to the teacher education program.

- EDUC 305 Human Development and Learning (4)
- EDUC 308 Human Relations and Student Diversity (3)
- EDUC 312 Instructional Planning and Assessment (3)
- EDUC 429 Secondary Reading and Teaching (4)
- EDUC 449 Middle School Philosophy, Organization and Planning (3)
- EDUC 459 Professional Educator (3)
- EDUC 465 Student Teaching (12 - 16)

TEACHING DEGREE REQUIREMENTS FOR POST-BACCALAUREATE STUDENTS

A Bachelor of Arts graduate who holds a degree from WSU or another accredited institution may qualify for teacher licensure by complying with the following requirements:

1. Complete the Professional Education Sequence (including student teaching in the major field). The student must have a minimum of a "C" grade in each course in the Professional Education Sequence before he or she is allowed to student teach. Anyone applying for a Minnesota teacher's license must complete a course that covers the effects of drugs and alcohol and an approved course in human relations. Also, Minnesota and Wisconsin both require verification of scores that meet the State Department of Children, Families and Learning's minimum levels in the reading, writing, and mathematics components of the PRAXIS I test (PPST). In order to be licensed, Minnesota also requires qualifying scores on exit exams called PRAXIS II in the content of all areas in which the teacher will be licensed, and on a test of the principles of teaching and learning. Wisconsin and other states have specific requirements for certification in addition to the completion of WSU's Professional Education Sequence. Contact the Registrar's Office (Somsen Hall, Room 114) for more information about teacher certification.
2. Complete one of the Bachelor of Science teaching majors with a GPA of 2.50-2.75 in the major as required by the major department.
3. Earn a cumulative GPA of 2.75. (All previous college and university credit will be included in computing the cumulative GPA.)
4. Students should consult with the department offering the major for any additional GPA requirements.

To receive a second bachelor's degree, the student must earn at least 30 semester credits after completing requirement for the first degree. For more information about dual degrees, see page 24.

The Board of Teaching/State Department of education issues licenses. Application for the license to teach in the State of Minnesota must be made during the last few weeks of the final semester of attendance at WSU. Application forms are available in the Registrar's Office. A person whose bachelor's degree is not in teacher education and who is interested in licensure is asked to check teacher licensure requirements.

Minnesota teacher licensure requirements state that any secondary school teacher licensed to teach with a minor preparation in a subject, or field shall within seven years after the initial licensure, acquire the minimum established by the Board of Teaching for major preparation in order to continue to be licensed to teach in the subject or field.

ADMISSION TO THE WSU TEACHER EDUCATION PROGRAM

- I. Attend the Admissions Meeting the semester before you wish to start taking classes. An Admissions Meeting is scheduled early each semester. At this mandatory meeting, students review the criteria for admission and complete an application form; students are given an Admissions Folder to begin documenting their attainment of the admission criteria. (If a student has been accepted previously but did not start the education sequence the following semester, the student must attend a new admissions meeting and be re-accepted under the criteria in effect for that semester.)
- II. Document attainment of admission criteria by submitting a complete Admissions Folder to the Education Department by four weeks after the mandatory meeting. The Admissions Folder is only complete if it contains highlighted documents, which demonstrate the admission criteria in effect during that semester.

Current admission criteria, which must be documented include:

1. 30 semester hours of completed credit of which no more than 2 semester hours may be pass/no credit hours. All transfer credits to be considered for admission, must have been accepted by WSU and be designated on the credit evaluation prepared by the WSU Office of Admissions.
2. Cumulative GPA of 2.75 or better (highlight on transcript). **Note:** Students who do not meet the 2.75 GPA may check a box ("Alternate Admission Requests") on the application form, requesting the Education Department to consider an alternate GPA. The alternate GPA calculation is based upon the last 30 semester credits completed or quarter credit equivalent. The calculation must include all semester or quarter hour coursework in any given semester needed to meet the 30-semester hour credit requirement.
3. Grade of "B" or better in a 3-credit college level writing course (ENG 111 if taken at WSU).
4. Grade of "B" or better in a 3-credit college level speech course (CMST 191 if taken at WSU).
5. Grade of "C" or better in a 3-credit college level math course (MATH 100 or higher at WSU).
6. Official score report on all three sections of the Pre-Professional Skills Test (PPST): Math, Reading, and Writing. It will take up to 8 weeks from the time a student completes the exam for results of the Writing section to be processed and reported to WSU. It is the student's responsibility to take the test at least two months before the deadline for completing the Admissions Folder. (Competency in each of the sections is not required for admittance to the WSU program, but it is required eventually before gaining a teaching licensure in Minnesota.)
7. Evidence of having passed the Education Department Writing Clearance exam. All applicants for admission to the education program are required to pass this exam, which is given during the second half of the Admissions Meeting. A \$20 fee is payable by check at the time of this exam. Currently enrolled WSU students may have this fee billed to their tuition account.
8. Copy of completed Credit Evaluation form prepared by the WSU Office of Admissions for students who have transferred from another institution.
9. Official transcript(s) from all institutions attended other than WSU. Official transcripts must be sent directly to the Education Department. These transcripts are in addition to any transcripts that may have already been sent to the WSU Office of Admissions. A Request for Office Transcript form, with proper mailing address, will be distributed at the Admissions Meeting.

* Course may be used to satisfy certain University Studies requirements.

- Affirmation of a record of good citizenship on the completed admission form.

Note: The University reserves the right to consider as part of the admission and retention policy those dispositions, general health, and scholastic achievement, or other standards as may be appropriate. Students must adhere to the WSU Student Conduct Policy.

RETENTION IN WSU TEACHER EDUCATION PROGRAM

Assistance Plan

Students identified by teacher education faculty as needing assistance in academic, personal, or professional domains are required to attend a review meeting to be called by the Education Department Chairperson and to include the education faculty member involved, appropriate department chairperson(s), and the student's advisor to demonstrate corrective action in the identified areas of concern. Assistance plans will likely draw upon services such as those provided by the Counseling Center, the Writing Center, Academic Skills Center, Student Support Services, and the Advising and Retention Office.

Continuation in Teacher Education

- The successful completion of conditions outlined in the student assistance plan will be required for continuation in teacher education programs under the following circumstances:
 - A grade of less than "C" in any Education Department course
 - Withdrawal (WD) from the same Education Department course more than once, OR withdrawal (WD) from two different Education Department courses in two different semesters
 - Failure to meet GPA requirements outlined below
- Teacher education students must maintain at least a 2.75 GPA each semester to continue in teacher education. Teacher education students who do not meet this GPA requirement may not enroll in any new Education Department courses or student teach until they meet the 2.75 requirement.
- Student assistance plans and academic warning letters are treated as part of the student's teacher education record.

Dismissal from Teacher Education Program

Students may be dismissed from the Teacher Education Program for either of the following reasons:

- Failure to document the fulfillment of the commitments of a student assistance plan
- Breach of ethical responsibilities, as stated in the Minnesota Code of Ethics for Teachers in the WSU Effective Educator Field Experience Handbook and the WSU Student Conduct Policies. A student dismissed for an ethical violation will not be allowed to continue in any field experience that semester, will be dropped from the Teacher Education Program at the end of the semester, and will not be readmitted to the major.

Student appeals must follow the process outlined in the Effective Educator Handbook.

STUDENT TEACHING

Requirements

Student teaching is required for all teacher education programs and is done during the final semester at Winona State University. One full semester is required in an area public school or early childhood program contracted by the University or elsewhere in Minnesota through the Common Market Program. All student teachers will complete a full semester in their licensure area. Student teachers follow the calendars of their respective school districts. The Student Teaching Director will indicate the beginning and ending dates of placement.

Student teaching on the secondary level is required in all major fields. If a second major is completed, the Director of Student Teaching will indicate the WSU student teaching requirements necessary to meet licensure.

Application

Application for student teaching is made to the Director of Student Teaching two semesters prior to the student teaching semester. Students apply for a semester when they will not have other commitments, such as coaching, music tours, classes, etc. Applications are available in the Department of Education Office.

ELEMENTARY EDUCATION PROGRAMS EARLY CHILDHOOD EDUCATION (120 S.H.)

Birth to Grade Three

UNIVERSITY STUDIES (48 S.H.)

I. BASIC SKILLS

- ENG 111 College Reading and Writing (4)
- CMST 191 Oral Communication (3)
- MATH 100 or higher (3)
- HHP 204 Personal and Community Health (3)

II. ARTS & SCIENCE CORE

- Humanities—Recommended: HIST 150 or 151 (6)
- Natural Science—one class with lab and one class without a lab (7)
- Social Science—SPED 400 and one additional course (6)
- Fine and Performing Arts—MUS 320 (3)

III. UNITY & DIVERSITY

- MTED 201 Technology Based Geometry (4)
- Science & Social Policies—Elective (3)
- EDUC 308 Human Relations and Student Diversity (3)
- Contemporary Citizenship Elective (3)

LICENSE REQUIREMENTS (21 S.H.)

- EDUC 321 Literature (3)
- MTED 125 Mathematics for Elementary Teacher (3)
- PER 200 Teaching Elem Physical Education (3)
- HHP 320 Health Education in Elementary Schools (3)
- SOC 150 Introduction to Sociology (3)
- SOC 212 The Family (3)
- Demonstration of education technology competencies required by test or EDUC 352 (See advisor.)

PROFESSIONAL EDUCATION SEQUENCE & METHODS (51 S.H.)

The courses require admission into the teacher education program.

- EDUC 303 Human Development & Learning (4)
- EDUC 410 Foundations of Early Childhood Education (3)
- EDUC 413 Development in Infancy (3)
- EDUC 414 Developing Child in Social World (3)
- EDUC 416 Early Childhood Education (4)
- EDUC 424 Org & Admin. of EC Ed Programs (3)
- EDUC 328 Reading and Language Arts I (3)
- EDUC 334 Teaching Math in Elementary School (3)
- EDUC 335 Teaching Science & Environmental Studies In Elementary School (3)
- ART 300 Elementary Art Education (3)
- EDUC 459 Professional Educator (3)
- EDUC 467 Student Teaching (16)

K-6 WITH PRE-PRIMARY SPECIALTY (113 S.H.)

Age 3 to Grade 6

UNIVERSITY STUDIES (48 S.H.)

I. BASIC SKILLS

- ENG 111 College Reading and Writing (4)
- CMST 191 Oral Communication (3)
- MATH 100 or higher (3)
- HHP 204 Personal and Community Health (3)

II. ARTS & SCIENCE CORE

- Humanities—HIST 150 or 151 recommended (6)
- Natural Science—one class with lab and one class without a lab (7)
- Social Science—SPED 400 and one additional course (6)
- Fine and Performing Arts—MUS 320 (3)

III. UNITY & DIVERSITY

- MTED 201 Technology Based Geometry (4)
- Science & Social Policies—Elective (3)
- EDUC 308 Human Relations and Student Diversity (3)
- Contemporary Citizenship Elective (3)

LICENSE REQUIREMENTS (15 S.H.)

- Literature – EDUC 321 or ENG 120 recommended (3)
 MTED 125 Mathematics for Elementary Teacher (3)
 PER 200 Teaching Elementary Physical Education (3)
 HHP 320 Health Education in Elementary School (3)
 Demonstration of education technology competencies required by test or EDUC 352 (See advisor.)

PROFESSIONAL EDUCATION SEQUENCE & METHODS (50 S.H.)

The courses require admission into the teacher education program.

- EDUC 303 Human Development & Learning (4)
 EDUC 310 Instructional Planning & Assess. (3)
 EDUC 410 Foundations of Early Childhood Education (3)
 EDUC 416 Early Childhood Education (3)
 EDUC 328 Reading and Language Arts I (3)
 EDUC 329 Reading and Language Arts II (3)
 EDUC 333 Teaching Social Studies in Elementary School (3)
 EDUC 334 Teaching Mathematics in Elementary School (3)
 EDUC 335 Teaching Science & Environmental Studies in Elementary School (3)
 ART 300 Elementary Art Education (3)
 EDUC 459 Professional Educator (3)
 EDUC 460 Student Teaching (16)

K-6 WITH MIDDLE SCHOOL MATH 5-8 SPECIALTY (119 S.H.)

Kindergarten – Grade 8

UNIVERSITY STUDIES (48 S.H.)**I. BASIC SKILLS**

- ENG 111 College Reading and Writing (4)
 CMST 191 Oral Communication (3)
 MATH 100 or higher (3)
 HHP 204 Personal and Community Health (3)

II. ARTS & SCIENCE CORE

- Humanities—HIST 150 or 151 recommended (6)
 Science—MATH 120 OR 140 OR 160 and 1 class with lab (7)
 Social Science—SPED 400 and one additional course (6)
 Fine and Performing Arts—MUS 320 (3)

III. UNITY & DIVERSITY

- MTED 201 Technology Based Geometry (4)
 Science & Social Policies—Elective (3)
 EDUC 308 Human Relations and Student Diversity (3)
 Contemporary Citizenship Elective (3)

LICENSE REQUIREMENTS (18 S.H.)

- Literature – EDUC 321 or ENG 120 recommended (3)
 MTED 125 Mathematics for Elementary Teacher (3)
 PER 200 Teaching Elementary Physical Education (3)
 HHP 320 Health Education in Elementary School (3)
 STAT 110 Fundamentals of Statistics (3)
 Demonstration of education technology competencies required by test or EDUC 352 (See Advisor.)

PROFESSIONAL EDUCATION SEQUENCE & METHODS (53 S.H.)

The courses require admission into the teacher education program.

- EDUC 304 Human Development & Learning (4)
 EDUC 311 Instructional Planning & Assess. (3)
 EDUC 328 Reading and Language Arts I (3)
 EDUC 329 Reading and Language Arts II (3)
 EDUC 333 Teaching Social Studies in Elementary School (3)
 EDUC 334 Teaching Mathematics in Elementary School (3)
 EDUC 335 Teaching Science & Environmental Studies in Elementary School (3)
 EDUC 434 Remedial Math Methods (3)
 MTED 421 Middle School Math Methods (3)
 EDUC 449 Middle School Philosophy (3)
 ART 300 Elementary Art Education (3)

- EDUC 459 Professional Educator (3)
 EDUC 464 Student Teaching (16)

K-6 WITH MIDDLE SCHOOL SCIENCE 5-8 SPECIALTY (123 S.H.)

Kindergarten – Grade 8

UNIVERSITY STUDIES (48 S.H.)**I. BASIC SKILLS**

- ENG 111 College Reading and Writing (4)
 CMST 191 Oral Communication (3)
 MATH 100 or higher (3)
 HHP 204 Personal and Community Health (3)

II. ARTS & SCIENCE CORE

- Humanities—HIST 150 or 151 recommended (6)
 Science—GEOS 120 and GEOS 130 (7)
 Social Science—SPED 400 and one additional course (6)
 Fine and Performing Arts—MUS 320 (3)

III. UNITY & DIVERSITY

- MTED 201 Technology Based Geometry (4)
 Science & Social Policies - GEOS 103 recommended (3)
 EDUC 308 Human Relations and Student Diversity (3)
 Contemporary Citizenship Elective (3)

LICENSE REQUIREMENTS (28 S.H.)

- Literature - EDUC 321 or ENG 120 recommended (3)
 MTED 125 Mathematics for Elementary Teacher (3)
 PER 200 Teaching Elementary Physical Education (3)
 HHP 320 Health Education in Elementary School (3)
 Science - BIOL 118 or BIOL 203 (4)
 Science - CHEM 108 (3)
 Science - PHYS 115 (3)
 Science - BIOL 104 (3)
 Demonstration of education technology competencies required by test or EDUC 352 (See Advisor.)

PROFESSIONAL EDUCATION SEQUENCE & METHODS (47 S.H.)

The courses require admission into the teacher education program.

- EDUC 304 Human Development & Learning (4)
 EDUC 311 Instructional Planning & Assess. (3)
 EDUC 328 Reading and Language Arts I (3)
 EDUC 329 Reading and Language Arts II (3)
 EDUC 333 Teaching Social Studies in Elementary School (3)
 EDUC 334 Teaching Mathematics in Elementary School (3)
 EDUC 335 Teaching Science & Environmental Studies in Elementary School (3)
 EDUC 449 Middle School Philosophy (3)
 ART 300 Elementary Art Education (3)
 EDUC 459 Professional Educator (3)
 EDUC 464 Student Teaching (16)

K-6 WITH MIDDLE SCHOOL SOCIAL STUDIES 5-8 SPECIALTY (122 S.H.)

Kindergarten – Grade 8

UNIVERSITY STUDIES (48 S.H.)**I. BASIC SKILLS**

- ENG 111 College Reading and Writing (4)
 CMST 191 Oral Communication (3)
 MATH 100 or higher (3)
 HHP 204 Personal and Community Health (3)

II. ARTS & SCIENCE CORE

- Humanities - HIST 150 or 151 recommended (6)
 Science electives - one with lab; one without (7)
 Social Science - SPED 400 and one elective (6)
 Fine and Performing Arts - MUS 320 (3)

III. UNITY & DIVERSITY

- MTED 201 Technology Based Geometry (4)
 Science & Social Policies elective (3)

* Course may be used to satisfy certain University Studies requirements.

EDUC 308 Human Relations and Student Diversity (3)
Contemporary Citizenship Elective (3)

LICENSE REQUIREMENTS (27 S.H.)

Literature – EDUC 321 or ENG 120 recommended (3)
MTED 125 Mathematics for Elementary Teacher (3)
PER 200 Teaching Elementary Physical Education (3)
HHP 320 Health Education in Elementary School (3)
Non-Western History - HIST 123 or HIST 165 or HIST 170 (3)
Western Civilization—HIST 120 or HIST 121 or HIST 122 (3)
Social Science - SOC 150 (3)
Social Science - ECON 202 (3)

Demonstration of education technology competencies required by test or EDUC 352 (See advisor.)

PROFESSIONAL EDUCATION SEQUENCE & METHODS (47 S.H.)

The courses require admission into the teacher education program.

EDUC 304 Human Development & Learning (4)
EDUC 311 Instructional Planning & Assess. (3)
EDUC 328 Reading and Language Arts I (3)
EDUC 329 Reading and Language Arts II (3)
EDUC 333 Teaching Social Studies in Elementary School (3)
EDUC 334 Teaching Mathematics in Elementary School (3)
EDUC 335 Teaching Science & Environmental Studies in Elementary School (3)
EDUC 449 Middle School Philosophy (3)
ART 300 Elementary Art Education (3)
EDUC 459 Professional Educator (3)
EDUC 464 Student Teaching (16)

K-6 WITH MIDDLE SCHOOL COMMUNICATION ARTS & LITERATURE 5-8 SPECIALTY (119 S.H.)

Kindergarten – Grade 8

UNIVERSITY STUDIES (48 S.H.)

I. BASIC SKILLS

ENG 111 College Reading and Writing (4)
CMST 191 Oral Communication (3)
MATH 100 or higher (3)
HHP 204 Personal and Community Health (3)

II. ARTS & SCIENCE CORE

Humanities - ENG 120: Young Adult Lit Sections and HIST 150 or HIST 151 recommended (6)
Science electives - one with lab; one without (7)
Social Science - SPED 400 and one elective (6)
Fine and Performing Arts - MUS 320 (3)

III. UNITY & DIVERSITY

MTED 201 Technology Based Geometry (4)
Science & Social Policies elective (3)
EDUC 308 Human Relations and Student Diversity (3)
Contemporary Citizenship Elective (3)

LICENSE REQUIREMENTS (21 S.H.)

Literature – EDUC 321 or ENG 120 recommended (3)
MTED 125 Mathematics for Elementary Teacher (3)
PER 200 Teaching Elementary Physical Education (3)
HHP 320 Health Education in Elementary School (3)
CMST 261 Public Speaking (3)
THAD 141 Oral Interpretation (3)
Demonstration of education technology competencies required by test or EDUC 352 (See advisor.)

PROFESSIONAL EDUCATION SEQUENCE & METHODS (50 S.H.)

The courses require admission into the teacher education program.

EDUC 304 Human Development & Learning (4)
EDUC 311 Instructional Planning & Assess. (3)
EDUC 328 Reading and Language Arts I (3)
EDUC 329 Reading and Language Arts II (3)
EDUC 330 Literacy for Second Language Learners (3)
EDUC 333 Teaching Social Studies in Elementary School (3)
EDUC 334 Teaching Mathematics in Elementary School (3)

EDUC 335 Teaching Science & Environmental Studies in Elementary School (3)

EDUC 449 Middle School Philosophy (3)

ART 300 Elementary Art Education (3)

EDUC 459 Professional Educator (3)

EDUC 464 Student Teaching (16)

COURSE DESCRIPTIONS

115 - Improving Reading and Study Skills—1 S.H.

To assist students who may have problems with reading skills and to help them develop efficient study habits to participate successfully in college level courses. Offered each semester. P/NC only.

120 - Parenting—3 S.H.

The social, emotional, physical and intellectual development of children from birth to adolescence is outlined. Parenting strategies and child-rearing practices are discussed. Offered each semester. Grade only.

150 - Introductory Field Experience—1 S.H.

A general elective teaching assistant experience at a selected school level for either an introductory classroom experience or an additional classroom experience. May be repeated once for two credits. Offered each semester. NOTE: Persons enrolling in EDUC 150 must arrange their schedule with the Field Experience Director in the Education Department prior to pre-registration. Prerequisite consent of instructor. P/NC Only.

303 - Human Development and Learning: Preprimary—4 S.H.

This course introduces students to the psychological and social dimensions of learning and development and their influence on students' participation in school. The course focuses on psychological theories of learning and development, classroom management, and the relationship between psychological theory and classroom practice in early childhood and primary classrooms. 30-40 hours of field experience is required in addition to regularly scheduled on-campus class sessions. Offered each semester. Concurrent enrollment with EDUC 310.

304 - Human Development and Learning: Middle School—4 S.H.

This course introduces students to the psychological and social dimensions of learning and development and their influence on students' participation in school. The course focuses on psychological theories of learning and development, classroom management, and the relationship between psychological theory and classroom practice in elementary and middle school classrooms. 30-40 hours of field experience is required in addition to regularly scheduled on-campus class sessions. Offered each semester. Concurrent enrollment with EDUC 311.

305 - Human Development and Learning: Secondary and K-12 Programs—4 S.H.

This course introduces students to the psychological and social dimensions of learning and development and their influence on students' participation in school. The course focuses on psychological theories of learning and development, classroom management, and the relationship between psychological theory and classroom practice in secondary classrooms. 30-40 hours of field experience is required in addition to regularly scheduled on-campus class sessions. Offered each semester. Concurrent enrollment with EDUC 312.

308 - Human Relations and Student Diversity—3 S.H.

A basic course in human relations for education majors. The course takes a laboratory and a directed study approach in areas such as communication, group interaction, trust, interpersonal relationships, and the study of minorities, ethnic groups, and second language learners. Offered each semester. Prerequisites: Admission to the Department of Education.

310 - Instructional Planning and Assessment: Preprimary—3 S.H.

Principles of curriculum formation including writing of objectives, unit planning and daily lesson planning. Evaluation techniques to determine achievement of objectives through teacher-made tests, standardized tests and observation techniques as well as statistics of measurement, specialized measurement instruments and interpretation. Offered each semester. Taken concurrently with EDUC 303.

311 - Instructional Planning and Assessment: Middle School—3 S.H.

Principles of curriculum formation including writing of objectives, unit planning and daily lesson planning for elementary and middle levels form the emphasis of this course. Assessment, measurement and evaluation techniques are studied to determine achievement of objectives through teacher-made tests, performance assessments, standardized tests and observation techniques. Statistics of measurement, specialized measurement instruments and test interpretation are also studied. Thirty-clock-hours of field experience are required, in addition to the

regularly scheduled on-campus class sessions. Offered each semester. Taken concurrently with EDUC 304.

312 - Instructional Planning and Assessment: Secondary and K-12—3 S.H.
Principles of curriculum formation including writing of objectives, unit planning and daily lesson planning for secondary education form the emphasis of this course. Assessment, measurement and evaluation techniques are studied to determine achievement of objectives through teacher-made tests, performance assessments, standardized tests and observation techniques. Statistics of measurement, specialized measurement instruments and test interpretation are also studied. Thirty-clock-hours of field experience are required, in addition to the regularly scheduled on-campus class sessions. Offered each semester. Taken concurrently with EDUC 305.

321 - Children's Literature—3 S.H.
This course teaches students about children's literature. Consideration will be given to locating and evaluating early literacy, primary and intermediate children's books and to the method of organizing, teaching, and evaluating a literature program at all age levels. Current issues and research will be examined. Offered summers only. Prerequisite: EDUC 303

328 - Teaching Reading and Language Arts I—3 S.H.
The first of a two-course sequence in literacy methods examines the integration of reading, writing, listening, speaking, and viewing competencies in a unified literacy curriculum for learners ages three to eight (P-3rd grade). Instructional emphasis is placed upon assessment, fluency, active construction of meaning, and matching learner capabilities with appropriate instructional strategies. Offered each semester. Prerequisites: EDUC 303 or 304, 310 or 311. (Early Childhood majors do not require 310, 311 or 312.)

329 - Teaching Reading and Language Arts II—3 S.H.
The second of a two-course sequence in literacy methods extends the examination of reading, writing, listening, speaking, and viewing competencies by focusing on learners ages nine to fourteen (grades 4-8). Emphasis is placed upon strategies for expanding purposes and genres, integration of assessment and instruction, and teaching for self-regulation of comprehension, composing, and editing strategies. Offered each semester. Prerequisite: EDUC 328.

330 - Literacy for Second Language Learners—3 S.H.
This course addresses the teaching of literacy for students with a primary language other than English. After examining the interwoven nature of language and culture, the course will focus on the instructional approaches to meet the needs of second language learners in school settings. Special attention will be given to the role of home school communication in programs for second language learners. Offered each semester. Prerequisite: EDUC 328.

331 - Teaching of Social Studies in Secondary Schools—3 S.H.
Materials and methods of teaching geography, history and civics, including the newest textbooks, maps, pictures and other electronic visuals. Prerequisites: EDUC 305 and 312. Offered each semester.

333 - Teaching Social Studies in Elementary School—3 S.H.
Course covers social studies curriculum for elementary grades. Development of teaching competencies in small group instruction, guiding student inquiry and conducting discovery lessons. Curriculum materials are studied and evaluated for use in the elementary classrooms. Field Experience, micro-teaching, unit planning, and the use of Children's Literature in the social studies curriculum are included in this course. Offered each semester. Prerequisites: EDUC 303 and 310 or 304 and 311.

334 - Teaching Mathematics in the Elementary School—3 S.H.
Teaching competencies such as guiding student inquiry, demonstrating mathematical principles and procedures, and using a variety of instructional aids are developed in relation to scope and sequence of elementary curriculums. Offered each semester. Prerequisites: EDUC 303 and 310 or 304, and 310 or 311. (Early Childhood majors do not require 310 or 311.)

335 - Teaching of Science and Environmental Studies in Elementary School—3 S.H.
Study and guided application of current materials and methods designed for science and environmental education. Theoretical background and practical skills necessary for teaching both process and content curriculums are developed through individual and group work, as well as field experiences. Offered each semester. Prerequisites: EDUC 303 and 310, 304 and 311. (Early Childhood majors do not require 310 or 311.)

352 - Integrating Microcomputers into the Classroom-3 S.H.
This course covers basic technological knowledge which will enable the teacher to plan technology based instruction, integrate technology into the curriculum and enhance the teachers' technological competencies. Offered each semester. Prerequisites: Admission to the Department of Education.

410 - Foundations of Early Childhood Education—3 S.H.
This is the introductory course in early childhood education examining the history, theory, trends and contemporary issues in early childhood education as well as the role of the early childhood teacher. Offered each semester. Prerequisites: Admission to the Department of Education.

413- Development in Infancy—3 S.H.
Genetics, prenatal development, birth, and physical, social, emotional, and cognitive development in the first two-years with emphasis on care in group settings. Includes experiences with infants and toddlers. Offered yearly. Prerequisites: EDUC 303 and 410

414- The Developing Child in the Social World—3 S.H.
This course covers physical, social, emotional, language and cognitive development of children ages 3-6, in learning environments and the community relationships needed to support this development. Offered yearly. Prerequisites: EDUC 303, 410. Grade only.

416 - Early Childhood Education—4 S.H.
Planning the curriculum and developing effective teaching strategies and assessment methods for young children from 2 and 1/2 years old through 5 years old. Students gain experience in a supervised preschool program. Offered each semester. Prerequisites: EDUC 303 and 410. Grade only.

424 - Organization and Administration of Early Childhood Education Programs—3 S.H.
Local and state laws governing various types of early childhood programs are studied. Financial aspects, buildings, personnel and administrative matters pertaining to the establishment of programs are discussed. Offered yearly. Prerequisites: EDUC 303, 410, and 416. Grade only.

429 - Secondary Reading and Teaching Strategies—4 S.H.
Emphasis is on reading comprehension, strategies, study skills in content areas, lesson planning, lesson presentation skills, media techniques appropriate to the instructional process. Prerequisites: EDUC 305, 312. Offered each semester.

434 - Remedial Mathematics Methods—3 S.H.
Diagnostic and remediation techniques to facilitate acquisition of basic mathematics skills. Offered on demand. Prerequisite: EDUC 334 or instructor's permission..

442 - The Adult Learner—3 S.H.
This course focuses on the characteristics and development of adult learners. Offered yearly.

449- Middle School Philosophy, Organization and Interdisciplinary Planning—3 S.H.

The major focus of this course will be the middle school concept including its philosophy, organization, and interdisciplinary team planning. The major objective of this course is to provide future middle school teachers with a background in the components of the middle school movement and planning appropriate instructional strategies for middle level learners. This course is designed for secondary education majors, K-12 majors, and those seeking K-6 MS licensure. Thirty-clock-hours of field experience are required in addition to the regularly scheduled on campus class sessions. Offered each semester. Prerequisites: EDUC 304, and 311 or 305 and 312. Grade only.

450 - Comparative Education—3 S.H.
A study of the purposes, organization, offerings, and achievements of education in selected foreign countries. Offered yearly. Grade only.

459 - The Professional Educator—3 S.H.
This course is designed to familiarize teacher education majors and others associated with the education profession with the historical and philosophical foundations of public education, school organizational patterns, legal responsibilities, professional organizations, and related educational issues. Additional components will involve classroom management and topics related to inclusive and special education. Offered each semester. Prerequisites: EDUC 303, 304, or 305, 310, 311, or 312 and junior or senior standing. (Early childhood majors do not require 310, 311 or 312.)

460 - Student Teaching- K6/PrePrimary—1-16 S.H.
A Capstone student teaching experience. One full semester of student teaching on a daily, full-time basis in an appropriate educational school
* Course may be used to satisfy certain University Studies requirements.

setting. Prerequisites: All the professional courses required for the major. P/NC only.

464 - Student Teaching/K-6- Middle School—1-16 S.H.

One full semester of student teaching on a full-day basis in a middle school. Offered each semester. Prerequisites: All the professional courses required for the major. P/NC only.

465 - Student Teaching-Senior High School- K-12 Specialty—1-16 S.H.

A Capstone student teaching experience. One full semester of student teaching on a daily, full-time basis in an appropriate educational school setting. Prerequisites: All the professional courses required for the major. P/NC only.

467 - Student Teaching-Early Childhood (Birth to Grade 3)—1-16 S.H.

Supervised teaching in two (2) Early Childhood placements. Offered each semester. P/NC only.

483 - Multicultural Children, Youth, and Families—2 S.H.

This course provides structure for acquiring, building and demonstrating mechanisms for integrating multicultural content into mainstream curricula. Specific attention is geared to goals, concepts and instructional planning in elementary education addressing culture, ethnicity, race, gender, language, socioeconomic levels, religion, age, ethics and exceptionality. The social reconstructionist approach is infused to provide demonstrations of transforming teaching for equity and justice.

490 - Individual Problem in Education—1-3 S.H.

Opportunity for the qualified advanced undergraduate and graduate student to work independently. Topics may include research, development of special projects, selected readings, etc. Time arranged. Offered each semester. Prerequisites: major advisor's permission; completion of the Professional Sequence, and for elementary majors, completion of the Professional Education Sequence. May be repeated to a total of 4 credits. P/NC only for undergraduates.

498 - Workshops and Seminar—1-3 S.H.

The subject matter to be developed by the Department and instructor prior to the workshop or seminar. Students may repeat the course without limitation on the number of credits as long as the subject matter is different. Offered on demand. P/NC only.

499 - Workshops and Seminar—1-3 S.H.

The subject matter to be developed by the Department and instructor prior to the workshop or seminar. Students may repeat the course without limitation on the number of credits as long as the subject matter is different. Offered on demand. Grade only.

ENGINEERING

Stark Hall, Room 203 (507-457-5685)

www.winona.edu/engineering

Parsi (Chairperson)

FACULTY

Becky Abdel-Magid, Professor; B.S., University of Khartoum; M.S., Ph.D., University of Wisconsin-Madison; 1990 -

Keith Denmehy, Professor; B.S., Rensselaer Polytechnic Institute; M.S., Youngstown State University; M.B.A., University of Utah; Ph.D., Rensselaer Polytechnic Institute; 1990 -

Maryam Eslamloo-Grami, Associate Professor; B.S., M.S., Shiraz University, Iran; Ph.D., University of California-Davis, 1993 -

Fariborz Parsi, Professor; B.S., M.S., Ph.D., University of South Carolina, Columbia; 1991 -

PURPOSE

The Department of Engineering offers the Bachelor of Science degree in composite materials engineering. Composites represent a new group of manufactured materials. These lightweight materials, which have high strength and stiffness, are formed by combining reinforcing fibers in a polymer, ceramic or metal matrix. Over the past two decades, the use of composites has grown significantly in the following industries: aerospace, automotive, biotechnology, construction, electronics, marine, and sporting goods. The future for people educated in the engineering of composite materials is bright.

The Composite Materials Engineering (CME) Program has been developed to meet the engineering needs of the composites industry and is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Graduates from this program will be prepared to practice engineering at a professional level and to enter the composites industry in positions that provide opportunities for professional growth. Graduates also will be prepared to enter graduate-level programs in composite materials and other related engineering disciplines.

The CME Program offers two options within the major. The mechanical option includes courses concentrating on the design, analysis, and manufacture of composite structures. The chemical option offers courses focusing on the development, processing, and chemistry of the materials used in composites including fibers, matrices and fiber/matrix systems. The program is the first accredited undergraduate composite materials engineering program in the United States.

MISSION AND OBJECTIVES

The mission of the CME Program is "to serve society by developing creative engineering minds for the world of tomorrow!"

The objectives of the CME Program are:

1. The educational objectives of the CME Program are:
 - a) To produce graduates with an ability to apply knowledge of mathematics, science and engineering to formulate and solve engineering problems.
 - b) To produce graduates with the ability to design and conduct experiments as well as to analyze and interpret data related to structure, properties, and performance of materials.
 - c) To produce graduates with an ability to use state-of-the-art engineering tools (experimental, computational, and statistical) necessary to select, analyze, design, fabricate, and test materials.
 - d) To produce graduates with theoretical knowledge and hands-on ability to confidently design components, systems, and processes to meet the needs of the composites industry in a cost-effective manner.
 - e) To produce graduates with an ability to communicate effectively and function in a multi-disciplinary team.
 - f) To produce graduates who understand their responsibilities to the engineering profession.
 - g) To produce graduates with an awareness of contemporary issues within a global context, and an understanding of the impact of their decisions on society.
 - h) To produce graduates who recognize the need and have the ability to engage in life-long learning.
2. To continuously improve the CME Program.
3. To provide cost effective engineering education.
4. To provide an active research environment.
5. To be a composite materials engineering resource center.

6. To be an engineering/technology resource center for this region.
7. To effectively manage enrollment.
8. To provide opportunities for faculty and staff development.
9. To facilitate part-time and full-time employment of students and graduates in engineering/composites related positions.

HIGH SCHOOL PREPARATION

The Department of Engineering recommends that high school preparation include two years of algebra, one year of geometry, one-half year of trigonometry, one-half year of college algebra, as well as one year each of physics and chemistry. Without this background, it is unlikely that a student will be prepared to complete the degree requirements in four years.

ADMISSION TO THE PROGRAM

Admission to the CME major is selective and is determined by the Engineering Admissions Committee. Before students can be considered for admission to the CME major, they must:

- Complete 4 S.H. of English composition, 3 S.H. of speech communication and a minimum of 38 S.H. of required lower-division engineering, physics, mathematics, chemistry and computer science courses. These courses can be taken at WSU or transferred from other institutions. However, courses with grades below "C" will not be accepted in transfer.
- Must have obtained a grade of "C" or higher in the required courses and have a minimum GPA of 2.5 in the required courses. Students will not be allowed to enroll in upper division 300- or 400-level engineering courses until either they are admitted into the major or they are granted special permission from their Department of Engineering major advisor.

PROBATION POLICY

CME majors will be placed on probation if their previous semester's GPA in courses required for the major falls below 2.0 or if they do not complete at least one course in the major each semester. Students will be disqualified from the major if they have been on probation for two consecutive semesters or for three non-consecutive semesters after admission to the major. Petition for reinstatement will be considered by the Department of Engineering.

Because composite materials engineering is a rapidly developing field, students must consult with their Department of Engineering major advisor for current program requirements.

UNIVERSITY STUDIES REQUIREMENTS

The objectives of the University Studies component of the Bachelor of Science in Composite Material Engineering degree are consistent with the objectives of the WSU University Studies program. However, the University Studies credits required for CME majors have been adjusted because of the courses that students must complete as part of the CME major.

Note: Students who receive a waiver from certain University Studies courses must take an equal number of credit hours of elective courses.

UNIVERSITY STUDIES COMPONENT FOR CME MAJORS

I. Basic Skills (11 S.H.)

- MATH 160 Calculus I (4)
- ENG 111 College Reading & Writing (4)
- CMST 191 Fundamentals of Speech Communication (3)

II. Arts and Science Core (20 S.H.)

- Humanities (6)
- Social Science (6)
- Natural Sciences (8):
 - CHEM 212 Principles of Chemistry I (4)
 - PHYS 221 University Physics I (4)

III. Unity and Diversity (9 S.H.)

- Critical Analysis: STAT 303 Intro to Engineering Statistics (3)
- Science and Social Policy: A sequence of 3 engineering courses (3):
 - ENGR 102 Introduction to Engineering
 - ENGR 390 Composites Manufacturing
 - ENGR 480 Design Project II
- Global or Multicultural Perspectives (3)

IV. Flag Courses (13 S.H.)

- † Oral: A sequence of two engineering courses (3):
 - ENGR 475 Design Project I
 - ENGR 491 Engineering Seminar
- Math/Critical Analysis: MATH 260 Multivariable Calculus (4)
- † Writing: A sequence of four engineering courses (6):
 - ENGR 292 Properties of Materials Lab
 - ENGR 451 Transport Phenomena Lab
 - ENGR 452 Mechanical Characterization Lab
 - ENGR 465 Composite Characterization Techniques

† All courses in the sequence should be completed to receive full credit in the University Studies requirement.

GRADING METHOD

Except for foreign language courses, all WSU courses taken for credit toward the Bachelor of Science degree in Composite Materials Engineering must be taken for a letter grade. In foreign language courses, students may obtain a grade of "P" (pass) either by taking an exam or by successfully completing upper-level foreign language courses.

B.S. MAJOR – COMPOSITE MATERIALS ENGINEERING

106 S.H. (No Minor Required)

CORE REQUIREMENTS (85 S.H.)

LOWER DIVISION (51 S.H.)

Mathematics (16 S.H.)

- 160 Calculus I (4)
- 165 Calculus II (4)
- 260 Multivariable Calculus (4)
- 270 Differential Equations & Linear Algebra (4)

Chemistry (8 S.H.)

- 212 Principles of Chemistry I (4)
- 213 Principles of Chemistry II (4)

Physics (8 S.H.)

- 221 University Physics I (4)
- 222 University Physics II (4)

Computer Science (3 S.H.)

- 130 Introduction to BASIC Programming (3)

Engineering (16 S.H.)

- 102 Introduction to Engineering (2)
- 182 Engineering Graphics & Design (2)
- 250 Statics (3)
- 260 Mechanics of Materials (3)
- 284 Properties of Materials (4)
- 292 Properties of Materials Lab (2)

UPPER DIVISION (34 S.H.)

Mathematics (3 S.H.)

- 303 Introduction to Engineering Statistics (3)

Physics (3 S.H.)

- 302 Electrical Circuits & Systems (3)

Engineering (28 S.H.)

- 300 Thermodynamics (3)
- 350 Fluid Mechanics (3)
- 360 Introduction to Composites Materials (3)

* Course may be used to satisfy certain University Studies requirements.

- 370 Heat & Mass Transfer (3)
- 390 Composites Manufacturing (3)
- 451 Transport Phenomena Laboratory (1)
- 452 Mechanical Characterization Laboratory (2)
- 465 Composite Characterization Techniques (3)
- 475 Design Project I (3)
- 480 Design Project II (3)
- 491 A/B Engineering Seminar (1)

Mechanical Option 21 S.H.

REQUIRED COURSES (12 S.H.)

Engineering (8 S.H.)

- 270 Dynamics (3)
- 382 Topics in Composite Materials Engineering M (2)
- 450 Mechanics of Composites (3)

Chemistry (4 S.H.)

- 341 Organic & Polymer Chemistry (4)

TECHNICAL ELECTIVES (9 S.H.)

Engineering Electives (6 S.H.)

- 420 Computer Integrated Manufacturing (3)
- 460 Introduction to Finite Element Analysis (3)
- 485 Advanced Microscopic Techniques (3)
- 499 Independent Study (1-3)

Non-Engineering Electives (3 S.H.)

- MATH 340 Advanced Linear Algebra (3)
- PHYS 330 Electronics (4)
- STAT 321 Industrial Design of Experiments I (3)
- PHYS 420 Control Theory (3)
- MATH 420 Numerical Analysis (4)

Chemical Option 21 S.H.

REQUIRED COURSES (12 S.H.)

Engineering (4 S.H.)

- 392 Topics in Composite Materials Engineering C (2)
- 412 Kinetics & Reactor Design (2)

Chemistry (8 S.H.)

- 350 Principles of Organic Chemistry I (4)
- 352 Principles of Organic Chemistry II (2)
- 410 Polymer Chemistry (2)

TECHNICAL ELECTIVES (9 S.H.)

Engineering Electives (6 S.H.)

- 410 Polymer Processing (3)
- 430 Rheology (3)
- 485 Advanced Microscopic Techniques (3)
- 499 Independent Study (1-3)

Non-Engineering Electives (3 S.H.)

- CHEM 425 Analytical Chemistry I (4)
- CHEM 426 Analytical Chemistry II (4)
- CHEM 411 Synthesis & Characterization of Polymers (2)
- STAT 321 Industrial Design of Experiments I (3)
- PHYS 420 Control Theory (3)

GENERALIZED CLASS SCHEDULE

Freshman Year- Fall (17 S.H.)

- ENGR 102 Introduction to Engineering (2)
- MATH 160 Calculus I (4)
- CHEM 212 Principles of Chemistry I (4)
- ENG 111 College Reading & Writing (4)
- University Studies (3)

Spring (17 S.H.)

- CHEM 213 Principles of Chemistry II (4)
- ENGR 182 Engineering Graphics and Design (2)
- MATH 165 Calculus II (4)
- PHYS 221 University Physics I (4)
- CMST 191 Fundamentals of Speech Communication (3)

Sophomore Year - Fall (18 S.H.)

- ENGR 250 Statics (3)
- ‡ CHEM 350 Principles of Organic Chemistry I (4)
- † CHEM 341 Organic & Polymer Chemistry (4)

- MATH 260 Multivariable Calculus (4)
- PHYS 222 University Physics II (4)
- CS 130 Introduction to BASIC Programming (3)

Spring (15†-16† S.H.)

- ‡ CHEM 352 Organic Chemistry (2)
- MATH 270 Differential Equations & Linear Algebra (4)
- ENGR 260 Mechanics of Materials (3)
- † ENGR 270 Dynamics (3)
- ENGR 284 Properties of Materials (4)
- ENGR 292 Properties of Materials Lab (2)

Junior Year - Fall (15†-17† S.H.)

- ‡ CHEM 410 Polymer Chemistry (2)
- ENGR 300 Thermodynamics (3)
- ENGR 350 Fluid Mechanics (3)
- ENGR 360 Introduction to Composite Materials (3)
- STAT 303 Introduction to Engineering Statistics (3)
- University Studies (3)

Spring (17 S.H.)

- ENGR 370 Heat & Mass Transfer (3)
- † ENGR 382 Topics in Composite Materials Engineering M (2)
- ENGR 390 Composites Manufacturing (3)
- ‡ ENGR 392 Topics in Composite Materials Engineering C (2)
- PHYS 302 Electrical Circuits & System (3)
- Technical Elective (3)
- University Studies (3)

Senior Year - Fall (14†-15† S.H.)

- ENGR 465 Composite Characterization Techniques (3)
- ‡ ENGR 412 Kinetics & Reactor Design (2)
- † ENGR 450 Mechanics of Composites (3)
- ENGR 451 Transport Phenomena Laboratory (1)
- ENGR 452 Mechanical Characterization Laboratory (2)
- ENGR 475 Design Project I (3)
- ENGR 491A Engineering Seminar (0)
- University Studies (3)

Spring (13 S.H.)

- ENGR 480 Design Project II (3)
- ENGR 491B Engineering Seminar (1)
- Technical Elective (3)
- Technical Elective (3)
- University Studies (3)

‡Mechanical Option

†Chemical Option

ENGINEERING COURSE DESCRIPTIONS

All engineering courses are to be taken for grade only. All courses are offered at least once a year except when indicated otherwise.

102 - Introduction to Engineering—2 S.H.

History of engineering, engineering disciplines, professional and ethical aspects of engineering, introduction to problem-solving, creativity and teamwork, use of personal computers in engineering applications, safety and environmental issues, current engineering challenges. Grade only.

103 - Understanding Engineering (for non-majors)—2 S.H.

This course is for non-engineers who want to learn what it is like to be an engineer. The topics covered in this course include engineering design, ethics, intellectual property, personal and environmental safety, and principles of engineering. Grade only.

182 - Engineering Graphics and Design—2 S.H.

A lecture-laboratory course. Engineering design process. Visualization and design communication. Engineering drawing standards and conventions. Computer-aided drafting and design (CADD) software are used throughout the course. Sectional views, auxiliary views, dimensioning, tolerancing, and blue print reading. Grade only.

250 - Statics—3 S.H.

Force systems and equilibrium. Applications to simple trusses, frames and machines; distributed loads; properties of areas and masses; laws of friction. Designed to develop the ability to analyze and solve engineering problems. Prerequisites: MATH 160 and PHYS 221. Grade only.

260 - Mechanics of Materials—3 S.H.

Concept of stress and strain, internal reactions (stresses and strains) to external load for axially loaded prismatic structural member; torsion members and beams; deformation and buckling of structural and machine elements. Statically determinate and statically indeterminate problems. Prerequisites: ENGR 250 and MATH 165. Grade only.

270 - Dynamics—3 S.H.

Kinematics: translation, rotational, plane motion and relative motion of particles and rigid bodies. Planar kinematics of rigid bodies. Kinetics of particles and rigid bodies by methods of: force-mass-acceleration, work energy, impulse and momentum, introduction to vibrations.

Prerequisites: ENGR 250, PHYS 222 and credit or concurrent registration in MATH 270. Grade only.

284 - Properties of Materials—4 S.H.

Classification of materials, atomic bonding, crystal structures, diffusion, mechanical properties of materials, introductory theory of elasticity, plasticity, strengthening mechanisms and failure modes, phase diagrams, phase transformations and thermal processing, structure and properties of ceramics, structure and properties of polymers, structure and mechanical properties of wood and concrete, and corrosion of materials. Prerequisites: CHEM 213 and credit or concurrent registration in ENGR 260. Grade only.

292 - Properties of Materials Laboratory—2 S.H.

A lecture-laboratory course. Determination of various material properties. Crystal structure by hardball models; X-ray powder diffraction; diffusion; tensile; hardness; microhardness; fatigue testing of metallic samples; fracture-ductile to brittle transition of engineering materials; examination of microstructure of ferrous, non-ferrous alloys, and polymeric materials; structure and properties of wood; corrosion and degradation of metallic materials. Prerequisites: credit or concurrent registration in ENGR 284, ENG 111. Grade only.

300 - Thermodynamics—3 S.H.

Basic thermodynamic principles: enthalpy, entropy, free energy, equations of state, non-ideal gases, and irreversibility. First and second laws applied to non-reacting systems, phases, phase transitions, thermodynamics of chemical reactions, and first law analysis of reacting systems. Prerequisite: PHYS 222. Grade only.

350 - Fluid Mechanics—3 S.H.

Pressure and flow measurements, hydrostatic force, continuity and momentum equations, flow in conduits, velocity distribution, drag force, pump calculations, flow through porous media. Prerequisite: MATH 270. Grade only.

360 - Introduction to Composite Materials—3 S.H.

Basic concepts and definitions of composite materials. Fabrication, structure, properties, and applications of fibrous materials. Structure and properties of polymer matrix, metal matrix and ceramic matrix materials. Study of interface between fiber and matrix. Fabrication methods, properties and applications of polymer matrix composites, metal matrix composites, ceramic matrix composites and carbon/carbon composites. Prerequisites: ENGR 284 and credit or concurrent registration in CHEM 341 or CHEM 410. Grade only.

370 - Heat and Mass Transfer—3 S.H.

Conduction, convection, radiation, energy equation, design and analysis of heat exchanger, boiling and condensation heat transfer, Fick's Law, molecular diffusion in solids, gases and liquids, and mass balance. Prerequisite: ENGR 350. Grade only.

382 - Topics in Composite Materials Engineering M—2 S.H.

Varying topics in composite materials engineering for mechanical option students. Includes kinetics and rate of reactions and its application to the manufacturing and performance of composite parts, engineering economy and its application to the design process and manufacturing of composite parts. Prerequisites: ENGR 360. Grade only.

390 - Composites Manufacturing—3 S.H.

A lecture-laboratory course. General manufacturing issues including: flow of a product through a manufacturing firm, environmental, health and safety issues, learning curve. Fabrication processes for polymeric and non-polymeric composite materials. Prerequisite: ENGR 360. Grade only.

392 - Topics in Composite Materials Engineering C—2 S.H.

Varying topics in composite materials engineering for chemical option students. Includes micro-mechanics of composite materials, behavior and properties of unidirectional laminas, engineering economy and its application to the design process and manufacturing of composite parts. Prerequisites: ENGR 360. Grade only.

410 - Polymer Processing—3 S.H.

Chemical and physical properties of polymers, additives, mixing and compounding, rheology of polymer melts, continuity, energy, and momentum equations, qualitative description and quantitative modeling of: extrusion, blow molding, thermoforming, injection molding, compression molding, and rotational molding processes. Recycling. Prerequisite: ENGR 350. Grade only. Offered a minimum of once every two years.

412 - Kinetics and Reactor Design—2 S.H.

Fundamental concepts of the rate of homogenous reactions, ideal batch and flow reactors and their prospective designs, materials and energy balance around chemical reactors and the rate of reaction of thermosetting resins. Prerequisites: CHEM 213 and MATH 270. Grade only.

420 - Computer Integrated Manufacturing—3 S.H.

Evolution of the manufacturing system. Functions and interactions in a manufacturing system. Examples of CIM implementation in industry. Analytical tools and simulation software are used in evaluating manufacturing systems. Prerequisite: ENGR 390. Grade only. Offered a minimum of once every two years.

430 - Rheology—3 S.H.

A lecture-laboratory course. Stress and strain, Newtonian vs. non-Newtonian fluids, rheological equations of state, viscometric flows, viscoelasticity, fluid mechanics of rheometry, plastic melt rheometry and suspension rheology. Prerequisite: ENGR 350. Grade only. Offered a minimum of once every two years.

450 - Mechanics of Composites—3 S.H.

Micro mechanics of composite materials. Behavior and mechanical properties of unidirectional composites. Study of failure modes, hygrothermal and transport properties. Stress transfer, stiffness and strength properties of short fiber composites. Generalized Hooke's Law and stress-strain relations of an orthotropic lamina. Stiffness and strength criteria of orthotropic composite materials. Laminated Plate Theory. Composites Design. Prerequisites: MATH 270, ENGR 260 and ENGR 360. Grade only.

451 - Transport Phenomena Laboratory—1 S.H.

A lecture-laboratory course. Theories of pressure, flow, and temperature measurements. Experiments in momentum, heat and mass transfer. Prerequisites: ENGR 350, ENGR 370 and STAT 303. Grade only.

452 - Mechanical Characterization Laboratory—2 S.H.

A lecture-laboratory course. Experimental characterization of composite materials, including density of fibers, fiber content, tension, compression, flexure, in-plane shear, interlaminar shear, fatigue and impact properties of composite materials. Effect of stress concentration in composites. Lamina thermoelastic and off-axis response, and nondestructive evaluations of composites. Prerequisites: STAT 303, ENGR 260 and ENGR 360. Grade only.

460 - Introduction to Finite Element Analysis—3 S.H.

Theory and practice of the finite element method with emphasis on stress analysis in two dimensions by means of assumed displacement fields. Direct stiffness method, variational method, isoperimetric formulations, shell and composite elements formulations, algorithms for construction and solution of the governing equations, numerical errors and convergence, modeling and programming. Prerequisites: ENGR 260, MATH 270 and CS 130. Grade only. Offered a minimum of once every two years.

465 - Composite Characterization Techniques—3 S.H.

A lecture-laboratory course. Overview of various thermal, chemical, microscopic and surface characterization techniques and their applications to composite materials. Determination of thermomechanical, viscoelastic, glass-transition temperature, melting point, and cure properties of polymer matrix composites. Determination of thermal stability and surface analysis of metal matrix composites. Emphasis on technical writing of laboratory reports. Prerequisites: ENGR 360. Grade only.

475/480 - Design Project I/II—3 S.H. (each)

Develop product from requirements definition through prototype fabrication. Including: definition of product requirements, development of product and tooling design, analysis, definition of fabrication process, development of quality assurance plan, fabrication of prototype, inspection and testing. Work is performed in student teams. Prerequisite: ENGR 390. Grade only.

485 - Advanced Microscopic Techniques—3 S.H.

A lecture-laboratory course. Theory and the use of scanning electron microscopes and transmission electron microscopes; theory of field ion microscopes, atomic force microscopes, and scanning tunneling microscopes. Comparisons are made to optical microscopy. Explores the relationships between chemistry, microscopic structure and properties of engineering materials. Qualitative and semi-quantitative X-rays microanalysis of metal matrix composites. Emphasis on technical writing of laboratory reports. Prerequisites: ENGR 360. Grade only. Offered a minimum of once every two years.

* Course may be used to satisfy certain University Studies requirements.

491 A/B Engineering Seminar—1 S.H.

Varying topics seminar class. Students are required to give presentations on topics pertinent to engineering. Also includes guest speakers from the engineering profession. Students must take 491A in order to receive credit for 491B. Grade only.

499 - Independent Study—1-3 S.H.

Designed for the undergraduate student who wishes to engage in research. Subject and credit to be arranged with instructor. Requires the approval of the Department of Engineering. Grade only.

ENGLISH

Minne Hall, Room 302 (507-457-5440)
www.winona.edu/english/
Forsythe (Chairperson)

FACULTY

James Armstrong, Assistant Professor; B.A., Northwestern University; M.F.A., Western Michigan University; Ph.D., Boston University; 1999 -
Sandra Bennett, Professor; B.A., Brigham-Young University; M.A., Ph.D., University of Utah; 1976-
Chris Buttram, Assistant Professor; B.A., Emory University; M.A., M.Phil., Ph.D., Columbia University; 2000 -
Jane Carducci, Professor; B.A., Colorado College, Colorado Springs; M.A., Ph.D., University of Nevada; 1992 -
Gary Eddy, Professor; B.A., State University of New York-Brockport; M.A., University of Texas-El Paso; M.F.A., University of Arizona; Ph.D., State University of New York-Binghamton; 1988 -
Ruth Forsythe, Professor; B.A., St. Olaf College; M.A., Ph.D., University of Minnesota-Twin Cities; 1977 -
Carol Galbus, Associate Professor; B.S., Edgewood College, (Wisconsin); M.A.T., St. Mary's College of Minnesota; 1986 -
Paul H. Graue, Professor; B.A., Carleton College; M.A., Ph.D., Northwestern University; 1968 -
Douglas Hayes, Assistant Professor; B.A., M.A., University of Alberta; Ph.D., University of Toronto; 2001 -
Goldie Johnson, Associate Professor; B.S., M.S., University of Wisconsin-Superior; 1988 -
J Paul Johnson, Associate Professor; B.S., Valley City State University; M.A., University of North Dakota; Ph.D., University of Minnesota-Twin Cities; 1987 -
Michael Meeker, Professor; B.A., M.A., Northern Illinois University; Ph.D., University of Wisconsin-Madison; 1977 -
Ann Eljenholm Nichols, Professor; B.A., St. Mary's College-Notre Dame; M.A., Ph.D., University of Washington; 1981 -
Elizabeth Oness, Assistant Professor; B.A., James Madison University; M.F.A., University of Maryland; Ph.D., University of Missouri-Columbia; 2001 -
David E. Robinson, Professor; B.A., Hamilton College; M.A., Ph.D., Duke University; 1971 -
Holly Shi, Associate Professor; B.A., Shanghai International Studies University; M.A., Ph.D., Indiana University of Pennsylvania; 1995 -

PURPOSE

The English Department is concerned with the English language as art and communication. At the lower academic levels, courses are designed to help students acquire competence in reading and writing, thinking critically, and understanding and responding to aesthetic values. At the upper levels, the emphasis shifts increasingly to British and American literature and to more sophisticated forms of writing and linguistic studies.

Students majoring in English should complete the lower-division requirements in English before registering for the upper-division courses. For English majors and minors, ENG 290 is a prerequisite to all English courses numbered 300 or above.

HONORS PROGRAM

The English Department offers an English Honors Program. For details about the program, see the departmental secretary in Minne Hall, Room 302.

TEACHING MAJORS

Except in unusual circumstances, the English Department recommends for student teaching only those students who have a minimum 2.75 GPA and who have earned at least a B in each of the following courses: ENG 290 and ENG 402.

PREREQUISITES

Prerequisites to all major and minor programs in English: ENG 111 and ENG 290.

PASS/NO CREDIT COURSES

No courses in the department except internships are open to declared English majors or minors on a P/NC basis. Students not majoring or minoring in English can take any course in the department on a P/NC basis (provided they have met the prerequisites) except ENG 099, ENG 105, ENG 106, ENG 107, ENG 111, ENG 120, ENG 210, ENG 211, ENG 220, ENG 221, ENG 222, ENG 223, ENG 224, ENG 290, and Humanities 140 which are grade-only courses. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit only or grade only basis are so designated in the course descriptions.

B.A. MAJOR – ENGLISH

49 S.H. (No Minor Required)

REQUIRED COURSES (36 S.H.)

290 Literary Studies (5)

Choose one of the following two courses:

223 Classical Mythology (3) OR

224 Bible as Literature (3)

301 British Literature to 1800 (3)

302 American Literature to 1840 (3)

303 British and American Romanticism (3)

304 Realism and Naturalism (3)

305 Modernism and Postmodernism (3)

405 Chaucer (3)

Choose one of the following two courses:

328 Stylistics (3) OR

420 Introduction to Language Studies (3)

Choose one of the following two courses:

414 Shakespeare: Comedies & Histories (3) OR

417 Shakespeare: Tragedies (3)

447 Modern Literary Criticism (3)

490 Portfolio (1)

ELECTIVES (13 S.H.)

Electives must be English courses at the 200 level or above, including at least 6 S.H. in literature courses numbered 400 or above.

B.A. MAJOR – ENGLISH: WRITING OPTION

49 S.H. (No Minor Required)

REQUIRED COURSES (36 S.H.)

290 Literary Studies (5)

211 Writing in Communities (3)

310 Story Writing (3)

312 Poetry Writing (3)

314 Non-fiction Prose Writing (3)

305 Modernism and Postmodernism (3)

328 Stylistics (3)

439 Technical Writing (3)

Choose one of the following two courses:

410 Advanced Creative Writing: Prose (3) OR

412 Advanced Creative Writing: Poetry (3)

Choose one of the following two courses:

414 Shakespeare: Comedies & Histories (3) OR

417 Shakespeare: Tragedies (3)

447 Modern Literary Criticism (3)

490 Portfolio (1)

ELECTIVES (13 S.H.)

Electives must be English courses at the 200 level or above, including at least 9 S.H. in literature courses numbered 300 or above.

**B.A. MAJOR – ENGLISH:
FIRST COMBINING MAJOR**

37 S.H.

This major can be taken only in combination with another full major, and students failing to complete a second major must take one of the full (non-combining) majors listed in the catalog if they wish to major in English.

REQUIRED COURSES (27 S.H.)

290 Literary Studies (5)

Choose one of the following two courses:

223 Classical Mythology (3) OR

224 Bible as Literature (3)

Choose three of the following five courses:

301 British Literature to 1800 (3)

302 American Literature to 1840 (3)

303 British and American Romanticism (3)

304 Realism and Naturalism (3)

305 Modernism and Postmodernism (3)

Choose one of the following two courses:

328 Stylistics (3) OR

420 Introduction to Language Studies (3)

Choose one of the following two courses:

414 Shakespeare: Comedies & Histories (3) OR

417 Shakespeare: Tragedies (3)

447 Modern Literary Criticism (3)

490 Portfolio (1)

ELECTIVES (10 S.H.)

Electives must be English courses at the 200 level or above, including at least 6 S.H. in courses numbered 400 or above.

**B.A. MAJOR – ENGLISH: SECOND COMBINING
MAJOR-WRITING OPTION**

37 S.H.

This major can be taken only in combination with another full major, and students failing to complete a second major must take one of the full (non-combining) majors listed in the catalog if they wish to major in English.

REQUIRED COURSES (27 S.H.)

290 Literary Studies (5)

211 Writing in Communities (3)

Choose one of the following three courses:

310 Story Writing (3) OR

312 Poetry Writing (3) OR

314 Non-fiction Prose Writing (3)

305 Modernism & Postmodernism (3)

328 Stylistics (3)

Choose one of the following three courses:

439 Technical Writing (3) OR

410 Advanced Creative Writing: Prose (3) OR

412 Advanced Creative Writing: Poetry (3)

Choose one of the following two courses:

414 Shakespeare: Comedies & Histories (3) OR

417 Shakespeare: Tragedies (3)

447 Modern Literary Criticism (3)

490 Portfolio (1)

ELECTIVES (10 S.H.)

Electives must be English courses at the 200 level or above, including at least 6 S.H. in courses numbered 400 or above.

**B.S. MAJOR – COMMUNICATION ARTS AND
LITERATURE (Teaching)**

61 S.H.

Note: Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to these requirements in the Effective Educator Handbook or the Education Department's section of this catalog (page 87).

REQUIRED COURSES (61 S.H.)

English (40 S.H.)

290 Literary Studies (5)

Choose one of the following three courses:

220 Multicultural American Literatures (3) OR

223 Classical Mythology (3) OR

224 Bible as Literature (3)

Choose one of the following two courses:

211 Writing in Communities (3) OR

222 Introduction to Creative Writing (3)

Choose two of the following four courses:

302 American Literature to 1840 (3)

303 British and American Romanticism (3)

304 Realism and Naturalism (3)

305 Modernism and Postmodernism (3)

301 British Literature to 1800 (3)

328 Stylistics (3)

402 Teaching Secondary English (4)

Choose one of the following two courses:

414 Shakespeare: Comedies and Histories (3) OR

417 Shakespeare: Tragedies (3)

* Course may be used to satisfy certain University Studies requirements.

- 420 Introduction to Language Studies (3)
 - 432 Comparative Literature (3)
 - 447 Modern Literary Criticism (3)
 - 490 Portfolio (1)
- Communication Studies (15 S.H.)**
- 261 Public Speaking (3)
 - 282 Introduction to Communication Studies (3)
 - 371 Discussion and Small Group (3)
 - 375 Argument and Advocacy (3)
 - 493 Teaching and Coaching Oral Communication (3)
- Mass Communication (3 S.H.)**
- 100 Mass Media and Society (3)
- Theater Arts and Dance (3 S.H.)**
- 141 Oral Interpretation (3)

Teachers in communication arts and literature are generally recruited to coach/direct one or more of the following activities:

1. Forensics/speech
2. Debate
3. Journalism/newspaper/yearbook
4. Literary journal
5. Theater
6. Radio Station
7. Related activities

Therefore, all communication arts and literature majors are required to show competency in two of the aforementioned categories. Students will be required to submit a portfolio in CMST 493 demonstrating their participation in two or more of these categories. This participation could have been gained in various settings: high school, college, community activities, or work-related assignments. If students have no experience in at least two of the categories, they will need to acquire that experience during their college careers, either for credit through activities courses in communication studies, English, mass communications, and theatre/dance, or through volunteer experience.

B.A. MINOR – ENGLISH

24 S.H.

REQUIRED COURSES (17 S.H.)

- 290 Literary Studies (5)
- Choose three of the following five courses:
- 301 British Literature to 1800 (3)
 - 302 American Literature to 1840 (3)
 - 303 British and American Romanticism (3)
 - 304 Realism and Naturalism (3)
 - 305 Modernism and Postmodernism (3)
- Choose one of the following two courses:
- 414 Shakespeare: Comedies & Histories (3) OR
 - 417 Shakespeare: Tragedies (3)

ELECTIVES (7 S.H.)

Electives must be chosen from any English course numbered 200 or above.

B.A. MINOR – ENGLISH: CREATIVE WRITING

24 S.H.

REQUIRED COURSES (17 S.H.)

- 290 Literary Studies (5)
 - 305 Modernism and Postmodernism (3)
 - 310 Story Writing (3)
 - 312 Poetry Writing (3)
- Choose one of the following two courses:
- 410 Advanced Creative Writing: Prose (3) OR
 - 412 Advanced Creative Writing: Poetry (3)
 - 447 Modern Literary Criticism (3)

ELECTIVES (7 S.H.)

Electives must be chosen from any English course numbered 200 or above.

B.A. MINOR – ENGLISH: WRITING

24 S.H.

REQUIRED COURSES (17 S.H.)

- 290 Literary Studies (5)
 - 211 Writing in Communities (3)
- Choose one of the following three courses:
- 310 Story Writing (3) OR
 - 312 Poetry Writing (3) OR
 - 314 Non-Fiction Prose Writing (3)
 - 328 Stylistics (3)
 - 439 Technical Writing (3)

ELECTIVES (7 S.H.)

Electives must be chosen from any English course numbered 200 or above.

ENGLISH COURSE DESCRIPTIONS

099 - Introduction to College Writing—3 S.H.

Intensive writing practice with special focus on the fundamentals of sentence and paragraph structure. Students enrolled in ENG 099 who do not pass the course, including the exit exam, will not be permitted to take ENG 111, College Reading and Writing. Offered each semester. Grade only. (Credit does not count toward graduation.)

105 - ESL: Listening to Academic Speech—3 S.H.

Intensive practice in understanding lectures. Individualized pronunciation practice and grammar review. Designed to help students function successfully in university classrooms. Grade only. Offered yearly.

106 - ESL: Academic Reading and Writing I—3 S.H.

Intensive advanced drill in reading and writing English. Designed to prepare the non-native speaker for more English courses. Grade only. Offered yearly.

107 - ESL: Academic Reading and Writing II—3 S.H.

A continuation of ENG 106 for students needing more extensive writing practice before advancing to ENG 111. Grade only. Offered yearly.

111 - College Reading and Writing—4 S.H.

Writing based on reading, interpreting, analyzing, critiquing and synthesizing texts; writing as a means of expression, learning and critical inquiry. Grade only. Prerequisite: qualifying score on the English placement exam or successful completion of ENG 099. Offered every semester.

120 - Introduction to Literature—3 S.H.

Intensive reading in selected major forms and themes of literature. Grade only. Offered every semester.

190 - Critical Reading—2 S.H.

Improvement of college-level reading through critical examination of and response to academic texts. Application of various critical theories. Offered every two years.

210 - Advanced Expository Writing—3 S.H.

An advanced course in writing essays, stressing the development of a mature writing style and evaluative abilities. Offered every semester. Prerequisite: ENG 111.

211 - Writing in Communities — 3 S.H.

The study and practice of writing as a means of participation in a diverse, democratic, and literate society. Offered yearly. Grade only. Prerequisite: ENG 111.

220 - Multicultural American Literatures—3 S.H.

A study of literatures representing the diversity of North American culture: Native American, Asian American, African American, Gay/Lesbian, or others. Offered yearly. Grade only. Prerequisite: ENG 111.

221 - Topics in World Literature—3 S.H.

A general introduction to literatures which reflect cultures outside the United States and Great Britain. Each class will have a specific focus. Offered yearly. Grade only. Prerequisite: ENG 111.

222 - Introduction to Creative Writing—3 S.H.

An introduction to writing poetry, fiction and other creative genres (may include drama, screenwriting, or creative non-fiction). Covers basics of genre, style, and voice. Offered yearly. Grade only. Prerequisite: ENG 111.

223 - Classical Mythology—3 S.H.

The great myths of Greece and Rome as they appear in classical literature. Offered yearly. Grade only. Prerequisite: ENG 111.

224 - The Bible as Literature—3 S.H.

The literary structure and genres of the Hebrew and Christian scriptures

with special attention to the cultures that created them and major translations. Grade only. Offered yearly. Prerequisite: ENG 111.

225 - Topics in Literature—1-2 S.H.

Intensive study of a selected topic in English and foreign literature in translation. Variable content published in semester schedule.

226 - Topics in Writing—1-2 S.H.

Focus on specialized kinds of writing; e.g. the journal. Variable content published in semester schedule.

290 - Literary Studies—5 S.H.

A first course in literary criticism, introducing literary analysis and writing about literature, focusing upon the major genres: fiction, drama, and poetry. Offered every semester. Prerequisite: ENG 111.

301 - British Literature to 1800—3 S.H.

Beowulf to Aphra Behn: A survey course of early English literature from the old English period through the eighteenth century. Offered yearly. Prerequisites: ENG 111 and ENG 290.

302 - American Literature to 1840—3 S.H.

American literature from pre-colonial period to 1840. Offered every two years. Prerequisites: ENG 111 and ENG 290.

303 - British and American Romanticism—3 S.H.

A survey of the major British and American authors and works of early 19th century poetry and prose. Offered yearly. Prerequisites: ENG 111 and ENG 290.

304 - Realism and Naturalism—3 S.H.

A survey of the major British and American authors and works of late 19th and early 20th century poetry and prose. Offered yearly. Prerequisites: ENG 111 and ENG 290.

305 - Modernism and Postmodernism—3 S.H.

A survey of the major British and American authors and works from the early 20th century to the present. Offered yearly. Prerequisites: ENG 111 and ENG 290.

310 - Story Writing—3 S.H.

Study and practice in the techniques and forms of fiction writing. Offered yearly. Prerequisites: ENG 111 and ENG 290.

312 - Poetry Writing—3 S.H.

Study and practice in the techniques and forms of poetry writing with emphasis on contemporary approaches. Offered yearly. Prerequisites: ENG 111 and ENG 290.

314 - Non-fiction Prose Writing—3 S.H.

Study and practice in the techniques and forms of nonfiction prose; reading and writing a variety of essay and nonfiction prose genres. Offered yearly. Prerequisites: ENG 111 and ENG 290.

320 - English Grammar and Usage—2 S.H.

Study of basic concepts and elements of English grammar and usage. Offered yearly. Prerequisites: ENG 111 and ENG 290.

325 - Works of Literature—1-2 S.H.

Study of a single major work of literature, including its creation, socio-historical context, and critical reception. Title of work announced in class schedule. Offered yearly.

326 - Figures in Literature—1-2 S.H.

Study of a major literary figure through selected works, cultural context, and critical reception. Selected figure announced in class schedule.

327 - Genres in Literature—1-2 S.H.

Study of a specific genre such as the sonnet, folklore, memoirs, etc. through selected readings, cultural contexts, and critical approaches. Specific genre announced in class schedule.

328 - Stylistics—3 S.H.

The structure of modern English as described by traditional grammarians and modern linguists; application of linguistics to the analysis of style. Offered yearly. Prerequisites: ENG 111 and ENG 290.

399 - Internship—1-12 S.H.

Supervised, practical experienced in a wide variety of fields. Must be arranged well in advance of the registration period. P/NC Only.

402 - Teaching Secondary English—4 S.H.

A study of the goals and methods of the secondary English teacher, and of the content and structure of the secondary English curriculum. Attention to young adult literature. Offered yearly. Prerequisites: ENG 111 and ENG 290.

405 - Chaucer—3 S.H.

The Canterbury Tales. Offered yearly. Prerequisites: ENG 111 and ENG 290.

410 - Advanced Creative Writing: Prose—3 S.H.

Opportunity to produce a significant body of new fiction or creative non-fiction, and to develop a literary aesthetic and philosophy. Application of various expressive, imitative and experimental writing techniques. Offered every two years. Prerequisites: ENG 111, ENG 290 and ENG 310.

412 - Advanced Creative Writing: Poetry—3 S.H.

Advanced study of selected poets and poetics; advanced practice in poetry writing. Offered every two years. Prerequisites: ENG 111, ENG 290 and ENG 312.

414 - Shakespeare: Comedies and Histories—3 S.H.

Study of Shakespeare's major comedies and history plays. Offered yearly. Prerequisites: ENG 111 and ENG 290.

417 - Shakespeare: Tragedies—3 S.H.

Study of Shakespeare's major tragedies. Offered yearly. Prerequisites: ENG 111 and ENG 290.

420 - Introduction to Language Study—3 S.H.

An introduction to the study of language systems and their relationships to the cultures in which they function. Offered yearly. Prerequisites: ENG 111 and ENG 290.

432 - Comparative Literature—3 S.H.

This course focuses on examining texts within their cultural context and explores strategies for comparing texts from various cultural traditions. Offered yearly. Prerequisites: ENG 111 and ENG 290.

439 - Technical Writing—3 S.H.

The theory and practice of technical writing. Offered yearly. Prerequisites: ENG 111 (and ENG 290 for English majors and minors).

447 - Literary Criticism: Theory and Practice—3 S.H.

A study of modern critical theories and their application in original critical evaluations. Offered yearly. Prerequisites: ENG 111 and ENG 290.

461 - Independent Studies—1-3 S.H.

Independent studies determined by the needs of the individual student. Offered by previous arrangement only. Offered every semester. Prerequisites: ENG 111 and ENG 290.

470 - Seminar in American Literature—3 S.H.

Advanced study of a period, genre, or figure in American literature. The course will focus on critical methodologies and student research. Offered yearly. Prerequisites: ENG 111 and ENG 290.

471 - Seminar in British Literature—3 S.H.

Advanced study of a period, genre, or figure in British literature. The course will focus on critical methodologies and student research. Offered yearly. Prerequisites: ENG 111 and ENG 290.

490 - Portfolio—1 S.H.

Students compile portfolio materials including a vita, a critical introduction, and selected papers and projects from their former coursework. Required of all English majors as a capstone project in the senior year.

HUMANITIES (HUM) COURSE DESCRIPTION

140 - Approaches to Film—3 S.H.

A general introduction to the art of the film with focus on the non-technical aspects of the art. Grade only. Offered every semester.

ENVIRONMENTAL SCIENCE

ENVIRONMENTAL SCIENCE STEERING COMMITTEE

Biology

Pasteur Hall, Room 215 (507-457-5165)

Delong, Mundahl

Chemistry

Pasteur Hall, Room 312 (507-457-5290)

Engen, Franz

Geoscience

Pasteur Hall, Room 114 (507-457-5260)

Summa

PURPOSE

The Environmental Science Program is an interdisciplinary program sponsored by the biology, chemistry and geoscience departments. This broadly based program is composed of a common set of introductory courses; an in-depth set of option courses in either the biology, chemistry, or geoscience areas; and a capstone experience, which involves an individual research problem and a group seminar course. Depending on the set of in-depth option courses chosen for their program, students graduate with one of following degrees:

- B.S. Biology—Environmental Science Option
- B.S. Chemistry—Environmental Science Option
- B.S. Geoscience—Environmental Science Option

Graduates of this program are broadly educated and prepared for graduate school or entry-level positions in a variety of environmental science fields. The Environmental Science Program is designed to provide students with a basic understanding of the environmental challenges that face modern society and to provide students with the skills necessary to address these challenges through a successful career in an environmental science field. The common set of introductory courses provides students with the strong, interdisciplinary science background necessary to understand, critically evaluate, and mitigate environmental problems. While pursuing the common set of introductory courses, students have additional time to choose the option portion of their programs and the department in which they will declare their major. The option portion of the program allows students to develop an in-depth understanding of an area of environmental science of their choice.

The capstone research experience fosters independent thought and hones problem-solving skills while integrating the common set of environmental courses and the option area studies with a real-life, environmental problem. Field work is an integral part of the environmental science curriculum and the capstone research project in particular. Students participate in ongoing research projects such as the one being conducted at the field station located on the Featherstone Farm in the Wiscoy Valley. The capstone seminar course sharpens communication skills and encourages interactions between students from different majors and faculty from different environmental science areas by providing a forum for discussing, analyzing, and debating environmental issues and topics related to any branch of environmental science.

At all times, students are encouraged to maintain a broad perspective and to augment their in-depth study with an understanding of the connections among public policy, economics, law, and the adjustment to social needs, which can result in the destruction or the preservation of the environment.

ENVIRONMENTAL SCIENCE CORE REQUIREMENTS—ALL OPTIONS

48-50 S.H. (These courses are listed again under each department option.)

- * CHEM 212 Principles of Chemistry I (4)
- * CHEM 213 Principles of Chemistry II (4)
- * CHEM 320 Environmental Chemistry (4)
- * BIOL 241 Basics of Life (4)
- * BIOL 242 Organismal Diversity (4)
- BIOL 312 General Ecology (3)
- BIOL 313 General Ecology Laboratory (1)
- * GEOS 120 Dynamic Earth (4)
- * GEOS 130 Earth and Life Through Time (4)
- * GEOS 240 Hydrogeology (4)

Two of the following three courses:

- BUSA 451 Environmental Law (3)
- ECON 315 Environmental and Natural Resource Economics (3)
- * POLS 340 Environmental Policy (3)

One of the following courses NOT within the major discipline of the elected option:

- BIOL 315 Environmental Biology (3)
- BIOL 335 Plant Ecology (4)
- BIOL 360 Entomology (4)
- BIOL 415 Ecology of Large Rivers (4)
- BIOL 420 Limnology (4)
- * CHEM 425 Analytical Chemistry I (4)
- CHEM 436 Topics in Environmental Chemistry (3)
- * GEOS 225 Environmental Geoscience (3)
- GEOS 310 Non-Renewal Natural Resources (3)
- GEOS 315 Surficial Processes and Soils (4)
- GEOS 370 GIS and Imaging Techniques (3)
- GEOS 420 Applied Hydrogeology (4)

A research capstone course from the major discipline of the elected option:

- BIOL 499 Student Research (3)
- CHEM 430 Individual Problems in Chemistry (2-3)
- GEOS 400 Directed Research in Geoscience (2-3)

A seminar capstone course from the major discipline of the elected option:

- BIOL 495 Seminar in Biology—Environmental Science (1)
- CHEM 475 Seminar in Chemistry—Environmental Science (1)
- GEOS 475 Geoscience Seminar—Environmental Science (1)

B.S. MAJOR BIOLOGY – ENVIRONMENTAL SCIENCE OPTION

94-95 S.H. (No Minor required)

BIOLOGY CORE COURSES (18 S.H.)

- 241 Basics of Life (4)
- 242 Organismal Diversity (4)
- 312 General Ecology (3)
- 313 General Ecology Lab (1)
- 308 Cell Biology (3)
- 310 Genetics (3)

ENVIRONMENTAL SCIENCE OPTION REQUIREMENTS (12 S.H.)

- 318 Invertebrate Zoology (4) OR 319 Vertebrate Biology (4)
- 335 Plant Ecology (4) OR 350 Plant Taxonomy (4)
- 315 Environmental Biology (3)
- 495 Seminar—Environmental Science (1)

ENVIRONMENTAL SCIENCE OPTION ELECTIVES (7 S.H.)

- 318 Invertebrate Zoology (4)
- 319 Vertebrate Biology (4)
- 320 Ornithology (4)
- 335 Plant Ecology (4)
- 350 Plant Taxonomy (4)
- 360 Entomology (4)
- 380 Evolution (3)
- 405 Fishery Biology (3)
- 409 Microbiology (4)
- 415 Ecology of Large Rivers (4)
- 420 Limnology (4)
- 423 Ecosystem Ecology (3)
- 424 Biogeography (3)
- 425 Animal Behavior (3)

BIOLOGY CAPSTONE REQUIREMENT (3 S.H.)

- 499 Student Research (3)

OTHER REQUIRED COURSES (54–55 S.H.)**Chemistry (16 S.H.)**

- * 212,*213 Principles of Chemistry I, II (8)
- * 320 Environmental Chemistry (4)
- * 340 Organic Chemistry Survey (4)

Geoscience (12 S.H.)

- * 120 Dynamic Earth (4)
- * 130 Earth and Life Through Time (4)
- * 240 Hydrogeology (4)

Mathematics (9 S.H.)

- * 150 *155 Math for Earth & Life Science I, II (6)
- * 305 Biometry (3)

Note: Calculus I, II (160, 165) may be submitted for MATH 150, 155.

Physics (8 S.H.)

- *201, *202 General Physics (8)

Note: University Physics I, II (221, 222) may be submitted for General Physics I, II (201, 202).

Two of the following three courses (6 S.H.)

- BUSA 451 Environmental Law (3)
- ECON 315 Environmental and Natural Resources (3)
- * POLS 340 Environmental Policy (3)

One of the following five courses (3-4 S.H.)

- * CHEM 425 Analytical Chemistry I (4)
- CHEM 436 Topics in Environmental Chemistry (3)
- * GEOS 225 Environmental Geoscience (3)
- GEOS 310 Non-Renewal Natural Resources (3)
- GEOS 315 Surficial Processes and Soils (4)
- GEOS 420 Applied Hydrogeology (4)

B.S. MAJOR CHEMISTRY – ENVIRONMENTAL SCIENCE OPTION

92-93 S.H.

CHEMISTRY CORE COURSES (29 S.H.)

- 212 Principles of Chemistry I (4)
- 213 Principles of Chemistry II (4)
- 350 Principles of Organic Chemistry I (4)
- 351 Principles of Organic Chemistry II (5)
- 412 Physical Chemistry I (3)
- 413 Physical Chemistry I Lab (1)
- * 425 Analytical Chemistry I (4)
- 426 Analytical Chemistry II (4)

ENVIRONMENTAL SCIENCE OPTION REQUIREMENTS (10 S.H.)

- * 320 Environmental Chemistry (4)
- 436 Topics in Environmental Chemistry (3)
- 475 Chemistry Seminar (1)

ENVIRONMENTAL SCIENCE OPTION ELECTIVES (4 S.H.)

- 400 Biochemistry I (4)
- 401 Biochemistry II (3)
- 410 Polymer Chemistry (2)

- 414 Physical Chemistry II (3)
- 415 Physical Chemistry Lab II (2)
- 420 Topics in Industrial Chemistry (2)
- 427 Topics in Instrumental Chemistry (2)
- 428 Chemical Separations (3)
- 450 Advanced Organic Chemistry (2)
- 470 Isotope, Nuclear and Radiochemistry (2)
- 475 Seminar in Chemistry (1) OR other advanced chemistry electives as approved by the Chemistry Department

OTHER REQUIRED COURSES (49–50 S.H.)**Biology (12 S.H.)**

- * 241 Basics of Life (4)
- * 242 Organismal Diversity (4)
- 312,313 General Ecology lecture and lab (4)

Geoscience (12 S.H.)

- * 120 Dynamic Earth (4)
- * 130 Earth and Life through Time (4)
- * 240 Hydrogeology (4)

Mathematics (8 S.H.)

- * 160, *165 Calculus I, II (8)

Physics (8 S.H.)

- * 221, *222 University Physics I, II (8)

Two of the following three courses (6 S.H.)

- BUSA 451 Environmental Law (3)
- ECON 315 Environmental and Natural Resources (3)
- * POLS 340 Environmental Policy (3)

One of the following eight courses (3-4 S.H.)

- BIOL 315 Environmental Biology (3)
- BIOL 335 Plant Ecology (4)
- BIOL 360 Entomology (4)
- BIOL 415 Ecology of Large Rivers (4)
- BIOL 420 Limnology (4)
- * GEOS 225 Environmental Geoscience (3)
- GEOS 310 Non-Renewable Natural Resources (3)
- GEOS 315 Surficial Processes and Soils (4)
- GEOS 370 GIS and Imaging Techniques (3)
- GEOS 420 Applied Hydrogeology (4)

B.S. MAJOR – GEOSCIENCE: ENVIRONMENTAL SCIENCE OPTION

92 - 96 S.H. (No Minor Required)

GEOSCIENCE CORE COURSES (23 S.H.)

- * 120 Dynamic Earth (4)
- * 130 Earth & Life through Time (4)
- 220 Minerals & Rocks (4) I
- 280 Field & Analytical Methods I (2)
- 330 Structural Geology (4)
- 340 Sedimentology & Stratigraphy (4)
- 475 Geoscience Seminar (1)

Note: Majors in all options are urged to take a geology summer field course prior to graduation. This can satisfy the requirement GEOS 480, or an upper-division elective.

ENVIRONMENTAL SCIENCE OPTION REQUIREMENTS (20–21 S.H.)

- * 225 Environmental Geoscience (3)
- * 240 Hydrogeology (4)
- 315 Surficial Processes & Soils (4)
- 370 GIS & Imaging Techniques (3)
- 420 Applied Hydrogeology (4)
- 400 Directed Research in Geoscience (2-3)

OTHER REQUIRED COURSES (43–44 S.H.)**Biology (12 S.H.)**

- * 241 Basics of Life (4)
- * 242 Organismal Diversity (4)
- 312, 313 General Ecology, Ecology Lab (4)

* Course may be used to satisfy certain University Studies requirements.

Chemistry (12 S.H.)

* 212, *213, Principles of Chemistry I, II (8)

* 320 Environmental Chemistry (4)

Mathematics (6 S.H.)

* 150, *155 Math for Earth & Life Sciences I, II (6)

Physics (4 S.H.)

* 115 Conceptual Physics (4)

Two of the following three courses (6 S.H.)

BUSA 451 Environmental Law (3)

ECON 315 Environmental & Natural Resources Economics (3)

* POLS 340 Environmental Policy (3)

One of the following courses (3-4 S.H.)

BIOL 315 Environmental Biology (3)

BIOL 335 Plant Ecology (4)

BIOL 360 Entomology (4)

† BIOL 415 Ecology of Large Rivers (4) (See Note below.)

BIOL 420 Limnology (4)

* CHEM 425 Analytical Chemistry I (4)

CHEM 436 Topics in Environmental Chemistry (3)

† If students take BIOL 415 as their elective from this group of courses, they may not choose BIOL 415 as an elective course under "Environmental Science Option Electives for Geoscience" below.

ENVIRONMENTAL SCIENCE OPTION ELECTIVES FOR GEOSCIENCE (6-8 S.H.)

(See Note below.)

Courses totaling 6-8 S.H. to be chosen from:

GEOS 310 Non-renewable Natural Resources (3)

GEOS 430 Chemistry & Physics of the Earth (3)

GEOS 480 Field & Analytical Methods II (1)

BIOL 415 Ecology of Large Rivers (4)

* STAT 210 Statistics (3)

BUSA 451 Environmental Law (3) OR

ECON 315 Environmental & Natural Resources (3) OR

* POLS 340 Environmental Policy (3)

Note: The courses selected as "Environmental Science Option Electives" must not duplicate the courses selected under "Other Required Courses" above.

FOREIGN LANGUAGES

Somsen Hall, Room 319 (507-457-5165)

www.winona.edu/foreignlanguages/

Ramos (Chairperson): German and Spanish; Frisk: French and Spanish; Mazur: German, French, and Spanish; Tenenbaum: French and Spanish

FACULTY

Timothy Frisk, Associate Professor; B.S., Winona State University; B.A., M.A., Ph.D., University of Minnesota; 1990 -

Ronald M. Mazur, Professor; B.A., University of Detroit; M.A., Ph.D., University of Michigan; 1978 -

Lillian Ramos, Associate Professor; B.A. Seattle University; M.A. University of Washington; Ph.D., University of Washington, 1992 -

Rosine Tenenbaum, Professor; B.A., M.A., University of Paris-Sorbonne; Ph.D., University of North Carolina; 1990 -

PURPOSE

WSU Foreign Language Department classes are designed to develop proficiency in the four skills areas: listening, reading, writing, and speaking. Their further goal is to develop an understanding and appreciation of individual foreign cultures. Students who enhance their occupational skills with linguistic and cultural training will increase their opportunities for employment in multinational corporations, government agencies, humanitarian organizations, and a variety of health professions. The following offerings are available:

- Complete B.A./B.S. major/minor in French
- Complete B.A./B.S. major/minor in German
- Complete B.A./B.S. major/minor in Spanish
- Bachelor of Science (teaching) degrees

The Foreign Language Department is authorized to recommend graduates for licensure in French, German, and Spanish majors. All coursework for the degrees is available on campus. Language courses 101, 102, 201, 202 are offered on a yearly basis. All other courses are offered every two years. For this reason, majors and minors in foreign languages are expected to register for the "specialized study" courses when they are offered.

Arranged classes are discouraged and will be offered only under the most exceptional circumstances and require approval of the entire Foreign Language Department faculty. Independent Studies courses are not offered.

Note: Education courses and student teaching are provided by the WSU Education Department.

PLACEMENT

All students with prior study or knowledge of a foreign language are urged to take a placement examination to determine the correct level of coursework with which to begin at WSU. Students should consult with the department chairperson for details.

CREDIT FOR PREVIOUS LANGUAGE STUDY

For students who meet the prerequisites stated in the descriptions for language courses 102, 201, or 202, the department recommends that they begin their foreign language study at WSU by enrolling in the appropriate beginning or intermediate language course. By earning a grade of "A" or "B" in language courses 102, 201, or 202 at WSU, students may obtain retroactive credit for course 101 and any sequel courses below the course in which they earned the "A" or "B." Students who qualify may apply for retroactive credit by completing the appropriate form(s) and paying a fee of \$5 per credit prior to receiving a grade of "P" (pass) in the appropriate course(s). For information about credit by examination, see page 25.

STUDY ABROAD

WSU students who wish to immerse themselves in a foreign culture and language for one or more semesters have several options available to them. For specific information, please contact the Study Abroad Office in Lourdes Hall, Room 152 or consult the Study Abroad section in this catalog (page 30). Students who wish to receive University credit for participation in a study abroad program must have prior approval from the Foreign Language Department. The foreign language majors and minors are strongly encouraged to study abroad in order to acquire language proficiency.

PASS/NO CREDIT COURSES

Elementary and intermediate language courses (101, 102, 201 and 202) may be taken for pass/no credit. Except for internships and practica, students must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

GPA REQUIREMENTS

1. A cumulative GPA of 2.00 to graduate with a foreign language major or minor
2. A 2.00 GPA in the courses taken for the major or minor
3. A cumulative GPA of 2.75 to be admitted to teacher education.

For a checklist of the University's graduation requirements, see page 24.

Note: Specialized study courses are offered on a two-year cycle. Therefore, students planning to major or minor in a foreign language should register for all specialized study courses offered in any given semester if they plan to graduate with a foreign language major or minor in four years.

B. A. MAJOR – FRENCH (32 S.H.)

(Minor Required)

LANGUAGE SKILLS FOR MAJORS AND MINORS (8 S.H.)

- FREN 201 Intermediate French I (4)
FREN 202 Intermediate French II (4)

SPECIALIZED STUDY (24 S.H.)

- 204 Special Topics in French Literature (2)
205 Special Topics in French Culture (2)
301 French Composition (4)
302 French Civilization and Culture (4)
401 Phonetics and Pronunciation (3)
402 French Literature I (3)
403 French Literature II (3)
404 French Literature III (3)

**B.S. MAJOR – FRENCH (Teaching) 36 S.H.
(Minor Required)****LANGUAGE SKILLS (8 S.H.)**

- FREN 201 and 202

Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to these requirements in the Effective Educator Handbook or the Education Department section of this catalog (page 87).

SPECIALIZED STUDY (28 S.H.)

- 204 Special Topics in French Literature (2)
205 Special Topics in French Culture (2)
301 French Composition (4)
302 French Civilization and Culture (4)
401 Phonetics and Pronunciation (3)
402 French Literature I (3)
403 French Literature II (3)
404 French Literature III (3)
405 Methods of Teaching a Modern Foreign Language (4)

See Education Department listings for education sequence and student teaching.

B.A. MINOR – FRENCH (24 S.H.)**LANGUAGE SKILLS (8 S.H.)**

- FREN 201 and 202

SPECIALIZED STUDY (16 S.H.)

- 204 Special Topics in French Literature (2) OR
205 Special Topics in French Culture (2)
301 French Composition (4)
302 French Civilization and Culture (4)
Choose two of the following courses:
402 French Literature I (3)
403 French Literature II (3)
404 French Literature III (3)

B.A. MAJOR – GERMAN (32 S.H.)

(Minor Required)

LANGUAGE SKILLS (8 S.H.)

- GERM 201 Intermediate German I (4)
GERM 202 Intermediate German II (4)

SPECIALIZED STUDY (24 S.H.)

- 204 Special Topics: German Literature (2)
205 Special Topics: German Culture and Language (2)
301 Advanced Reading and Structural Analysis (3)
302 German Conversation and Composition (4)
303 German Culture and Civilization (4)
401 Early Medieval to Baroque Literature (3)
402 Eighteenth and Nineteenth Century Literature (3)
403 Twentieth Century Literature (3)

**B.S. MAJOR – GERMAN (Teaching) 36 S.H.
(Minor Required)****LANGUAGE SKILLS (8 S.H.)**

- GERM 201 and 202

Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to these requirements in the Effective Educator Handbook or the Education Department section of this catalog (page 87).

SPECIALIZED STUDY (28 S.H.)

- 204 Special Topics: German Literature (2)
205 Special Topics: German Culture and Language (2)
301 Advanced Reading and Structural Analysis (3)
302 German Conversation and Composition (4)
303 German Culture and Civilization (4)
401 Early Medieval to Baroque Literature (3)
402 Eighteenth and Nineteenth Century Literature (3)
403 Twentieth Century Literature (3)
405 Methods of Teaching a Modern Foreign Language (4)

See Education Department listings for education sequence and student teaching.

B.A. MINOR – GERMAN (24 S.H.)**LANGUAGE SKILLS (8 S.H.)**

- GERM 201 and 202

SPECIALIZED STUDY (16 S.H.)

- 204 Special Topics: German Literature (2) OR
205 Special Topics: German Culture and Language (2)
301 Advanced Reading and Structural Analysis (3)
302 German Conversation and Composition (4)
303 German Culture and Civilization (4)
Choose one of the following three courses:
401 Early Medieval to Baroque Literature (3)
402 Eighteenth and Nineteenth Century Literature (3)
403 Twentieth Century Literature (3)

B.A. MAJOR – SPANISH (32 S.H.)

(Minor Required)

LANGUAGE SKILLS (8 S.H.)

- SPAN 201 Intermediate Spanish I (4)
SPAN 202 Intermediate Spanish II (4)

* Course may be used to satisfy certain University Studies requirements.

SPECIALIZED STUDY (24 S.H.)

- 204 Special Topics in Hispanic Literature (2)
- 300 Spanish Linguistics (2)
- 301 Spanish Composition and Conversation (4)
- 302 The Culture of Spain (3)
- 303 The Culture of Latin America (3)
- 401 Spanish Literature I (3)
- 402 Spanish Literature II (3)
- 403 Latin American Literature (4)

B.S. MAJOR – SPANISH (Teaching) (36 S.H.) (Minor Required)

LANGUAGE SKILLS (8 S.H.)

SPAN 201 and 202

Note: Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to these requirements in the Effective Educator Handbook or the Education Department section of this catalog (page 87).

SPECIALIZED STUDY (28 S.H.)

- 204 Special Topics in Hispanic Literature (2)
- 300 Spanish Linguistics (2)
- 301 Spanish Composition and Conversation (4)
- 302 The Culture of Spain (3)
- 303 The Culture of Latin America (3)
- 401 Spanish Literature I (3)
- 402 Spanish Literature II (3)
- 403 Latin American Literature (4)
- 405 Methods of Teaching a Modern Foreign Language (4)

See Education Department listings for education sequence and student teaching.

B.A. MINOR – SPANISH (24 S.H.)

LANGUAGE SKILLS (8 S.H.)

SPAN 201 and 202

SPECIALIZED STUDY (16 S.H.)

- 204 Special Topics in Hispanic Literature (2) OR 300 Spanish Linguistics (2)
- 301 Spanish Composition and Conversation (4)
- 302 The Culture of Spain (3) OR 303 The Culture of Latin America (3)
- 401 Spanish Literature I (3) OR 402 Spanish Literature II (3)
- 403 Latin American Literature (4)

FOREIGN LANGUAGES COURSE DESCRIPTIONS

Foreign Languages (FLAN)

405 - Methods of Teaching a Modern Foreign Language—4 S.H.
Discussion of foreign language teaching methods with respect to their effectiveness in achieving pedagogical goals. Practical applications are offered. Must be taken before the student teaching assignment. Prerequisite: FREN, GERM, or SPAN 202 or equivalent. Offered every two years.

French (FREN)

101 - Elementary French I—4 S.H.
Introductory French for students with little or no prior French training. Instruction in speaking, listening, reading and writing through classroom drills and language lab work. Prerequisite: none. Offered yearly.

102 - Elementary French II—4 S.H.
Continuation of 101. Prerequisites: 101 or 1-2 years of high school French or equivalent. Offered yearly.

201 - Intermediate French I—4 S.H.
Further development of communication skills. In-depth study of grammar. Selected readings in French. Prerequisite: 102 or equivalent of three years of high school French. Offered yearly.

202 - Intermediate French II—4 S.H.

Continuation of FREN 201. Further development of all the skills essential for communication. Further development of understanding written and spoken French. Practice in translation and practice in writing accentuated. Prerequisite: 201 or equivalent to 4-5 years of high school French. Offered yearly.

204 - Special Topics in French Literature—2 S.H.

Directed readings of French contemporary writers. Focusing particularly on African writers and French writers outside of France (Canada and Antilles). Prerequisite: 202 or equivalent. Offered every two years.

205 - Special Topics in French Culture—2 S.H.

Study of contemporary issues in the French media, particularly cinema. Prerequisite: 202 or equivalent. Offered every two years.

301 - French Composition—4 S.H.

This course reinforces skills in written French through translation of a wide variety of texts taken from various fields such as business and literature. The writing of poems, essays and articles in French is practiced in order to reinforce and refine writing skills. Prerequisite: 202 or equivalent. Offered every two years.

302 - French Civilization and Culture—4 S.H.

The unfolding of French culture and civilization from the Lascaux Caves to French Rap music. Topics include architecture, plastic arts, literary movements and contemporary French popular culture. The course is taught in French with texts in French. Students present reports on selected topics in French. Prerequisite: 202 or equivalent. Offered every two years.

401 - Phonetics and Pronunciation—3 S.H.

Each student perfects his/her pronunciation through class and language laboratory exercises. The class relies on pronunciation tapes to teach the proper French accent. The sounds are studied so that one can describe and teach them to students. Some pronunciation rules are also mastered: rule of three consonants, silent e, e before yod, etc. Students read articles from the French press in order to practice correct pronunciation. Prerequisite: 202 or equivalent. Offered every two years.

402 - French Literature I—3 S.H.

Middle Ages, Renaissance French Literature. The course is taught in French. The French Explication De Texte type of critical analysis is taught. Writings such as the Song of Roland, The Romance of the Rose, Villon's Poems, Rabelais' Gargantua, Montaigne's Essays, and the Pleiades are studied. Prerequisite: 202 or equivalent. Offered every two years.

403 - French Literature II—3 S.H.

Seventeenth and 18th-Century French literature. The course is taught in French. Writers such as Corneille, Moliere, Racine, Marivaux, Voltaire, Diderot, Rousseau, Beaumarchais are studied. Prerequisite: 202 or equivalent. Offered every two years.

404 - French Literature III—3 S.H.

Nineteenth and 20th-Century French literature. Romanticism, the Parnasse, Symbolism and Naturalism, as well as Surrealism, Existentialism, Contemporary writers are studied. Prerequisite: 202 or equivalent. Offered every two years.

German (GERM)

101 - Elementary German I—4 S.H.

Introductory German for students with little or no prior German training. Instruction in speaking, listening, reading and writing through classroom drill and language lab work. Offered yearly.

102 - Elementary German II—4 S.H.

Continuation of 101. Prerequisite: 101 or 2 years of high school German or equivalent. Offered yearly.

201 - Intermediate German I—4 S.H.

Further development of communication skills. Study of grammar essential to skills. Selected readings in German. Prerequisite: 102 or equivalent of three years of high school German. Offered yearly.

202 - Intermediate German II—4 S.H.

Continuation of 201. Further development of all the skills essential for communication. Further development of understanding written and spoken German. Practice in translation and practice in writing accentuated. Prerequisite: 201 or equivalent of 5 years of middle school/high school German. Offered yearly.

204 - Special Topics: German Literature—2 S.H.

The course focuses on an individual author, a literary period/ movement or a special literary category/genre. Prerequisite: 202 or equivalent. Offered every two years.

205 - Special Topics: German Culture and Language—2 S.H.

This course deals with such topics as modern cultural developments in the German-speaking world, modern usage and themes in the German-language media, the development of the German language into its modern form, or the application of the German language to a specific professional field. Prerequisite: 202 or equivalent. Offered every two years.

301 - Advance Reading and Structural Analysis—3 S.H.

Advanced study and analysis of the German language. The course includes a discussion of advanced German grammar (with exercises), the development of effective reading strategies and an introduction to basic linguistic concepts. Prerequisite: 202 or equivalent. Offered every two years.

302 - German Conversation and Composition—4 S.H.

The practice of advanced language skills through guided conversation and composition. Prerequisite: 202 or equivalent. Offered every two years.

303 - German Civilization and Culture—4 S.H.

The evolution of German culture from its beginnings to the present, including analysis of historical, literary and artistic movements. Prerequisite: 202 or equivalent. Offered every two years.

401 - Medieval to Baroque Literature—3 S.H.

A survey of representative works by major authors in various genres from the beginnings of Old High German literature (8th century) to the literary Baroque (17th century). Classwork focuses on the close reading and critical discussion of texts in their literary and cultural contexts. Prerequisite: 202 or equivalent. Offered every two years.

402 - 18th- and 19th-Century Literature—3 S.H.

A survey of representative works by major authors in various genres from the Enlightenment through Symbolism and Naturalism (late 19th century). Class work focuses on the close reading and critical discussion of texts in their literary and cultural contexts. Prerequisite: 202 or equivalent. Offered every two years.

403 - 20th- Century Literature—3 S.H.

A survey of representative works by major authors in various genres from the turn of the 20th century to the present. Class work focuses on the close reading and critical discussion of texts in their literary and cultural contexts. Prerequisite: 202 or equivalent. Offered every two years.

Spanish (SPAN)**101 - Elementary Spanish I—4 S.H.**

Introductory Spanish for students with little or no prior training in Spanish. Instruction in speaking, listening, reading and writing through classroom drill and language lab work. Offered yearly.

102 - Elementary Spanish II—4 S.H.

Continuation of 101. Prerequisite: 101 or equivalent. Offered yearly.

201 - Intermediate Spanish I—4 S.H.

Further development of communication skills. Study of grammar essential to skills. Selected readings in Spanish. Prerequisite: 102 or equivalent. Offered yearly.

202 - Intermediate Spanish II—4 S.H.

Continuation of 201. Further development of skills essential for communication. Study of grammar and syntax. Additional practice in reading and writing. Prerequisite: 201 or equivalent. Offered yearly.

204 - Special Topics in Hispanic Literature—2 S.H.

Directed readings in Hispanic literature. Prerequisite: 202 or equivalent. Offered every two years.

300 - Spanish Linguistics and Phonetics—2 S.H.

Practice in all the sounds of the language with observations on its development from Latin. Exploration of the grammatical structures of Spanish. Prerequisite: 202 or equivalent. Offered every two years.

301 - Spanish Composition and Conversation—4 S.H.

The emphasis is on class discussion and the development of critical thinking. Readings to be included are short stories by modern and classical authors. Overview of semantics and stylistics. Prerequisite: 202 or equivalent. Offered every two years.

302 - The Culture of Spain—3 S.H.

This course is taught in Spanish and focuses on the successive phases in the development of the culture of Spain. The development of Spanish art, architecture, music and lifestyle are studied as well as the different characteristics of the individual regions of Spain. Prerequisite: 202 or equivalent. Offered every two years.

303 - The Culture of Latin America—3 S.H.

This course is taught in Spanish and focuses on the countries of Central and South America, a study of the pre-Columbian cultures as well as their development after the Spanish colonization: their art, their traditions and their present lifestyle and customs. Prerequisite: 202 or equivalent. Offered every two years.

401 - Spanish Peninsular Literature I—3 S.H.

The course is taught in Spanish. Classwork focuses on the study of early Peninsular Spanish literature: epic poetry, novel, theater, the renaissance, baroque literature. Prerequisite: 202 or equivalent. Offered every two years.

402 - Spanish Peninsular Literature II—3 S.H.

The course is taught in Spanish. It covers Peninsular literature of the Age of Enlightenment, the Romantic period, the generation of 98, the generation of 27, the literature of the Civil War and the post-Civil War as well as contemporary authors. Prerequisite: 202 or equivalent. Offered every two years.

403 - Latin American Literature—4 S.H.

A survey of Latin American literature from pre-colonial to contemporary literature. This course includes the study of pre-Hispanic writings (Nahautl, maya, quechua), Los Cronistas, Colonial Literature, the Neoclassicism, the Romanticism, and the transition of the "gaugho Epic" from the 19th to the 20th century. It also includes Modernism, the Criollismo, the post-modernism, the Magic Realism, the Boom with writers such as: Gabriel Garcia, Marquez, Carols Fuentes, Cortazar, and Vargas Llosa, the theater and other essay writers. Prerequisite: 202 or equivalent. Offered every two years.

* Course may be used to satisfy certain University Studies requirements.

GEOGRAPHY

Minne Hall, Room 228 (507-457-5432)

FACULTY

Jerry Gerlach, Professor; B.A., M.A., University of Nebraska; Ph.D., University of Oklahoma; 1988-

PURPOSE

The study of geography affords students the opportunity to examine the differences and similarities of the various physical and cultural environments in which we live. Drawing on concepts from both the physical and the social sciences, geographers work in such fields as education, urban and regional planning, government agencies, conservation, international business, tourism, cartography, international relations.

GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for geography minors are as follows:

- A grade of "C" or better is required for any course used to complete the requirements of the minor.
- Four courses (12 S.H.) must be taken at WSU.

B .A. MINOR – GEOGRAPHY

24 S.H.

REQUIRED COURSES (12 S.H.)

- 211 Economic Geography (3)
- * 212 Physical Geography (3)
- * 213 Cultural Geography (3)
- 450 Cartography (3)

ELECTIVES (12 S.H.)

Six credits must be from courses 300-level or above. GEOG 110 does not apply to the minor.

GEOGRAPHY COURSE DESCRIPTIONS

110 - World Regional Geography-3 S.H.

A survey of physical and cultural aspects of world regions including landforms; climate; levels of economic development; cultural diffusion; attitudes toward the land, the social structure and values. Grade only. Offered yearly.

211 - Economic Geography-3 S.H.

A systematic study of the geographic bases of human economic activities in agriculture, mining and manufacturing. This course explains - by theory and example - the why, where and how activities are distributed in our economic world. Grade only. Offered yearly.

212 - Physical Geography-3 S.H.

An introduction to the significance and aereal distribution of various physical elements of our environment with emphasis on climate, landforms, gradational work of streams and glaciation. Grade only. Offered yearly.

213 - Cultural Geography-3 S.H.

An introduction to the significance and aerial distribution of various cultural elements of our environment with emphasis on population, cultural origins, language, religion and agriculture. Grade only. Offered yearly.

223 - Geography of the Orient-3 S.H.

A study of the physical and cultural features of the Far East. Grade only. Offered every other year.

224 - Geography of Africa-3 S.H.

Natural setting, distribution of people, important occupations and problems of Africa's future development. Grade only. Offered every other year.

225 - Geography of Latin America-3 S.H.

A study of the complex cultural, racial, political, demographic and economic patterns which have developed in Latin American since 1492 - within its physical geographic setting. Grade only. Offered yearly.

233 - Geography of the Middle East-3 S.H.

Environmental setting, population distribution, important occupations, crossroads, functions and problems of development. Grade only. Offered every other year.

270 - Introduction to the Geography of Tourism-3 S.H.

An introduction to the study of the geography of tourism. This course studies the origin, development and spread of tourism. Particular emphasis is placed on the location of tourist areas in the U.S. Grade only. Offered every other year.

320 - Geography of the United States-3 S.H.

An examination of the various regions of the United States with emphasis on the ways in which physical geography, sources of economic activity and cultural heritage combine to produce the unique character of each region. Grade only. Offered yearly.

326 - Geography of Europe-3 S.H.

A study of nations, regions and economies of Europe with special attention to current problem areas. Grade only. Offered every other year.

332 - Geography of Canada-3 S.H.

A detailed examination of Canada's geography with special emphasis on developmental problems. Grade only. Offered every other year.

349 - Maps and Air Photos-3 S.H.

A study of the elements of map scale and projection, and the use of air photos in map preparation. Practice in reading and interpreting various kinds and series of maps. Grade only. Offered every other year.

370 - The Geography of Tourism: Advanced Study-3 S.H.

An in-depth study of tourist locations worldwide. Detailed examination and classification of tourist types and locations is emphasized. Grade only. Offered every other year.

450 - Cartography-3 S.H.

Theory and design of map-making skills using a variety of techniques in the production and reproduction of qualitative and quantitative maps. Grade only. Offered every other year.

455 - Remote Sensing-3 S.H.

An examination of various remote sensing techniques including radar, infra-red, high-altitude photography and LANDSAT earth satellite imagery, and their application to geographical inquiry in areas such as land use, agriculture, forest and range management, and urban studies. Prerequisite: instructor' permission. Grade only. Offered every other year.

490 - Independent Reading in Geography-1-3 S.H.

A course designed to aid those planning to attend graduate school or who have a special area of interest which the desire to pursue beyond formal course limits. Work is undertaken with an instructor chosen by the student. Prerequisite: instructor's permission. Grade only. Offered by arrangement.

GEOSCIENCE

Pasteur Hall, Room 114, (507) 457-5260
http://www.winona.edu/geology
Summa (Chairperson)
Jannik (Director of Water Resource Center)

FACULTY

John F. Donovan, Professor; B.Sc., St. Francis Xavier University; M.S., University of Iowa; Ph.D., Cornell University; 1968 -
Nancy O. Jannik, Dean, College of Science and Engineering; B.S., College of William & Mary; M.S., Rutgers University; Ph.D., New Mexico Institute of Mining & Technology; 1986 -
James H. Meyers, Professor; B.A., Franklin & Marshall College, Ph.D., Indiana University; 1980 -
Steven M. Richardson, Vice President for Academic Affairs, A.B., A.M., Boston University; Ph.D., Harvard University; 1999 -
Catherine L. Summa, Associate Professor; B.A., Wellesley College; Ph.D., Massachusetts Institute of Technology; 1996 -

PURPOSE

Geoscience is the study of the earth—its atmosphere, hydrosphere, internal composition, structure, processes, and history. Geoscientists study the earth at present, using the outdoors as their laboratory, where studies of rocks, landforms and earth processes enable geologists to decipher earth's history and to predict its future. The earth is dynamic, and processes that act to shape the earth are complex and inter-related. Thus, all courses within the department are related to one another in unraveling the complex picture of the planet on which we live.

The department offers a range of introductory courses to expose students to the wide variety of processes active on earth, to develop an understanding of interactions between humans and the environment, and to help build an appreciation for the place of people in earth's long history. The department offers an Honors Program for qualified students; research and internship opportunities also are available. Alumni of the department have established an endowed fund, making academic scholarships available to qualified entering and continuing students.

Professions in the geological sciences are ideal for those who possess curiosity about natural processes, scientific talent, and a love of the outdoors. The Department of Geoscience offers the Bachelor of Science Program for students planning graduate studies and professional careers in geology and the Bachelor of Science Program for prospective teachers of earth science. Three options within the major allow students flexibility to choose studies preparing them for career options that best suit their interests, from classical geology to environmental geosciences to resource management. Field excursions and practical laboratory experiences are integral to most courses. Majors pursue studies enriched with the closely related disciplines of mathematics, chemistry, physics, and biology. Students preparing for teaching also take courses in astronomy, meteorology, oceanography, and education.

CAREER OPPORTUNITIES

Employment opportunities in the geosciences described by the Geological Society of America for the new millennium are bright. Federal and state regulatory legislation regarding waste disposal and its relationship to clean water and clean air has greatly increased employment opportunities for geoscientists. Many new positions are created each year with consulting firms, industries, and state and local governmental agencies. These positions are being filled by persons with bachelor's and master's degrees, but the majority of employers prefer graduates with the Master of Science degree. Hiring in the petroleum industry has increased. Graduates with master's degrees have the best opportunities. The aging of the faculties of colleges and universities is beginning to result in employment opportunities for geoscientists in higher education. Now is an excellent time to begin preparation for such a career, and interested students should plan to attain a Ph.D. degree. According to national teacher-employment surveys, there are employment opportunities for earth science teachers in most regions of the U.S. Earth science teachers are employed in secondary schools where earth science is usually a required component of the science curriculum.

GRADUATE SCHOOL PREPARATION

The Geoscience Department has an excellent record of placement of graduates into master's and doctoral programs, and most graduates have received financial support for graduate study. Students who are considering graduate studies must supplement their curriculum with a minimum of a full year of chemistry, physics, and calculus. They should also take a summer field course in addition to their required degree program.

ADVISING

All geoscience and earth science majors must have an advisor from the Department of Geoscience. Students must keep in mind when planning schedules that many upper-division courses are offered on an every-other-year basis. Therefore, students should meet with their advisor on a regular basis to do long-range program planning for timely graduation. Geoscience minors are encouraged to meet with their academic advisor to review their progress in the program.

DEGREE OPTIONS

Geoscience Major

- **Geology Option:** Prepares students for graduate study or employment in classic geologic sub-disciplines, including mineralogy and petrology, structural geology, stratigraphy, sedimentology, petroleum exploration, and economic geology.
- **Environmental Science Option:** Prepares students for graduate study or employment in hydrogeology and environmental careers that focus on ground-water quality, ground-water quantity, contaminant problems, and related soil investigations.
- **Water Resources Management Option:** Prepares students for careers specifically addressing management issues related to water as a resource and the associated political, economic, philosophic, and social considerations.

Bachelor of Science (Teaching) Earth Science Major

The earth science major is designed for students who desire a secondary-school teaching career. The program conforms to the Minnesota Board of Teaching licensure standards.

PASS/NO CREDIT COURSES

All courses in the Geoscience Department must be taken on a grade-only basis.

DEPARTMENTAL REQUIREMENTS

Geoscience majors and minors must achieve a grade of "C" or better in all geoscience courses numbered 240 and higher. For a checklist of the University's graduation requirements, see page 24.

* Course may be used to satisfy certain University Studies requirements.

GEOSCIENCE HONORS PROGRAM

The Geoscience Department offers students the option to engage in independent research culminating in an honor's thesis. Geoscience majors maintaining a minimum 3.0 GPA are eligible to participate in the program. Refer to the departmental website for complete eligibility requirements and expectations.

B.S. MAJOR – GEOSCIENCE: GEOLOGY OPTION

67-71 S.H. (No Minor Required)

CORE REQUIREMENTS (23 S.H.)

- 120 Dynamic Earth (4)
- 130 Earth & Life through Time (4)
- 220 Minerals & Rocks (4)
- 280 Field & Analytical Methods I (2)
- 330 Structural Geology (4)
- 340 Sedimentology & Stratigraphy (4)
- 475 Geoscience Seminar (1)

Note: Majors in all options are urged to take a geology summer field course prior to graduation. This can satisfy the requirement GEOS 480 or an upper-division elective.

REQUIRED COURSES (35–36 S.H.)

Geoscience (12 S.H.)

- 320 Optical Mineralogy & Petrology (4)
- 430 Chemistry & Physics of the Earth (3)
- 440 Basin Analysis & Tectonics (4)
- 480 Field & Analytical Methods II (1)

Chemistry (4 S.H.)

- * 212 Principles of Chemistry I (4)

Physics (4 S.H.)

Choose one of the following two courses:

- * 201 General Physics I (4) OR
- * 221 University Physics I (4)

Plus one (Chemistry or Physics) of the following (4 S.H.)

- * PHYS 202 General Physics II (4) OR
- * PHYS 222 University Physics II (4) OR
- * CHEM 213 Principles of Chemistry II (4)

Mathematics (6 S.H.)

- * 150, *155 Math for the Earth & Life Sciences I, II (3,3)

Computer Skills (2-3 S.H.)

Choose one of the following two courses:

- ENGR 205 Engineering Graphics (2) OR
- * CS 130 Visual Basic (3)

English (3 S.H.)

Choose one of the following two courses:

- 439 Technical Writing (3) OR
- 449 Scientific Writing (3)

GEOSCIENCE ELECTIVES (9–12 S.H.)

Select from the "Electives Pool" list (page 110), except for geoscience courses listed as requirements for the major.

B.S. MAJOR – GEOSCIENCE: ENVIRONMENTAL SCIENCE OPTION

122-126 S.H. (No Minor Required; this total includes University Studies requirements)

Alliance with environmental science options of other departments is given under "Environmental Science" on page 100.

UNIVERSITY STUDIES COURSES (30 S.H.)

Basic Skill Requirements (9 S.H.)

- ENG 111 College Reading and Writing (4)
- CMST 191 Fundamentals of Speech Communication (3)
- MATH (0 S.H.; included below with MATH 150, 155)

Courses selected from approved list of physical education activities courses (2)

Arts and Science Core (15 S.H.)

Humanities (6 S.H.)

Courses selected from approved list of humanities courses

Natural Science (0 S.H.)

(7 S.H. included below with CHEM 212, 213, PHYS 115, BIOL 241, 242)

Social Science (6 S.H.)

Courses selected from approved list of social science courses

Fine & Performing Arts (3 S.H.)

Courses selected from approved list of fine & performing arts courses

Unity and Diversity (6 S.H.)

Critical Analysis (0 S.H.)
(3 S.H. included below with GEOS 240)

Science & Social Policy (0 S.H.)
(3 S.H. included below with GEOS 225)

Multicultural or Global Perspectives (3 S.H.)

Courses selected from approved list of Multicultural or Global Perspectives courses

Democratic Institutions or Contemporary Citizenship (3 S.H.)

Courses selected from approved list of Democratic Institutions or Contemporary Citizenship courses

Note: Many courses required in the program outlined below can be used to satisfy certain requirements.

GEOSCIENCE CORE COURSES (23 S.H.)

- 120 Dynamic Earth (4)
- 130 Earth & Life through Time (4)
- 220 Minerals & Rocks (4)
- 280 Field & Analytical Methods I (2)
- 330 Structural Geology (4)
- 340 Sedimentology & Stratigraphy (4)
- 475 Geoscience Seminar (1)

Note: Majors in all options are urged to take a geology summer field course prior to graduation. This can satisfy the requirement GEOS 480 or an upper-division elective.

ENVIRONMENTAL SCIENCE OPTION REQUIREMENTS (20–21 S.H.)

- * 225 Environmental Geoscience (3)
- * 240 Hydrogeology (4)
- 315 Surficial Processes & Soils (4)
- 370 GIS and Imaging Techniques (3)
- 420 Applied Hydrogeology (4)
- 400 Directed Research in Geoscience (2-3)

OTHER REQUIRED COURSES (43–44 S.H.)

Biology (12 S.H.)

- * 241 Basics of Life (4)
- * 242 Organismal Diversity (4)
- 312, 313 General Ecology, Ecology Lab (4)

Chemistry (12 S.H.)

- * 212, *213, Principles of Chemistry I, II (8)
- * 320 Environmental Chemistry (4)

Mathematics (6 S.H.)

- * 150, *155 Math for Earth & Life Sciences I, II (6)

Physics (4 S.H.)

- * 115 Conceptual Physics (4)

Two of the following three courses (6 S.H.)

- BUSA 451 Environmental Law (3)
- ECON 315 Environmental & Natural Resources Economics (3)
- * POLS 340 Environmental Policy (3)

One of the following courses (3-4 S.H.)

- BIOL 315 Environmental Biology (3)
- BIOL 335 Plant Ecology (4)
- BIOL 360 Entomology (4)
- † BIOL 415 Ecology of Large Rivers (4) (See below)
- BIOL 420 Limnology (4)

- * CHEM 425 Analytical Chemistry I (4)

- * CHEM 436 Topics in Environmental Chemistry (3)

† If students take BIOL 415 as their elective from this group of courses, they may not choose BIOL 415 as an elective course under "Environmental Science Option Electives" below.

ENVIRONMENTAL SCIENCE OPTION ELECTIVES (6–8 S.H.)

(See Note below.)

Courses totaling 6–8 S.H. to be chosen from:

- GEOS 310 Non-renewable Natural Resources (3)
- GEOS 430 Chemistry & Physics of the Earth (3)
- GEOS 480 Field & Analytical Methods II (1)
- BIOL 415 Ecology of Large Rivers (4)
- * STAT 210 Statistics (3)
- BUSA 451 Environmental Law (3) OR
- ECON 315 Environmental & Natural Resources (3) OR
- * POLS 340 Environmental Policy (3)

Note: The courses selected as "Environmental Science Option Electives" must not duplicate the courses selected under "Other Required Courses" above.

B.S. MAJOR – GEOSCIENCE: WATER RESOURCES MANAGEMENT OPTION

59–60 S.H. (No Minor Required)

CORE REQUIREMENTS (23 S.H.)

- 120 Dynamic Earth (4)
- 130 Earth and Life through Time (4)
- 220 Minerals and Rocks (4)
- 280 Field and Analytical Methods I (2)
- 330 Structural Geology (4)
- 340 Sedimentology and Stratigraphy (4)
- 475 Geoscience Seminar (1)

Note: Majors in all options are urged to take a geology summer field course prior to graduation. This can satisfy the requirement GEOS 480 or an upper-division elective.

REQUIRED COURSES (34 S.H.)

Geoscience (15 S.H.)

- 110 Oceanography (4) OR
- 115 Meteorology (4)
- * 225 Environmental Geoscience (3)
- * 240 Hydrogeology (4)
- 315 Surficial Processes and Soils (4)

Math (3 S.H.)

- * 150 Math for the Earth and Life Sciences I (3)

English/Administrative Information Systems (3 S.H.)

- ENG 439 Technical Writing (3) OR
- ENG 449 Scientific Writing (3) OR
- ALS 333 Business Communications (3)
- Biology (4 S.H.)
- 415 Ecology of Large Rivers (4)

Political Science (3 S.H.)

- * 340 Environmental Policy Analysis (3)

Philosophy (3 S.H.)

- * 340 Philosophy of Science (3)

Economics (3 S.H.)

- 315 Environmental and Natural Resource Economics (3)

GEOSCIENCE ELECTIVES (2–3 S.H.)

Select from the "Electives Pool" list (page 110), except for geoscience courses listed as requirements for major.

B.S. MAJOR – EARTH SCIENCE (Teaching) 124–126 S.H.

128 S.H. required for graduation

The Minnesota Board of Teaching (BOT) had recently changed the requirements for teaching licensure when this catalog went to print. The Geoscience Department, in cooperation with other science departments and the College of Education, developed a new BOT-approved program (outlined below). Students should be aware that the program described below may change significantly in the near future, as the BOT considers changes to the Science Licensure programs; therefore, students should work closely with their academic advisor to ensure that they will be able

to graduate with a BOT-approved degree. Students graduating after September 1, 2001, must meet these new licensure requirements. The program outlined below will enable the student to apply for a 5–12 Science Licensure with an Earth Science Specialty.

In addition, work is underway to fully align the major program requirements with the requirements of the new University Studies Program. Some courses included in the major program below may be approved for University Studies credit in the future. The Geoscience Department is working in cooperation with other secondary licensure programs and the Education Department to ensure that teacher-licensure programs meet both BOT and University Studies requirements. See your academic advisor for more information.

Note: Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area listed below. Refer to these requirements in the Effective Educator Handbook or the Education Department section of this catalog (page 87). Students must gain admission to the Education Program before they enroll in Professional Education Sequence courses. See your academic advisor or the Department of Education Admissions Coordinator for more information.

UNIVERSITY STUDIES (USP) (22 S.H.)

Basic Skills (7 S.H.)

- English 111 College Reading and Writing (4)
- CMST 191 Fundamentals of Speech Communication (3)
- Physical Education (Filled by HHP 204 below) (0)
- Math (0) filled by major requirements below

Arts and Science Core (6 S.H.)

- Humanities (3) (filled by PHIL 240, Philosophy of Science below)
- Social Sciences (0) (3 S.H. filled by SPED 400 below;
3 filled by EDUC 305 below)

- Natural Science (0) (filled by major requirements below)

- Fine & Performing Arts (3)

- Unity and Diversity (6 S.H.)

- Critical Analysis (3 S.H.)

- Science & Social Policy (0) (3 S.H. filled by GEOS 225 below)

- Multicultural or Global Perspectives (0) (3 S.H. filled by
EDUC 308 below)

- Democratic Institutions or Contemporary Citizenship (3 S.H.)

Flag Requirements (12 S.H.)

- Writing Flag
- Oral Flag
- Mathematics/Statistics or Critical Analysis Flag

EARTH SCIENCE REQUIREMENTS (80–82 S.H.)

Geoscience Courses (34–36 S.H.)

- 105 Astronomy (4)
- 110 Oceanography (4)
- 115 Meteorology (4)
- 120 Dynamic Earth (4)
- 130 Earth & Life Through Time (4)
- 220 Minerals & Rocks (4)
- * 225 Environmental Geoscience (3)
- 280 Field & Analytical Methods I (2)
- 230 Paleontology (3) OR 340 Sedimentology & Stratigraphy (4) OR
- 315 Surficial Processes & Soils (4)
- 400 Directed Research (2–3)

OTHER REQUIRED COURSES (46 S.H.)

- BIOL 241* Basics of Life (4)
- BIOL 242* Organismal Diversity (4)
- CHEM 212*, 213* Principles of Chemistry I, II (8)
- PHYS 201*, 202* General Physics I, II (8)
- PHYS 311 Science Teaching Methods (4)
- MATH 150*, 155* Math for Earth & Life Sciences I, II (6)
- PHIL 240* Philosophy of Science (3) (counts as USP Humanities)
- HHP 204* Personal & Community Health (3) (counts as USP
Phys. Development & Wellness)
- SPED 400* Exceptional Children and Youth (3) (counts as USP
Social Sciences)
- WS 220* Power, Privilege, and Gender (3) (counts as USP
Multicultural Perspectives)

* Course may be used to satisfy certain University Studies requirements.

PROFESSIONAL EDUCATION SEQUENCE (32 S.H.)

EDUC 305*, 308*, 312, 429, 449, 459, 465 (Student Teaching)

Note: EDUC 305 and 312 must be taken together in the same semester; they will not be offered during the summer term.

OTHER REQUIREMENTS

In addition to the above course requirements, all students must demonstrate that they have:

1. Judged a local, regional, or state science fair, or mentored K-12 students on their science fair projects
2. Hosted a geoscience visit by a K-4 class
3. Hosted a geoscience visit by a 5-12 class
4. Worked as a departmental teaching assistant or peer tutor in geoscience.

B.S. MINOR – GEOSCIENCE

25-26 S.H.

REQUIRED COURSES (22 S.H.)

Geoscience (22 S.H.)

- * 120 Dynamic Earth (4)
- * 130 Earth & Life through Time (4)
- 220 Minerals & Rocks (4)
- 280 Field & Analytical Methods I (2)
- 330 Structural Geology (4)
- 340 Sedimentology & Stratigraphy (4)

GEOSCIENCE ELECTIVES (3–4 S.H.)

May be chosen from any departmental course offerings 300-level and above, except for GEOS 399.

ELECTIVES POOL (for all geoscience majors):

- * 225 Environmental Geoscience (3)
- 230 Paleontology (3)
- * 240 Hydrogeology (4)
- 310 Non-renewable Natural Resources (3)
- 315 Surficial Processes & Soils (4)
- 320 Optical Mineralogy & Petrology (4)
- 370 GIS & Imaging Techniques (3)
- 385 Geology of North America (3)
- 399 Geoscience Internship (1-3)
- 400 Directed Research, Geoscience (1-3)
- 405 Current Topics in Geoscience (1-3)
- 420 Applied Hydrogeology (4)
- 430 Chemistry & Physics of the Earth (3)
- 440 Basin Analysis & Tectonics (4)

GEOSCIENCE COURSE DESCRIPTIONS

100 - Minnesota's Rocks and Waters—3 S.H.

Introduction to Minnesota's geological history focusing on such topics as: Minnesota's rock record and history, fossils, mining, soils, lakes, rivers and ground water. Lecture, no laboratory. Offered on demand.

103 - Natural Disasters—3 S.H.

An investigative exploration of significant geohazards impacting the earth with emphasis on volcanoes, earthquakes, landslides and other hill slope failures, hurricanes and tornadoes, pollution and floods. Geologic processes governing each type of disaster are explored. Prediction, impacts and mitigation potential for each hazard are examined. Lecture, no laboratory. Offered yearly in the spring semester.

105 - Astronomy—3 or 4 S.H.

History of astronomy. Study of the planets, their moons, comets, asteroids, meteors and other planetary bodies. Origin of the universe, solar system, sun and other stars. Lecture. Laboratory and observation optional. Offered yearly in the fall semester.

110 - Oceanography—3 or 4 S.H.

Introduction to oceans including the ocean floor, marine sediments, composition of sea water, ocean currents, waves and tides, marine biology and oceanic resources. Lecture. Laboratory optional. Offered alternate years in the spring semester.

115 - Meteorology—4 S.H.

Study of earth's dynamic weather system including atmospheric structure, composition, and processes; origin and development of storms

and related phenomena. Lecture and laboratory. Offered alternate years in the spring semester.

120 - Dynamic Earth—4 S.H.

An introduction to geologic principles and the processes shaping planet Earth. Composition and distribution of earth materials; examination of internal processes and their relationship to the distribution of continents over time; surficial processes and environmental problems. Lecture and laboratory. Offered each semester.

130 - Earth and Life Through Time—4 S.H.

Traces the physical, chemical and biological evolution of the Earth from the origin of the solar system to the present including origin and evolution of earth's crust, interior, hydrosphere and atmosphere; plate tectonics and mountain building; absolute age dating; paleomagnetism. Lecture and laboratory. Field trips required. Prerequisite: GEOS 120 or equivalent. Offered yearly in the spring semester.

220 - Minerals and Rocks—4 S.H.

Introduction to minerals as naturally occurring inorganic chemical compounds. Physical and chemical properties of minerals, classification and description of minerals, with emphasis on rock-forming minerals. Classification, description and interpretation of major rock groups. Lecture and laboratory. Prerequisite: GEOS 120 or instructor's permission. Offered yearly in the fall semester.

225 - Environmental Geoscience—3 S.H.

Study of geologic and hydrologic processes operating in various terrestrial environments, including how these processes relate to land use, land-use planning and geologic hazards. Includes investigation of impact of human activity on natural systems. Lecture and laboratory. Prerequisite: GEOS 120 or instructor's permission. Offered alternate years in the fall semester.

230 - Paleontology—3 S.H.

Evolution, classification, and geologic significance of major invertebrate and vertebrate groups. Lecture and laboratory. Required field trips. Prerequisite: GEOS 130 or instructor's permission. Offered alternate years in the spring semester.

240 - Hydrogeology—4 S.H.

Examination of the hydrologic cycle and surface-water and ground-water relationships. Study of interrelationship of water and earth materials, including ground-water occurrence, movement and determination of aquifer characteristics. Lecture and laboratory. Prerequisite: GEOS 130. Offered yearly in the fall semester.

280 - Field and Analytical Methods I—2 S.H.

Basic geologic field techniques including sampling methods, rock identification, field descriptions and use of Brunton compass. Measurement and description of stratigraphic sections. Prerequisite: ENG 111 and instructor's permission. Corequisite: GEOS 220. Offered yearly in the fall semester. Field trips required.

310 - Non-Renewable Natural Resources—3 S.H.

Origin and geologic environment of economic mineral deposits. Availability, exploitation, and management of non-renewable resources including metallic and non-metallic minerals, ground water, and energy resources. Lecture only. Prerequisite: GEOS 220. Offered on demand.

315 - Surficial Processes and Soils—4 S.H.

Study of the nature and evolution of landforms and materials at or near earth's surface. Analysis of landforms using topographic maps and aerial photographs. Soil-forming processes and soil classification. Lecture and laboratory. Prerequisite: GEOS 130. Offered alternate years in the fall semester.

320 - Optical Mineralogy and Petrology—4 S.H.

Theory of optical mineralogy. Optical properties of minerals determined by petrographic microscope. Introduction to major sedimentary, igneous, and metamorphic rocks; mineral equilibria and stability, mineralogic phase rule and metamorphic facies. Rock identification by megascopic and petrographic techniques. Lecture and laboratory. Prerequisite: GEOS 220. Offered alternate years in the spring semester.

330 - Structural Geology—4 S.H.

Study of faulting, folding, mechanics of rock deformation and structural techniques. Principles of plate tectonics and mountain building. Lecture and laboratory. Prerequisite: GEOS 220. Offered yearly in the spring semester.

340 - Sedimentology and Stratigraphy—4 S.H.

Physical, chemical and biological processes that affect sedimentation and depositional systems. Study of stratigraphic nomenclature and correlation, facies models and depositional sequences, eustatic changes of sea level, and plate tectonics. Lecture, laboratory and required field trips. Prerequisite: GEOS 220 and ENG 111. Offered yearly in the fall semester.

370 - GIS and Imaging Techniques—3 S.H.

Techniques of using aerial photographs, remote sensing, and GIS for geological applications. Prerequisite: CMST 191, GEOS 130, and instructor's permission. Offered alternate years in the spring semester.

385 - Geology of North America—3 S.H.

Study of the physiographic provinces of the North American continent with emphasis on geomorphology, structural history, stratigraphy and mineral deposits of each province. Lecture and laboratory. Prerequisite: GEOS 220. Offered on demand.

399 - Internship—1-3 S.H.

Supervised governmental agency, business, industrial or research institution experience designed by Geoscience faculty advisor, work supervisor and student. Open only to Geoscience students with Junior or Senior standing, math/science GPA 2.5 or better, and approval by the Geoscience Department. Offered each semester.

400 - Directed Research-Geoscience—1-3 S.H.

Independent study of selected geologic field and/or laboratory problem with subsequent preparation of written report and oral seminar. May be repeated up to 6 credits. Prerequisite: department chairperson's permission. Offered each semester.

405 - Current Topics in Geoscience—1-3 S.H.

Analysis of current topics and issues relevant to Geosciences. Subject matter and prerequisites will be announced in advance by the department. May be repeated as topics change. Offered on demand.

420 - Applied Hydrogeology—4 S.H.

Application of hydrologic principles to ground-water flow problems, aqueous geochemistry, and contaminant studies. Techniques of water-well development, aquifer tests, determination of ground-water chemistry. Use of computer models and other analytical tools. Lecture and laboratory. Prerequisite: GEOS 240 and MATH 155. Offered alternate years in the spring semester.

430 - Chemistry and Physics of the Earth—3 S.H.

Application of chemical and physical principles to geologic problems. Chemistry of formation of major rock groups. Isotopic and elemental distribution and abundance. Physics of Earth's interior as determined from study of seismic activity. Application of seismic reflection and refraction principles. Lecture only. Prerequisite: CHEM 212, PHYS 201, GEOS 330 and GEOS 340. Offered alternate years.

440 - Basin Analysis and Tectonics—4 S.H.

Interpretation of the stratigraphic record to understand the development of sedimentary basins in a plate tectonic context. Study of sequence stratigraphy, eustatic changes in sea level, and fluid flow in basins. Lecture and laboratory. Prerequisite: GEOS 340. Offered alternate years in the spring semester.

475 - Geoscience Seminar—1 S.H.

Critical reading, discussion, and oral presentation of current topics and controversies in geosciences. Focus on professional journals and other scientific media. Prerequisite: Senior standing in Department or instructor's permission. Offered yearly in the spring semester.

480 - Field and Analytical Methods II—1 S.H.

Advanced geologic field techniques including mapping, correlation, and problem solving. Includes some laboratory sample preparation and analysis. Prerequisite: GEOS 280, GEOS 340 and instructor's permission. Offered alternate years.

GLOBAL STUDIES

Minne Hall, Room 122 (507-457-5415)

www.winona.edu/globalstudies

Yogesh Grover, (Director)

PURPOSE

Global Studies is an interdisciplinary program designed to address students' needs to prepare themselves for a world that is increasingly interrelated economically, politically and culturally. Through the Global Studies Program, students are able to locate information about existing opportunities for international exposure, to design an academic program that capitalizes on those opportunities, and to meet other students and faculty who share an interest in global issues.

The Global Studies Program (GSP) is designed to serve all WSU students. Student participation can involve any of the following possibilities:

1. Academic Degrees: Students may be interested in major and minor degree programs that are designed with an international focus. Students should consult the GSP Office during the fall semester to obtain information about these options.
2. Co-Curricular Activities: The Global Studies Program sponsors or co-sponsors a number of activities that provide exposure to global/cultural issues. Students are encouraged to take advantage of the many valuable learning experiences outside the classroom. Activities include conferences, speakers, panel discussions and presentations. Information on specific events is available through the GSP Office.
3. Study Abroad: Students are encouraged to consider studying abroad as a way of broadening their university experience and enhancing their resumes by including a living and learning experience in a foreign country. In addition to programs sponsored by WSU, students may select programs through other universities. For specific information, students should consult the Study Abroad topic on page 30, or make an appointment with the Study Abroad Office in Lourdes Hall, Room 156 (453-2517). Preliminary information is also available from the Student Answer Center in Kryzsko Commons (457-2472).

Students interested in any of these opportunities are encouraged to make an appointment with the GSP Director.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. The P/NC option is available to non-majors and non-minors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

GLOBAL STUDIES MINOR

The global studies minor provides students with a broad spectrum of courses that are interdisciplinary and cross-cultural. Students who minor in global studies graduate not only with solid preparation in their major field of study, but also with knowledge of global issues. In an increasingly globalizing world, such knowledge can be extremely beneficial in understanding how the dynamic of global forces affects our lives, and indeed, our careers.

* Course may be used to satisfy certain University Studies requirements.

B.A. MINOR – GLOBAL STUDIES

29-32 S.H. (Minimum of 9 credit hours at the 300-400 level.)

CORE REQUIREMENTS (6 S.H.)

Global Studies

- * 200 Introduction to Global Studies (3)
- 400 Global Studies Seminar (3)

COMPARATIVE COURSES (6–9 S.H.)

Choose from the following:

Communication Studies

- CMST 381 Advanced Intercultural and International Communication (3)

Economics and Finance

Choose one of the following three courses:

- ECON 404 International Economics (3) OR
- ECON 415 International Economic Development (3) OR
- FIN 440 International Finance (3)

Education

- EDUC 450 Comparative Education (3)

Geography

Choose one of the following two courses:

- * GEOG 110 World Regional Geography (3) OR
- * GEOG 213 Cultural Geography (3)

Music

- * MUS 114 World Music (3)

Political Science

Choose one of the following three courses:

- * POLS 130 Introduction to International Relations (3) OR
- * POLS 135 Comparative Political Systems (3) OR
- POLS 390 Comparative Politics of the Third World (3)

Sociology

Choose one of the following two courses:

- SOC 340 Social Cultural Anthropology (3) OR
- SOC 411 Sociology of Religion (3)

FOREIGN LANGUAGE (8 S.H.)

The 8 credits must be earned in one language. Students are required to complete at least the equivalent of the first year of university-level foreign language. The requirement can be fulfilled by the completion of 8 credits of language study at WSU or through language proficiency evaluation. Students should consult the Foreign Language Department for language proficiency tests. Languages offered at WSU are French, German, and Spanish.

International students have the option of having their foreign language requirements waived by the GSP Director if they take courses with equivalent number of credits from the list of electives in the Global Studies Program.

ELECTIVES (6–9 S.H.)

The following list of electives includes courses that take a global or area studies approach. Students are encouraged to choose electives that complement their major or that focus on a global issue or an area studies specialization. (Students are responsible for satisfying any prerequisites associated with the electives they choose.) If students have a special interest in a course not listed, they should consult with the GSP Director for additional approved courses.

Art

- ART 437 Nineteenth Century Art
- ART 438 Early Twentieth Century Art
- ART 439 Later Twentieth Century Art

Business Administration (Management)

- BUSA 411 International Business Law
- MGMT 447 International Labor Relations
- MGMT 455 International Business
- MGMT 475 Seminar in International Management
- MGMT 477 International Human Resource Management

Communication Studies

- CMST 381 Advanced Intercultural and International Communication

Economics and Finance

- ECON 404 International Economics
- ECON 415 International Economic Development

- FIN 440 International Finance

Education

- EDUC 450 Comparative Education

English

- ENG 220 Topics in World Literature
- ENG 432 European and Non-Western Literature

Foreign Languages

- FREN 204 Special Topics in French Literature
- FREN 205 Special Topics in French Culture
- FREN 301 French Composition
- FREN 302 French Civilization and Culture
- FREN 402 French Literature I
- FREN 403 French Literature II
- FREN 404 French Literature III
- GERM 204 Special Topics: German Literature
- GERM 205 Special Topics: German Culture and Language
- GERM 302 German Composition and Conversation
- GERM 303 German Culture and Civilization
- GERM 401 Early Medieval to Baroque Literature
- GERM 402 Eighteenth and Nineteenth Century Literature
- GERM 403 Twentieth Century Literature
- SPAN 204 Special Topics in Hispanic Literature
- SPAN 301 Spanish Composition and Conversation
- SPAN 302 The Culture of Spain
- SPAN 303 The Culture of Latin America
- SPAN 401 Spanish Literature I
- SPAN 402 Spanish Literature II
- SPAN 403 Latin American Literature

History

- HIST 123 East Asian Civilization
- HIST 165 Latin American History
- HIST 170 African Civilization
- HIST 233 History of Mexico
- HIST 325 American Diplomatic History
- HIST 335 The Holocaust
- HIST 440 World War II
- HIST 461 Latin American Social Revolution
- HIST 469 History of Brazil

Marketing

- MKTG 331 International Marketing

Mass Communication

- MCOM 450 International Broadcasting

Music

- MUS 114 World Music
- MUS 115 Music of East and Southeast Asia
- MUS 116 Music of the Americas
- MUS 351 Music of the Middle Ages
- MUS 352 Music of the Classical Period, 19th and 20th Centuries

Political Science

- POLS 130 Introduction to International Relations
- POLS 135 Comparative Political Systems
- POLS 205 United Nations in World Affairs
- POLS 224 Politics and Society in Latin America
- POLS 225 Ethnic Conflict and Nationalism
- POLS 226 Politics and Society in Africa
- POLS 270 Politics and Society in the Middle East
- POLS 332 European Political Systems
- POLS 335 Latin American Political Systems
- POLS 336 Post-Communist Political Systems
- POLS 337 Asian Political Systems
- POLS 342 International Political Economy
- POLS 346 International Law
- POLS 347 International Organization
- POLS 390 Comparative Politics of the Third World
- POLS 488 Issues in International Politics

Residential College (RESC) Courses

- RESC 232 Interdisciplinary Approach to an Overview of Latin America and the Caribbean
- RESC 233 Interdisciplinary Approach to Latin American and Caribbean Immigrants in U.S. Society
- RESC 234 Interdisciplinary Approach to Gender and Latin American Society through 20th Century Literature
- RESC 235 Interdisciplinary Approach to Women and Social Justice Issues in Latin America

Note: For descriptions of the RESC courses, see Residential College on page 184.

Sociology

SOC 340	Social Cultural Anthropology
SOC 411	Sociology of Religion
SOC 440	Sociology of Dying and Death

GLOBAL STUDIES (GS) COURSE DESCRIPTIONS**200 - Introduction to Global Studies-3 S.H.**

This course introduces students to a framework for viewing the world as a unit and explores a variety of contemporary global issues such as economic development, environmental problems, status of women, world population and its implications, ethnic conflicts, etc. Offered every semester.

350 - Cross-Cultural Field Experience-1-9 S.H.

The cross-cultural field experience is typically part of a WSU-approved Study Abroad Program. The field experience gives students an opportunity to explore cultural issues through experiences outside the classroom situation and to integrate direct cultural experiences with theoretical understanding of cultural issues. May be repeated for up to 9 semester hours. This course cannot be used to fulfill University Studies credit. Prerequisite: permission of the instructor and the GSP Director.

400 - Global Studies Seminar-3 S.H.

This course allows students to engage in an in-depth examination of global issues, using a cross-disciplinary approach. Offered yearly. Prerequisite: GS 200.

460 - Independent Study-1-9 S.H.

Directed independent work on specific topics of interest to the student. The course topics, requirements, meeting times and number of semester hours are to be determined through consultation with the instructor. Repeatable for credit up to a total of 9 semester hours. Prerequisite: permission of the instructor and GSP Director.

HEALTH & HUMAN PERFORMANCE

Memorial Hall, Room 122 (507-457-2600)

www.winona.edu/hhp/

Miller (Chairperson)

FACULTY

Dawn Anderson, Professor; B.A., University of Minnesota-Morris; M.S., Iowa State University; Ph.D., Ball State University, Muncie (IN); 1992-
Phillip Appicelli, Assistant Professor; B.A., College of St. Scholastica; M.A., Ph.D., Kent State University; 1998 -
Amy Fisher, Assistant Professor; B.A., Luther College; M.S., Northern Michigan University; 1995 -
Gail Grimm, Professor; B.S., University of Wisconsin-Platteville; M.S., University of Wisconsin-Madison; Ph.D., University of Arkansas-Fayetteville; 1989 -
Gary Kastello, Assistant Professor; B.S., University of Wisconsin-La Crosse; M.A., Ball State University; Ph.D., University of Wisconsin-Milwaukee; 1997 -
Randolph W. Miller, Professor; B.P.E., University of Manitoba (Canada); M.A., Ph.D., University of Minnesota-Twin Cities; 1974 -
Shellie Nelson, Associate Professor; B.S., Winona State University; M.S., University of Wisconsin-La Crosse; 1988 -
Kyle Poock, Instructor, Women's Basketball Coach; B.S., M.S., Winona State University; 1995 -
Brian Zeller, Assistant Professor, Co-Head Athletic Trainer, B.S., University of Wisconsin-La Crosse; M.S., Indiana State University; 2000 -

PURPOSE

The Department of Health and Human Performance is committed to preparing competent, entry-level exercise physiologists, health educators, and athletic trainers who can serve the needs of Minnesota and the global community. In order to fill this fundamental mission, the faculty:

- Provide instruction in health education pedagogy, basic science, and clinical sciences.
- Facilitate the professional development of the students through sound instruction, scholarly activity, and demonstrated service.

The department fosters the development of physical, social, emotional, recreational, clinical and culturally diverse skills to enhance the human behavior and well-being of all populations. The department is committed to the Seven Principles for Good Practice in Undergraduate Education: student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectations, diverse talents and ways of learning.

PRE-PROFESSIONAL SEQUENCES

Pre-professional sequences do not lead to degrees at WSU; rather, pre-professional programs are preparatory for degrees at another college or university. The Health and Human Performance Department offers a pre-physical therapy and a pre-health science sequence.

Most pre-physical therapy students major in the Biology Allied Health Option. Students in the Department of Health and Human Performance typically choose Exercise Science: Athletic Training Option as their major. Dr. Gary Kastello is the Pre-Physical Therapy Advisor and is responsible for advising students on the selection of courses that help them prepare for admission to a school of physical therapy. For more information about pre-physical therapy and pre-health science, see the Pre-Professional Sequences section.

SCHOLARSHIPS

A number of scholarships are available for school and community health and exercise science majors. Students should inquire about scholarships early in the academic year. A complete listing explaining the criteria for each scholarship is available in the Health and Human Performance Department office.

INSURANCE

Both student teaching and internships require professional liability insurance. Students of Minnesota State Colleges and Universities participating in practica and internships are insured by the Chicago Insurance Company through its agent Maginnis and Associates for \$1,000,000 each incident/occurrence and \$3,000,000 in the Aggregate. A \$10.00 fee for the student professional liability coverage is payable to WSU Business Office.

Student teachers may purchase liability insurance (\$16.00/year) directly from the student chapter of the Education Minnesota Student Program (EMSP). Students should contact their advisor for more information.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in the major, minor, options, concentrations and licensures on a grade-only. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit only or grade only basis are so designated in the course descriptions.

* Course may be used to satisfy certain University Studies requirements.

B.S. MAJOR – SCHOOL AND COMMUNITY HEALTH EDUCATION

A student choosing to major in school and community health education may choose from one of the three options: non-teaching, teaching, and public administration. Each option leads to a Bachelor of Science degree. All three of the options within the school and community health education major allow for many career opportunities. With this B.S. degree, one should be able to meet the Competencies of Entry-Level Health Educators. Students should contact their academic advisor immediately after they declare their major; the academic advisor can provide valuable career information.

The Health and Human Performance Department encourages its school and community health education majors to become members of its academic club, H.O.P.E. (Health Organization for Promotion and Education), and to maintain physically active and healthful lifestyles. Student teaching experiences and internships are designed to allow students to practice their major at an actual school or agency.

B.S. Major-School And Community Health Education (Non-Teaching)

57 S.H. (No Minor Required)

Note: Students majoring in school and community health education (non-teaching) must meet all requirements for graduation specified in the academic policies section of this catalog (page XX).

REQUIRED COURSES 42 S.H.

HHP (34 S.H.)

- * 204 Personal & Community Health (3)
- 288 Health Perspectives (3)
- 311 Comprehensive School Health Program (2)
- * 326 Educational Topics/Issues (2)
- 328 Behavioral Interventions (3)
- * 403 Epidemiology (3)
- 410 Program Planning in Health Promotion (3)
- 430 Public Health (4)
- * 433 Senior Health Seminar (1)
- 496 Health Education Internship (10)

Biology (8 S.H.)

- * 211 Anatomy & Physiology I (4)
- * 212 Anatomy & Physiology II (4)

ELECTIVES (15 S.H.)

Administrative Information Systems - 332, 441
Biology - 104, 171, 172, 203, 206, 209, 269
Communication Studies - 281, 282, 371
Counselor Education - 220, 432
Education - 309, 442
Geography - 213
Health Care Management - 213
Health & Human Performance - *205, 320, 354, 431, 490
Marketing - 300, 323
Nursing - 260, 480
Physical Education & Recreation - *214, 422
Political Science - 340, 341, 426
Psychology - 250, 298, 325, 365, 424
Sociology - 212, 216, 350, 412, 434, 440, 450
Special Education - 400, 405
Statistics - *110

B.S. MAJOR – SCHOOL AND COMMUNITY HEALTH EDUCATION (Teaching)

49 S.H.

REQUIREMENTS

1. Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area.
2. For admission into the Professional Education Sequence, students majoring in school and community health education (teaching) must have both a 2.75 overall GPA and a 2.50 GPA in the major. For more information about these requirements, refer to the Effective Educator Handbook or to the Education Department section of this catalog (page 87).

REQUIRED COURSES (35 S.H.)

HHP (27 S.H.)

- * 204 Personal & Community Health (3)
- 288 Health Perspectives (3)
- 311 Comprehensive School Health Program (2)
- 320 Health Education in the Elementary School (3)
- * 326 Educational Topics/Issues (2)
- 328 Behavioral Interventions (3)
- 410 Program Planning in Health Promotion (3)
- 425 Organization and Administration of School Health (3)
- 430 Public Health (4)
- * 433 Senior Health Seminar (1)

Biology (8 S.H.)

- * 211 Anatomy & Physiology I (4)
- * 212 Anatomy & Physiology II (4)

ELECTIVES (14 S.H.)

Administrative Information Systems - 332, 441
Biology - 104, 203, 206, 209, 269
Communication Studies - 281, 282
Counselor Education - 220, 432
Health & Human Performance - *205, 354, 403, 431, 490, 496
Nursing - 260
Physical Education & Recreation - *214, 422
Political Science - 340
Psychology - 250, 298, 365
Sociology - 212, 216, 350, 412, 434, 440, 450
Special Education - 400, 405
Statistics - *110

B.S. MAJOR—SCHOOL AND COMMUNITY HEALTH: PUBLIC ADMINISTRATION OPTION

74 S.H. (No Minor Required)

REQUIRED COURSES 43 S.H.

HHP (34 S.H.)

- * 204 Personal & Community Health (3)
- 288 Health Perspectives (3)
- 311 Comprehensive School Health Program (2)
- * 326 Educational Topics/Issues (2)
- 328 Behavioral Interventions (3)
- * 403 Epidemiology (3)
- 410 Program Planning in Health Promotion (3)
- 430 Public Health (4)
- * 433 Senior Health Seminar (1)
- 496 Health Internship (10)

Biology (8 S.H.)

- * 211 Anatomy & Physiology I (4)
- * 212 Anatomy & Physiology II (4)

ELECTIVES (15 S.H.)

Biology - 104, 171, 172, 203, 206, 209, 269
Communication Studies - 281, 282, 371
Counselor Education - 220, 432
Education - 309, 442
Geography - 213
Health Care Management - 213
Health & Human Performance - *205, 320, 354, 431, 490
Marketing - 300, 320
Nursing - 260, 480
Physical Education & Recreation - *214, 422
Political Science - 340, 341, 426
Psychology - 250, 298, 365
Sociology - 212, 216, 350, 412, 434, 440, 450
Special Education - 400, 405
Statistics - *110

OTHER DEPARTMENTAL REQUIREMENTS (9 – 12 S.H.)

Political Science (6-9 S.H.)

- 221 State & Local Government (3)
- 228 Public Service (3)
- 426 Politics of Public Budgeting (3)

Administrative Information Systems (3 S.H.)

- 333 Business Communications (3)
441 Training Techniques and Media (3)

ELECTIVES (8 S.H.)

- Administrative Information Systems- 340, 360, 410, 412, 435
Business Administration - 202
Philosophy - 330
Political Science - 320, 322, 340

B.S. MAJOR—EXERCISE SCIENCE

72 – 81 S.H. (No Minor Required)

Exercise science majors may choose one of three options: Worksite Health Promotion, Cardiopulmonary Rehabilitation, or Athletic Training. Each of these options leads to a Bachelor of Science degree. All three of the options allow students to prepare for many career opportunities such as graduate study in related disciplines or placement in the rapidly expanding allied health workforce. Additional information on exercise science career opportunities can be found at www.acsm.org and www.css.edu/asep/. The academic advisor for each option can also provide information pertaining to career opportunities.

Practica and internships are designed to allow students to practice their major at an actual worksite. Practicum and internship worksites require professional liability insurance, current certification in CPR and first aid certification.

The Health and Human Performance Department encourages its exercise science majors to become members of its academic clubs and to maintain physically active and healthful lifestyles.

Four-Year Graduation Guarantee

The Exercise Science Program offers a four-year graduation guarantee. The conditions of this guarantee require that students declare a major as entering first-year students, maintain a semester load of 16 credits each semester, and complete program requirements without repeating any courses (except for internships). Students should contact the department chairperson for additional information about this program.

Admission to the Exercise Science Major

Students who have completed BIOL 211, BIOL 212, STAT 110 or STAT 210, and ENG 110 with a "C" or better and who have a cumulative GPA of 2.50 or higher may apply for admission to the exercise science major.

Admission to the exercise science major is a two-step process. The first step is for the student to be admitted to WSU and to declare exercise science as his/her major. Once the student's declaration of a major is processed, an academic advisor will be assigned to assist the student with his/her academic plans.

The second step is for the student to apply for admission to the exercise science major. This application is generally completed during the student's second year; transfer students should confer with the department chairperson. Note that the athletic training option of the exercise science major has a separate application process.

Academic Requirements

For a checklist of the University's graduation requirements, see page 24. Specific academic requirements for exercise majors are as follows:

- Earn a grade of C or above in each required exercise science course. Grades less than "C" constitute a failure in the exercise science major.
- Adhere to the policies and procedures as outlined in the handbook for each exercise science option.

REQUIRED COURSES (45 S.H.)**HHP (28 S.H.)**

- * 235 Professional Issues in Exercise Science (3)
- 280 Techniques of Fitness Programming (2)
- 291 Prevention & Care of Athletic Injuries (2)
- 314 Anatomical Kinesiology (2)
- * 340 Physiology of Exercise (4)
- 360 Nutrition for the Physically Active (3)
- 370 Mechanical Kinesiology (3)
- * 380 Laboratory Methods in Exercise Science (3)
- * 403 Epidemiology (3)

- * 445 Medical Aspects of Exercise (3)

PER (2 S.H.)

- 300 Motor Learning (2)

Biology (8 S.H.)

- * 211 Anatomy & Physiology I (4)
- * 212 Anatomy & Physiology II (4)

Nursing (4 S.H.)

- 360 Pharmacology (1)
- 66 Pathophysiology (3)

Statistics (3 S.H.)

- * 110 Fundamentals of Statistics (3) OR
- 210 Statistics (3)

**EXERCISE SCIENCE:
ATHLETIC TRAINING OPTION**

The athletic training option is a nationally accredited program, accredited by the Commission for Accreditation of Allied Health Education Programs (CAAHEP). In addition to the academic coursework requirements, students are required to complete a comprehensive outcome-based clinical education program. Students should expect to complete a minimum of 1,000 hours of clinical education as assigned by the Athletic Training Program Director. Following completion of the clinical education and academic requirements of the major, students will be eligible for national certification from the National Athletic Trainers' Association Board of Certification (NATABOC).

Application and Selection Information

Students interested in the athletic training major must apply to the program, participate in a competitive selection process, and adhere to published retention guidelines. Applications must be submitted on the first Monday of April each year.

Students should meet with the Athletic Training Program Director as early as possible after enrolling at WSU. They should enroll in HHP 191 (Introduction to Athletic Training), BIOL 211, and BIOL 212 during their first year at WSU as these are among the prerequisites for admission. Applications will be rated and ranked by academic class; students will be selected for interview. The selection committee will determine the number of students selected from each academic class; this number directly correlates with the number of clinical educators available each year.

Each applicant must complete the following requirements.

- Official documentation should be sent from the following institutions to the program director (10 points).
 - WSU transcript. Students must have completed HHP 191, HHP 235, HHP 291 HHP 340, HHP 314, BIOL 211, and BIOL 212. Students must have a minimum 2.75 cumulative GPA.
 - For transfer students, official transcripts for all other institutions attended. Transfer students must take HHP 191 at WSU, and they must participate in all application and selection procedures at WSU. Transfer students must meet all University guidelines given in this catalog for transfer students (page 7); must take HHP 362, 345, 389, 391, 392, 393, 491, 494, and 495 at WSU; and complete all clinical education requirements at WSU.
 - Copy of high school transcript.
 - Proof of first aid and CPR certification.
 - Completed medical physical (Form available from Athletic Training Program Director).
 - Completed technical standards (Form available from Athletic Training Program Director).
 - Proof of Hepatitis B vaccination (or waiver).
- Winona State University clinical education and log (10 points). Each student will complete clinical education in the WSU Athletic Training Room as required for HHP 191. Students will be given the opportunity to continue their clinical education throughout the academic year for a total of no more than 100 clinical education hours per year.
- Observation Hours at a Sports Medicine Clinic (5 points). Pre-professional students are required to perform a minimum of ten observation hours at a sports medicine clinic of his/her choice with a certified athletic trainer. These hours may be performed during University breaks and over the summer in a clinic location other than Winona. (This ATC could be one of the professional references.)
- Letters of Recommendation (13 points). Each student must provide a total of five letters of recommendation. Two of these letters should be
 - * *Course may be used to satisfy certain University Studies requirements.*

written by a senior athletic trainer student and should reflect on the student's day-to-day interaction in the athletic training room. Three letters of recommendation may be labeled "professional" recommendations. These letters might be written by either of the following:

- Professionals in the medical, health, or allied health field who have worked directly with the student through observation hours and who can assess the student's potential to succeed in an allied health profession.
- Professors or instructors who can assess the student's academic success and potential.
- Employers who can reflect on the student's maturity, interpersonal skills, and other qualities of a successful allied health care professional.

5. Cover letter and resume (4 points). The student should include a single-spaced essay or cover letter stating the student's qualifications for this program, stating why the student wishes to become an athletic trainer, and summarizing what the student can add to the program. A one-page resume should also be included. All the materials listed above should be professionally presented in a soft covered portfolio (NO hard cover or three-ring binders). Each application will be kept on file in the program director's office.

Pre-Professional Program (typically first- and sophomore-year students)

- Students enrolled in HHP 191 will extensively cover clinical expectations, duties and application procedures. (WSU Athletic Training Handbook)
- Pre-professional students are expected to perform clinical hours each semester as assigned by the Program Director. Students may obtain a maximum of 100 hours per year prior to acceptance.
- Pre-professional students are also required to perform a minimum of ten observation hours at a sports medicine clinic of his/her choice as part of the application process.
- Applications to the clinical education program are accepted on the first Monday in April each year. (see WSU Athletic Training Handbook for specific requirements)

Pre-Admission Program (typically sophomores)

The pre-admission program is designed for sophomore-level students. This program enhances second-year clinical educational experiences by providing more hands-on learning opportunities with an approved clinical instructor. Students who have been pre-admitted are identified as students that are on the right track for formal admission in the spring. Students who do not qualify for pre-admission may also formally apply to the program in the spring.

Requirements for pre-admission program:

- Completion of a minimum of 24 semester hours (WSU and/or transfer credits).
- Successful completion of HHP 191, BIOL 211 and BIOL 212.
- Currently meet all academic selection criteria: overall and major GPA of at least a 2.75 (WSU and/or transfer credits).
- Currently meet all clinical education requirements.
- Successful completion of freshman clinical education proficiencies. These proficiencies are completed as part of HHP 191 and are reviewed by an approved clinical instructor, who will provide the student feedback for each proficiency.
- Clinical education observation logs are also required for HHP 191. After completing HHP 191, students are required to complete a log each semester and submit it to the program director for review and comments.
- Pre-admitted students must complete formal application prior to their junior year. Students who are not pre-admitted may still apply.

Athletic Training Student Program (Juniors/Seniors)

- Following successful completion of the application process, students must acquire clinical education over two calendar years as assigned by the program director. These hours will be on a rotation as described in the WSU Athletic Training Handbook and be acquired at a variety of

settings with several approved clinical instructors. Students must comply with all academic and clinical retention guidelines.

- Athletic training students must record their hours each month, have their approved clinical instructor sign-off on the hours at the time of the monthly evaluation, and be responsible for an up-to-date file. This file will be checked by the program director.
- The approved clinical instructor is assigned to evaluate the athletic training student on a monthly basis. Athletic training students will also be evaluated annually by the program director and WSU clinical educators.
- WSU sponsors an annual university "Assessment Day." Seniors complete a "Mock" NATABOC examination, and juniors complete a practical injury evaluation, modality prescription and set-up hosted by the WSU athletic training faculty. Evaluations and performance feedback will be given to each athletic training student.

WSU Athletic Training Student Retention Competencies

The following requirements and procedures apply for athletic training students who have successfully completed the application process and have been selected to begin their clinical education.

I. Academic requirements

- Meet WSU and departmental graduation standards. For a checklist of the University's graduation requirements, see page 24.
- Maintain a cumulative WSU GPA of not less than 2.75.
- Attain a "B" or better in all athletic training option courses.

II. Clinical education requirements

- Compliance with ALL objectives, policies and procedures established in the WSU Athletic Training Handbook.
- Compliance with the NATA's Code of Ethics (Athletic Training Handbook).
- Compliance with the WSU Student Handbook (including the statement of student rights and responsibilities), which is available at www.winona.edu/studentaffairs.
- Approved Clinical Instructor.
- Demonstration of appropriate clinical skill acquisition paralleling clinical and academic experience level.
 - Positive monthly evaluations
 - Positive annual evaluations
 - Satisfactory completion of "Assessment Day Competencies"

III. Program compliance procedures

Student athletic trainers are expected to comply with all academic and clinical guidelines.

Athletic training students, pre-professional students, and pre-admitted students will act in a mature, responsible manner that will reflect positively on themselves, the Athletic Training Program, and the University while participating in academic and clinical education. These expectations and due process rights are clearly outlined in the Athletic Training Handbook and covered extensively in HHP 191 Introduction to Athletic Training.

Additional information about the Athletic Training Program can be found at www.winona.edu/athletictraining.

ATHLETIC TRAINING OPTION (36 S.H.)

HHP 33 S.H.

- | | |
|-------|--|
| 191 | Introduction to Athletic Training (1) |
| * 204 | Personal and Community Health (3) |
| 345 | Emergency Response for the Professional Rescuer (3) |
| 362 | Practicum in Athletic Training (4) |
| 389 | Strength and Conditioning Principles and Programming (2) |
| 391 | Injury Recognition of the Upper Body (3) |
| 392 | Injury Recognition of the Lower Body (3) |
| 393 | Therapeutic Modalities (3) |
| 491 | Therapeutic Treatment and Rehabilitation (3) |
| 492 | Administration of Athletic Training (3) |
| 494 | Therapeutic Interventions (3) |
| 495 | Capstone Clinical Skill Proficiency Lab (2) |

Psychology (3 S.H.)

- * 210 General Psychology (3)

CARDIOPULMONARY REHABILITATION OPTION

27 S.H.

HHP (21 S.H.)

- 344 Electrocardiography (3)
- 361 Practicum in Cardiopulmonary Rehabilitation (3)
- 385 Senior Seminar: Cardiopulmonary Rehabilitation (3)
- 420 Clinical Exercise Testing and Prescription (4)
- 497 Internship in Cardiopulmonary Rehabilitation (8)

Nursing (3 S.H.)

- 392 Cardiac Risk Prevention (3)

Counselor Education (3 S.H.)

- 432 Stress Management (3)

WORKSITE HEALTH PROMOTION OPTION

28-29 S.H.

HHP (22 S.H.)

- 288 Health Perspectives (3)
- 354 Principles of Safety (2)
- 363 Practicum in Worksite Health Promotion (3)
- 410 Program Planning (3)
- 493 Worksite Health Promotion (3)
- 499 Internship in Worksite Health Promotion (8)

Counselor Education (3 S.H.)

- 432 Stress Management (3)

REQUIRED Elective (3-4 S.H.)

- HHP 420 Clinical Exercise Testing and Prescription (4) OR
- MKTG 300 Principles of Marketing (3) OR
- PSY 298 Health Psychology (3)

Note: A minor in Training and Development is recommended (page 52).

HHP COURSE DESCRIPTIONS

Note: In this section, courses are organized in two major areas: (1) health education and (2) exercise science.

Health Education**204 - Personal & Community Health—3 S.H.**

Addresses individual and community health issues. Investigates the dimensions of personal wellness that influence health behavior. Course material covers content, self-assessments and journal entries in relationship to behavioral change. Alcohol, tobacco and/or other drugs with emphasis on prevention strategies are addressed as mandated by Minnesota state law 126.06. Offered each semester. Grade only.

288 - Health Perspectives—3 S.H.

Introduction to health education and health promotion. Analyzes the foundations of the discipline of health education including theories of health education. Explores the theories of behavior change. Investigates the career opportunities in all health education/promotion settings. Introduces professional organizations and certifications for the field of health education including worksite health promotion. Prerequisite: HHP 204. Offered each semester. Grade only.

311 - Comprehensive School Health Program—2 S.H.

In-depth look at the components of a comprehensive school health program. Examines the role of school staff and health care providers in coordination of health services. Explores the role of school health administrator, the teacher and the school health advisory committee relating to the Pre-K-12 students' health needs and concerns. Prerequisites: HHP 204 and HHP 288. Offered yearly. Grade only.

320 - Health Education in the Elementary Schools—3 S.H.

Designing Pre-8 educational programs consistent with specified program objectives, includes development of logical scope and sequence plan for an elementary health education program. Applying individual or group learning process methods appropriate to given early childhood, elementary and middle school level learning situations. Proper techniques and skills needed to successfully meet the National Health Education Standards and the Minnesota State Graduation Standards. Prerequisite: HHP 204. Offered each semester. Grade only.

326 - Educational Topics/Issues—2 S.H.

In-depth study of current and emerging health topics in health education and promotion. Study of bio-psycho-social issues related to such topics as addiction, sexuality education and violence prevention. Students utilize

computerized health information retrieval systems, access on-line and other database health information resources. Prerequisites: HHP 204, 288 and HHP 311. Offered yearly. Grade only.

328 - Behavioral Interventions—3 S.H.

Application of theories of behavior change to program planning for the secondary student and adult population. Students utilize a wide range of techniques and strategies for community and secondary health education. Prerequisites: HHP 204, 288; teaching option majors – HHP 320. Offered yearly. Grade only.

345 - Emergency Response for the Professional Rescuer—3 S.H.

This course is designed to teach those emergency care skills and the accompanying knowledge which is needed by such emergency care givers as policemen, fire department members, park rangers and other first line care-givers Upon successful completion of the class, students will be issued American Red Cross "Emergency Care" and "CPR for the professional rescuer" cards. This course will not prepare the student to become an Emergency Medical Technician. Offered yearly. Prerequisite: HPER 214 or First Aid and CPR certification.

354 - Principles of Safety Education—2 S.H.

Principles and practices of safety in occupational, community, school and worksite health settings. Course content consists of the elements of Occupational Health and Safety Programs, environmental literacy, hazard control and risk management. Prerequisites: HHP 204, 288 and First Aid/CPR Certification. Offered yearly. Grade only.

403 - Epidemiology—3 S.H.

Distribution and patterns of disease including cardiovascular disease, cancer, musculoskeletal disorders, severe trauma or psychological conditions within populations; an examination of the nature of epidemiological research. Prerequisites for SCHE majors: HHP 204, 288; BIOL 211, 212; STAT 110. Prerequisites for non-SCHE majors: HHP 204; STAT 110 or instructor's permission. Offered each semester. Grade only.

410 - Program Planning in Health Promotion—3 S.H.

In-depth study of the process of planning, implementing and evaluating effective health education/promotion programs. Students formulate appropriate and measurable program objectives, design educational programs consistent with specified program objectives and exhibit competence in carrying out planned educational programs. Prerequisites: HHP 204 and 288. Offered each semester. Grade only.

425 - Organization and Administration of School Health—3 S.H.

Organization and administrative aspects of an effective school health education/promotion program pertaining to budgets, personnel, facilities, legal responsibilities, home/school/community communications and the formulation of practical modes of collaboration among educational settings. The creation and the development of scope and sequence as it applies to the Minnesota State Graduation Standards and the National Health Standards. Prerequisites: HHP 204, 288, and 311. Offered yearly. Grade Only.

430 - Public Health—4 S.H.

Explores the foundations of public health practices, including health organization/agency structures, and specific public health concerns of the target populations. The course will have a component similar to a practicum - working with a health-related organization throughout the semester - 2 hours per week minimum. Topics covered in this course could be environmental health, community crisis health and/or public service health. Prerequisites: HHP 204, 288, 311 and 328. Non-teaching majors: recommended prerequisites: HHP 403 and STAT 110. Offered yearly. Grade only.

431 - Health Issues Workshop—1-3 S.H.

Explores recent and relevant issues, trends and programming developments in health education/promotion. Designed for teachers, school nurses, school administrators, undergraduates and/or graduate students. Junior or Senior standing. May be repeated for credit. Offered upon demand.

433 - Senior Health Seminar—1 S.H.

In-depth school and community health analysis. Review of responsibilities and competencies for entry-level health educators, for Certified Health Education Specialist (CHES) credentials and ethical considerations and standards, as outlined by the Society of Public Health Educators. Completion of professional files: resume, the development of a letter of application, professional presentation for interviews, professional portfolios and skills needed to make one marketable. Prerequisites: HHP 204, 288, 311, 410, BIOL 211 and 212. Recommended prerequisites: HHP 403 and STAT 110. Senior standing. Offered yearly. Grade only.

* Course may be used to satisfy certain University Studies requirements.

490 - Independent Study in Health—1-3 S.H.

Opportunities for undergraduates to work on an advanced health issue, research or with technology/presentation methods. Prerequisites: Junior or Senior standing, preparation of proposed outline, permission of the major advisor and Department chairperson. Offered upon demand. Grade only.

496- Internship in School and Community Health—10 S.H.

A capstone experience in School and Community Health Education to foster the culmination of skills and abilities necessary for the entry level Community Health Educator in a Health agency or organization. Prerequisites: Senior standing, all major coursework must be completed and approved by the Health faculty, and instructor's permission. P/NC

Exercise Science

191 - Introduction to Athletic Training—1 S.H.

In-depth view of the National Athletic Trainers' Association's Certification requirements, WSU Program Handbook, policies, procedures, selection and retention requirements, as well as training room observation hours and log. Prerequisite: Department approval required. Offered yearly. Grade only.

205 - Nutrition for Lifetime Wellness—3 S.H.

Introduction of basic nutritional concepts and their application to lifetime wellness. Topics of study will include nutrition standards, nutrients, weight management, eating disorders, life cycle nutrition, and disease prevention. A personal dietary analysis is also included. Offered each semester.

235 - Professional Issues in Exercise Science—3 S.H.

Introductory course for professional socialization and role development, including communication and assessment skills. Ethical issues and professionalism also are discussed. Offered each semester. Grade only.

280 - Techniques of Fitness Programming—2 S.H.

Practical experiences in the assessment of fitness components and performance variables, and the knowledge to design training programs for improvement of these factors. Grade only. Offered each semester.

291 - Prevention and Care of Athletic Injuries—2 S.H.

Prevention, evaluation, treatment and taping of athletic injuries. Lectures, demonstrations and laboratory experience. Prerequisites: BIOL 211 or PER 251 (for non-Physical Education/Exercise Science majors) and first aid certification for non-Physical Education/Exercise Science majors. Grade only. Offered each semester.

314 - Anatomical Kinesiology—2 S.H.

The structure and function of the human body will be systematically studied as it applies to human movement, exercise and sport. Prerequisites: BIOL 211 and 212 or equivalent. Offered each semester. Grade Only.

340 - Physiology of Exercise—4 S.H.

Major physiological systems of the human body and their responses to acute and chronic exercise. Energy systems of exercise, physiological support systems, exercise prescription, and methods of physical training are addressed. Lecture and lab. Prerequisites: BIOL 212 with grade of C or higher. Offered each semester. Grade only.

344 - Electrocardiography—3 S.H.

Theory and practice in the interpretation of the electrocardiogram, cardiovascular physiology and special characteristics of ECGs for certain cardiovascular diseases. Lecture, Lab, ECG case study review. Offered yearly. Prerequisite: HHP 340. Grade only.

360 - Nutrition for the Physically Active—3 S.H.

Nutritional requirements for the active individual and athletes. Topics of study will include carbohydrate, protein, fat, vitamin, mineral and water requirements of active populations, as well as the use of nutritional ergogenic aids for performance enhancement. Prerequisite: HHP 205 and 340. Offered each semester. Grade only.

361 - Practicum in Cardiopulmonary Rehabilitation—3 S.H.

A one hundred hour field experience in working directly with populations that have cardiopulmonary disease. Seventy-five hours in WSU's Phase III Program and twenty-five hours in Winona Community Memorial's Phase II rehabilitation program. Prerequisite: HHP 380, instructor's permission and current certification in First Aid and CPR. Grade only.

362 - Athletic Training Practicum—1-4 S.H.

Upon successful completion of the application procedure, students will enroll in one semester hour each semester for four semesters in HHP362. Students will obtain clinical education experience with certified athletic trainers in traditional athletic training settings (university and high school athletic training facilities) and in hospital or clinic settings as

scheduled by the Athletic Training Program Director. Students will be evaluated each month and will accomplish designated clinical proficiencies each semester enrolled. Prerequisites: program acceptance, liability insurance, current certification in First Aid and CPR, and instructor's permission.

363- Practicum in Worksite Health Promotion—3 S.H.

Practical experience as a pre-professional in worksite health promotion, with an emphasis on behavior change facilitation and a variety of in-class and self-directed programming and exercise leadership experiences. Offered each semester. Grade only. Prerequisite: Instructor's permission and current certification in First Aid and CPR.

370 - Mechanical Kinesiology—3 S.H.

Mechanical principles will be systematically studied as they apply to human movement. Application of these principles will be used to understand and improve the efficiency, efficacy, and safety of movement. Prerequisite: HHP 235 and 314. Offered each semester. Grade only.

380 - Laboratory Methods in Exercise Science—3 S.H.

A series of experiments designed to achieve competency in research methods, procedures and instruments typically used in human performance laboratories. Lecture and lab. Prerequisites: HHP 235, 340 and STAT 110 or STAT 210. Offered each semester. Grade only.

385 - Senior Seminar: Cardiopulmonary Rehabilitation—3 S.H.

Focuses on the analysis of the relationships between concepts in cardiopulmonary rehabilitation. Emphasis is placed upon helping students integrate these concepts into their professional procedure via major paper, case studies and special presentations. Prerequisites: Senior standing and instructor's permission. Offered yearly.

389 - Strength and Conditioning Principles and Programming—2 S.H./lab

This course is designed for students preparing for National Strength and Condition Association's (NSCA) Certified Strength and Conditioning Specialist (CSCS) certification or for students wishing to gain additional practical application of exercise science, strength training and programming. The major focus of the course will be on exercise techniques, designing strength and conditioning programs, application of exercise prescription principles and facility management, organization and administrative procedures. Prerequisites: HHP 205, 280, 314, 340, BIOL 211 & 212.

391 - Injury Recognition of the Upper Body—3 S.H.

Advanced course in the evaluation and recognition of athletic injuries from the lumbar spine upward. Lecture and lab. Prerequisites: HHP 191 and HHP 291. Offered yearly. Grade only.

392 - Injury Recognition of the Lower Body—3 S.H.

Advanced course in the evaluation and recognition of athletic injuries from the pelvic region down. Lecture and lab. Prerequisite: HHP 391. Offered yearly. Grade only.

393 - Therapeutic Modalities—3 S.H.

Exploration of pain theories, inflammation and the injury cycle. Physiological and mechanical theories of therapeutic modalities are defined and the effects of therapeutic modalities on athletic injuries throughout the injury cycle are applied. Lecture and lab. Prerequisites: BIOL 211 and BIOL 212. Offered yearly.

420 - Clinical Exercise Testing and Prescription—4 S.H.

Methods, procedures and techniques of functional and diagnostic exercise stress testing will be emphasized. For normal, cardiopulmonary, and other special populations special consideration will be given to referral procedures, contraindications, protocol selection, equipment selection, data interpretation, follow-up procedures and exercise prescription. Lecture and lab. Offered yearly. Prerequisite: HHP 344 and 380. Grade only.

445 - Medical Aspects of Exercise—3 S.H.

Selected topics regarding the science and medicine of sports and exercise participation. Areas to be covered include pharmacological aspects, overtraining and overreaching, the effect of exercise on reproductive function, and exercise for special populations. Offered each semester. Prerequisite: HHP 340 and NURS 366. Grade only.

490 - Independent Study in Exercise Science—1-4 S.H.

Opportunity for undergraduates to work independently. Prerequisites: Junior or Senior standing, preparation of proposed outline and major advisor's permission. Offered each semester. Grade only.

491 - Therapeutic Treatment and Rehabilitation of Athletic Injuries—3 S.H.

In-depth view of pain theories, their control and the body's psychological and physiological responses. Indications and applications of therapeutic modalities and rehabilitation exercises will be investigated and

developed into comprehensive rehabilitation programs. Lecture and lab. Prerequisites: HHP 340, HHP 370, HHP 392 and HHP 393. Offered yearly. Grade only.

492 - Administration of Athletic Training—3 S.H.

Designed to prepare the student athletic trainer for the behind-the-scenes duties that are required to ensure that an athletic room is functioning efficiently and properly. Areas covered include liability, budgeting, record-keeping and other administrative areas. Prerequisite: HHP 390. Offered yearly. Grade only.

493 - Worksite Health Promotion—3 S.H.

Role of business knowledge and skills in worksite health promotion. Focuses on business policy, ethics, management and marketing in health promotion organizations. Prerequisite: HHP 410. Offered yearly. Grade only.

494 - Therapeutic Interventions—3 S.H.

Anatomical review and discussion of mechanisms, specific injuries, their acute treatment and referral process for conditions relating to the head, face, ear, eye, nose, throat thorax, abdomen and skin. Intervention techniques for athletes suffering physical, emotional, or psychological illnesses will be discussed. Commonly used drugs, their actions, side effects and action for abuse and testing will also be included. Prerequisite: HHP 391, PSY 210.

495 - Capstone Clinical Skill Proficiencies Lab—2 S.H.

This is a capstone clinical skill acquisition lab course. Students that have successfully completed the academic and clinical requirements of the Exercise Science: Athletic Training major will take this course in the final semester. This course will serve as the final assessment of clinical skill learning over time. Final semester of Exercise Science: Athletic Training major with successful completion of all academic, clinical and program requirements.

497 - Internship in Cardiopulmonary Rehabilitation—8 S.H.

A capstone experience to foster the culmination of skills and abilities necessary for the entry-level cardiopulmonary clinical experience physiologist. Six hundred hours of clinical experience are required in the ACSM certified exercise specialist learner outcomes. Internship clinical sites are nationally located and an internship handbook details application, registration, and evaluation procedures. Prerequisites: senior standing, liability insurance, current CPR and First Aid certification, all major coursework must be completed, and instructor's permission. P/NC.

498 - Internship in Athletic Training—4 S.H.

A capstone experience to foster the culmination of skills and abilities necessary for the entry-level athletic training professional. With an in-depth view of an athletic trainer's role in the Sports medicine clinic with opportunities to interact with physicians, physician assistants, physical therapists, other personnel and a diverse patient population under the direct supervision of a NATABOC Certified Athletic Trainer. Opportunities for special projects, presentations and viewing surgeries may also be available. An internship handbook details admission, registration, and evaluation procedures. Prerequisites: senior standing, liability insurance, current CPR and First Aid certification, all major coursework must be completed, and instructor's permission. P/NC.

499 - Internship in Worksite Health Promotion—8 S.H.

A capstone experience in Worksite Health Promotion to foster the culmination of skills and abilities necessary for the entry-level worksite health promotion exercise physiologist. ACSM and AWHP standards require a full semester of field experience. Prerequisites: senior standing, liability insurance, current CPR and First Aid certification, all major coursework must be completed, and instructor's permission. P/NC.

HISTORY

Minne Hall, Room 212 (507-457-5400)
Yard (Chairperson)
Chairperson's email: ayard@winona.edu
Department's email: histdept@winona.edu

FACULTY

Marianna Westbrook Byman, Associate Professor; B.A., Baylor University; M.S., Winona State University; D.A., University of North Dakota at Grand Forks; 1988 -
Seymour Byman, Professor; B.A., University of Illinois; M.A., Roosevelt University; Ph.D., Northwestern University; 1970 -
John Campbell, Associate Professor; B.A., Wesleyan University; M.A., Ph.D., University of Minnesota-Twin Cities; 1996 -
Peter V. N. Henderson, Associate Professor, B.A., J.D., Vanderbilt University; Ph.D., University of Nebraska-Lincoln; 1989 -
Colette A. Hyman, Professor; B.A., Brown University; M.A., Ph.D., University of Minnesota-Twin Cities; 1990 -
Troy Paino, Associate Professor; B.A., Evangel College; J.D., Indiana University School of Law; M.A., Ph.D., Michigan State University; 1997 -
Gregory G. Schmidt, Professor; B.A., M.A., Ph.D., University of Illinois-Urbana; 1984 -
Norman Sobiesk, Professor; B.A., University of Illinois; M.A., University of Kansas; Ph.D., University of Wisconsin-Madison; 1970-
Jacqueline Stroud, Assistant Professor, B.A., University of Southern Colorado; M.A., University of Texas; 1995 -
Alexander Yard, Professor; M.A., University of Missouri-St Louis; A.B., A.M., Ph.D., Washington University (St Louis, Missouri); 1986 -

HISTORY PROGRAM

The History Department offers a B.A. major and a B.A. minor in history. Additionally, the department participates in the Social Science/History Program for secondary-level social studies teachers. The department also advises pre-law students and oversees the Law and Society Program.

History programs enable students to study diverse societies and cultures while enhancing their abilities to read critically, think clearly, and write effectively. Both the major and minor programs require students to take courses in the histories of Europe and the United States and to select among courses in the histories of Africa, Asia, and Latin America. Majors and minors take courses at both the introductory and advanced levels, as well as the course in Historical Research Methods and Historiography, which instructs them in mysteries of historical research, interpretation and writing. In addition, history majors take the advanced writing course offered by the English Department. As a capstone experience, majors complete their course of study in a Senior Seminar, which requires them to produce an original research project and enables them to practice, reinforce and expand upon what they learned in the program. History programs, providing a broad range of academic experiences, enhance students' intellectual skills and understanding of the present, while promoting informed citizenship in a rapidly changing world.

History programs provide reliable preparation for any career prizing analytical ability, clear thinking, and strong communication skills. The programs also form a solid basis for graduate study in law, history and other liberal arts fields. The department strongly recommends study of foreign languages to students who are interested in studying history at the graduate level.

* Course may be used to satisfy certain University Studies requirements.

PARALEGAL PROGRAM

The History Department coordinates and administers the B.S. Paralegal Program, which leads to careers in law, business, and government. For more information about the Paralegal Program, see page 152.

SECONDARY-LEVEL SOCIAL STUDIES AND HISTORY TEACHING

Students interested in teaching history at the high school and middle school levels need to complete a broad field program in history and the social sciences in preparation for licensure as a "social studies" teacher. There is no license in Minnesota for teaching only history. The Minnesota Board of Teaching, not Winona State University, defines the scope of teaching licenses. For the broad field program for social studies teachers, refer to B.S. Social Science/History (Teaching) on page 176. The education component of the program, called the Professional Education Sequence, is described in the Education Department section of this catalog (page 87).

LAW AND SOCIETY PROGRAM

The History Department manages the Law and Society program designed for students interested in attending law school as well as students interested in a vigorous liberal arts degree focused on the law. For more information, consult the Law and Society Program in this catalog (page 124).

DEPARTMENT SCHOLARSHIPS AND AWARDS

The History Department offers four scholarships each year. Contact the department office for further information.

- Junior and senior history majors with a strong interest in historical research may apply for the Jederman Scholarship established in the memory of Frederick A. Jederman who taught history at WSU from 1924 to 1964.
- History and paralegal majors are eligible for the Marvin and Muriel Palacek Scholarship, honoring Dr. Marvin Palacek, who taught history at WSU from the early 1960s to the middle of the 1980s.
- Paralegal students may apply for the Association of Paralegal Students Alumni Scholarship established by graduates of the Paralegal Program.
- History majors and minors, paralegal majors and social science/history majors are eligible to compete for the Thielen Memorial Scholarship, which honors a late member of the department faculty.

The department also offers the annual Susan H. Dahl award for the best paper(s) written in the senior research seminar. The recipient must have written the paper while a student in the seminar but need not be a history major. Faculty members nominate students' papers, and a department committee makes the award. The Dahl award includes a cash prize.

MUSEUM INTERNSHIP OPPORTUNITIES

The department offers for-credit internship opportunities in the Winona County Historical Society museum and other historical museums for students interested in exploring careers in the field of public history. Contact the department for further information.

PROGRAM RESULTS AND ASSESSMENT

The department believes that the history major should produce the following educational results for students:

Skills

- Enhance students' ability to critically read and evaluate historical scholarship.
- Develop students' ability to understand the main lines of historiographic debate concerning a topic and frame new questions.
- Develop students' ability to engage in historical research focused on primary sources.
- Develop students' ability to express their ideas clearly in written form.
- Develop students' ability to express their ideas in oral presentations.
- Develop students' capacity for independent, critical thought.
- Develop in students the understanding that history is actually an ongoing interpretive debate and not a series of short answers.
- Provide training that is sufficiently rigorous to permit qualified and motivated students to succeed in graduate programs in history.

Knowledge

- Develop students' understanding of both long-term trends and discrete events in the history of the United States, Europe, and at least two other cultural groups.
- Develop students' ability to consider the past in terms of both change and continuity.
- Develop students' ability to identify and explain change over time.
- Develop students' understanding of the ways in which change affects different groups in different ways.

Values

- Enhance students' ability to use the skills promoted by the history program in their life and career plans.
- Enhance students' toleration of diverse peoples and cultures.
- Enhance students' ability to act as responsible citizens who make informed, reasoned judgments.
- Develop students' commitment to a life-long search for learning and truth.
- Promote among students a collaborative work and learning ethic.

The department has adopted a plan to use samples of student work to assess the program's effectiveness and need for change. History majors become acquainted with the assessment plan in History 100, Introduction to History.

ADDITIONAL REQUIREMENTS

Coursework below a grade of "C" in 300- and 400-level courses does not count toward completion of the history major or minor program.

PASS/NO CREDIT COURSES

No history course can be taken on a P/NC basis, with the exceptions of internships and institutes.

TRANSFER STUDENTS

For the B.A. history major, transfer students must complete at least 18 semester hours of WSU history coursework in addition to the Senior Seminar. Transfer coursework completed on a P/NC basis is not accepted for the WSU history major or minor. Transfer students who wish to complete the B.A. history minor must complete at least 12 semester hours in WSU history coursework.

B.A. MAJOR – HISTORY

48 S.H. (No Minor Required)

REQUIRED COURSES (29 S.H.)**Western Civilization Sequence (6 S.H.)**

Any two of the following:

- 120 Western Civilization to 1500 (3)
- 121 Western Civilization, 1500 to 1815 (3)
- 122 Western Civilization, 1815 to Present (3)

Students can substitute 125 Classical History for 120 Western Civilization to 1500

United States History Sequence (6 S.H.)

- 150 United States History to 1865 (3)
- 151 United States History Since 1865 (3)

Developing Societies and Different Cultures Sequence (6 S.H.)

Any two of the following:

- 123 East Asian Civilization (3)
- 165 Latin American History (3)
- 170 African Civilization (3)
- 220 Introduction to African-American History (3)
- 233 History of Mexico (3)
- 235 History of the American Indian (3)

English (3 S.H.)

- 210 Advanced Expository Writing (3)

Other Required History Courses (8 S.H.)

- 100 Introduction to History (1)
- 298 Historical Research Methods and Historiography (3)
- 495 Senior Seminar (4)

ELECTIVES (19 S.H. 300–and 400–level courses)

Electives are subject to an advisor's approval.

- Students must take at least 3 S.H. in each of the three sequence areas: European, United States, and Developing Societies and Different Cultures.
- The courses, Topics in History (HIST 397) and Independent Readings in History (HIST 499), are counted in the sequence area the department deems appropriate.
- Students may count HIST 295, Sophomore Seminar, as an elective.
- History majors cannot count Paralegal Sequence courses (HIST 370, HIST 381, HIST 372, HIST 373, HIST 374, HIST 375, HIST 376, HIST 377, HIST 380 and HIST 383) and the Historical Museum Internship (HIST 390) as electives in the history major program.

B.A. MINOR – HISTORY

27 S.H.

REQUIRED COURSES (15 S.H.)**Western Civilization Sequence (6 S.H.)**

Any two of the following:

- 120 Western Civilization to 1500 (3)
- 121 Western Civilization, 1500 to 1815 (3)
- 122 Western Civilization, 1815 to Present (3)

Students can substitute 125 Classical History for 120 Western Civilization to 1500

United States Sequence (6 S.H.)

- 150 United States History to 1865 (3)
- 151 United States History Since 1865 (3)

Developing Societies and Different Cultures Sequence (3 S.H.)

Any one of the following:

- 123 East Asian Civilization (3)
- 165 Latin American History (3)
- 170 African Civilization (3)
- 220 Introduction to African-American History (3)
- 235 History of the American Indian (3)

Research Requirement (3 S.H.)

- 298 Historical Research Methods and Historiography (3)

ELECTIVES (9 S.H.)

Students must select 9 S.H. in coursework at the 300 and 400 levels with the approval of a History Department advisor.

- The department suggests students consider taking all the elective courses in one sequence area.

- Students may count HIST 295, Sophomore Seminar, as an elective.
- History minors may not count Paralegal Sequence courses (HIST 370, HIST 371, HIST 372, HIST 373, HIST 374, HIST 375, HIST 376, HIST 377, HIST 380 and HIST 383) and the Historical Museum Internship (HIST 390) as electives in the history minor program.

HISTORY COURSE DESCRIPTIONS**100 – Introduction to History—1 S.H.**

An introduction to the study of university-level history. It will enable students to better identify and understand historical arguments and historians' uses of evidence. The course will also acquaint students with both the writing and citation styles commonly used in the field and the departments' program assessment plan. Offered yearly. Prerequisite: None

101 – Introduction to Law and Society—1 S.H.

An introduction to interdisciplinary studies as it relates to the law and society major. Students will examine a series of historical and contemporary legal issues from a variety of disciplinary perspectives. This course is required of all law and society majors.

120 - Western Civilization to 1500—3 S.H.

A survey of Western traditions and institutions from their beginnings in Egypt and Mesopotamia through Greece, Rome and the Middle Ages. Grade only. Offered every semester.

121 - Western Civilization 1500-1815—3 S.H.

A survey of the European Renaissance, Protestant Reformation, development of the nation state, the Enlightenment, Commercial and Industrial Revolution, the French Revolution and the Napoleonic era. Grade only. Offered every semester.

122 - Western Civilization 1815 to Present—3 S.H.

A survey of European traditions and institutions from the fall of Napoleon to the present, stressing the Industrial Revolution, nationalism, imperialism, the rise of totalitarianism, World War II, the Cold War and post-Cold War problems. Grade only. Offered every semester.

123 - East Asian Civilization—3 S.H.

A survey of China and Japan from the pre-modern era to the present, which emphasizes their traditional institutions and values and their responses to Western imperialism, Japan's Meiji Restoration and expansionism, traditional China's collapse and revolutionary movements, World War II, China's Communist reconstruction and post-communist economy, and Japan's re-emergence as a world power. Grade only. Offered yearly.

125 - Classical History—3 S.H.

The history of Greece from Homeric time of Plato to the Roman Republic. Grade only.

150 - United States History to 1865—3 S.H.

A survey of United States history from prehistoric times to the American Civil War. Special emphasis is placed on political developments and public policy, the origins and consequences of both slavery and ethnic, cultural and regional diversity and conflict. Also emphasized is the transformation of the social and economic systems. Grade only.

151 - United States History Since 186—3 S.H.

A survey of United States history since the American Civil War with special emphasis on post-Civil War Reconstruction, late 19th-century economic and social developments and 20th-century reform movements. Additionally, foreign policy and the overseas expansion of the U.S. economy receive attention, as do the Cold War and post-Cold War developments. Grade only.

165 - Latin American History—3 S.H.

A survey of Latin American history from pre-Columbian times to present including the colonial period, the struggle for independence and the rise of modern Latin American nations. Special emphasis is placed on Argentina, Brazil, Chile and Mexico. Grade only.

170 - African Civilization—3 S.H.

A survey of African history from prehistoric times to the present. The emphasis is on African social, cultural and political history. The periods of study include Africa in the ancient world, medieval Africa, the slave trade, the era of European colonialism, the rise of nationalism and independence movements and contemporary Africa. Grade only.

215 - Minnesota History—3 S.H.

History of the land and people of Minnesota. Emphasis is on social, cultural, economic and political history of indigenous and immigrant groups in Minnesota during the 19th and 20th centuries. Grade only. Offered as needed.

* Course may be used to satisfy certain University Studies requirements.

220 – Introduction to African American History—3 S.H.

This course will introduce students to African American history. It examines the full breadth of African American history, starting with Africa in the years before the international slave trade, continuing on with the nature of African life in America during the colonial period and maturation and destruction of slavery in the 19th Century. History majors and minors may count this class among their history electives.

233 - History of Mexico—3 S.H.

A survey of the history and development of the Mexican nation from pre-historic times until the present, with attention to the Indian and Spanish roots of Mexican culture and emphasis on the continuing Mexican Revolution. Grade only.

235 - History of the American Indian—3 S.H.

Traces the history of North American Natives since pre-Columbian times. Emphasis is placed on viewing native history through a balanced combination of native historical accounts and fiction to illustrate history. Readings come from primary documents, fiction and anthropological and sociological works as well as history. Traces attitudes and stereotypes surrounding natives and examines their growth as a political entity in American history. Prerequisites: ENG 111 or instructor's permission. Grade only.

240 - History of Christianity—3 S.H.

The development of Christianity from the time of Christ to the present, with emphasis on the interplay between Christianity and the political, economic, social and cultural structures of various historical ages. Grade only.

295 – Sophomore Seminar—2-3 S.H.

An in-depth study of the current state of historical understanding of selected topics. The department will invite students to take the course based on their performance in 100-level history classes. Enrollment limited to 20 students. History majors and minors and social science/history majors may count this course as an elective in the category calling for 300- and 400-level elective credits. Prerequisite: any 100-level history course and permission of the department.

298 - Historical Research Methods and Historiography—3 S.H.

An introduction to historical research and criticism that exposes students to the sources, resources and techniques of research and evaluation of research as well as divergent historiography traditions. Prerequisites: History Major or Minor standing or Social Science/History Major standing and ENG 111. Limited to 20 students. Grade only.

360 – Introduction to Historical Museums—3 S.H.

This course provides students with an overview of the field of Historical Museums and Public History. It will examine the history of museums, museum management, collections care, management of historical libraries and archives, fundraising and budgeting and the development of exhibits and public programming. It will also survey opportunities available in Public History. Required student projects will make use of the resources of the Winona County Historical society. Prerequisites: History 150 and 151.

390 – Historical Museum Internship 3-15 S.H.

Placement in the Winona County Historical Society Museum or other historical museum for the purpose of experience and training in the field of public history. Prerequisite: History 360 and permission of the department. Internship credits may not be counted toward completion of the history major or minor.

397 - Topics in History—1-3 S.H.

In-depth study of current topics and concern in American society and the historical profession. With different topics, can be repeated. Offered on demand. Grade only.

495 - Senior Research Seminar—4 S.H.

In-depth study and research on selected topics offered in the spring semester. The seminar and students' research projects build upon work completed in a companion, advanced level course offered in the fall semester. Each spring, before pre-registration for the following fall, the Department identifies the companion course(s) for the following year. Contact a History Department academic advisor for more information about the companion course(s). The Department strongly recommends, but does not require, completion of the companion course before enrolling in the Senior Seminar. Prerequisite: History or Social Science/History major status, senior standing. Students must be carrying no Incompletes at time of registration. Instructor permission required. Grade only.

Advanced Sequence in Histories of Developing Societies and Different Cultures

320 - North American Indian Civilization—3 S.H.

This course examines important issues in the history of North American Natives: prehistoric interactions among Native groups, Native reaction and interaction with early Europeans, cultural issues such as the outlawing of Native languages and Native customs, the American Indian Movement, the First Nations Movement and the anti-Columbus protests. It discusses both Canada and the United States in an effort to include all North American Native groups. Prerequisite: HIST 235. Grade only.

341 - Modern Japan—3 S.H.

The course traces and analyzes the principal developments that shaped modern Japan. Beginning with examination of 17th- and 18th-century Tokugawa culture and institutions, the course will then explore the sources and consequences of the revolution Meiji "Restoration." The course will then consider Japan's march toward the Pacific War, and the post-World War II revival. Prerequisites: HIST 123 and ENG 111 or instructor's permission. Grade only.

461 - Latin American Social Revolution—3 S.H.

An analysis of Latin American's major revolutionary movements of the 20th century. Special emphasis on Mexico, Bolivia, Cuba and Central America. Prerequisite: HIST 165 or instructor's permission. Grade only.

469 - History of Brazil—3 S.H.

Brazilian history from European discovery to the present. The course emphasizes study of exploration and colonization, the development of slavery and its abolition, and Brazil's experience with industrialization and world power status. Prerequisite: HIST 165 or instructor's permission. Grade only.

Advanced Sequence in United States History

315 - Women in U.S. History—4 S.H.

A survey of the history of women in the United States, from the colonial period to the present. Topics to be covered include changing ideas about women and the changing nature of the family, sexuality, women's political activity, and paid and unpaid work. The course also examines the way in which gender has combined with other social definitions - such as race, ethnicity and age - to shape the experiences of both men and women in U.S. history. Prerequisites: HIST 150 or HIST 151 and ENG 111. Grade only.

325 - American Diplomatic History—3 S.H.

Traces and analyzes the major developments in modern American diplomacy. The course will examine 19th-century traditions, but will focus on the impact of domestic concerns and overseas wars and revolutions on the 20th century global expansion of American interests, ideology and power. Prerequisites: HIST 150 or HIST 151 or instructor's permission. Grade only. Offered as needed.

336 – History of American Sports —3 S.H.

A historical look at the place and value of sport in American culture.

365 - American Legal History—3 S.H.

An overview of Anglo-American legal history from the time of the Conquest to the present. Emphasis will be placed on the evolution of substantive law, including real property law, business law, family law, and personal injury law. The class emphasizes case analysis. Prerequisites: HIST 150 and HIST 151 or instructor's permission. Grade only.

447 – America in the Vietnam War Era—3 S.H.

A historical survey of the Vietnamese War with the growing American involvement and the subsequent American effort to disengage without loss of prestige. The course will include the study of American objectives in this war and the subsequent impact upon American society. Prerequisite: HIST 151 or instructor's permission. Grade only.

476 - The American Revolution—3 S.H.

This course examines the origins of the Revolution; the War for Independence; social, economic, and cultural change during the Revolution; and the origins and creations, and ratification of the Constitution of 1787. Prerequisites: HIST 150 or instructor's permission. Grade only.

477 - The Age of Jackson—3 S.H.

Traces the political, social, intellectual, and cultural development of the United States from the 1820s through the 1840s. Topics include Jacksonian politics, Manifest Destiny and the Mexican War, northern society, the South and slavery, ante-bellum reform movements and Romanticism. Prerequisite: HIST 150. Grade only.

478 - The Old South

This course examines many issues, topics, and themes central to the History of the American South (ca. 1800 to 1860). Among the key topics that we look at are: the colonial origins, the origins and evolution of planter culture, the nature of yeomen society, the diverse lives of southern women, the economics of slavery, slave life and culture, the politics of slavery and the coming of the Civil War, and the rise and fall of the Confederacy.

479 - The Civil War and Reconstruction—3 S.H.

Explores the culture and society of ante-bellum America, the origins of the war, the political and military development of the war. The course will then explore Reconstruction of the Southern political, social and economic orders and the southern counter-revolution of the 1870s. Prerequisite: HIST 150 or instructor's permission. Grade only.

480 - Gilded Age America (1877-1900)—3 S.H.

Explores late 19th-century corporate, industrial development and its social, cultural and political consequences. The course pays special attention to both old-fashioned, communitarian counter-attacks and progressive, radical opposition to the new economic order in rural and urban settings. It also explores the mass immigration and new urban political and social structures that economic change generated. The course concludes with consideration of the emergence of the New Empire amidst the Spanish-American War. Prerequisites: HIST 151 and ENG 111 or instructor's permission. Grade only.

481 - American Westward Expansion—3 S.H.

Examines the historical West versus the mythical West. Compares stereotypes and popular images of the West and its inhabitants to the cultural, political and social diversity of the American West. Traces the development of Western history from first contact to the present. Prerequisites: HIST 150 and HIST 151 or instructor's permission. Grade only.

483 - The Progressive Era and the "New Era" Twenties (1901-1929)—3 S.H.

Consideration will be given to the cultural and economic crisis of the 1890s, the progressive impulse, varieties of progressive reform, progressive foreign policy and World War I, postwar adjustment problems and select social phenomena of the Twenties. The course will conclude with study of Herbert Hoover's economic and political vision. Prerequisite: HIST 151 or instructor's permission. Grade only.

484 - Depression, New Deal and War (1929-1945)—3 S.H.

The course explores the Great Depression which began in 1929 with emphasis on the economic, social and psychological causes and consequences, Herbert Hoover's responses to it and FDR's New Deal Revolution, and the role of the United States in World War II and developments on the home front. Prerequisite: HIST 151 or instructor's permission. Grade only.

485 - Contemporary America 1945-Present—3 S.H.

The course explores the causes and consequences of the Cold War including McCarthyism, U.S. involvement in the Korean War, and selected post-war problems in foreign policy, mass society and social alienation. It also explores the reforms and social movements of the Great Society era and the development of contemporary conservatism and consumer-oriented neo-liberalism. Prerequisite: HIST 151 or instructor's permission. Grade only.

486 - American Intellectual and Cultural History—3 S.H.

The course focuses on the development of basic concepts in American political, religious, philosophical, scientific and social thought, and on their impact on American culture from the colonial period to the present. Prerequisite: HIST 150 or HIST 151 or instructor's permission. Grade only.

488 - American Constitutional History—3 S.H.

A study of the origins, growth and development of the United States Constitution in the context of American social and political history. Prerequisite: HIST 150 or HIST 151 or instructor's permission. Grade only.

Advanced Sequence in European History**330 - Psycho-history—3 S.H.**

The application of psychoanalytical theory to history. Part of the course will focus on the study of psychoanalytic theory. The rest of the course will focus on the application of theory to history. Grade only.

335 - The Holocaust—3 S.H.

A historical study and analysis of the Nazi Holocaust from 1933 to 1945

350 - The History of Attitudes Toward Death—3 S.H.

A look at the attitudes toward death of various societies. Prerequisites: ENG 111 or instructor's permission. Grade only.

355 - European Intellectual and Cultural History—3 S.H.

a study of the history of the development and basic concepts in European religious, philosophical, political, legal, scientific and social thought and their impact on Western culture.

401 - Ancient Rome—3 S.H.

The rise of Rome from a small republic to empire, the decline and fall of the empire. The Roman contribution to western civilization. Prerequisite: HIST 120 or instructor's permission. Grade only.

403 - Middle Ages—3 S.H.

The decline of the Roman Empire, the Germanic kingdoms, the early Christian Church, the development of feudalism and manorialism, the economic recovery of Europe, civilization of the High Middle Ages, rise of the national monarchies. Prerequisite: HIST 120 or instructor's permission. Grade only.

408 - Renaissance—3 S.H.

The rise of commerce, development of the national monarchies, growth of the Italian city-states, secularization of society, humanism and art in Italy and in Northern Europe, new scientific discoveries, and expansion of Europe. Prerequisites: HIST 120 and HIST 121 or instructor's permission. Grade only.

409 - Reformation—3 S.H.

A study of the religious background of 16th-century Europe. The rise of Lutheranism, Calvinism, Anabaptism and Anglicanism. The Catholic Counter-Reformation. Prerequisite: HIST 120 and HIST 121 or instructor's permission. Grade only.

412 - French Revolution and Napoleon—3 S.H.

Intellectual, cultural, economic and political origins of the French Revolution, a decade of revolution, the Napoleon Era and the legacy of the revolution. Prerequisite: HIST 121 or instructor's permission. Grade only.

417 - Hitler and Nazi Germany—3 S.H.

Emphasis will be given to the factors which led to Nazism, the personality of Hitler, his drive for world domination, and the Nuremberg trials. Prerequisite: HIST 122 or instructor's permission. Grade only.

421 - Tudor and Stuart England—3 S.H.

The transition from medieval to modern England, the Reformation, the Age of Elizabeth, and the constitutional and social conflicts of the 17th century. Prerequisite: HIST 121 or instructor's permission. Grade only.

423 - Modern England—3 S.H.

England in the 20th century from the height of imperial power and World War I to a Socialist government, cold War and the rise of late 20th-century conservatism. Prerequisite: HIST 122 or instructor's permission. Grade only.

434 - Soviet Russia (1905-Present)—3 S.H.

The theory of Communism and its practice in Russia and the role of the Soviet Union in world affairs. The course will also discuss the downfall of Soviet Communism and the Yeltsin era. Prerequisites: HIST 122 and HIST 151 or instructor's permission. Grade only.

440 - World War II—3 S.H.

An examination of the origins of both the European and Asian phases of the war and of the relationship between political leadership and military strategy. The course will also examine the political, social, and economic developments on the home fronts of the principle belligerents. Prerequisites: HIST 122 and HIST 151 or instructor's permission. Grade only.

Paralegal Sequence**370 - Legal Research and Writing I—3 S.H.**

The student will become acquainted with commonly used terminology, the need for precision in meaning, and how courts interpret documents; and techniques of legal research, the process of judicial review, the extent of legal reporting, and methods of researching court decisions. Students will draft legal briefs and legal memoranda. Prerequisites: admission to the Paralegal Major and advanced sophomore standing. Grade only. Offered yearly.

371 - Substantive Law and Ethics I—2 S.H.

Students will learn the basic rules of contract law, real property law, torts, including workers' compensation, and legal ethics, and will be expected to practice their skills in legal research and writing. Grade only. Offered yearly.

* Course may be used to satisfy certain University Studies requirements.

372 - Legal Research and Writing II—3 S.H.

The students will expand use of research and writing techniques gained in Legal Research and Writing I by drafting deeds, leases, negotiable instruments, business agreements, corporate minutes and by-laws, wills and researching issues that are relevant to these topics. Students will continue to draft legal briefs and memoranda reflecting their research findings. Prerequisite: HIST 370. Grade only. Offered yearly.

373 - Adversary System: Civil Procedure—2 S.H.

Basic civil court procedures, such as pleadings; pre-trial discovery; trials and appeals; background of the adversary system; the role of the advocate, judge and jury in the search for justice. Prerequisite: HIST 370. Grade only. Offered yearly.

374 - Evidentiary Rules—2 S.H.

Acquaints the student with logic of evidentiary rules, value of first-hand evidence, burden of proof, qualification of witnesses, impeachment of witnesses, differentiation between proof and argument, order of proof. Prerequisite: HIST 370. Grade only. Offered yearly.

375 - Substantive Law and Ethics II—3 S.H.

Students will study the basic elements of probate law, negotiable instruments, bankruptcy, landlord-tenant law with extensive coverage of family law (divorce, separation, and paternity), including the study of motion practice and the Minnesota Rules of Family Court Procedure, pre-trial discovery and conflict resolution techniques as well as ethical issues associated with each. Prerequisite: HIST 372. Grade only. Offered yearly.

376 - Adversary System: Criminal Procedure—2 S.H.

Supplements the course on the Adversary System - Civil and covers criminal pleadings, the grand jury system, criminal pretrial discovery, jury instructions, post-trial sentencing, requirements of a fair hearing and constitutional legal defenses. Prerequisite: HIST 372. Grade only. Offered yearly.

377 - Practical Legal Investigation Techniques—3 S.H.

Students will learn the practical techniques used in investigating cases involving traffic, aircraft, personal negligence, employer negligence, product liability, professional malpractice and criminal investigation. Students also will become acquainted with the technique of working with witnesses. Prerequisites: admission to the Paralegal Major. Grade only. Offered yearly.

380 - Paralegal Internship—12 S.H.

Field placement in a selected organization for the purpose of experience and training as a professional paralegal. Prerequisites: HIST 370, HIST 371, HIST 372, HIST 373, HIST 374, HIST 375, HIST 376 and completion of portfolio. P/NC only.

381 - Paralegal Topics and Issues—3 S.H.

This course is an approved elective for Paralegal majors taken in conjunction with the program-required internship. In addition to selected readings on some aspect of law in contemporary American society, students will engage in a weekly discussion via e-mail with the instructor and fellow students on topics relating to the readings and their internship experience. Students will be evaluated both by the quality of their contribution to these discussions and a final paper that grows out of the readings, internship and e-mail discussions.

383 - Paralegal Institute—1-3 S.H.

The Paralegal Institute will cover various specialized topics which directly relate to areas of the paralegal profession. The specialized institutes will be offered for 1-3 credits and may be repeated to a maximum of 3 credits toward the WSU Paralegal degree. P/NC only.

LAW AND SOCIETY

Minne Hall, Room 212 (History Dept) (507-457-5400)

Co-Directors: John Campbell (History) and Troy Paino (History)

FACULTY

John Campbell, Associate Professor; B.A., Wesleyan University; M.A., Ph.D., University of Minnesota; 1996 -

Troy Paino, Associate Professor; B.A., Evangel College; J.D., Indiana University School of Law; M.A., Ph.D., Michigan State University; 1997 -

The following faculty members teach upper-division required courses in the major:

Criminal Justice: M. Norman

English: M. Dorner

Geoscience: K. Summa

History: M. Byman, J. Campbell, T. Paino, G. Schmidt

Mass Communications: R. Elcombe, T. Schwarze

Psychology: P. Miene

Philosophy: D.Scheid, K. Possin

Political Science: M. Bosworth

PROGRAM AND ITS BENEFITS TO STUDENTS

As one of the central forces, processes, and institutions in modern life, the law (in all of its guises) merits the liberal-arts-based examination offered by the Law and Society Program. Law and society is a richly interdisciplinary major that enables interested students to study law and legal culture from many different disciplinary, conceptual, historical, theoretical, and empirical perspectives. The Law and Society program offers numerous benefits for students as they pursue their post-collegiate life:

- Because of their broad-based, multi-disciplinary background, law and society graduates will be able to participate more effectively and intelligently as citizens in an ever-changing world.
- Successful participation in this program will provide a sound basis and preparation for students hoping to attend law or graduate school. Although law schools are quick to point out that many undergraduate majors in the liberal arts stand as good preparation, the law and society major, with its focus on the law in the context of an interdisciplinary and liberal arts education, will be especially attractive to law schools. Once in law school, knowledge acquired as a law and society major may give students an added advantage in their law school studies.
- Even if law or graduate school is not the ultimate goal for students majoring in this program, the law and society major will endow any Winona State student with the intellectual interests and abilities to achieve success (and satisfaction) in other post-collegiate endeavors.
- For students pursuing employment right after college, successfully majoring in law and society will provide graduates with many valuable intellectual skills—thinking analytically, writing and speaking persuasively, reading and listening critically, and researching and organizing data systematically—desired by many employers. Such versatility is all the more desirable in a world where work and careers continuously change.
- By having examined the law from many different disciplines, law and society graduates will have valuable expertise to sell when seeking post-collegiate employment. Given the centrality of the law in contemporary American society, there are many potential employers—corporate, governmental, non-profit, to name a few—who will be eager to hire successful law and society majors for their understanding of how the law influences the work-a-day world of employers.

REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for the law and society major includes:

1. Being admitted to the program
2. Successfully completing the required courses with a minimum 2.50 GPA.
3. Successfully writing a capstone senior thesis on some topic involving the law. Although there is considerable flexibility in the choice of topic, the actual coursework for the thesis will be done in the history major sequence of Historical Methods (History 298) and the Senior Seminar (History 495). The senior thesis gives students the opportunity to showcase much of their knowledge and understanding by doing their own in-depth research, analysis, and writing.

B.A. MAJOR – LAW AND SOCIETY

80 S.H.

English (5 S.H.)

- 210 Advanced Expository Writing (3)
- 225 Topics in Literature: Law & Literature (2)

Geoscience (7 S.H.)

- * 120 Dynamic Earth (4)
- 225 Environmental Geoscience (3)

History (16 S.H.)

- 101 Introduction to Law & Society (1)

Choose one of the following three courses:

- * 120 Western Civilization: Beginning-1500 (3)
- * 121 Western Civilization: 1500-1815 (3)
- * 122 Western Civilization: 1815-Present (3)

Choose one of the following two courses:

- * 150 U.S. History to the Civil War (3) OR
- * 151 U.S. History Since the Civil War (3) AND
- 355 European Intellectual & Cultural History (3)
- 365 American Legal History (3)
- 488 Constitutional History (3)

Mass Communication (6 S.H.)

- * 100 Mass Media & Society (3)
- 405 Issues and Ethics (3)

Philosophy (6 S.H.)

- * 210 Inductive Reasoning (3)
- 332 Philosophy of Law (3)

Political Science (9 S.H.)

- * 120 Introduction to American Politics (3)
- 227 Judicial Process and Politics (3)
- 320 Constitutional Law (3)

Psychology (6 S.H.)

- * 210 General Psychology (3)
- * 330 Psychology and the Law (3)

Sociology (6 S.H.)

- * 150 Introduction to Sociology (3)

- 210 Introduction to Criminal Justice (3)

Senior Writing & Research Requirement (7 S.H.)

- * 298 History - Historical Methods (3)
- 495 History - Senior Seminar (4) OR

Note: If another department within the College of Liberal Arts develops a senior writing project similar to that required in the History Department's methods and seminar courses, it may be substituted for History 298 and 490. It is important that the research and writing project focus on some aspect of legal culture.

* Course are considered to be "additional requirements" and may be used to satisfy certain University Studies requirements.

APPROVED ELECTIVES (12 S.H.)

Choose 4 of the following courses.

History

- 486 American Intellectual & Cultural History (3)

Mass Communication

- 300 Mass Media Law (3)

Political Science

- * 220 Civil Rights: Civil Liberties (3)
- ** 260 Development of Political Thought (3)
- ** 358 Contemporary Political Thought (3)
- 421 The First Amendment (3)
- ** 450 Feminist Political Theory (3)

Psychology

- 430 Forensic Psychology (3)

Social Work

- 425 Law and Social Work (3)

Sociology/Criminal Justice

- 315 Criminology (3)
- 425 Social Change and Social Movements (3)
- 429 Social Class and Power (3)

** These courses have specific prerequisites. Students must either satisfy these prerequisites or get permission from the instructor.

LIBRARY SCIENCE

Main Library, Room 110 (507-457-5151)

Leighton (Chairperson)

Chairperson's e-mail: vleighton@winona.edu

General Inquiries: Refdesk@winona.edu

FACULTY

Russell Dennison, Systems and Cataloging Librarian, Professor; B.A., Central College; M.A.L.S., University of Wisconsin-Madison; 1980 –

Mark J. Eriksen, Coordinator of Access Services, Assistant Professor; B.A., Ohio State University; M.L.S., Kent State University; M.S., South Dakota State University; 1998 –

Joe Jackson, Instruction Librarian, Assistant Professor; B.A., University of Minnesota; B.A., University of Lyon; M.S., Simmons College; M.A., Arizona State University; 1997 –

Kendall Larson, Information Gallery Librarian, Assistant Professor; B.A., Gustavus Adolphus College; M.A., University of Wisconsin-Madison; 2001 –

H. Vernon Leighton, Coordinator of Public Service, Associate Professor; B.A., Bucknell University; M.S., University of Illinois; 1990 –

Joe Mount, Collection Development Librarian, Assistant Professor; B.A., Wake Forest University; M.A., Ohio University; M.L.S., Indiana University-Bloomington; 1994 –

William Palzer, Reference Librarian, Assistant Professor; B.A., College of St. Thomas; M.A.L.S., University of Minnesota; 1970 –

Kathryn Sullivan, Coordinator of Non-Print Resources and Distance Education, Professor; B.A., M.A., Northern Illinois University; D.Sc., Nova University; 1978 –

PURPOSE

The Library Department does not have a program per se; however, the department offers courses in computerized information retrieval to help researchers become more effective at using modern information technology to locate relevant material. Persons wishing to make library science a professional career are encouraged to pursue a broad-based program of study with courses from many different fields.

* Course may be used to satisfy certain University Studies requirements.

LIBRARY SCIENCE COURSE DESCRIPTIONS

101 – Introduction to Online Information Searching – 1 S.H.

An introduction to tools and strategies for locating information in cyberspace. Emphasis is on using online public access catalogs and web browsers.

200 – Topics in Library/Information Science – 1-2 S.H.

A variable content course examining different topics in library and information science. Can be repeated as topics change.

MARKETING

Somsen Hall, Room 102 (507-457-5698)

<http://marketing.winona.msus.edu/Marketing.htm>

Murphy (Chairperson)

FACULTY

James W. Bovinet, Professor; B.S., Drake University; M.B.A., D.B.A., Southern Illinois University-Carbondale; 1990 –

Bruce Klemz, Assistant Professor; B.S., Michigan State University; M.S., Oakland University; M.B.A., University of Saint Thomas; Ph.D., University of Iowa; 2000 –

James William Murphy, Professor; B.S.Ed, M.S.Ed., Arkansas State University; Ed.D., University of Memphis; 1989 –

C. Robert Newberry, Associate Professor; B.S., M.B.A., University of Wisconsin-La Crosse; Ph.D., University of Wisconsin-Milwaukee; 1992 –

Russell K. Smith, Jr., Associate Professor; B.A., Drake University; Ph.D., University of Tennessee-Knoxville; 1993 –

Mark Young, Professor; B.S., M.B.A., University of Wisconsin-La Crosse; D.B.A., University of Kentucky; 1980 –

PURPOSE

The Marketing Department is committed to fostering excellence in marketing education through progressive curriculum development and the application of state-of-the-art technology. Students who pursue an education in marketing will develop an understanding of the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives. Graduates are prepared for a professional career in marketing or advanced graduate studies.

MARKETING DEPARTMENT POLICIES

In complying with WSU's academic integrity policy, the Marketing Department requires that students represent themselves and their work honestly. Violations of this policy, which include cheating, fabrication of information, multiple submissions and plagiarism, shall be sanctioned by the individual faculty member through the lowering of the student's grade and/or failing them in the course. Serious or second violations may carry the additional sanction of dismissal from the Marketing Program. This policy is enforced in accordance with "due process" as set forth on page 29 of this catalog.

Policy Regarding Course Prerequisites: If a course is taken prior to the successful completion of prerequisite courses, then successful completion of an additional marketing course will be required for graduation. Successful completion of a course is considered to be a grade of "C" or better in the course.

GRADUATION REQUIREMENTS

1. Completion of all coursework required for the major.
2. A grade of "C" or better in all marketing major required and elective courses.
3. Completion of an experiential marketing practicum (MKTG 399 or MKTG 429).
4. A minimum of 50% of the marketing major requirements must be completed at WSU.
5. Meet all WSU graduation requirements (page 24).
6. Sixty-four non-business credits are required for the marketing major. The mathematics, statistics and economics courses required for the Bachelor's degree can be counted toward the 64 non-business credits.
7. Completion of the marketing core fulfills the University Studies upper-division flag requirements. (MKTG 320 fulfills the 3 S.H. math/statistics flag, MKTG 340 fulfills the 6 S.H. written flag, and MKTG 420 fulfills the 3 S.H. oral flag.)

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in major and minor on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

B.S. MAJOR – MARKETING

60 S.H. (No Minor Required)

REQUIRED COURSES (51 S.H.)

Accounting (3 S.H.)

ACCT 211 Financial Accounting Principles (3)

Business Administration (9 S.H.)

BUSA 291 Legal Environment of Business (3)

MGMT 325 Organizational Dynamics (3)

POM 334 Production and Operations Management (3)

Economics and Finance (9 S.H.)

ECON 201 Principles of Microeconomics (3)

ECON 202 Principles of Macroeconomics (3)

FIN 360 Corporate Finance (3)

Mathematics Requirements (3 S.H.)

MATH 140 Applied Calculus (3) OR

MATH 160 Calculus I (3)

Statistics (3 S.H.)

DIS 220 Business Statistics I (3) OR

STAT 210 Statistics (3)

Marketing Core (24 S.H.)

300 Principles of Marketing (3) (Prerequisites: Grade of "C" or better in ACCT 211 and ECON 201)

320 Market Analysis (6) (Prerequisites: Completion of the written and oral communications basic skills in the University Studies program, and a grade of "C" or better in both MKTG 300 and in the math and statistics requirements listed above)

322 Marketing Communications I (1) (must be taken with MKTG 320)

340 Marketing Planning (6) (Prerequisite: Grade of "C" or better in MKTG 320)

342 Marketing Communications II (1) (must be taken with MKTG 340)

- 399 Internship Experience (3) OR MKTG 429 Small Business Consulting (3) fulfills the marketing major practicum requirement (Prerequisite: MKTG 320)
- 420 Marketing Management (3) (Prerequisite: Grade of "C" or better in MKTG 340)
- 422 Marketing Communications III (1) (must be taken with MKTG 420)

ELECTIVES (9 S.H.)

(Prerequisite: MKTG 300)

- 323 Consumer Behavior (3)
- 325 Professional Selling (3)
- 337 Qualitative Research Methods (3)

(Prerequisite: MKTG 320)

- 327 Marketing and Entrepreneurship (3)
- 329 Sport Marketing (3)
- 331 International Marketing (3)
- 333 Topics in Marketing (3)
- 335 Tourism Marketing (3)
- 339 Internet Marketing (3)
- 341 E-Commerce (3)
- 343 Business to Business Marketing (3)
- 345 Sales Management (3)
- 347 Marketing Channels (3)
- 349 Independent Study (3)
- 429 Small Business Consulting (3)

B.S. MINOR—MARKETING

23 S.H.

REQUIRED COURSES (20 S.H.)

Business Administration/Statistics (3)

Completion of any introductory statistics course

Marketing Core (17 S.H.)

- 300 Principles of Marketing (3) (Prerequisites: College of Business majors: ACCT 211 and ECON 201, non-College of Business majors: instructor's consent).
- 320 Market Analysis (6) (Prerequisites: Completion of the written and oral communications basic skills in the University Studies program, and a grade of "C" or better in both MKTG 300 and in the business administrative/statistics requirement listed above).
- 322 Marketing Communications I (1) (must be taken with MKTG 320).
- 340 Marketing Planning (6) (Prerequisite: Grade of "C" or better in MKTG 320).
- 342 Marketing Communications II (1) (must be taken with MKTG 340)

ELECTIVES (3 S.H.)

Any marketing elective (See marketing major.)

MARKETING COURSE DESCRIPTIONS

100 - Marketing and Society—3 S.H.

This course introduces students to marketing's role in society and compares it with marketing's role within the organization. Ethical and moral issues pertinent to marketing are raised. These include the ethical dilemmas often faced by marketing professionals, as well as the consequences of marketing on society as a whole.

300 - Principles of Marketing—3 S.H.

A beginning course in marketing which stresses the marketing function's contribution to any organization. Topics include buyer behavior, products, and channels of distribution, promotion, and pricing and social issues in marketing. Standard business and non-traditional aspects of marketing are explored. The potential employment scenario is reviewed. Prerequisites: For business majors, ECON 201 and ACCT 211; for non-College of Business majors, instructor's consent.

320 - Market Analysis—6 S.H.

Market analysis integrates three disciplines: marketing research, the study of consumer behavior, and market demand analysis. Market analysis applies these disciplines to understanding relevant markets, analyzing consumer and business-to-business buying behavior, and identifying and measuring target markets. The course examines the theory, tools and processes that are utilized to apply marketing research,

the study of consumer behavior and market demand analysis to provide information that facilitates decision making in marketing management. Emphasis is placed on the practical issues related to the successful application of the three disciplines by an organization under market conditions. Market analysis provides the student with substantial experience in developing written and oral communications skills. Market Analysis must be taken simultaneously with Marketing Communications I (MKTG 322). Prerequisites: Completion of the written and oral communications basic skills in the University Studies program, and a grade of "C" or better in both MKTG 300 and in the mathematics and statistics requirements of the marketing major or minor.

322- Marketing Communications I: Research Reports—1 S.H.

Marketing Communication I is designed to develop written communication skills in marketing research and analysis including effective format and design and the ethical dimensions of report writing. Marketing Communications I must be taken simultaneously with Market Analysis (MKTG 320).

323 - Consumer Behavior—3 S.H.

An application of the behavioral sciences to marketing. Topics include attitudes and beliefs, perception, interpretation, learning, personality, communication, cultural values and norms, social class, cultural and gender diversity, and consumer decision-making models. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 300; for non-marketing majors and minors, instructor's consent.

325- Professional Selling—3 S.H.

Learning professional selling concepts and the communications skills to apply them. Topics include interpersonal communications in business, relationship building, prospecting and qualifying, determining customer wants and needs, sales presentation and negotiation and post-sale communications. Employment opportunities in sales are examined. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 300; for non-marketing majors and minors, instructor's consent.

327 - Marketing and Entrepreneurship—3 S.H.

An examination of the procedures and managerial practices of small business. Specific emphasis is given to entrepreneurial subjects such as the legal organization of the firm, financing, franchising, site selection, employee management, and buying and customer support functions. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

329 - Sport Marketing—3 S.H.

Sports marketing focuses on the different problems presented in developing promotional programs for sports teams. Emphasis will be placed on professional and collegiate level. A survey of potential sports-related jobs is included. Grade only. Student fee is required. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

331 - International Marketing—3 S.H.

A study of the economic, political, cultural and business environments affecting the international marketing operations of the firm. Market selection decision, entry and operating decisions, marketing mix decisions and organizational structures are examined. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

333 - Topics in Marketing—3 S.H.

Various courses offered in conjunction with curriculum needs and the availability of faculty with relevant expertise. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

335 - Tourism Marketing—3 S.H.

Tourism Marketing provides students with an introduction to the principles and issues associated with marketing the services and products that comprise the leisure industry. This includes examining the behavioral component of consumers who use travel, hospitality and tourism services and products, as well as the research techniques that inform marketing strategies for tourism related organizations.

Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

337 - Qualitative Research Methods—3 S.H.

Qualitative Research Methods will introduce the students to qualitative research as a means of inquiry into consumer behavior, marketing and marketing related problems. Qualitative methods for data collection such as focus groups, observation and interviewing will be considered as well as the techniques of interpretation and reporting. Prerequisite: For

* Course may be used to satisfy certain University Studies requirements.

marketing majors and minors, grade of "C" or better in MKTG 300; for non-marketing majors and minors, instructor's consent.

339 - Internet Marketing—3 S.H.

Internet Marketing examines strategies and marketing concepts that form the basis of Internet commerce and prepares future business decision makers to develop and manage the marketplace of tomorrow.

Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

340 - Marketing Planning—6 S.H.

Marketing Planning takes a strategic perspective to examine the nature and scope of utilizing market analysis outcomes to plan the implementation of a marketing mix. The course includes the study of marketing management theory and the experience of business and marketing planning. Course implementation will involve detailed analysis of product development and management activities, such as, research and development, and brand and product line management; promotional activities, such as, advertising, personal selling, public relations, and sales and trade promotions; distribution activities, such as retailing and wholesaling; and pricing activities, such as, new product pricing, pricing strategies and pricing adjustments. The course includes substantial experiential learning with written and oral communications skills. Marketing Planning must be taken simultaneously with Marketing Communications II (MKTG 342). Prerequisite: Grade of "C" or better in MKTG 320.

341 - E-Commerce—3 S.H.

E-Commerce applies marketing strategies and concepts and prepares future business decision makers for the rapidly changing world of Web business practices. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

342 - Marketing Communications II: Marketing Plans—1 S.H.

Marketing Communication II is designed to develop and refine written communication necessary for authoring a business and marketing plan including effective format and design. Marketing Communications II must be taken simultaneously with Marketing Planning (MKTG 340).

343 - Business-to-Business Marketing—3 S.H.

Business to business marketing considers organizational and industrial markets and marketing processes. An examination of organizational buying behavior procurement and marketing management for industrial goods and services is provided. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

345 - Sales Management—3 S.H.

An in-depth coverage of determining the types of sales positions, the recruiting and hiring process, training, determining sales territories, methods of compensation and motivation, and control over the sales force. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

347 - Marketing Channels—3 S.H.

The legal, political, social and economic relationships among the various institutions that comprise marketing channels with a focus on managing the distribution of goods and services. Prerequisite: For marketing majors and minors, grade of "C" or better in MKTG 320; for non-marketing majors and minors, instructor's consent.

349 - Independent Study—1-3 S.H.

Offers the advanced student an opportunity to do additional readings and/or research papers in areas of special interest. Grade only.

Prerequisite: Grade of "C" or better in MKTG 320 and department approval.

398 - Internship—1-9 S.H.

Credits will not be counted in marketing major, but as general elective credits. Prerequisites: Grade of "C" or better in MKTG 320 and department approval. P/NC only.

399 - Internship Experience—3 S.H.

See Department chairperson for a list of requirements. Credits fulfill marketing major practicum requirement. Grade only. Prerequisites: Grade of "C" or better in MKTG 320 and department approval.

420 - Marketing Management—3 S.H.

An advanced applied course in marketing management and decision-making. Marketing management is a comprehensive study of the development and implementation of a marketing plan including the plans placement in a business or organizational plan. Students will be required to apply the principles and concepts of marketing to real-world problems. Each student will be required to write and present a marketing plan. Emphasis will be placed on analysis, decision-making, and the communication of the plan to appropriate audiences. Marketing Planning must be taken simultaneously with Marketing Communications III (MKTG 422). Prerequisite: Grade of "C" or better in MKTG 340.

422 - Marketing Communications III: Presentations—1 S.H.

Course is designed to develop student presentation skills and use of presentation software. Students will learn and practice the elements of good oral presentation skills specifically designed for a business audience. Marketing Communications III must be taken simultaneously with Market Management (MKTG 420).

429 - Small Business Consulting—3 S.H.

Small Business Consulting is a capstone course designed to provide students with an opportunity to integrate and apply their knowledge, skills, and abilities in a real world situation. A wide variety of projects may be considered, however, all projects must be integrative and comprehensive. Projects typically consist of working with a business on a special project or assisting the business in an area where they are trying to improve. Alternative projects have included: developing a business plan for a new business, conducting marketing research, completing a special project outside your normal responsibilities for a company where you currently work, analyzing an industry, conducting original research to extend general business knowledge, etc. Credits fulfill marketing major practicum requirement. Grade only. Prerequisites: Grade of "C" or better in MKTG 320 and department approval.

MASS COMMUNICATION

Phelps Hall, Room 126 (507) 457-5474
Elcombe (Chairperson)

FACULTY

Ajit Daniel, Professor; B.A., St. Stephen's College, Delhi University, India; B.S., Southern Illinois University-Edwardville; M.S., Southern Illinois

University-Carbondale; Ph.D., The Union Institute; 1982 -

Ronald Elcombe, Associate Professor; B.S., University of Minnesota-Twin Cities; M.M., Mankato State University; Ph.D., The Union Institute: 1991 -

Drake Hokanson, Assistant Professor; B.A., M.A., University of Iowa; 1997 -

Cindy Killion, Associate Professor; B.J., University of Missouri-Columbia; M.A., University of Oklahoma; 1992 -

Dennis H. Pack, Professor; B.S., University of Utah; M.A., Northwestern University; 1978 -

Terry Schwarz, Professor; B.F.A., University of Minnesota-Twin Cities; M.A., University of Northern Iowa; Ph.D., The Union Institute; 1988 -

John H. Vivian, Professor; A.B. Gonzaga University; M.S.J., Northwestern University; 1981 -

John N. Weis, Assistant Professor; B.S., Northern Illinois University; M.A., Vermont College of Norwich University; 1996 -

PURPOSE

Mass media are needed in a free society to inform, survey, protect and enlighten. The mass communication faculty stresses developing communicators with a strong sense of their responsibility in serving the community and society. The faculty also provides practical experience in producing mass media content.

Practicing professionals are frequent guests. Mass communication students have many opportunities to apply theory to practice in laboratories, co-curricular and extracurricular programs including:

- KQAL, a full-service departmental radio station serving an average listening audience of 15,000.
- Bravura, a laboratory publication with a circulation of 17,000.
- Color television production facilities in which students produce programs for a variety of audiences.
- Computerized reporting labs for writing projects and graphics projects.
- Campus chapters of the American Advertising Federation, the International Association of Business Communicators, the National Broadcasting Society (Alpha Epsilon Rho), the National Press Photographers Association and the Society for Collegiate Journalists.
- Many other opportunities to work in student and professional media activities are available to students both on and off-campus.
- Computerized work stations for creating multi-media electronic portfolios mass communication majors choose an option for their coursework in advertising, broadcasting, journalism, photojournalism or public relations.

The curriculum offers students opportunities to develop skills in oral, visual, and written communication; gain an understanding of media law, ethics and theory; and receive both theoretical and practical experience in an area of special interest.

PASS/NO CREDIT COURSES

Except for internships, students must take all courses in their mass communication major or minor program on a grade-only basis. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

ADDITIONAL GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for mass communication majors/minors are as follows:

- All mass communication majors must have a cumulative GPA average of 2.5 or higher to graduate.
- Mass communication majors and minors must earn a grade of "C" or better in all mass communication courses and all additional courses taken to satisfy the requirements of a mass communication major.
- All mass communication majors must submit an electronic assessment portfolio prior to graduation.
- To graduate from WSU with a mass communication degree in any option, a student transferring credits must satisfy requirements from the appropriate option including 12 credit hours earned at WSU in mass communication courses at the 300-level or above.

B.A. MAJOR – MASS COMMUNICATION

42 S.H. (Minor Required)

Mass communication majors choose one of the five options for which the core requirements are the same.

- 300 MKTG Principles of Marketing (3)
- 323 MKTG Consumer Behavior (3)

CORE REQUIRED COURSES (15 S.H.)

- 100 Mass Media & Society (3)
- 110 Visual Communication (3)
- 130 News Writing (3)
- 300 Mass Media Law (3)
- 405 Mass Media Issues & Ethics (3)
- 499 Electronic Assessment Portfolio (0)

Advertising Option – 42 S.H.

CORE REQUIRED COURSES (15 S.H.)

CORE ELECTIVES (3 S.H.)

Choose One:

- 305 Mass Media History (3)
- 400 Mass Communication Theory (3)
- 450 International Broadcasting (3)

ADVERTISING REQUIRED COURSES (18 S.H.)

- 175 Mass Communication Computer Applications (3)
- 260 Advertising (3)
- 360 Advertising Copy Writing (3)
- 361 Advertising Media Selection (3)
- 362 Advertising Design (3)
- 460 Advertising Campaigns (3)

ADVERTISING ELECTIVES (6 S.H.)

- 215 Photocommunication (3)
- 220 Broadcast Writing (3)
- 240 Public Relations (3)
- 275 Publication Design (3)
- 226 Video/Multimedia Planning & Design (3)
- 408 Research in Mass Media (3)
- 461 Retail/Business Advertising (3)

Broadcasting Option – 42 S.H.

CORE REQUIRED COURSES (15 S.H.)

CORE ELECTIVES (3 S.H.)

Choose One:

- 305 Mass Media History (3)
- 400 Mass Communication Theory (3)
- 450 International Broadcasting (3)

BROADCASTING REQUIRED COURSES (18 S.H.)

- 020 Electronic Media Activities (1)
- 120 Electronic Media (2)
- 220 Broadcast Writing (3)
- 225 Radio Production (3)
- 226 Video/Multimedia Planning & Design (3)
- 320 Television Production Operations (3)
- 425 Senior Seminar in Electronic Media (3)

BROADCASTING ELECTIVES (6 S.H.)

- 321 Topics In Television Production (3)
- 325 Broadcast Journalism (3)
- 326 Mass Communication Multimedia Applications (3)
- 399 Internship (3)
- 420 Electronic Media Management (3)

Journalism Option – 42 S.H.

CORE REQUIRED COURSES (15 S.H.)

CORE ELECTIVES (3 S.H.)

Choose One:

- 305 Mass Media History (3)
- 400 Mass Communication Theory (3)
- 450 International Broadcasting (3)

* Course may be used to satisfy certain University Studies requirements.

JOURNALISM REQUIRED COURSES (18 S.H.)

- 175 Mass Communication Computer Applications (3)
- 230 News Gathering (3)
- 275 Publication Design (3)
- 330 Feature Writing (3)
- 331 News Editing (3)
- 437 Publication Practicum (3)

JOURNALISM ELECTIVES (6 S.H.)

- 215 Photocommunication (3)
- 220 Broadcast Writing (3)
- 240 Public Relations (3)
- 310 Photojournalism (3)
- 226 Video/Multimedia Planning & Design (3)
- 345 Public Relations Writing (3)
- 408 Research in Mass Media (3)
- 430 Specialized Reporting (3)

Photojournalism Option – 42 S.H.

CORE REQUIRED COURSES (15 S.H.)

CORE ELECTIVES (3 S.H.)

Choose One:

- 305 Mass Media History (3)
- 400 Mass Communication Theory (3)
- 450 International Broadcasting (3)

PHOTOJOURNALISM REQUIRED COURSES (21 S.H.)

- 175 Mass Communication Computer Applications (3)
- 215 Photocommunication (3)
- 230 News Gathering (3)
- 275 Publication Design (3)
- 310 Photojournalism (3)
- 317 Photojournalism Practicum (3)
- 419 Senior Seminar in Photojournalism (3)

PHOTOJOURNALISM ELECTIVES (3 S.H.)

- 240 Public Relations (3)
- 260 Advertising (3)
- 319 Studio Photography (3)
- 226 Video/Multimedia Planning & Design (3)
- 330 Feature Writing (3)
- 331 News Editing (3)
- 408 Research in Mass Media (3)
- 437 Publication Practicum (3)

Public Relations Option – 42 S.H.

CORE REQUIRED COURSES (15 S.H.)

CORE ELECTIVES (3 S.H.)

Choose One:

- 305 Mass Media History (3)
- 400 Mass Communication Theory (3)
- 450 International Broadcasting (3)

PUBLIC RELATIONS REQUIRED COURSES (21 S.H.)

- 175 Mass Communication Computer Applications (3)
- 230 News Gathering (3)
- 240 Public Relations (3)
- 275 Publication Design (3)
- 340 Public Relations Cases (3)
- 345 Public Relations Writing (3)
- 440 Public Relations Campaigns (3)

PUBLIC RELATIONS ELECTIVES (3 S.H.)

- 120 Electronic Media (2)
- 215 Photocommunication (3)
- 220 Broadcast Writing (3)
- 260 Advertising (3)
- 226 Video/Multimedia Planning & Design (3)
- 330 Feature Writing (3)

- 331 News Editing (3)
- 347 Public Relations Practicum (3)
- 361 Advertising Media Selection (3)
- 399 Internship (3)

B.A. MINOR – MASS COMMUNICATION

21 S.H.

REQUIRED COURSES (9 S.H.)

- * 100 Mass Media & Society (3)
- 110 Visual Communication (3)
- 130 News Writing (3)

ELECTIVES (12 S.H.)

Students must select 12 semester hours of credit from other mass communication courses.

MASS COMMUNICATION COURSE DESCRIPTIONS

100 - Mass Media and Society-3 S.H.

Sociological examination of the interrelationship of mass media and society in contemporary America.

110 - Visual Communication-3 S.H.

Basic visual communication theory and basic b&w photography including camera handling and darkroom experience. Weekly critiques. Lab required. Manual 35mm camera required.

115 - Photography Appreciation – 3 S.H.

An introduction to the art and expression of photography through lecture, photography assignments, discussion, and critique. Students will complete photo assignments tied to major themes of the course using simple cameras and commercially-processed film. Emphasis on wide range of genres and important photographers and their work from 1839 to the present.

120 - Electronic Media-3 S.H.

Characteristics, philosophy and impact of radio, television, cable and the developing electronic mass media.

130 - News Writing-3 S.H.

Style and structure of news stories; news sources; newsroom practices and procedures; with reporting assignments for publication and broadcast. Prerequisite: ENG 111.

175 - Mass Communication Computer Applications-3 S.H.

Computer skills for the mass media using word processing, page layout, database, spreadsheet, image generation, image manipulation and other applications for the Macintosh computer.

215 - Photocommunication-3 S.H.

Advanced visual and technical skills for black-and-white photography. Prerequisite: MCOM 110.

220 - Broadcast Writing-3 S.H.

Radio and television writing including commercial copy and feature programs. Prerequisite: ENG 111.

225 - Radio Production-3 S.H.

Design, technique, production and presentation of radio programs. Prerequisite: MCOM 220.

226 - Video/Multimedia Planning and Design-3 S.H.

An overview of the television/video and multimedia production process with special attention to organizing, scripting, budgeting, equipment and personnel. This course deals with essential pre-production planning, rather than production techniques.

230 - News Gathering-3 S.H.

Interviewing, observation and research as information-gathering methodologies; with reporting assignments for publication and broadcast. Prerequisite: MCOM 130.

240 - Public Relations-3 S.H.

Nature and role of public relations in a democratic society. Case problems and projects.

260 - Advertising-3 S.H.

A survey course that serves as an introduction to advertising. The course covers the structure of the advertising industry, the process of creating and delivering an advertising message and the function advertising serves in our society.

275 - Publication Design-3 S.H.

Using the Macintosh computer to learn layout, design principles and processes for the print media. Prerequisite: MCOM 175.

300 - Mass Media Law-3 S.H.

Major issues and survey of the media's current legal status. Prerequisite: MCOM 100.

305 - Mass Media History-3 S.H.

Development of the mass media including historiography, examination of movements and current research problems.

310 - Photojournalism-3 S.H.

The photograph as a means of visual reporting. Lab required. Weekly critique. Prerequisite: MCOM 215.

317 - Photojournalism Practicum-3 S.H.

Practical hands-on applications of photojournalism concepts and theories in the form of news photography and photo stories for publication in print version of departmental laboratory publication and adapting print version for electronic dissemination. Prerequisite: MCOM 310.

319 - Studio Photography-3 S.H.

Large-format camera photography with emphasis on studio techniques. Prerequisite: MCOM 215.

320 - TV Production Operations-3 S.H.

Theory and practical experience in planning and creating of television programs using single- and multiple-camera systems. Prerequisite: MCOM 226.

321 - Topics in Television Production-3 S.H.

Advanced theory and practical experience in producing television programs using single- or multiple-camera systems. Prerequisite: MCOM 320.

325 - Broadcast Journalism-3 S.H.

Reporting and presenting the news on radio and television. Topics include news writing, reporting, taping and editing; producing newscasts; broadcast news ethics. Prerequisites: MCOM 226 and MCOM 320.

326 - Interactive Media Production-3 S.H.

Understanding and authoring multimedia computer applications for the mass media. Topics include equipment and software, selection, preparation and programming of graphics, animation, sound and video in multimedia for the mass media. Prerequisites: MCOM 100 and MCOM 226.

330 - Feature Writing-3 S.H.

Developing, writing and marketing feature stories to a variety of media. Prerequisite: MCOM 230.

331 - News Editing-3 S.H.

Operation of the newsroom including copy editing, gatekeeper decisions, headline writing, layout. Prerequisite: MCOM 230.

340 - Public Relations Cases-3 S.H.

Public relations problems in business, industry, government, trade associations, labor and other groups. Planning and preparing communications materials for various media, and applications of public relations techniques. Prerequisite: MCOM 240.

345 - Public Relations Writing-3 S.H.

Preparing news releases, scripts, employee publications, newsletters, brochures, plus other promotional and PR techniques. Prerequisite: MCOM 230.

347 - Public Relations Practicum-3 S.H.

Practical experience in print and public relations tasks including writing or designing brochures, speech writing, collecting data and developing strategies. Prerequisite: MCOM 240.

360 - Advertising Copy Writing-3 S.H.

The creation of effective advertising messages for newspapers, magazines, radio, television and other mass media. The course emphasizes the writing of advertising copy and the coordination of visual and verbal concepts to achieve advertising objectives.

361 - Advertising Media Selection-3 S.H.

Theories, problems and practices related to advertising media evaluation and selection. Prerequisite: MCOM 260.

362 - Advertising Design-3 S.H.

Principles and practices of advertising design with an emphasis on the design of effective advertisements in newspapers, magazines, direct mail and alternative delivery systems. Prerequisite: MCOM 360.

399 - Internship-3 S.H.

Departmentally approved, supervised practical experience in mass communication. Prerequisite: Departmental approval.

400 - Mass Communication Theory-3 S.H.

Theories of mass influence on society and culture. Prerequisite: MCOM 100.

405 - Mass Media Issues and Ethics-3 S.H.

Introduction to perspectives on ethics as applied to case studies and issues in advertising, broadcasting, journalism, photojournalism and public relations. Prerequisite: MCOM 100 and senior standing.

408 - Research in Mass Media-3 S.H.

Investigation and interpretation of mass media research; introduction to procedures for studying media control, content, audience and effects; problems in applying theoretical concepts. Prerequisites: MCOM 100 and junior standing.

409 - Independent Study-3 S.H.

To meet the needs of the individual student. By previous arrangement only. Prerequisite: Junior standing. May be repeated for a total of 6 S.H.

419 - Senior Seminar in Photojournalism-3 S.H.

A capstone experience in photojournalism which utilizes the breadth of previous knowledge gained in identifying and researching a selected issue appropriate to the field. Prerequisites: Senior standing and MCOM 317.

420 - Electronic Media Management-3 S.H.

Techniques and organization for management of commercial, non-commercial and industrial television, and radio. Prerequisite: MCOM 120.

425 - Senior Seminar in Electronic Media-3 S.H.

Capstone experience in electronic media. Students research, plan and write a major research paper or produce a radio, television/video or multimedia program. Students also create a resume/portfolio. Prerequisites: Senior standing, MCOM 225 and MCOM 226.

430 - Specialized Reporting-3 S.H.

Interpretative writing, investigative reporting, editorial persuasion and other topics. May be repeated for credit on a second topic. Prerequisite: MCOM 230.

437 - Publication Practicum-3 S.H.

Practical hands-on application of journalism concepts and skills through team leadership, story generation, copy editing, page layout and production of the departmental printed laboratory publication as well as editing for electronic dissemination. Prerequisites: MCOM 130, MCOM 230 and MCOM 331.

440 - Public Relations Campaigns-3 S.H.

Implementation of theory and processes of public relations into business practices by analyzing situations, planning strategies and facilitating public relations activities based on specific objectives. Prerequisites: MCOM 340 and MCOM 345.

450 - International Broadcasting-3 S.H.

Examine the structures, processes, functions and significance of various international broadcasting systems and services. Emphasis is placed on the scope and complexity of such systems, and their impact upon global understanding. Prerequisites: MCOM 100.

460 - Advertising Campaigns-3 S.H.

Consideration and implementation of advertising principles in actual situations. Development of situation analysis, marketing strategy and multimedia advertising campaigns to achieve specific objectives. Study of measurement of communication cost. Prerequisites: MCOM 360, MCOM 361 and MCOM 362.

461 - Retail and Business-to-Business Advertising-3 S.H.

This course focuses on how the principles of effective advertising are used by retail stores and businesses selling products and services to other businesses. Prerequisite: MCOM 360 and MCOM 362.

499 - Electronic Assessment Portfolio - 0 S.H.

For this arranged class, each student completes an electronic assessment portfolio to fulfill a graduation requirement.

MATHEMATICS AND STATISTICS

Gildemeister Hall, Room 322 (507) 457-5370

www.winona.edu/mathematics

Anderson (Chairperson)

FACULTY

Jeffrey Anderson, Professor; B.A., University of Minnesota, Morris; Ph.D., Iowa State University; 1992 -
Carol Joyce Blumberg, Professor; A.B., A.M., University of Michigan; M.S., Ph.D., Michigan State University; 1987 -
Gary Bunce, Professor; B.S., North Dakota State University; M.A., Ph.D., University of New Mexico; 1971-
Joyati Debnath, Professor; B.Sc., M.Sc., Jadavpur University; M.S., Ph.D., Iowa State University of Science and Technology; 1989 -
Brant Deppa, Professor; B.S., M.S., University of Minnesota, Duluth; Ph.D., University of Minnesota-Twin Cities; 1992 -
Jeffrey Draskoci-Johnson, Associate Professor; B.A., Ohio Wesleyan University; M.S., Ph.D., Ohio State University-Columbus; 1996 -
George Gross, Assistant Professor; B.S., M.A., University of South Dakota; 1987-
Richard Jarvinen, Professor; B.A., St. John's University; M.A.T., Vanderbilt University; Ph.D., Syracuse University; 1989 -
Steve Leonhardi, Associate Professor; B.S., Concordia College, Moorhead (MN); M.S., Ph.D., University of Wisconsin-Madison; 1996 -
Felino G. Pascual, Associate Professor; B.A., Ateneo de Manila, Philippines; M.Sc., Ph.D., University of Minnesota-Twin Cities; 1992 -
Barry Peratt, Associate Professor; B.S., Moravian College; M.S., Ph.D., University of Delaware; 1996 -
Terry M. Price, Assistant Professor; B.S., M.S., Lamar University-Beaumont; Ph.D., Washington State University; 1998 -
Joyce Quella, Assistant Professor; B.S., University of Wisconsin-Madison; M.A., University of Illinois; 1987 -
Cheryl Quinn-Nelson, Associate Professor; B.A., Luther College; M.S. Winona State University; 1986 -
Daniel Rand, Assistant Professor; B.S., Purdue University; M.S., Ph.D., University of Minnesota-Twin Cities; 1998 -
Martyn R. Smith, Professor; B.S., Montclair State College; M.Ph., Ph.D., Yale University; 1989 -
Kenneth A. Suman, Professor; B.S., M.S., Clemson University; Ph.D., Pennsylvania State University; 1990 -
David K. Urion, Professor; B.A., Culver-Stockton College; M.S., Miami University; Ph.D., University of Maryland; 1982 -

PURPOSE

The Department of Mathematics and Statistics offers major programs in mathematics, mathematics education, and statistics. The department also offers minor programs in mathematics, statistics, and mathematics education (secondary teaching). These programs are designed around a common, required departmental core of courses, which allows students to change majors within the department or to coordinate double majors with relative ease during the first two years of coursework. The best choice of courses beyond the core depends upon career plans (industry, graduate school, professional school, teaching, government, finance, insurance, etc.), and students should consult with faculty advisors as early as possible.

The mathematics major (B.A. Major—Mathematics) is specifically designed to support a wide range of student interests. Whether the goal is to complement coursework in another discipline, to obtain an education leading to a position in industry or in government, or to prepare for graduate work, students can choose elective coursework within the department to suit these needs.

The mathematics teaching major (B.S. Major—Mathematics Teaching) is designed to prepare students for a career in teaching mathematics (grades 5-12). In addition, students in the mathematics education program may choose to complete an additional major or minor program, which also grants licensure in those subjects. All these options may offer important advantages regarding employment.

The statistics option (B.S. Major—Statistics) provides students with both a solid background in mathematics as well as experiences with statistical theories, techniques, and software. The statistics faculty have experience in the application of statistics to diverse areas such as quality control, industrial experimental design, clinical trials, and the social sciences. Because statistics is applicable in a wide variety of fields, a minor or second major in statistics is a good choice for students majoring in fields such as the biological and earth sciences, business, economics, sociology, and psychology.

CAREERS IN THE MATHEMATICAL SCIENCES

There are opportunities for graduates with a mathematics major in industry as part of a development or research team and in government service. However, graduates who complete a double major including mathematics find themselves in significantly greater demand than if they had completed either major singly. The B.A. mathematics major is specifically designed to accommodate this employment trend.

Current job placement for students with a mathematics teaching major remains strong, and projections indicate this will continue for the next decade. With a degree in mathematics education, career opportunities also exist within insurance companies, other business and industry, government, and the armed services. With appropriate choices of elective courses, a mathematics teaching major would be qualified for graduate studies in a number of fields including mathematics, statistics, actuarial science, mathematics education, educational psychology, and business.

The job market for statistics majors is very solid with some projections indicating that the demand for statisticians will continue to increase. In statistics, opportunities for professional employment exist in industry, medical research, government agencies, and several areas of business. Statistics majors can also find future careers in actuarial science. For more information about careers in actuarial science, quality control, and biostatistics, see page 134.

HONORS IN MATHEMATICS AND STATISTICS

A departmental honors program is available to qualified majors in the Department of Mathematics and Statistics. Students completing the departmental honors program will graduate with honors in the Department of Mathematics and Statistics. Requirements of the departmental honors program are to complete a thesis, which is reviewed by two departmental faculty readers, to attend departmental colloquia and seminars, and to present a summary of the thesis in a departmental seminar.

CREDIT BY EXAM COURSES

A student may receive credit by examination for MATH 140, MATH 160 and MATH 165. A student is allowed only one attempt per course. A grade of "B" or higher is required on the examination to receive credit.

ADVANCED PLACEMENT CREDIT

Students can receive credit for MATH 160, MATH 165 and STAT 110 or STAT 210 for high school courses taken through the Advanced Placement Program. Consult with the department chairperson for specific test score requirements.

PASS/NO CREDIT COURSES

The pass/no credit (P/NC) option is available to non-majors unless otherwise noted. MATH 050 and STAT 492 must be taken for pass/no credit. Any other course not required nor elected for a major or minor may be taken on a pass/no credit basis.

Except for internships and practica, students must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

PREREQUISITES

The prerequisites for courses in the Department of Mathematics and Statistics must be met with a "C" grade or better or by instructor permission.

TRANSFER CREDIT

No credit will be given for a grade below a "C" for mathematics, mathematics education, or statistics courses taken at other institutions.

DEPARTMENTAL CORE (25–26 S.H.)

Techniques of Continuous Mathematics and Numerical Analysis (12 S.H.)

MATH 160 Calculus I (4)

MATH 165 Calculus II (4)

MATH 260 Multivariable Calculus (4)

Matrix Algebra and Applications (3 – 4 S.H.)

MATH 130 Matrix Algebra (3) OR

MATH 270 Differential Equations & Linear Algebra (4)

Introduction to Theoretical and Discrete Mathematics (7 S.H.)

MATH 210 Discrete Mathematics & Foundations (4)

MATH 220 Combinatorics and Graph Theory (3)

Statistics (3 S.H.)

STAT 210 Statistics (3) OR

STAT 303 Introduction to Engineering Statistics (3) OR

STAT 305 Biometry (3)

of this catalog (page 87). Students interested in a mathematics teaching major should contact the Department of Mathematics and Statistics for an advisor.

Student Teaching Requirements

To receive departmental recommendation for student teaching, a student must:

1. Complete at least 26 credits in the declared major.
2. Earn a grade of "C" or better in each of the courses comprising the 26 credits.
3. Achieve a 2.75 GPA in all courses completed in the declared major.
4. Meet the requirements of the College of Education. MTED 320 must be completed prior to student teaching. It is highly recommended that MTED 420 be completed prior to student teaching.

Additional Graduation Requirements

For a checklist of the University's graduation requirements, see page 24. In addition, for the mathematics teaching major, students must earn a grade of "C" or better in each course taken in the mathematics teaching major, and students must earn a 2.75 GPA in all courses taken in the mathematics teaching major.

DEPARTMENTAL CORE (25–26 S.H.) REQUIRED COURSES (26 S.H.)

Mathematics (14 S.H.)

310 Number Theory (3)

330 Advanced Calculus I (4)

410 History of Mathematics (3)

440 Abstract Algebra (4)

Mathematics Education (11 S.H.)

320 Teaching Math in the Secondary Schools I (3)

322 Modern Geometry (4)

420 Teaching Math in the Secondary Schools II (3)

421 Middle School Methods in Mathematics (1)

Statistics (1 S.H.)

115 Laboratory in Statistics (1)

B.A. MAJOR – MATHEMATICS

38-39 S.H. (Minor or Second Major Required)

The B.A. Program in Mathematics provides students with instruction in the basic techniques, applications, and theories of mathematics. Consequently, all B.A. mathematics majors must complete the Departmental Core and two courses in advanced mathematical theory. Beyond this, students choose from electives, which are designed to complement another major or minor, prepare for future graduate work, or provide coursework that is specific to the needs of industry. (With the permission of the faculty advisor, students may substitute an additional 3 S.H. elective in place of MATH 220 in the Departmental Core.)

Students currently majoring or planning to major in other disciplines are strongly urged to consider adding a major or minor in mathematics as a useful means of preparing for professional exams, such as the MCAT, as a way of creating an undergraduate program, which sets the student apart from others in that discipline when competing for future employment, and as a way of increasing options for future graduate work.

Students must earn a grade of "C" or higher in all required departmental courses.

DEPARTMENTAL CORE (25–26 S.H.)

Toward satisfying the Departmental Core, mathematics majors may substitute an additional elective course for MATH 220. Students should obtain the approval of their advisors for such a substitution.

MATHEMATICS (8 S.H.)

330 Advanced Calculus I (4)

440 Abstract Algebra (4)

ELECTIVES (5 S.H.)

Choose 5 S. H. of elective coursework in MATH or STAT courses numbered MATH 310 and above or STAT 320 and above.

B.S. MAJOR – MATHEMATICS: SECONDARY TEACHING

54-55 S.H. (No Minor Required)

The mathematics teaching major prepares students for teaching mathematics in grades 5 to 12. This program is administered through the Department of Mathematics and Statistics and the College of Education. Therefore, majors must satisfy requirements of and be admitted to the College of Education in addition to satisfying the requirements of the Department of Mathematics and Statistics.

The College of Education course requirements are listed under "Professional Education Sequence" in the Education department section

ELECTIVES (3 S.H.)

To be chosen in consultation with an advisor from MATH or STAT courses numbered MATH 310 and above or STAT 320 and above. Students in a teaching major must complete the Professional Education Sequence in the College of Education.

B.S. MAJOR – MATHEMATICS: STATISTICS OPTION

55-56 S.H. (No Minor Required)

The B.S. Program in Statistics provides students with instruction in the basic techniques, applications, and theories of mathematics and statistics. Students choosing statistics may complete a statistics project under the supervision of a faculty member. This provides students the opportunity to work with a faculty member on a consulting project or research problem. For students planning to attend graduate school, the research project is recommended. Internship opportunities also exist for students in the statistics option. Recent graduates have completed internships at the Mayo Clinic, insurance companies, local industry, and non-profit organizations. Both consulting projects and internships are good choices for students seeking employment upon graduation.

Students who are interested in business or industrial applications of statistics might consider the fields of actuarial science or quality control. Specific information about these two fields follows the required coursework for the statistics major.

* Course may be used to satisfy certain University Studies requirements.

DEPARTMENTAL CORE (25–26 S.H.)

REQUIRED COURSES (19 S.H.)

Statistics

- 115 Laboratory in Statistics (1)
- 360 Regression Analysis (3)
- 450, 460 Introduction to Mathematical Statistics I (3), II (3)

Three of the following five courses:

- STAT 350 Design of Sample & Surveys (3)
- STAT 355 Nonparametric Statistics (3)
- STAT 365 Experimental Design & Analysis (3)
- STAT 415 Multivariate Analysis (3)
- STAT 425 Modern Methods of Data Analysis (3)

ELECTIVES (11 S.H.)

To be chosen in consultation with an advisor from MATH courses numbered 310 or above and STAT courses numbered 320 or above. Students may also choose classes with a significant mathematical/statistical component offered outside the department; however, the courses must be approved by the Department of Mathematics and Statistics. Students may also count either CS 231 or CS 234 as an elective. Students may also count STAT 255 and FIN 335 as electives.

Actuarial Science

Actuaries use quantitative skills to analyze and plan for future financial situations. About two-thirds of all actuaries are employed in the insurance industry. Actuaries assess risk and make sure that the insurance company charges a fair price to assume that risk. An increasing number of actuaries work in consulting where they advise companies specializing in the areas of financial services, risk management, and health care. Actuaries need broad-based business skills. Therefore, students interested in a career as an actuary are strongly encouraged to include the following as part of their coursework.

University Studies Courses

- ACCT 211 Financial Accounting Principles
- ECON 201 Principles of Microeconomics
- ECON 202 Principles of Macroeconomics

Other Suggested Course

- DIS 202 or a course that covers microcomputer use with emphasis on spreadsheets

Major Electives

- FIN 335 Forecasting Methods
- MATH 420 Numerical Analysis
- MATH 430 Operations Research: Linear Programming
- MATH 435 Operations Research: Modeling

To become a certified actuary, candidates must pass a series of examinations that are administered by the Society of Actuaries (SOA). Some of the examinations can be successfully completed while the student is still in college. In fact, some companies only hire candidates that have successfully completed at least one of the examinations. Below is a list of courses needed for each of the examinations, which a student may choose to take before graduation.

Course 1: Mathematical Foundations of Actuarial Science
MATH 130 or MATH 270, MATH 160, MATH 165, MATH 220, and MATH 260
STAT 210 and STAT 450

Course 2: Interest Theory, Economics and Finance
(covers some material beyond the courses below)
ECON 201, ECON 202, ACCT 211, ACCT 212, FIN 360
STAT 250 – Actuarial Exam Preparation is an independent study course designed to help students prepare for either of the first two actuary exams. This class cannot be applied toward the major or minor.

Quality Control

There is a great need today for a work force proficient in the principles and practices of quality control. In order to prepare for employment in this area, a student may pursue a major or minor with a statistics

emphasis. Students pursuing any major who are interested in the area of quality control should consider preparing themselves for the ASQ (American Society for Quality) certification examinations. These examinations are nationally recognized and greatly enhance employment opportunities. The Department of Mathematics and Statistics offers the following courses to help students prepare for certification examinations:

Mechanical Inspector: STAT 110 or 210 or 303, STAT 320

Quality Technician: STAT 110 or 210 or 303, STAT 320

Quality Auditor: STAT 110 or 210 or 303, STAT 320

Software Quality Engineer: STAT 110 or 210 or 303, STAT 320

Quality Engineer: STAT 110 or 210 or 303, STAT 320-322

Quality Manager: STAT 110 or 210 or 303, STAT 320, STAT 350

Reliability Engineer: MATH 140 or 160, 220, STAT 110 or 210 or 303, STAT 320-322

Biostatistics

Biostatistics is a rapidly expanding field combining the disciplines of statistics, biology, and the health sciences. Biostatisticians work at major medical clinics, pharmaceutical companies, and universities performing clinical trials and analyzing health-related data. The statistics major is well prepared for either an entry-level position or admission into a graduate school in biostatistics. It is recommended that an interested student take some biology and health science courses and the department's offerings in epidemiology (STAT 440) and data management using SAS (STAT 255).

B.A. MINOR – MATHEMATICS

22-23 S.H.

The Departmental Core (minus MATH 220) is the B.A. minor in mathematics.

B.S. MINOR – MATHEMATICS: EDUCATION OPTION†

26 S.H.

REQUIRED COURSES (26 S.H.)

Mathematics (15 S.H.)

- 130 Matrix Algebra (3)
- * 160, 165 Calculus I, II (8)
- 210 Discrete Mathematics & Foundations (4)

Mathematics Education (8 S.H.)

- 320 Teaching Mathematics in the Secondary Schools (3)
- 322 Modern Geometry (4)
- 421 Middle School Methods in Mathematics (1)

Statistics (3 S.H.)

- * 210 Statistics (3)

† The State of Minnesota no longer issues teaching licenses for Bachelor of Science minors.

B.S. MINOR – MATHEMATICS: STATISTICS OPTION

21-23 S.H.

Either teaching or non-teaching degree candidates may take the B.S. minor in statistics option; however, this is not a certifiable minor for teaching.

REQUIRED COURSES (15–17 S.H.)

Mathematics (6-8 S.H.)

- 130 Matrix Algebra (3) OR
- 260 Differential Equations & Linear Algebra (4)
- 140 Applied Calculus (3) OR
- 155 Mathematics for Earth and Life Sciences II (3) OR
- 160 Calculus I (4)

Statistics (3 S.H.)

- STAT 110 Fundamentals of Statistics (3) OR
- STAT 210 Statistics (3) OR
- STAT 303 Introduction to Engineering Statistics (3) OR
- STAT 305 Biometry (3) OR
- DIS 220 Business Statistics (3) OR

PSY 231 Statistics (3)

Two of the following six courses (6 S.H.):

- STAT 350 Design of Samples & Surveys (3)
- STAT 355 Nonparametric Statistics (3)
- STAT 360 Regression Analysis (3)
- STAT 365 Experimental Design & Analysis (3)
- STAT 415 Multivariate Analysis (3)
- STAT 425 Modern Methods of Data Analysis (3)

ELECTIVES (6 S.H.)

Select 6 S.H. from Group I and Group II. (At most 3 S.H. from Group II.)

Group I - Statistics

- MATH 220 Combinatorics and Graph Theory (3)
- ‡ STAT 350 Design of Sample & Surveys (3)
- ‡ STAT 355 Nonparametric Statistics (3)
- ‡ STAT 360 Regression Analysis (3)
- ‡ STAT 365 Experimental Design & Analysis (3)
- ‡ STAT 415 Multivariate Analysis (3)
- ‡ STAT 425 Modern Methods of Data Analysis (3)
- STAT 450 Mathematical Statistics I (3)
- STAT 460 Mathematical Statistics II (3)
- ‡ Can be used as an elective course if not used as a required course

Group II - Application Areas

Up to 3 S.H. from the following courses:

- BIOL 310 (3), 312 (3); CS 231 (3), 234 (3), 298 (3)
- ECON 304 (3), 450 (3); FIN 335 (3), 360 (3), 423 (3)
- HHP 403 (3); MKTG 320 (6); MATH 340 (3), 420 (3), 430 (3), 435 (3)
- NURS 375 (3); POLS 410 (3); PSY 308 (5), 350 (3); SOC 376 (3)
- STAT 115 (1), 255 (3), 289 (1-3), 290 (1-4), 310 (3), 320 (3), 321 (3), 322 (3), 440 (3), 488 (1-6), 489 (1-3), 490 (1-4)

**MATHEMATICS AND STATISTICS
COURSE DESCRIPTIONS**

All courses offered every semester unless indicated differently.

Mathematics (MATH)

050 - Intermediate Algebra—3 S.H.

A study of basic algebra for the student who has not successfully completed two years of high school algebra. MATH 050 is a non-degree credit course and will not count toward meeting minimum total credit requirements for graduation. P/NC only.

100 - Survey of Mathematics—3 S.H.

Contemporary application of mathematical topics selected from algebra, statistics, management science, geometry and social choice. Grade only. Prerequisite: qualifying score on the mathematics placement exam or MATH 050.

110 - Finite Mathematics—3 S.H.

Applications of elementary mathematics on matrices, linear programming, probability, and statistics to real-life problems. This course provides the non-calculus mathematics background necessary for students in business, management, and social sciences. Prerequisite: qualifying score on the mathematics placement exam or MATH 050.

120 - Precalculus—4 S.H.

A study of topics designed to give students the skills necessary for successful completion of calculus. Equation solving, graphing, functions and trigonometry are some of the main topics covered. Prerequisite: qualifying score on the mathematics placement exam or MATH 050.

130 - Matrix Algebra—3 S.H.

An introduction to matrix algebra and elementary vector spaces with an emphasis on computation. Prerequisite: MATH 120

140 - Applied Calculus—3 S.H.

An intuitive approach to calculus for students in business, management or the social sciences. Emphasis throughout is to enhance students' understanding of how mathematics is used in real-world applications. Prerequisite: qualifying score on the mathematics placement exam or MATH 120.

150, 155 - Mathematics for the Earth and Life Sciences I, II—Each 3 S.H.

A two-semester sequence designed to develop the algebraic, trigonometric, statistical and calculus skills of students through modeling applications. Prerequisite: qualifying score on the mathematics placement exam or MATH 050.

160, 165 - Calculus I, II—Each 4 S.H.

Differential and integral calculus of functions of a single variable. Two semesters in sequence. Prerequisite: qualifying score on the mathematics placement exam or MATH 120.

161 - Calculus Companion I: Skills for Success—1 S.H.

A course that reinforces students' algebraic and trigonometric skills in the context of Calculus I. Intended to be taken concurrently with the instructor's Calculus I course, students' abilities with algebra and trigonometry are improved upon as they are needed in the calculus. Prerequisite: concurrent enrollment in instructor's section of MATH 160 or instructor's permission.

166 - Calculus Companion II: Toward Your Continued Success—1 S.H.

Provides students with increased ability with topics of Calculus I as these are required in the development of Calculus II. Instruction is given in the application of the methods of calculus to new material as introduced in second semester calculus. Prerequisite: concurrent enrollment in instructor's section of MATH 165 or instructor's permission.

210 - Discrete Mathematics and Foundations—4 S.H.

Introductory discrete mathematics including symbolic logic, elementary number theory, sequences, sets and combinatorics. Valid and invalid argument forms are studied, and direct and indirect methods of proof are introduced. Prerequisite: MATH 110 or MATH 120 or MATH 150.

220 - Combinatorics and Graph Theory—3 S.H.

Combinatorics topics will include permutations, combinations, multisets, sequences, generating functions, inclusion-exclusion, and recursion. Combinatorics topics will focus on applications in probability. Graph theory topics will include planarity, transversibility, trees, and directed graphs. Prerequisites: MATH 110 or MATH 120 or MATH 150 or sufficient score Calculus Readiness Mathematics Placement Exam. Offered each semester.

260 - Multivariable Calculus—4 S.H.

A continuation of MATH 165. Partial differentiation and multiple integration are studied. Prerequisite: MATH 165.

270 - Differential Equations and Linear Algebra—4 S.H.

Solution techniques for ordinary differential equations including boundary/initial value problems and systems of first-order equations. Topics include linear homogeneous and non-homogeneous differential equations and the Laplace transform. Methods of linear algebra are studied as they apply to the solution of differential equations. Prerequisite: MATH 165.

280 - Special Topics—1-3 S.H.

Exposure to lower-division mathematical topics not included in other courses. Prerequisite: determined by topics. Offered on demand.

310 - Number Theory—3 S.H.

A study of primes, divisibility, congruences, number-theoretic functions and diophantine equations. Prerequisite: MATH 165 and MATH 210. Offered spring semester.

315 - Chaos Theory—3 S.H.

An introduction to chaos theory and fractal geometry. Topics will include bifurcations, Julia sets, the Mandelbrot set, fractal geometry, iterated function systems and a survey of the applications of this theory to a variety of disciplines. Prerequisite: MATH 160.

320 - Theory of Functions of a Complex Variable—3 S.H.

The calculus of functions of a complex variable including differentiability, analyticity, and integration. Additional topics include the residue theorem. Prerequisite: MATH 260. Offered alternate fall semesters.

330, 335 - Advanced Calculus I, II—Each 4 S.H.

A systematic approach to the theory of differential and integral calculus for functions and transformations in several variables. Prerequisite: MATH 210 and MATH 260.

340 - Advanced Linear Algebra—3 S.H.

A continuation of MATH 130 with emphasis on more general vector spaces. Additional topics include linear transformations, inner product spaces, eigen-systems, diagonalization of matrices, and canonical forms. Prerequisite: MATH 130 and MATH 210. Strongly recommended: Completion of MATH 160 and MATH 165 prior to enrollment. Offered alternate spring semesters.

410 - History of Mathematics—3 S.H.

General view of the historical development of the elementary branches of mathematics. Prerequisites: MATH 160 and MATH 210. Offered fall semester.

* Course may be used to satisfy certain University Studies requirements.

420 - Numerical Analysis—4 S.H.

Numerical solution of equations, numerical interpolation, differentiation, and integration, numerical linear algebra, numerical solution of differential equations with analysis and use of algorithms and related software. Prerequisite: CS 231 or CS 234 and MATH 260. Offered alternate spring semesters.

430 - Operations Research: Linear Programming—3 S.H.

An introduction to linear programming, including the simplex method. Other topics chosen from duality, sensitivity analysis, and the transportation and assignment problems. Prerequisite: one calculus course. Recommended: one linear algebra course. Offered alternate fall semesters.

435 - Operations Research: Modeling—3 S.H.

This course emphasizes mathematical model building: problem identification and model construction. Topics chosen from among network flow analysis, nonlinear mathematical programming, queuing theory, simulation, integer programming and Markov chains. Prerequisite: one calculus course. Recommended: one course in probability and statistics, and more than one course in calculus. Offered alternate spring semesters.

440 - Abstract Algebra—4 S.H.

Axiomatic development of groups, rings and fields. Prerequisite: MATH 210. Offered fall semester.

450 - Introduction to Topology—3 S.H.

A study of indexed families of sets, mappings, diagrams, continuity, neighborhoods, limit points, open and closed sets. Prerequisites: MATH 165 and MATH 210. Offered alternate fall semesters.

460 - Real Analysis—3 S.H.

Measurable sets, measurable functions, and the theory and methods of Lebesgue integration. Additional topics at the instructor's discretion, e.g., summability, L theory of Fourier series, orthogonal expansions in L, famous theorems of analysis. Prerequisites: MATH 330 and MATH 335. Offered alternate spring semesters.

470 - Math Projects—1-4 S.H.

Practical experience in working on real problems or research under the supervision of a faculty member. Prerequisite: instructor's permission. Offered on demand.

480 - Special Topics—1-3 S.H.

Exposure to mathematical topics not included in other courses. Prerequisite: determined by topics. Offered on demand.

490 - Independent Problems in Mathematics-1-4 S.H.

An opportunity to continue study of selected topics. Prerequisite: instructor's permission. Offered on demand.

Mathematics Education (MTED)

125 - Mathematics for Elementary Teachers—4 S.H.

The study of concepts and properties of operations essential to mathematics in the elementary and middle school grades. Prerequisite: completion of basic skills mathematics (MATH) requirement.

201 - Technology Based Geometry and Other Essential Mathematics for Elementary Teachers—4 S.H.

Study of additional mathematical topics essential to mathematics in the elementary and middle school grades including Euclidean geometry. Prerequisite: MTED 125. Offered spring semester.

289 - Special Topics—1-3 S.H.

Exposure to lower-division mathematics education topics not included in other courses. Prerequisite: determined by topics. Offered on demand.

290 - Independent Problems in Mathematics Education—1-3 S.H.

An opportunity to study selected lower-division topics in mathematics education. Prerequisite: instructor's permission. Offered on demand.

320 - Teaching Mathematics in the Secondary Schools I—3 S.H.

Organization and methods of teaching mathematics in the secondary school. The course includes a Teaching Assistantship experience. Prerequisites: MATH 165, MATH 210 and EDUC 306. Offered spring semester.

322 - Modern Geometry—4 S.H.

This course is designed to give the prospective teacher of secondary school geometry an exposure to the concepts of non-Euclidean geometries, their relation to, and their impact on secondary school geometry. Teaching methodology and related items will be incorporated throughout the course. Prerequisites: MATH 165 and MATH 210. Offered spring semester.

420 - Teaching Mathematics in the Secondary Schools II—3 S.H.

The course is an extension of MTED 320 with emphasis on appropriate

uses of technology, teaching strategies, assessment, learning theory related to mathematics and research on current issues in mathematics education. Prerequisite: MTED 320. Offered fall semester.

421 - Middle School Methods in Mathematics—1 S.H.

Organization and methods of teaching mathematics in the middle school. Prerequisite: MATH 210 or MTED 125. Offered fall semester.

489 - Special Topics—1-3 S.H.

Exposure to mathematics education topics not included in other courses. Prerequisite: determined by topics.

490 - Independent Problems in Mathematics Education—1-4 S.H.

An opportunity to continue study of selected topics in mathematics education. Prerequisite: instructor's permission.

Statistics (STAT)

110 - Fundamentals of Statistics—3 S.H.

Introductory statistics with emphasis on applications. NOTE: Students who have completed MATH 140 or MATH 160 should take STAT 210 instead of STAT 110. Prerequisite: Qualifying score on the mathematics placement exam or MATH 050.

115 - Laboratory in Statistics—1 S.H.

This course will provide experience in collecting data, analyzing data, and the writing of statistical reports. Students will study statistical concepts through activities and projects which involve the collecting and analyzing of data. Techniques for summarizing, analyzing and interpreting large sets of data will also be discussed. Emphasis will be on practical problem-solving with real data sets using appropriate computer software packages. Prerequisite: completion of any introductory statistics course or instructor's permission.

210 - Statistics—3 S.H.

First course in statistics for students with a strong mathematics background. Prerequisites: MATH 140 or MATH 160.

250 - Actuarial Exam Preparation—2 S.H.

This is an independent study course designed to help students with actuarial exam preparation. Students enrolled in this course are required to take the appropriate exam at the date nearest completion of this course. Course cannot be applied toward fulfilling major or minor program requirements. Prerequisites: instructor's permission. Offered on demand.

255 - Data Management Using SAS—3 S.H.

An introduction to the statistical package SAS. The course will focus on DATA step programming and selected basic PROC routines, with an introduction to SAS/GRAPH if time permits. Prerequisite: STAT 110 or equivalent. Offered spring semester.

289 - Special Topics—1-3 S.H.

Exposure to lower-division statistical topics not included in other courses. Prerequisite: determined by topics. Offered on demand.

290 - Independent Problems in Statistics 1—4 S.H.

Exposure to statistical topics not included in other courses. Prerequisite: instructor's permission. Offered on demand.

303 - Introduction to Engineering Statistics—3 S.H.

Introduction to statistics and quality control concepts and techniques. Topics include graphical techniques, descriptive statistics, probability distributions, hypothesis testing, control charts, process capability studies, and additional topics in total quality management. Credit will not be given for both STAT 210 and STAT 303. Prerequisite: MATH 160. Offered fall semester.

305 - Biometry—3 S.H.

An introductory course of statistical applications to the biological sciences. Data reduction, sampling, techniques of estimation, hypothesis testing, and model verification procedures are included. Diversity indices, techniques of species sampling, and other specific biometric methods will be covered. Prerequisite: MATH 150 or MATH 155 or instructor's permission. (Cannot be used as a MATH or STAT elective for mathematics, mathematics education or statistics majors.)

310 - Intermediate Statistics—3 S.H.

A second course in statistics covering regression, measures of association, and analysis of variance. Interpretation of computer output and applications will be emphasized throughout. Prerequisites: STAT 110, STAT 210, STAT 303, STAT 305, PSY 231 or equivalent. Credit will not be given for STAT 310 if the student has completed STAT 360 or STAT 365.

320 - Statistical Quality Control—3 S.H.

An introduction to the basic philosophy of quality control and statistical tools used in quality control. Tools to include control charts, Ishikawa fishbone charts, Pareto charts, histograms, stem-and-leaf plots and dot

plots. There will be industrial case studies and tours of local industries (when available). Prerequisite: an introductory statistics course (preferably STAT 210). Offered fall semester.

321 - Industrial Design of Experiments I—3 S.H.

An introduction to applications of statistical methods used by industrial researchers to aid in the solution of certain types of industrial problems. Methods to include analysis of means, analysis of variance, factorial designs, fractional factorial (screening) designs. There will be industrial case studies and actual (hands-on) experience at local industries (when available). Prerequisite: an introductory statistics course (preferably STAT 210). Offered spring semester.

322 - Industrial Design of Experiments II—3 S.H.

A second course in experimental design methods in industry. Topics may include empirical model building, review of factorial and fractional factorial designs, process improvement with steepest ascent, analysis of response surfaces, experimental designs for fitting response surfaces, Taguchi's robust parameter designs, experiments with mixtures. Prerequisite: STAT 321 or instructor's permission. Offered on demand.

350 - Design of Samples and Surveys—3 S.H.

Practical problems of surveys. Design of optimal surveys. Questionnaire design. Practical problems of sampling. Design of optimal sampling procedures. Adapting standard statistical techniques to specialized sampling design. Prerequisites: an introductory statistics course (preferably STAT 210) and MATH 120. Offered fall semester.

355 - Nonparametric Statistics—3 S.H.

Statistical methods based on runs, the empirical distribution function and ranks. Topics will include one and two sample tests, ANOVA, goodness of fit tests, rank regression, correlation, and confidence intervals. Both applications and theory emphasized. Prerequisite: STAT 110 or STAT 210. Offered alternate fall semesters.

360 - Regression Analysis—3 S.H.

Simple linear regression, multiple regression, hypothesis testing, analysis of residuals, stepwise regression. Interpretation of computer output will be emphasized. Prerequisites: an introductory statistics course (preferably STAT 210) and MATH 120 and completion of or concurrent enrollment in MATH 130 or MATH 270 is recommended. Offered fall semester.

365 - Experimental Design and Analysis—3 S.H.

One-way Analysis of Variance, planned comparisons, post-hoc procedures, two- and three-way Analysis of Variance, experimental design, Analysis of Covariance. Interpretation of computer output will be emphasized. Prerequisites: An introductory statistics course (preferably STAT 210) and MATH 120. STAT 360 is recommended. Offered spring semester.

415 - Multivariate Analysis—3 S.H.

Statistical analysis of multivariate data. Topics will include preparation of data for analysis, selection of techniques appropriate to research questions, measures of association for continuous and discrete variables, Hotelling's T, MANOVA, MANCOVA, discriminant analysis, principal component and factor analysis. This is a computer-oriented course with emphasis on application. Prerequisites: MATH 130 or MATH 270, STAT 360 or instructor's permission. Offered alternate spring semesters.

425 - Modern Methods of Data Analysis—3 S.H.

An introduction to the use of the computer as a powerful tool in data analysis. Topics will include statistical graphics, advanced regression techniques, curve fitting and smoothing, generalized additive models, CART, multivariate techniques, cross-validation and the bootstrap. Additional topics that may be covered are random number generation and Monte Carlo simulation methods. Prerequisites: MATH 165 and STAT 360. Offered alternate spring semesters.

440 - Epidemiology—3 S.H.

A general introduction to the concepts and methods of epidemiology as they are applied in a variety of disease situations. Topics include modeling the disease process in a population; retrospective, prospective and observational studies; rates, ratios and data interpretation; and evaluation of epidemiological information. Prerequisite: an introductory statistics course. Offered spring semester.

450, 460 - Introduction to Mathematical Statistics I, II—Each 3 S.H.

A mathematical approach to probability and statistics. Prerequisite: MATH 260 and completion of or concurrent enrollment in MATH 220.

455 - Stochastic Processes—3 S.H.

An introduction to stochastic processes. Topics will include underlying probability theory, random variables, conditioning, Markov chains, exponential distribution, and Poisson processes. Both applications and theory will be emphasized. Prerequisite: STAT 450. Offered alternate spring semesters.

488 - Statistics Projects—1-6 S.H.

Practical experience working on real problems under the supervision of a faculty member experienced in statistics. Prerequisite: instructor's permission. Offered on demand.

489 - Special Topics—1-3 S.H.

Exposure to statistical topics not included in other courses. Prerequisite: determined by topics. Offered on demand.

490 - Independent Problems in Statistics—1-4 S.H.

An opportunity for continued study of selected topics. Prerequisite: instructor's permission. Offered on demand.

492 - Practicum in Statistics—3-6 S.H.

Provides the student with experience and training in statistical techniques. The student will work a minimum of 100 hours (3 credits) or a minimum of 200 hours (6 credits) on a job utilizing statistics. Prerequisite: instructor's permission. Open to B.S. Option C Statistics majors only. P/NC only. Offered on demand.

MEDICAL TECHNOLOGY

Pasteur Hall, Room 219 (507-457-5462)
http://bio.winona.edu/biohp/acad_deg.htm

WSU DIRECTOR, MEDICAL TECHNOLOGY

Dr. Frances R. Ragsdale, Associate Professor, B.S. Eastern Oregon State; M.S. Southeastern Louisiana University; Ph.D. University of Iowa, 1993—

ADJUNCT FACULTY

Community Memorial Hospital, Winona, Minnesota
William McNeil, MD, Medical Director
Dennis A. Rollman, B.S., M.T. (ASCP), MBA, Laboratory Director
 †*Edward Hines Jr.*, VA Hospital, Hines, Illinois
Myron E. Rubnitz, MD, Medical Director
Donna M. Wray, MT (ASCP), Program Director
 † *Mercy Hospital Medical Center*, Des Moines, Iowa
Vijaya Dhannavada, MD Medical Director
Stacy Sime, MT (ASCP), Program Director

† *Hennepin County Medical Center*, Minneapolis, Minnesota
John T. Crosson, MD, Pathologist, Medical Director
Pat Elringer, MEd, MT (ASCP), SBB, Program Director
 † *Sacred Heart Hospital*, Eau Claire, Wisconsin
Thomas Hadely, MD, Pathologist, Medical Director
Ken Johnson, MT (ASCP), Program Director

(Note: ASCP = American Society of Clinical Pathologists.)
 † Schools with which WSU has affiliated internship programs

* Course may be used to satisfy certain University Studies requirements.

CAREER OPPORTUNITIES AND REQUIREMENTS

The Medical Technology Program is a four-year course of instruction leading to the degree of Bachelor of Science in Medical Technology. After completing board examinations, individuals with a degree in medical technology find employment in clinical settings, where they are responsible for routine laboratory tests on body fluids. Frequently, at a large hospital or clinic, an individual will work primarily in one area of the field, such as maintaining a blood bank. Many smaller institutions assign more diverse duties to broadly trained medical technologists. First-year medical technology majors must consult with the program director soon after arrival on campus. The first three years consist of intensive coursework in the basic sciences. The fourth year is a one-year clinical internship at an approved school of medical technology. To qualify for the clinical internship, students must complete the course of study outlined below with a minimum grade point average of 3.0 (on a 4.0 scale).

It should be noted that acceptance into the fourth year of training is not automatic upon completion of the third year at WSU. Students are selected by affiliated institutions on the basis of academic achievement and potential as a medical technologist. The latter is determined through a personal interview with appropriate officials at approved schools of medical technology. Students accepting an invitation for clinical training in medical technology from an approved institution will complete the training required for graduation at that institution. WSU will assess tuition on a semester basis, and students will be evaluated each semester.

Following the successful completion of the clinical fourth year, the student is granted the degree of Bachelor of Science with a major in medical technology. Upon satisfactory completion of the program, the student is eligible to apply for examination by two certifying agencies: the National Accrediting Agency for Clinical Laboratory Science (NAACLS) and the Committee on Allied Health Education and Accreditation (CAHEA).

Note: Students expecting to complete the WSU requirements within a three-year period should consult with the program director prior to registration. All student programs (schedules) must be approved each semester by the Director of Medical Technology.

B.S. MAJOR – MEDICAL TECHNOLOGY

REQUIRED COURSES (124 – 126 S.H.)

UNIVERSITY STUDIES COURSES (30 S.H.)

Note: WSU was in the process of finalizing its new University Studies Program when this catalog went to print, and the interrelationships between the requirements of the University Studies Program and the requirements of the medical technology major were not fully established. A number of courses required by the medical technology major also satisfy requirements of the University Studies Program. Students should consult with their academic advisor for more information.

MAJOR AREA COURSES (30–32 S.H.)

Required Biology Courses (25 S.H.)

- 241 Basics of Life (4)
- 242 Organismal Diversity (4)
- 308 Cell Biology (3)
- 307 Cell Biology Lab (1)
- 409 General Microbiology (4)
- 443 Urinalysis (1)
- 444 Hematology (2)
- 445 Immunology (3)
- 460 Parasitology (3)

Note: BIOL 241 and 242 should be taken prior to BIOL 308 and BIOL 307.

MAJOR ELECTIVES (5–7 S.H.)

- BIOL 310 Genetics (3)
- BIOL 333 Medical Laboratory Techniques (1)
- BIOL 201 Human Anatomy (4)
- BIOL 323 General Physiology (5)
- STAT 305 Biometry (4)

ADDITIONAL REQUIREMENTS (32–34 S.H.)

Chemistry (16 S.H.)

- * 212 Principles of Chemistry I (4)
- * 213 Principles of Chemistry II (4)
- 340 Organic Chemistry (4) or 350 Principles of Organic Chemistry I (4)
- 400 Biochemistry (4) or 425 Analytical Chemistry I (4) or 426 Analytical Chemistry II (4)

Mathematics (4-6 S.H.)

- * 120 Precalculus, Functions & Graphs (4) OR
- * 150, 155 Mathematics for the Earth and Life Sciences I, II (Each 3 S.H.)

Physics (8 S.H.)

- * 201 General Physics I (4)
- 202 General Physics II (4)

Note: PHYS * 221 and PHYS 222 may be taken in place of the above series. Be aware that MATH 160 is a prerequisite for PHYS 221 and that this substitution may prevent completion of the major in four years.

CLINICAL EDUCATION (32 S.H.)

- BIOL 450 Medical Technology I (12)
- BIOL 451 Medical Technology II (12)
- BIOL 452 Medical Technology III (4)
- BIOL 453 Medical Technology IV (4)

Note: The clinical training can be completed at any approved clinical training site.

OTHER ELECTIVES:

Some clinical schools require a course in statistics; therefore, it is recommended that students select STAT 305 as an elective in the "Major Electives" above.

MUSIC

Performing Arts Center, Room 146 (507-457-5250)

www.winona.edu/music

Schmidt (Chairperson)

FACULTY

Gloria Chuang, Assistant Professor; B.M., M.M., Julliard School; D.M.A., University of Michigan; 1997 -

Suzanne Rhodes Draayer, Professor; B.M. Furman University; M.S., George Peabody College of Vanderbilt University; D.M.A. University of Maryland College Park, 1993 -

James S. Hoch, Professor; B.M., University of the Pacific, Stockton (CA); M.M., D.M.A., University of Colorado; 1992 -

Donald Lovejoy, Assistant Professor; B.S., Asbury College; M.M., University of Regina; M.M., Northwestern University; D.M.A., University of Wisconsin-Madison; 2000 -

R. Richard MacDonald, Assistant Professor; B.M., M.M.E., University of North Texas; D.A., University of Northern Colorado; 1996 -

Harry Mechell, Professor; B.Mus., M.M., Temple University; D.M.A., University of Illinois; 1989 -

Catherine Schmidt, Associate Professor; B.S., M.S., University of Illinois, Urbana; Ph.D., University of Wisconsin-Madison; 1991 -

Paul Vance, Associate Professor; B.A., Moorhead State University; M.M., University of Wisconsin-Milwaukee; D.M.A., University of Michigan; 1996 -

PURPOSE

The Department of Music offers courses of study leading to a B.S. or a B.A. degree with a major in music. The department is committed to providing music degree programs that foster creativity, skill development, critical thinking, independent learning, and understanding of and respect for multiple perspectives.

For students majoring in other fields, the department offers a program leading to a minor as well as a variety of courses and activities for the general student. Musical organizations are open to all students. The department also offers private study of instruments and voice for credit with members of the music faculty. WSU is an accredited institutional member of the National Association of Schools of Music.

PRIVATE INSTRUCTION

The courses denoted as "Private Instruction" in the program requirements may be repeated at various levels of instruction.

PASS/NO CREDIT COURSES

Except for the internship, students must take all courses in the major or minor on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

ADDITIONAL REQUIREMENTS

- Students must achieve a "C" or better in all required music courses within a music degree program in order to count the courses for graduation. (For a checklist of the University graduation requirements, see page 24.)
- Students majoring in music education (teaching) must have both a 2.75 overall GPA and a 2.75 GPA in the major.
- All music majors must participate in the large ensemble related to their major performing medium each semester they are enrolled as music majors. The major performing ensemble for wind and percussion players is MUS 241 (Symphonic Wind Ensemble), the major performing ensemble for string players is MUS 242 (Orchestra), and the major performing ensemble for vocalists is MUS 243 (Concert Choir).
- All majors are required to register for Concert Attendance (MUS 001) each semester—maximum 8 semesters. Minors are required to complete 4 semesters of MUS 001, Concert Attendance.

PIANO PROFICIENCY EXAMINATION

All music majors must pass a piano proficiency examination. Students may enroll in piano classes to help prepare for passing the proficiency examination; however, these piano classes do not count towards a degree.

APPLIED INSTRUCTION AUDITIONS

All entering music majors are required to audition for the appropriate studio instructor in their primary performing medium. (These auditions can be in conjunction with scholarship auditions.)

THEORY ENTRANCE AND PLACEMENT EXAMINATION

To register for MUS 201, Theory I, new music majors and minors must pass an entrance examination on basic music notation including note values, note names, and key signatures. Students who do not meet the minimum requirements for MUS 201 may register for MUS 120, Introduction to Music Theory.

A theory placement exam is required for those students requesting advanced placement in the theory sequence. The exam is offered prior to the beginning of the fall semester each year.

ASSESSMENT PRETEST AND POSTTEST

All entering music majors are required to take a departmental assessment pretest during the first month of the fall semester. The same test will be administered prior to graduation. This testing process is for department-level assessment and does not affect the student's degree program in any way.

B.A. MAJOR IN MUSIC (LIBERAL ARTS)

44-45 S.H. (No Minor Required)

CORE REQUIREMENTS (25 S.H.)

- 001 Concert Attendance (0)
- 114 World Music (3)
- 201, 202 Music Theory I, II (8)
- 203, 204 Music Theory III, IV (8)
- 351 Music of the Middle Ages, Renaissance, Baroque (3)
- 352 Music of the Classical Period, 19th and 20th Centuries (3)

REQUIRED COURSES (14-15 S.H.)

- 475 Instrumental Literature & Styles (3) OR
- Choice of 471, 472, 473 Vocal Literature Class (2) OR
- 477 Piano Literature I (2)

Major Performing Large Ensemble (4): Choose one: 241, 242, 243 (See Note 1 below.)

Applied Lessons in Primary Performance Medium (8) (See Note 2 below.)

Notes:

1. All credits must be taken in the large ensemble related to major performing medium.
2. Students must enroll in a minimum of 4 semesters of applied lessons.

CAPSTONE PROJECT (2 S.H.)

- 491 Independent Study (2)

ELECTIVES (3 S.H.)

Electives must be taken from the areas of theory, history, and literature. MUS 109 and 120 do not fulfill elective requirements.

PIANO PROFICIENCY

See above for information concerning piano proficiency.

B.A. MAJOR IN MUSIC PERFORMANCE

78-79 S.H. (No Minor Required)

CORE REQUIREMENTS (25 S.H.)

- 001 Concert Attendance (0)
- 114 World Music (3)
- 201, 202 Music Theory I, II (8)
- 203, 204 Music Theory III, IV (8)
- 351 Music of the Middle Ages, Renaissance, Baroque (3)
- 352 Music of the Classical Period, 19th and 20th Centuries (3)

REQUIRED COURSES (47 S.H.)

- 306 Conducting (2)
- 480 Junior and Senior Recital (3)

Applied Lessons in Primary Performance Medium (28) (See Note 3 below.)

Major Performing Large Ensemble (8)

Choose one: 241, 242, 243 (See Note 4 on next page.)

Pedagogy & Literature (6-7)

* Course may be used to satisfy certain University Studies requirements.

Vocal Performance Major

- 415 Vocal Pedagogy (2)
- 471 Italian Vocal Literature (2)
- 472 German Vocal Literature (2)
- 473 French Vocal Literature (2)

Piano Performance Major

- 416 Piano Pedagogy (2)
- 477 Piano Literature I (2)
- 478 Piano Literature II (2)
- 337 Accompanying (1-2)

Instrumental Performance Major

- 252 Jazz Improvisation (2)
- 475 Instrumental Literature & Styles (3)

Choose two of the following four courses:

- 311 Woodwind Methods I (1)
- 312 String Methods I (1)
- 313 Percussion Methods I (1)
- 314 Brass Methods I (1)

Music Performance Notes:

3. Student must enroll in a minimum of 8 semesters of applied lessons.
4. Credits must all be taken in the large ensemble related to major performing medium.

ADDITIONAL REQUIREMENTS

- Piano proficiency. See page 139 for information concerning the piano proficiency examination.
- Participation in small chamber ensemble required.

ELECTIVES (6 S.H.)

Electives must be taken from areas of theory, history, and literature. MUS 109 and 120 do not fulfill elective requirements.

B.S. MAJOR – MUSIC EDUCATION (TEACHING)

147 S.H. (Total S.H. includes all University Studies requirements.)

Both the Music Education degree program and the Professional Education Sequence are subject to changes in Board of Teaching licensure requirements. Check with your advisor for current program/licensure requirements.

UNIVERSITY STUDIES PROGRAM (USP) (26 S.H.)

Basic Skills (10 S.H.)

- ENG 111 College Reading and Writing (4)
- CMST 191 Fundamentals of Speech Communication (3)
- Mathematics (3)
- Physical Development and Wellness (fulfilled by HHP 204) (0)

Arts and Sciences (7 S.H.)

Humanities (fulfilled by ART 109, 221, 222, or 224 and THAD 119 or 210) (0)

Natural Science (7)

- Social Science (fulfilled by SPED 400 and EDUC 305) (0)
- Fine and Performing Arts (fulfilled by THAD 115) (0)

Unity and Diversity (9 S.H.)

- Critical Analysis (3)
- Science and Social Policy (3)
- Global or Multicultural Perspectives (fulfilled by EDUC 308) (0)
- Contemporary Citizenship or Democratic Institutions (3)

REQUIRED COURSES – BOTH VOCAL AND INSTRUMENTAL LICENSURES (61 S.H.)

- 001 Concert Attendance (0)
- 002 Music Education Seminar (0)
- 114 World Music (3)
- 201, 202 Music Theory I, II (8)
- 203, 204 Music Theory III, IV (8)
- 252 Jazz Improvisation (2)
- 301 Orchestration & Instrumentation (2)
- 306 Conducting I (2)
- 406 Conducting II (1)
- 298 Foundations & Principles of Music Education (2)
- 322 Elementary Music Methods I (3)
- 332 Elementary Music Methods II (2)
- 323 Secondary Music Methods (3)

- 351 Early Music through Baroque (3)
- 352 Classic through 20th centuries (3)

Major Performing Large Ensemble (6)

Choose one: 241, 242, or 243 (See Note 5 below.)

Private Instruction in Major Applied Field (12) (See Note 6 below.)

- 480—Recital (1)

Music Education Notes:

5. Credits must all be taken in the large ensemble related to major performing medium.
6. Students must enroll in a minimum of 6 semesters of applied lessons.

ADDITIONAL REQUIREMENTS FOR INSTRUMENTAL MAJORS

(12 S.H.)

- 311 Woodwind Methods (1)
- 312 String Methods (1)
- 313 Percussion Methods (1)
- 314 Brass Methods (1)
- 341 Woodwind Methods II (1)
- 342 String Methods II (1)
- 343 Percussion Methods II (1)
- 344 Brass Methods II (1)
- 236 Voice Class (2)
- 425 Instrumental Ensemble Administration & Marching Band Techniques (2)

ADDITIONAL REQUIREMENTS FOR VOCAL MAJORS

(12 S.H.)

- 415 Vocal Pedagogy (2)
- 422 Music Seminar on Choral Techniques & Materials (2)

Private Instruction in Minor Applied Field (6)

(Substitution of up to 2 credits of 337 permitted; substitution of up to 2 credits of 335 permitted.)

Choose two of the following four courses (2):

- 311 Woodwind Methods (1)
- 312 String Methods (1)
- 313 Percussion Methods (1)
- 314 Brass Methods (1)

OTHER REQUIRED COURSES

(INSTRUMENTAL AND VOCAL LICENSURES) (16 S.H.)

* THAD 115 Dance Appreciation (3)

Choose one of the following four courses (3)

- * ART 109 Introduction to Art (3)
- * ART 221 Art History I (3)
- * ART 222 Art History II (3)
- * ART 224 American Art (3)

Choose one of the following two courses (3):

- * THAD 119 Play Reading (3)
- * THAD 210 Theatre History and Dramatic Literature I (3)

Choose one of the following two courses:

- PER 116 Modern Dance I (1)
- PER 118 Jazz Dance I (1)
- * HHP 204 Personal and Community Health (3)
- * SPED 400 Exceptional Children and Youth (3)

PROFESSIONAL EDUCATION SEQUENCE (32 S.H.)

EDUC 305, *308, 312, 429, 449, 459, 465 (Student Teaching)

OTHER REQUIREMENTS

In addition to the above course requirements, all students must:

1. Pass a piano proficiency examination (see page 139 for more information).
2. Pass a guitar proficiency examination.
3. Participate in small ensemble performance.
4. Attend a specified proportion of music education workshops/seminars yearly.
5. Pass Music Education Seminar (MUS 002) each semester they are enrolled as music education majors except when student teaching.

B.S. MAJOR – MUSIC (MUSIC BUSINESS)

93 S.H. (No Minor Required)

CORE REQUIREMENTS (56 S.H.)

- 001 Concert Attendance (0)
- 114 World Music (3)
- 201, 202 Music Theory I, II (8)
- 203, 204 Music Theory III, IV (8)

Major Performing Large Ensemble (4):

Choose one: 241, 242, 243 (See Note 7 below.)

Applied Lessons in Primary Performance Medium (8) (See Note 8 below.)

- 261 Applied Instruction - Piano (4)
- 307 Music Technology (2)
- 351 Music of the Middle Ages, Renaissance, and Baroque (3)
- 352 Music of the Classical Period, 19th and 20th Centuries (3)
- 399 Music Internship (10)
- 491 Independent Study (3)

Music Business Notes:

7. Credits must all be taken in the large ensemble related to major performing medium.
8. Students must enroll in a minimum of 4 semesters of applied lessons.

ADDITIONAL REQUIREMENTS (10 S.H.)**Select one of the following two courses:**

- 301 Orchestration & Instrumentation (2) OR
- 306 Conducting (2)

Select two of the following four courses:

- 311 Woodwind Methods (1)
- 312 String Methods (1)
- 313 Percussion Methods (1)
- 314 Brass Methods (1)

Select two of the following three courses:

- 110 History of Jazz (3)
- 111 Film Music (3)
- 122 History of Rock (3)

BUSINESS REQUIREMENTS (27 S.H.)**Accounting (6 S.H.)**

- ACCT 211 Financial Accounting Principles (3)
- ACCT 212 Managerial Accounting Principles (3)

Economics and Finance (9 S.H.)

- ECON 201 Principles of Microeconomics (3)
- ECON 202 Principles of Macroeconomics (3)
- FIN 360 Corporate Finance (2)

Business Administration (9 S.H.)

- DIS 220 Business Statistics (3)
- BUSA 291 Legal Environment of Business (3) OR
- BUSA 301 Business Law I (3)
- BUSA 312 Business Computer Programs (3)

Marketing (3 S.H.)

- MKTG 300 Principles of Marketing (3)

PIANO PROFICIENCY

See page 139 for information concerning piano proficiency.

B.A. MINOR – MUSIC

22 S.H.

REQUIRED COURSES (19 S.H.)

- 114 World Music (3)
- 201 Music Theory I (4)
- 202 Music Theory II (4)

Major Performing Large Ensemble (4) Choose one: 241, 242, 243 (See Note 9 below.)**Applied lessons in primary performance medium (4)** (See Note 10 below.)

(Substitution of up to 2 credits of 337 permitted for piano students.)

B.A. Music Minor Notes:

9. Credits must all be taken in the large ensemble related to major performing medium.
10. Students must enroll in a minimum of 2 semesters of applied lessons.

ELECTIVES (3 S.H.)

Any 3 credits of music elective courses except MUS 109 and MUS 120.

B.S. MINOR – MUSIC

26 S.H.

Minor suggested for elementary education majors. Music minor not for licensure.

REQUIRED COURSES (26 S.H.)

- 114 World Music (3)
- 201 Music Theory I (4)
- 202 Music Theory II (4)

Major Performing Large Ensemble (4) Choose one: 241, 242, 243 (See Note below.)

- 261 Piano (Studio instruction) (4) OR 234, 235, 335 (Substitution of up to 2 credits of 337 permitted).
- 298 Foundations & Principles of Music Education (2)
- 306 Conducting (2)
- 322 Elementary Music Methods (3)

B.S. Music Minor Note: Credits must all be taken in the large ensemble related to major performing medium.**MUSIC COURSE DESCRIPTIONS**

Note: Music course descriptions are listed in the following sequence: (1) applied courses, (2) ensembles, (3) methods and education, and (4) theory, history, and literature.

Applied Courses**234 - Class Piano I-2 S.H.**

First semester of a sequence designed to develop basic keyboard and musicianship skills in preparation for the Piano Proficiency Examination. Permission of instructor required. Offered each semester.

235 - Class Piano II- 2 S.H.

Second semester of a sequence designed to further develop basic keyboard and musicianship skills in preparation for the Piano Proficiency Examination. Permission of instructor required. Offered each semester.

236 - Class Voice-2 S.H.

Classification of voices, English diction, fundamentals of vocal techniques. Performance of songs in English and Italian. Offered alternate years.

335 - Class Piano III-2 S.H.

Final course of a sequence designed to develop and strengthen basic keyboard and musicianship skills in preparation for the Piano Proficiency Examination. Permission of instructor required. Offered each semester.

337 - Accompanying-1-2 S.H.

Survey of accompanying techniques and styles. Assignment to specific accompanying duties. May be repeated up to total of 6 credits. Prerequisite: department's permission. Offered each semester.

Individual Instruction

Private lessons meeting once a week may be repeated for credit and are offered each semester. Entering music students must pass an entrance audition to qualify for the 160-level series of lessons. Students not fulfilling requirements for 160-level series lessons are placed in 060-level series lessons until they are ready for the 160-level series. Piano students not meeting 160-level requirements may be placed in either piano class or 061 lessons. All 060-level series lessons are half-hour lessons for 2 semester hour credits. These credits do not count toward the major or minor for graduation. Credit is variable in the 160, 260, 360 and 460 series. Half-hour lessons receive 2 semester hour credits. One-hour lessons receive 4 semester hour credits. Enrollment in all applied lesson series requires the instructor's permission.

060-series: Students entering with limited music background. Instructor's permission required. 2 S.H.

160-series: Entering students with previous musical training and background. Students pursuing secondary performance medium. Instructor's permission required. 2 or 4 S.H.

260-series: Second-year students. Students must show sufficient progress in 160-level series lessons before enrolling for 260-level series lessons. Instructor's permission required. 2 or 4 S.H.

* Course may be used to satisfy certain University Studies requirements.

360-series: Third-year students. Students must show sufficient progress in 260-level series lessons before enrolling for 360-level series lessons. Instructor's permission required. 2 or 4 S.H.

460-series: Fourth-year students and beyond. Students must show sufficient progress in 360-level series lessons before enrolling in 460-level series lessons. Instructor's permission required. 2 or 4 S.H.

- 061, 161, 261, 361, 461 - Piano-2 or 4 S.H.
- 062, 162, 262, 362, 462 - Voice-2 or 4 S.H.
- 063, 163, 263, 363, 463 - Strings-2 or 4 S.H.
- 064, 164, 264, 364, 464 - Woodwinds-2 or 4 S.H.
- 065, 165, 265, 365, 465 - Brass-2 or 4 S.H.
- 066, 166, 266, 366, 466 - Percussion-2 or 4 S.H.
- 067, 167, 267, 367, 467 - Organ-2 or 4 S.H.
- 068, 168, 268, 368, 468 - Harpsichord-2 or 4 S.H.

Ensembles

Open to all students by audition. Repertory selected to acquaint the student with representative literature from all periods. Can be repeated for credit. Offered each semester.

- 141 World Music Ensemble- 1 S.H., P/NC only (no audition necessary)
- 142 Oratorio Chorus – 1 S.H.
- 143 Women's Chorus – 1 S.H.
- 233 Piano Ensemble – 1 S.H.
- 240 Percussion Ensemble-1 S.H.
- 241 Symphonic Wind Ensemble-1 S.H.
- 242 Orchestra-1 S.H.
- 243 Concert Choir-1 S.H.
- 244 Jazz Ensemble-1 S.H.
- 245 String Ensemble-1 S.H.
- 246 Brass Ensemble-1 S.H.
- 247 Woodwind Ensemble-1 S.H.
- 249 Madrigal Ensemble-1 S.H.

Methods and Education

002 – Music Education Seminar – 0 S.H.

A seminar designed to provide music education students with consistent practice in conducting, rehearsal techniques, and performing on secondary instruments or voice throughout their major program. All music education majors are required to enroll each semester they are in attendance at WSU.

298 - Foundations and Principles of Music Education-2 S.H.

Study of the historical foundations and principles of music education. Examination of selected current topics in music education. Prerequisite: MUS 202 or instructor's permission. Offered alternate years.

311 - Woodwind Methods I-1 S.H.

Class instruction in flute, oboe, clarinet, saxophone and bassoon. History, literature and teaching methods for the music major or minor. Offered alternate years.

312 - String Methods I-1 S.H.

Class instruction in violin, viola, cello and bass. History, literature and teaching methods for the music major or minor. Offered alternate years.

313 - Percussion Methods I-1 S.H.

Class instruction in percussion instruments. History, literature and teaching methods for the music major or minor. Offered alternate years.

314 - Brass Methods I-1 S.H.

Class instruction in cornet, trumpet, horn, trombone and tuba. History, literature and teaching methods for the music major or minor. Offered alternate years.

315 - Guitar Methods- 2 S.H.

Class instruction in guitar and other fretted instruments. History, literature and teaching methods for music major or minor. Offered alternate years.

320 - Music for Elementary Teachers-3 S.H.

Study of the fundamentals of music and methods for teaching music in the kindergarten and elementary grades. Students with an adequate background in music should consider MUS 322 as alternate to this course. Prerequisite: admittance to the Professional Education Sequence. Not for music majors. Not applicable toward B.A. degree. Offered each semester.

321 - Music in Special Education-2 S.H.

An overview of materials and methods used in teaching music to children who are physically or developmentally challenged. Offered occasionally.

322 - Elementary Music Methods I-3 S.H.

Study of material and methods for music instruction in the elementary grades. Not applicable toward the B.A. degree. Prerequisite: Admittance to the Professional Education Sequence. Offered alternate years.

323 - Secondary Music Methods-3 S.H.

Study of material and methods for music in the secondary school. Not applicable toward the B.A. degree. Prerequisite: successful completion of guitar and piano proficiencies, and admittance to the Professional Education Sequence. Offered alternate years.

324 - Recreational Music-2 S.H.

Introduction to music techniques and fundamentals necessary for recreation programs. Offered alternate years.

332 - Elementary Music Methods II-2 S.H.

Advanced study of materials and methods for elementary music instruction. Development and application of skills and techniques needed to successfully teach elementary general music. Prerequisite: MUS 322. Successful completion of guitar and piano proficiencies and admittance to the Professional Education Sequence. Offered alternate years.

341 - Woodwind Methods II-1 S.H.

Continuation of the study of woodwind instruments. The course emphasizes pedagogical principles and materials available for the beginning level through high school including solo literature and small ensemble repertoire. Prerequisite: MUS 311 or instructor's permission. Offered alternate years.

342 - String Methods II-1 S.H.

Continuation of the study of string instruments. The course emphasizes pedagogical principles and materials available for the beginning level through high school including solo literature and small ensemble repertoire. Prerequisite: MUS 312 or instructor's permission. Offered alternate years.

343 - Percussion Methods II-1 S.H.

Continuation of the study of percussion instruments. The course emphasizes pedagogical principles and materials available for the beginning level through high school including solo literature and small ensemble repertoire. Prerequisite: MUS 313 or instructor's permission. Offered alternate years.

344 - Brass Methods II-1 S.H.

Continuation of the study of brass instruments. The course emphasizes pedagogical principles and materials available for the beginning level through high school including solo literature and small ensemble repertoire. Prerequisite: MUS 314 or instructor's permission. Offered alternate years.

399 - Music Internship-10 S.H.

Supervised experience in music business or industry designed by music faculty advisor, work supervisor and student. Prerequisite: successful completion of required music and business courses with a 2.5 GPA or better. Offered each semester. P/NC only.

410 - Music Supervision and Administration-3 S.H.

Problems of supervision and administration in public school music programs. Prerequisite: MUS 298. Not applicable toward the B.A. degree. Offered occasionally.

415 - Vocal Pedagogy-2 S.H.

Techniques and methodologies of voice instruction. Current trends in vocal pedagogy. Offered alternate years.

416 - Piano Pedagogy-2 S.H.

Historical survey of the schools of playing and teaching throughout the course of the piano's development. Analysis and comparison of 20th century teaching methods and historical anthologies. Special unit addressing beginner's needs. Offered alternate years.

420 - Multicultural Music in the Elementary School-2 S.H.

Advanced study of the philosophic foundations and values of using music from a broad range of cultures in both the elementary classroom and the general music classroom. Development of multicultural materials, their cultural context and methodology for their use in classroom and music class settings. Prerequisite: MUS 320 or MUS 322 or equivalent or instructor's permission. Offered alternate years.

421 - Music in Early Childhood Education-2 S.H.

Advanced study of musical development in children from birth to nine years. Development and application of materials and methods for successfully teaching music to young children. Prerequisite: MUS 320 or MUS 322 or equivalent or instructor's permission. Offered alternate years.

422 - Music Seminar on Choral Techniques and Materials-2 S.H.

Criteria for selection of vocal music, examination of representative music suitable for groups at various levels of development, principals of

programming, rehearsal techniques and organization. Offered alternate years.

423 - High School Solo Vocal Literature-2 S.H.

Course designed to help the high school teacher choose vocal solo literature for all types of voices. Offered occasionally.

424 - High School Orchestra Methods-2 S.H.

Course is designed to assist high school teachers select music which is appropriate for groups of varying levels of development. Organizational and rehearsal procedures are addressed. Offered occasionally.

425 - Instrumental Administration and Marching Band Techniques-2 S.H.

The organization and administration of elementary and secondary instrumental music programs, performance practice, rehearsal and marching band techniques. Prerequisite: instructor's permission. Offered alternate years.

435 - Wind Instrument Repair-2 S.H.

Care, maintenance and repair of woodwind and brass instruments. Offered occasionally.

490 - Music for Today's Schools: New Ideas in Music Education-1-3 S.H.

The objectives of this workshop are to offer new ideas or theories, elaborate on new trends and offer guidelines for improving public school programs. Course content changes each year. May be repeated for credit.

Theory, History, and Literature

109 - Introduction to Music-3 S.H.

Study of the elements of music, fundamental techniques and formal patterns. Stylistic traits of Baroque, Classic, Romantic and modern periods. Brief biographies of outstanding composers. Acquisition of familiarity with representative works through recordings. Does not fulfill elective requirements for music major/minor. Offered each semester.

110 - History of American Jazz-3 S.H.

A history of jazz in America, its African and European influences, its emergence as a recognizable art form in the 20th century, and its present-day varieties. Offered each semester.

111 - Film Music: Art Behind the Scenes-3 S.H.

This course will demonstrate the importance of music in perhaps the most important 20th century new entertainment and artistic medium known as Film. The course will progress from the early beginnings of the silent screen up to the present day. Students will learn the important, basic musical elements (i.e. melody, rhythm, harmony, etc) and how composers use them in film scoring. Students will do a "hands-on" project putting music to a film clip. No prior music experience necessary. Laptop is required.

113 - Women in Music-3 S.H.

An overview of the contributions made by women in creating, performing, teaching, and commissioning music. The course will examine the role of women in Western art and popular music, and in music of non-Western cultures. Offered alternate years.

114 - World Music-3 S.H.

A survey of selected world music cultures. Cultures covered are chosen from Africa, India, China, Japan, Southeast Asia, Indonesia and the Americas. Designed for the general student as well as the Music Major and Minor. Offered yearly. Concert/Listening Lab Required.

115 - Music of East and Southeast Asia-3 S.H.

A survey of the music found in east and southeast Asia, focusing on the music of China and Japan along with selected countries in southeast Asia. Designed for the general student as well as the music major or minor. Offered alternate years.

116 - Music of the Americas-3 S.H.

A survey of music cultures found in the Americas focusing on Native American music from both North and South America along with additional selected music traditions from the Americas such as African-American music and Latin American music among others. Designed for the general student as well as the music major and minor. Offered alternate years.

120 - Introduction to Music Theory-3 S.H.

An introduction to the structure and notation of music found in past and current composition. Does not fulfill elective requirements for music major/minor. Offered yearly.

122 - The History of Rock Music - 3 S.H.

A history of rock and roll and pop/rock music; its diverse American influences, its emergence as a recognizable style in the 1950's and its symbiotic relationship with modern society. Offered alternate years.

201 - Theory I - 4 S.H.

Scales; intervals; 2-, 3-, and 4-part writing; non-harmonic tones; simple harmonic progression and voice leading; beginning aural skills. Prerequisite: Successful completion of Theory Entrance Exam or MUS 120. Offered yearly.

202 - Theory II - 4 S.H.

Continuation of 2-, 3- and 4-part writing and harmonic progression, melodic construction, binary and ternary forms, divisive and additive rhythm, diatonic seventh chords; aural skills. Prerequisite: MUS 201. Must be a declared music major or minor. Offered yearly.

203 - Theory III- 4 S.H.

Continuation of 4-part writing, tertian structures greater than the octave, secondary dominants, modulation, Augmented 6th. Forms studied include Binary, Ternary, Variation as well as contrapuntal forms such as Invention and Fugue. Aural skills further developed. Prerequisite: MUS 202. Must be a declared music major. Offered yearly.

204 - Theory IV- 4 S.H.

Chromatic harmony. New harmonic approaches including twelve tone, polytonality, atonality and related 20th-century techniques. Aural skills further developed. Prerequisite: MUS 203. Must be a declared music major. Offered yearly.

207 - Composition-2 S.H.

A study of the creative process. Original student compositions. Prerequisite: MUS 204 or equivalent. Offered alternate years.

250 - Sight Singing-2 S.H.

Study in aural perception of interval and rhythmic relationships. Prerequisite: knowledge of musical notation. Offered occasionally.

252 - Jazz Improvisation-2 S.H.

A study of the basic tools of jazz improvisation including scales, chord terminology, the blues, and basic jazz forms. Prerequisites: MUS 201 or instructor's permission. Offered alternate years.

301 - Orchestration and Instrumentation-2 S.H.

Study of techniques, ranges and timbre of instruments. Fundamentals of scoring for band and orchestra. Prerequisite: MUS 204. Offered yearly.

302 - Jazz Ensemble Arranging-3 S.H.

Scoring for large and small ensembles. Prerequisite: MUS 202 or equivalent. Offered occasionally.

306 - Conducting-2 S.H.

Techniques of conducting choral and instrumental groups. Offered yearly.

307 - Music Technology-2 S.H.

A survey of computer applications in the music field with an emphasis on MIDI sequencing and notation programs. Offered alternate years.

350 - Sight Singing II-2 S.H.

Continued study in aural perception of interval and rhythmic relationships. Development of skills needed to successfully read music at sight. Prerequisite: MUS 250. Offered occasionally.

351 - Music of the Middle Ages, Renaissance and Baroque-3 S.H.

Study of the development of music from antiquity through c.1750. Heritage and central concepts of medieval theory and the rise of individual composers in the Renaissance. Study of multi-movement forms from the cyclic polyphonic mass to opera, oratorio and early instrumental genres. Prerequisite: MUS 204. Instructor's permission required for non-major. Offered yearly.

352 - Music of the Classical Period, 19th and 20th Centuries-3 S.H.

Study of the development of music from c.1750 to the present day. Significant works of the growing art-music repertoire and careers of important composers. Changing roles of form and harmonic language, proliferating responses to the changing role of art music. Prerequisite: MUS 204 and MUS 351. Instructor's permission required for non-major. Offered yearly.

402 - Form & Analysis-3 S.H.

Analysis of compositions as to form, melodic and harmonic structure. Students write original compositions modeled after works analyzed. Offered alternate years.

403 - Counterpoint-3 S.H.

Strict counterpoint in 16th-century style, study of species. Prerequisite: MUS 202. Offered alternate years.

406 - Conducting II-1 S.H.

Advanced techniques of conducting choral and instrumental groups. Prerequisite: MUS 306 and instructor's permission. Offered yearly.

440 - American Art Music-3 S.H.

Music in America from the time of the Puritans to the present day. Historical, biographical material and listening. For the general student as

* Course may be used to satisfy certain University Studies requirements.

well as for music majors and minors. Prerequisite: MUS 109 or equivalent. Offered occasionally.

445 – Art Music of the 20th Century-3 S.H.

A survey of the contemporary musical scene. The changes that have occurred in music since the beginning of the 20th century. Historical, biographical material and record listening. Designed for the general student as well as for music majors and minors. Prerequisite: MUS 109 or equivalent. Offered occasionally.

455 - Opera Literature-3 S.H.

The development of opera from Florentine Camerata to the present day. Principal styles and tendencies illustrated by study of representative works. Offered occasionally.

456 - Music Theatre Production-1-3 S.H.

Study of representative operas and musical plays, and production problems. Performance of scenes and/or complete works. Can be repeated up to 8 credits.

471 - Survey of Vocal Literature I (Italian)-2 S.H.

Songs and arias of the 17th and 18th centuries, Baroque performance practice. Offered alternate years. Prerequisite: MUS 351.

472 - Survey of Vocal Literature II (German)-2 S.H.

Lieder of Schubert, Schumann, Franz, Mendelssohn, Brahms, Strauss, Wolf, and others. Offered alternate years.

473 - Survey of Vocal Literature III (French)-2 S.H.

Representative French songs of Faure, Duparc, Chausson, Debussy, Poulenc and others. Offered alternate years.

475 - Survey of Instrumental Literature and Styles-3 S.H.

Study of the rise of instrumental styles beginning with Renaissance and continuing through the Romantic Orchestra. Survey course studying representative works of various composers. Prerequisite: MUS 351. Offered alternate years.

477 - Piano Literature I-2 S.H.

Appropriate early keyboard and piano literature of the Baroque and classical periods. Performance and analysis of forms, genres, style and primary composers are studied. History of the piano included. Offered alternate years.

478 - Piano Literature II-2 S.H.

Piano literature of the Romantic, Impressionistic and Contemporary periods (including brief look at Nationalism). Continued developments in instrumental design of piano discussed. Offered alternate years.

480 - Recital-1-2 S.H.

Half recital (1 S.H.) or full recital (2 S.H.) of representative literature. May be repeated for credit. Prerequisite: Must be enrolled in 300 or 400 level lessons for half recital; 400 level lessons for full recital.

491 - Independent Studies in Music-1-6 S.H.

Course designed to offer advanced students the opportunity to work in a music area of special interest to them. May be taken for or repeated up to 6 credits. Prerequisite: department's permission. Offered each semester.

NURSING

Stark Hall, Room 303 (507-457-5120)

www.winona.edu/nursing (e-mail: nursing@winona.edu)

Seppanen (Chairperson)

FACULTY

Note: All nursing faculty are registered nurses.

Susan Ballard, Associate Professor; B.S.N., University of Illinois; M.S.N., University of Minnesota; 1984 -

Judith Bautch, Associate Professor; B.S., University of Wisconsin; M.N., University of Washington; Ph.D., University of Wisconsin; 1997 -

Norma Blankenfeld, Associate Professor; B.S.N., M.S., University of Minnesota; 1980 -

Cynthia Bork, Assistant Professor; B.S.N., College of St. Teresa; M.S., Winona State University; Ed.D., St. Mary's University of Minnesota; 1993 -

Karen L. Gardner, Associate Professor; B.S.N., Florida State University; M.S.N., Texas Woman's University; 1985 -

Phyllis Gaspar, Associate Professor; B.S.N., M.S.N., University of Nebraska; Ph.D., Case Western Reserve University; 1995 -

Timothy Gaspar, Dean, College of Nursing and Health Sciences; B.S., South Dakota State University; M.S.N., University of Nebraska

Medical Center; Ph.D., University of Utah; 1995 -

Patricia Hartkopf, Professor; B.S.N., B.S., Winona State University; M.S.P.H., Ph.D., University of Minnesota; 1990 -

Jacqueline Hatlevig, Professor; B.S.N., Winona State University; M.S.N., Ph.D., University of Wisconsin-Milwaukee; 1987 -

Linda Heath, Associate Professor; B.S., M.S.N., University of Wisconsin; Ph.D., Walden University; 1993 -

Judy Hovelson, Assistant Professor; B.S.N., University of Vermont; M.S.N., University of Minnesota; 1984 -

Lola Johnson, Associate Professor; B.S.N., Minnesota State University-Mankato; M.S.N., Washington University; 1989 -

William McBreen, Professor; B.S.N., Mount Marty College; M.S.N., University of Nebraska Medical Center; Ph.D., University of Texas; 2000 -

Shirley Newberry, Assistant Professor; B.S., University of Dubuque; M.S., Winona State University; D.N.Sc., Rush University; 1994 -

Daniel Nicholls, Professor; M.S.N., University of Texas; M.Ed., Ed.D., Montana State University; 1988 -

Catherine Nosek, Assistant Professor; A.D., Inver Hills Community College; B.S., M.S., University of Wisconsin; 1997 -

Gayle P. Olsen, Associate Professor; B.S.N., College of Saint Teresa; M.S., University of California; 1980 -

Kathy S. Orth, Associate Professor; A.A., Austin Community College; B.S.N., College of Saint Teresa; M.S.N., University of Minnesota; 1983 -

Christine E. Pilon-Kacir, Professor; B.S.N., Mercy College of Detroit; M.S., University of Michigan; Ph.D. University of Missouri, 1994 -

Mary K. Proksch, Associate Professor; B.S.N., Viterbo College; M.S., Winona State University; Ed.D, University of St. Thomas; 1996 -

Linda Seppanen, Professor; B.S.N. St. Olaf College; M.S.N., The Catholic University of America; Ph.D., University of Alabama; 1990 -

Susanne Smith, Associate Professor; B.S., Goshen College; M.S.N., University of Maryland; 1978-1980; 1983 -

Joanne Stejskal, Professor; B.S.N., College of Saint Teresa; M.S.N., University of Wisconsin; Ed.D., University of St. Thomas; 1975 -

Sharon Tucker, Associate Professor; B.S.N., College of Saint Teresa; M.S.N., University of Wisconsin; D.N.Sc., Rush University; 1997 -

Mary Welhaven, Professor; B.S.N., Winona State University; M.S., Ph.D., University of Minnesota; 1981 -

Janet A. Wilke, Associate Professor; B.S.N., University of Wisconsin; M.S., University of Minnesota; 1975 -

PROGRAM OVERVIEW

The nursing major offers a liberal education with a concentration of study in nursing. The curriculum builds on a broad base of university studies. In addition to liberal learning and global perspectives, students develop clinical, scientific, decision-making, and caring skills in nursing courses that combine the theory and the practice of nursing. Graduates are prepared to practice in all health care settings, work with clients of all ages, and pursue graduate study. The nursing major is structured in two options:

- Generic Option for students seeking professional preparation at the level of BSN (Bachelor of Science in Nursing) and registered nurse licensure. The Generic Option can be completed on the Winona campus, through the 2+2 Program on the Rochester campus (page 40), or by traditional transfer. This option includes two years of sequenced upper-division nursing coursework. Most students complete the major on a full-time basis of study; part-time study is possible.
- RN Option for those who already hold a registered nurse license and are now seeking a BSN degree. This option includes sequenced upper-division nursing courses that can be completed in one to two years after all other degree requirements are completed. The RN Option can be completed on a full-time or part-time basis at the Rochester campus and through outreach. The Nursing Department also offers an adapted RN-to-MS Professional Pathway for registered nurses whose goal is to earn a Masters Degree in Nursing.

A variety of community facilities are utilized for site-based experiences for students in the nursing major. Campus assignment determines location of clinical facilities. Students in the Generic Option assigned to the Winona campus participate in acute care clinical experiences at Community Memorial Hospital in Winona and the Gundersen-Lutheran and Franciscan-Skemp medical complexes in La Crosse, Wisconsin. Students in the Generic Option assigned to the Rochester campus participate in acute care clinical experiences at hospitals affiliated with Mayo Medical Center and Olmsted Medical Center. Both campuses also offer a wide variety of other clinical experiences in nursing homes, public health agencies, mental health agencies, school systems, occupational health settings and other agencies, and clients' homes. Students in the RN Option have learning experiences in the Rochester area through a variety of community and county agencies. Outreach courses are delivered through interactive television (ITV) and web-based instruction as needed.

ACCREDITATION AND APPROVAL

The Nursing Program is accredited by the National League for Nursing Accrediting Commission (NLNAC), 61 Broadway, New York, NY 10006 (212-363-5555 or www.nlac.org). NLNAC is a resource of information regarding tuition, fees and length of program. The Nursing Program also has preliminary approval for accreditation from the Commission on Collegiate Nursing Education (CCNE), 1 Dupont Circle NW, Suite 530, Washington, D. C. 20036-1120 (202-887-6791 or www.aacn.nche.edu). The Nursing Program is approved by the Minnesota Board of Nursing (www.nursingboard.state.mn.us). Graduates are eligible to write the professional nurse licensure examination (NCLEX-RN) and apply for Public Health Nursing Certification. Graduates can apply to the Board of Teaching for a school nurse license in Minnesota after they obtain the RN license and Public Health Nurse certification.

ADMISSIONS

For general information about Winona State University admission procedures and requirements, see page 6.

Admission to the Generic Option

1. Complete the WSU admissions process before the application deadline for the nursing major.
2. Complete the application to the nursing major during the spring semester prior to beginning nursing courses the following fall (during a student's sophomore year). Check with the Department of Nursing for the application deadline set for that year. Notification of admission to the nursing major is made during the spring semester. Nursing advisors are available to assist with the application process. Please refer to the Department of Nursing Student Progression Policies for further delineation of the admission policies. The number of students admitted to the upper-division nursing major is limited.
 - a. When applying in the spring semester, students must have completed 7 of 10 prerequisite courses in the natural and social sciences with a "C" or better and have an admission GPA of 2.75 or above. This admission GPA is cumulative and calculated on the most recent five years of college coursework or the last 50 semester hour credits of college work; however, all grades for prerequisite courses must be at a "C" or better no matter when they were completed.
 - b. When applying, students must indicate a plan for completing any remaining prerequisite courses in the natural and social sciences and ENG 111 prior to starting the nursing major in the fall. ALL prerequisite courses must be completed with a grade of "C" or better.
 - c. In addition to meeting the above requirements, a student transferring from another nursing program must submit to the Department of Nursing an official transcript from the program and a letter from the academic head of the program stating that the student is eligible for continuing in or readmission to that program. Placement in the major will then be determined based on background and space available.
 - d. Campus preference is indicated during the application phase. Campus assignments are made at the time of admission to the major.

Four-Year Graduation Guarantee

Students who meet the following requirements of the Four-Year Graduation Guarantee are admitted to the nursing major:

1. All first-year students entering fall semester wishing to participate in the graduation guarantee program must complete the guarantee application form and officially declare a major within the Department of Nursing before beginning their fall semester classes.
2. All eligible students must be qualified to begin college-level science, mathematics and English as required by the nursing major.
3. All eligible students must pre-register for classes each semester and have their schedules approved by their official nursing advisor.
4. All eligible students must meet any program requirements (GPA, grade, prerequisites) as stipulated in the University catalog and/or the schedule of classes and have a cumulative GPA of 3.3 at the time of admission to the nursing major.
5. All eligible students must successfully complete an average course load of 16 credits each semester (32 credits per year).
6. Any prerequisite courses with a grade of less than "C" or repeated voids the guarantee.
7. Any change in major, options or minor voids the guarantee.

Admission to the RN Option

1. Complete the WSU admissions process before applying to the nursing major (page 6). After receiving the Official Evaluation of Credit from the Office of Admissions, arrange an appointment with a nursing advisor on the Rochester campus.
2. Apply for admission to the nursing major. Applicants to the Nursing Program are admitted once a year for the following academic year.
 - a. Contact the Rochester campus Nursing Department office in the preceding fall for application materials, deadline dates, and general information. Students need to seek academic advisement prior to applying to the RN Option program to ensure that all requirements are fulfilled. Select the full-time or part-time option for completing the nursing courses.

* Course may be used to satisfy certain University Studies requirements.

- b. Additional degree requirements beyond nursing courses will need to be completed for graduation. It is highly recommended that all non-nursing degree requirements and the nursing requirement of 5 upper-division elective credits be completed prior to the RN Option nursing courses because of scheduling considerations.
- c. All RN Option students must hold a current RN license issued by a state or territory of the United States. A photocopy of the license must be submitted to the Nursing Department. At the time of application, students must have completed at least 7 of 10 prerequisite courses in the natural and social sciences with a "C" or better and have an admission GPA of 2.75 or above. This admission GPA is cumulative and calculated on the most recent five years of college coursework or the last 50 semester hours of credits of college work; however, all grades for prerequisite courses must be at a "C" or better no matter when they were completed. At the time of application, students must have a plan for completing any remaining prerequisite courses in the natural and social sciences and ENG 111. ALL prerequisite courses must be completed with a grade of "C" or better before starting the nursing major in the fall.
- d. Twenty-four (24) credits in the RN Option of the nursing major (N302, N304, N306 and N308) will be granted by transfer to RNs who have completed an Associate Degree in Nursing from an NLNAC-accredited program. The Comprehensive Nursing Assessment Test (CNAT) is used as a challenge for these credits for RNs who are graduates of diploma programs and A.D.N. programs that are not accredited by NLNAC. If all examinations are successfully completed, the 24 credits are granted.
- e. The RN-to-MS Professional Pathway is designed for highly motivated nurses who graduated with an associate degree in nursing or a diploma in nursing, who have nursing experience, and whose goal is a Masters Degree in Nursing. Selected courses meet requirements for the undergraduate and graduate programs. Students must meet additional admission requirements and should also consult the WSU Graduate Catalog. Separate formal application to the Master's Nursing Program is required. Further information can be obtained from the Nursing Department at WSU-Rochester Center.

MnSCU Statewide Nursing Articulation Agreement

The following terms and conditions of articulation among nursing programs are in effect at WSU:

1. The candidate must have graduated from an Associate Degree program for registered nurses that is approved by a state board of nursing and based in a regionally accredited college or university.
2. The candidate must have been awarded the Associate in Science (A.S.) Degree in Nursing with a cumulative GPA of 2.75 and a minimum grade of "C" in each nursing course.
3. The candidate must have been graduated from a board-approved program in nursing and have a current unencumbered authorization to practice as a Registered Nurse (RN).
4. The Associate in Science (A.S.) Degree transfers to the baccalaureate institution as a whole package of nursing major and supporting courses.
5. Articulation RNs should not be required to complete more total credits for the degree than the generic nursing baccalaureate students.

ACADEMIC POLICIES, PROCEDURES, REQUIREMENTS, AND RESOURCES

Costs

Nursing students admitted into the upper-division nursing major must assume responsibility for any costs incurred while meeting the clinical agency requirements. Nursing students are expected to provide their own transportation to all site-based experiences. Nursing students also must assume responsibility for the costs of their name pins, uniform(s), lab coats and faculty-approved stethoscopes, as well as any costs incurred to maintain their health (throat cultures, physician/ nurse practitioner visits, etc.) and meet any clinical agency requirements. Initial costs for book purchases for junior nursing students in the Generic Option can total approximately \$500. Most textbooks are used throughout the program. Nursing students need to provide for themselves compatible computer access for electronic communication for coursework and departmental needs.

Scholarships

A number of scholarships are available for nursing majors through the Department of Nursing; a complete listing is maintained in the Nursing Department Offices on both the Rochester and Winona campuses. Students should apply for scholarships one academic year in advance of the academic year when the scholarship is desired (e.g., apply during the 2002-2003 academic year for the 2003-2004 academic year). Scholarships are provided by individual benefactors, affiliating hospitals, and professional and community organizations. Students are encouraged to contact agencies (hospitals, nursing homes, American Legion, VFW, etc.) in their hometowns regarding possible nursing scholarships. Refer to page 12 and 14 for general information on scholarships, grants and financial aid.

Professional-Related Organizations

Minnesota Nursing Students' Association (MNSA): This is a pre-professional organization with membership at the local, state, and national levels. First-year and sophomore nursing students are welcome and encouraged to join. The Winona campus MNSA office is located in Stark Hall, Room 314. Names of current officers are posted on Nursing Department bulletin boards in Winona and Rochester.

Undergraduate Nursing Clubs: The membership includes all who are in the Generic Option, with separate clubs on the Winona and Rochester campuses. They deal with student-related issues and events. Officers and representatives to Department of Nursing committees are elected yearly, and names are posted on the respective campuses.

Kappa Mu Chapter of Sigma Theta Tau: The purpose of this nursing honor society is to recognize superior achievement and development of leadership qualities, foster high professional standards, and encourage creative work. Membership is by invitation and includes nurses in the southeast Minnesota area and students.

Program Assessment

The Department of Nursing requires all students enrolled in the nursing major to participate in the systematic evaluation of program outcomes. This involves completion of surveys, participation in discussion groups, and maintenance of a portfolio. This portfolio includes examples of work showing critical thinking, communication abilities, caring therapeutic nursing interventions and service, and evidence of progression in the professional nursing roles throughout the educational experience.

Honors In Nursing Program

This program is designed to provide eligible students an opportunity to participate in scholarly activity above and beyond the normal course of study provided within the Nursing Department. A student has an opportunity to work closely with the faculty advisor and pursue personal learning goals. Application is made in the spring of the junior year of nursing courses. At that time the student needs a 3.0 GPA overall and 3.5 GPA in nursing courses and enrollment in or completion of the nursing research course. The student must form an Honors Committee of WSU faculty members, one of whom is willing to serve as honors advisor. The student must complete a scholarly project that involves research or clinical focus; the project must be approved by the Honors Committee. In the spring semester of the senior year, the student must complete a written report and present the completed honors project.

Students may register for up to 6 credits (N490 Independent Study in Nursing) over the two-year period if elective credit is desired for working on the honors project. Students who successfully complete the Honors Program will, upon graduation, have their official transcripts stamped with the words, "Graduated With Honors In Nursing"; their graduation status (Honors in Nursing) will be indicated on the graduation program and noted during graduation ceremonies. The specific details and steps in this process are available from the Department of Nursing.

MINIMAL STANDARDS WITHIN THE NURSING MAJOR

To satisfy the academic standards of the nursing major, students must:

1. Achieve a grade of "C" or above in each required nursing course. Grades less than "C" constitute a failure in the nursing major. Students must adhere to the University standards for retention and scholarship.
2. Maintain a level of health that does not interfere with the student's ability to function adequately and safely in the nursing major. The student is expected to seek appropriate professional assistance as needed. The faculty may recommend the need for assistance, a leave of absence and/or withdrawal from the program.
3. Follow the ethical responsibilities as outlined in the Handbook for Undergraduate Nursing Students.
4. Complete the forms for the background studies conducted by the licensing division of the Department of Human Services on behalf of the Department of Health. Under the 1995 amendments to the Vulnerable Adults Act, individuals who provide direct contact service to patients or residents in select health facilities must undergo a background check. Currently no fees are charged.

"Minnesota law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a Minnesota licensed health care facility. Failure to participate in a clinical placement required by the academic program could result in ineligibility to qualify for a degree in this program."

5. Meet clinical agency requirements when enrolled in courses with site-based experiences: yearly Mantoux skin tests; diphtheria-tetanus immunity; measles, mumps and rubella immunity; polio immunity; Hepatitis B vaccination; chicken pox immunity/titer; medical/hospital insurance coverage; a physical examination (within the past 10 years); health care provider CPR certification; and professional liability insurance.

PROFESSIONAL RETENTION AND PROGRESSION POLICIES

1. No nursing course may be repeated more than once due to withdrawal or grade less than "C." (A grade of "D" or less is considered to be a failing grade.) No theory exams can be retaken. Students who fail or withdraw from a course (theory and/or clinical) will be able to continue part-time in the nursing major if they have satisfied progression policies and as space allows.
2. Students will not be allowed to continue in the nursing major if they have failed or withdrawn for academic reasons from the same nursing course more than once or from two different nursing courses over more than one semester.
3. A student may be dismissed from a course for breach of ethical responsibilities. See the Handbook for Undergraduate Nursing Students or contact the Office of the Vice President for Student Affairs for information regarding University expectations and policies. A student dismissed for such a violation will not be allowed to continue in any clinical nursing course that semester, will be dropped from the nursing major at the end of the semester, and will be not readmitted to the major.
4. A student may be dismissed from a nursing course for breach of clinical safe practice guidelines as described in the course syllabus.
5. Students who once were admitted to the nursing major, completed at least one nursing course, but currently are not enrolled in the nursing major have one year from the date of withdrawal/failure to file a progression plan approved by the nursing advisor (for Generic Option students) or the RN Coordinator (for RN Option students). After one year, the student must reapply for admission to the nursing major.
6. All students are assigned to a clinical site-based experience sequence. If a student varies from the assigned plan, space in clinical courses cannot be assured.
7. All part-time students must file a written progression plan that has been approved by the nursing advisor or the RN Option Coordinator (for RN Option students).
8. Students who change from full-time to part-time status in the nursing major for academic or personal reasons must file a progression plan developed with the assistance of their academic advisor and must obtain plan approval from the department chairperson or designated faculty member (for Generic Option students) or the RN Coordinator (for RN Option students). This plan is based on space availability in clinical courses and completion of prerequisites for courses.
9. The grade of "Incomplete" (I) may be granted at the discretion of the course instructor in special cases where, for reasons beyond the student's control, some course assignments were not finished but the student was passing all other aspects (refer to page 26). For courses that are prerequisite to subsequent nursing courses, the "Incomplete" must be resolved by the second week of the new semester.

Credit by Examination

A student may receive credit by examination and/or demonstration of competence for courses or parts of courses in the Generic and RN Options. Faculty permission is needed for some course challenges.

Graduation Requirements

Graduation requirements include completion of WSU University Studies Program requirements or their equivalent for transfer students as well as all nursing major course requirements. A total of 128 semester credits is needed to graduate with a baccalaureate degree from WSU; at least 64 of these semester credits must be from a four-year college. For the RN Option nursing major, the 64 credits from a four-year college include 30 credits in nursing, 3 credits in statistics, 5 upper-division elective credits (2 credits of these in nursing), plus 26 credits.

A formal application for graduation must be made no later than one semester before the expected graduation semester. For a checklist of the University's graduation requirements, see page 24.

Withdrawal

Withdrawal from a nursing course and/or the University must be completed according to WSU guidelines (page 28).

OBTAINING LICENSURE AS A REGISTERED NURSE

After graduation, Generic Option nursing graduates must pass the National Council Licensure Examination (NCLEX-RN) in order to obtain a Registered Nurse (RN) license. Students may apply for licensure and take the NCLEX-RN in the state of their choice. Contact information for all state boards of nursing can be obtained from the National Council of State Boards of Nursing at <http://www.ncsbn.org/>.

* Course may be used to satisfy certain University Studies requirements.

B.S. MAJOR – NURSING

96 S.H. (No Minor Required)

Note: All courses must be taken for a letter grade

PREREQUISITES/REQUIRED COURSES 37–38 S.H.

NATURAL SCIENCE 21 - 22 S.H.

Biology (14 S.H.)

- 206 Normal Nutrition (3)
- 209 Microbiology (3)
- * 211 Anatomy and Physiology I (4)
- * 212 Anatomy and Physiology II (4)

Chemistry (7-8 S.H.)

- * 208 (3), *209 (4) General, Organic and Biochemistry I and II OR
- * 212, *213 Principles of Chemistry I and II (4 S.H. each)

SOCIAL SCIENCE 12 S.H.

Psychology (6 S.H.)

- * 210 General Psychology (3)
- * 250 Developmental Psychology (3)

Sociology (6 S.H.)

- * 150 Introduction to Sociology (3)
- * 212 The Family (3)

OTHER 4 S.H.

English (4 S.H.)

- * 111 College Reading and Writing (4)

Additional nursing major requirements are to be completed after admission to the major, but before graduation. See listings of prerequisites or corequisites for N375.

- * STAT 110 Fundamentals of Statistics (3) OR
- PSY 231 Statistics (3) (Note: This course does not fulfill a University Studies requirement.)

UPPER-DIVISION ELECTIVES

(300- and 400-level courses) (5 S.H.)

Five semester hours of upper-division electives (300- and 400-level courses) are required for the nursing major; of these, 2 credits must be from nursing electives. Electives may be taken as letter grade or pass/no credit if the courses are offered on a P/NC basis.

NURSING ELECTIVES at the 300–400 level

- 327 Introduction to Public Health (3)
- 360 Pharmacology (1) (for RN Option only)
- 366 Pathophysiology (3) (for RN Option only)
- 392 Cardiac Risk Prevention (3)
- 399 Skills for Professional Success (2)
- 401 Spirituality in Nursing (2)
- 402 Clinical Pharmacology (3) (RN-to-MS Professional Pathway)
- 404 Advanced Pathophysiology (3) (RN-to-MS Professional Pathway)
- 406 Psychosocial Interventions in Family Care (2) (RN-to-MS Professional Pathway)
- 408 Advanced Role Seminar (2) (RN-to-MS Professional Pathway)
- 410 Theoretical Foundations and Research for Advanced Nursing Practice
- 412 Critical Care Nursing (2-3)
- 414 Health Care Policy and Finance (3) (RN-to-MS Professional Pathway)
- 416 Issues in Gerontology and Geriatrics for the 21st Century (1-3)
- 417 Health Assessment Techniques (1)
- 418 Computer Applications in Nursing (2)
- 419 Advanced Health Promotion (3) (RN-to-MS Professional Pathway)
- 425 Transcultural Issues in Health Care (3)
- 432 Principles of OR Nursing (3)
- 480 Holistic Approaches to Health (3)
- 490 Independent Study in Nursing (1-3)
- 492 Jamaica Studies: Health Care in an Emerging Country (3)
- 493 The Patient's Voice: Experiences of Illness (2)
- 494 Contemporary Film: Understanding the Patient's Experience (2)
- 495 Seminar/Workshop in Nursing (1-3)
- 496 Feminist Perspectives in Nursing (2)
- 497 Nursing Care of the Aged (3)

B.S. MAJOR – NURSING: GENERIC OPTION

55 S.H. (Required courses must be taken for a letter grade.)

REQUIRED COURSES

- 300 Caring Skills I (2)
- 301 Caring Skills II (2)
- 320 Caring Concepts I (3)
- 321 Caring Concepts II (3)
- 330 Role Development I (3)
- 331 Role Development II (3)
- 345 Health Assessment I (3)
- 346 Health Assessment II (2)
- 360 Pharmacology (1)
- 366 Pathophysiology (3)
- 375 Nursing Research, Theory and Technology (3)
- 400 Emerging Health Care Systems (2)
- 411 Nursing of Adults and Their Families (2)
- 413 Nursing of Families Experiencing Mental Illness (2)
- 421 Nursing of Childbearing Families (2)
- 422 Nursing of Childrearing Families (2)
- 423 Role Development III (4)
- 433 Role Development III Seminar (1)
- 471 Community Health Care (2)
- 472 Leadership/Management in Nursing (2)
- 474 Role Development IV (4)
- 484 Role Development IV Seminar (1)
- 491 Capstone Experience in Role Synthesis (3)

B.S. MAJOR – NURSING: RN OPTION

54 S.H. (Required courses must be taken for a letter grade.)

Note: Includes 24 S.H. of nursing in transfer or exam.

REQUIRED COURSES

- 375 Nursing Research, Theory and Technology (3)
- 415 Holistic Caring (5)
- 435 Holistic Assessment (4)
- 445 Management and Leadership (3)
- 455 Continuity of Care (4)
- 465 Nursing Roles and Health Promotion (4)
- 475 Community Health Nursing (4)
- 491 Capstone Experience in Role Synthesis (3)

NURSING COURSE DESCRIPTIONS

Note: Courses offered on a pass/no credit-only or grade-only basis are so designated. All required courses in the major must be completed on a grade-only basis.

120 – Introduction to the Health Professions – 3 S.H.

Examines the practice and politics of the health and health-related disciplines within the U.S. health care system. Explores entering the health care professions and also how to be an astute consumer of health care. P/NC option.

260 - Women's Health Issues - 3 S.H.

A study of contemporary issues in women's health focusing on historical aspects, current significance and future trends of each issue. Focus is on preparing students to make their own health care decisions. P/NC option.

300 - Caring Skills I - 2 S.H. (Generic Option)

Develops the knowledge and skills for meeting physiologic needs of clients and providing a safe environment as part of a team in professional nursing practice. Lab course. Prerequisite: admission to the major. Grade only.

301 - Caring Skills II - 2 S.H. (Generic Option)

Develops the knowledge and skills for integrating selected therapeutic nursing interventions into nursing care of individuals, families and communities in professional nursing practice. Lab course. Prerequisite: N300. Grade only.

302 - CNAT: Care of the Adult Client - 6 S.H. (RN Option)

Demonstration of knowledge through an exam focusing on the nursing care of clients in a variety of settings and at various stages of the wellness-illness continuum. Items also assess nursing skills in meeting physiologic and psychosocial needs of clients with stable conditions. The Comprehensive Nursing Assessment Test (CNAT) is required for RNs who are graduates of diploma programs and A.D.N. programs that are not accredited by NLNAC. P/NC only.

304 - CNAT: Care of Client During Childbearing - 6 S.H. (RN Option)
Demonstration of knowledge through an exam focusing on nursing care during the antepartal, intrapartal and neonatal periods. Emphasis is on the normal, with some common complications. The Comprehensive Nursing Assessment Test (CNAT) is required for RNs who are graduates of diploma programs and A.D.N. programs that are not accredited by NLNAC. P/NC only.

306 - CNAT: Care of the Child - 6 S.H. (RN Option)
Demonstration of knowledge through an exam concerned with nursing care of children of all ages at various stages of health and illness. The Comprehensive Nursing Assessment Test (CNAT) is required for RNs who are graduates of diploma programs and A.D.N. programs that are not accredited by NLNAC. P/NC only.

308 - CNAT: Care of the Client with a Mental Disorder - 6 S.H. (RN Option)
Demonstration of knowledge through an exam addressing the broad spectrum of psychological wellness-illness. The content includes psychosocial assessment and intervention strategies to support the client's strengths. The Comprehensive Nursing Assessment Test (CNAT) is required for RNs who are graduates of diploma programs and A.D.N. programs that are not accredited by NLNAC. P/NC only.

320 - Caring Concepts I - 3 S.H. (Generic Option)
Introduces the profession of nursing in the context of the changing health care delivery system. Caring concepts, ethical decision-making, therapeutic use of self and professional roles of caregiver, scholar, and advocate are emphasized. Prerequisite: admission to the major. Grade only.

321 - Caring Concepts II - 3 S.H. (Generic Option)
Focuses on health promotion for self, individuals and groups, and builds on professional nursing role development as caregiver, advocate, scholar, and teacher. Primary, secondary, and tertiary levels of prevention related to major health problems are included. Prerequisite: N320. Grade only.

327 - Introduction to Public Health - 3 S.H. (Elective)
This course is designed to introduce concepts of public health appropriate for students in health care fields. These concepts will be applied to present health care delivery systems, health and disease of population groups, and community planning. The influence of political, economic, and social aspects are considered. P/NC Option.

330 - Role Development I - 3 S.H. (Generic Option)
Beginning integration of ethical decision-making, communication, health assessment, and therapeutic nursing interventions into the professional nursing roles of provider of care, scholar, and advocate. Includes Care Group activities. This course is a flagged course for University Studies and is designed to meet 3 S.H. of the requirement for writing as it applies to the field of nursing. Ninety hours practicum for semester. Prerequisite: admission to the major; prerequisite or corequisite: N300, N345, N320, N360, N366. Grade only.

331 - Role Development II - 3 S.H. (Generic Option)
Integrates professional nursing roles of provider of care, advocate, scholar, teacher, and researcher in nursing care of individuals, families and a community. There is a focus on health promotion as related to health needs and risk appraisal. Includes Care Group activities. Ninety hours practicum for semester. Prerequisite: N330, N300, N345, N320, N360, N366; prerequisite or corequisite: N301, N346, N321. Grade only.

345 - Health Assessment I - 3 S.H. (Generic Option)
Develops the knowledge and skills necessary for holistic assessment of the child and adult, includes physical assessment skills and determination of nursing diagnoses. Lecture and lab course. Prerequisite: admission to the major or instructor's permission. Lecture and lab course. Grade only.

346 - Health Assessment II - 2 S.H. (Generic Option)
Develops the knowledge and skills necessary for assessment of the family and the community including determination of nursing diagnoses for specific groups. Lecture and lab course. Pre- or co-requisite: N345 or instructor's permission. Grade only.

360 - Pharmacology - 1 S.H. (Generic Option; elective for RN Option)
An introduction to general principles of drug therapies in self-care and in nursing practice. Prerequisite: sophomore standing or instructor's permission. Grade only.

366 - Pathophysiology - 3 S.H. (Generic Option; elective for RN Option)
Covers the human pathologic processes and common treatment modalities for frequently occurring health problems. Nursing prerequisite: completion of anatomy & physiology sequence or

instructor's permission. HHP prerequisite: HHP 340 Physiology of Exercise and completion of A & P sequence. Grade only.

375 - Nursing Research, Theory and Technology - 3 S.H. (Generic & RN Options)
Develops the ability to analyze, critique and interpret research findings and data based on nursing theory and practice needs. Includes use of selected software and technological modalities. This course is flagged for University Studies and designed to meet 3 S.H. of the Critical Analysis requirement. Prerequisite or corequisite: statistics course or instructor's permission. Grade only.

392 - Cardiac Risk Prevention - 3 S.H. (Elective)
Lecture course designed to identify risk factors that can lead to cardiovascular disease. The major risk factors will be analyzed and strategies for modifying each will be developed. Health information sources and their reliability for health promotion information also will be discussed. New technology in diagnosing and treating cardiac conditions included. Prerequisite or corequisite: anatomy & physiology course. P/NC option.

399 - Skills for Professional Success - 2 S.H. (Elective)
This course will help the student learn what he/she needs to know to live a successful and harmonious life as a person working in a professional career. The coursework will focus in three areas critical to career success: (1) how to develop the self-confidence and self-esteem essential for personal and professional well-being; (2) how to relate with others in a professional and confident manner to make work more vital, effective, and satisfying every day; (3) how to determine one's desired professional career path, make career decisions comfortably and efficiently, and achieve professional goals. P/NC option.

400 - Emerging Health Care Systems - 2 S.H. (Generic Option)
Explores American and global nursing care within the health care delivery systems including consideration of issues and trends in organization/ management, quality, financing, political, legal, and ethical. Prerequisite: senior standing in major or instructor's permission. Grade only.

401 - Spirituality in Nursing - 2 S.H. (Elective)
The purpose of this course is to assist students in their understanding of spirituality and spiritual development, and to identify ways of incorporating the essence of spirituality in their nursing practice. Eastern and Western spirituality and practices affecting health are explored. Students examine how society as well as their own biases have affected their ability to respond to spiritual concerns and needs. Spiritual assessment as well as specific spiritual interventions are discussed. Students are challenged to explore their own spiritual nature and its impact in their personal and professional lives. P/NC option.

402 - Clinical Pharmacology - 3 S.H. (Elective, RN-to-MS Professional Pathway)
This course includes principles of pharmacokinetics and pharmacodynamics as a foundation for the use of medications in the clinical management of diseases. Major classes of drugs will be discussed in terms of actions; therapeutic and other effects; adverse, allergic and idiosyncratic reactions; indications and contraindications. The importance of sound diagnostic reasoning in the selection of pharmacological interventions with attention to safety, cost, simplicity, acceptability and efficacy will be stressed. The responsibilities related to prescribing medications will be emphasized. Prerequisite: admission to the graduate program in nursing or instructor's permission. Grade only.

404 - Advanced Pathophysiology - 3 S.H. (Elective, RN-to-MS Professional Pathway)
Advanced physiology and pathophysiology at the cellular, organic and systemic level, will be explored as a basis for clinical assessment and management by the advanced practice nurses. Integration of function among organ systems will be emphasized. The effect of psychosocial variables on physiologic function will be explored. Prerequisite: admission to the graduate program in nursing or instructor's permission. Grade only.

406 - Psychosocial Interventions in Family Care - 2 S.H. (Elective, RN-to-MS Professional Pathway)
This course explores the role of the advanced practice nurse in addressing the psychosocial needs of the client and family. Focus will be on the development of counseling skills for advanced psychosocial assessment and on providing culturally sensitive guidance in caring for the client and family during health crisis, and acute and chronic illness. Prerequisite: admission to the graduate program in nursing or instructor's permission. Grade only.

* Course may be used to satisfy certain University Studies requirements.

408 – Advanced Role Seminar - 2 S.H. (Elective, RN-to-MS Professional Pathway)

This course will provide a forum for the explorations of advanced practice role behaviors including collaboration and leadership. Selected theories and frameworks relevant to the various roles will be evaluated. Ethics and diversity issues in nursing and health care will be discussed. Prerequisite: admission to the graduate program in nursing or instructor's permission. Grade only.

410 – Theoretical Foundations and Research for Advanced Nursing Practice - 4 S.H. (Elective, RN-to-MS Professional Pathway)

The goal of this course is to provide students with the opportunity to critically analyze existing nursing theories and articulate a personal philosophy of nursing. Students will do an in-depth analysis of a concept. The students will analyze methods and techniques of research and interpret their usefulness for application in clinical practice. Theory and practice will be used to define nursing problems and develop a research proposal. Prerequisite: admission to the graduate program in nursing or instructor's permission. Corequisite or prerequisite: STAT 601. Grade only.

411 - Nursing of Adults and Their Families - 2 S.H. (Generic Option)

Studies the theoretical basis of nursing care for adult clients and their families in well-being and illness. Prerequisite: N330, N360, N366. Grade only.

412 - Critical Care Nursing - 2-3 S.H. (Elective)

This course is designed to introduce the student to care for critically ill persons. Emphasis is on rapid assessment, setting priorities, rapid decision-making and nursing interventions for the critically ill. The 2-credit option has theory only. The 3-credit option has theory and a clinical laboratory experience. Prerequisite: N411, N423, and senior standing or instructor's permission. P/NC option.

413 - Nursing of Families Experiencing Mental Illness - 2 S.H. (Generic Option)

Studies the theoretical basis of nursing care of individuals, families and groups with emotional concerns or mental illnesses and explores nursing in the psychiatric/mental health setting. Prerequisite: N330. Prerequisite or corequisite: N331. Grade only.

414 – Health Care Policy and Finance - 3 S.H. (Elective, RN-to-MS Professional Pathway)

This course provides a base for nurse leaders and advanced practice nurses to enter and effectively shape health care policy in the workplace, organizations, community, and government at the state and federal level. Students will develop an understanding of health care financing in the delivery of health care. Prerequisite: admission to the graduate program in nursing or instructor's permission. Grade only.

415 - Holistic Caring - 5 S.H. (RN Option)

This course introduces the WSU nursing curriculum and organizing framework to the RN student. Holistic caring is related to critical thinking, teaching-learning, role development and nursing practice. Prerequisite: admission to RN Option; Corequisite: N375, N435, N475. Grade only.

416 – Issues in Gerontology and Geriatrics for the 21st Century – 1-3 S.H. (Elective)

This course is a series of three consecutive modules of content related to common issues in gerontology and geriatrics. A student may take one, two, or all three modules, and each has the preceding module as a prerequisite. The course focuses on normal aging, theories of aging, social gerontology, and societal effects of an increasing population of older people. The geriatric content will focus on major geriatric syndromes such as immobility, incontinence, instability, iatrogenic illness and intellectual impairment. Emphasis will be placed on assessment and maintenance of individual competency, independence and physiological function across clinical settings. Prerequisite: senior standing in major or instructor's permission. Grade only.

417 – Health Assessment Techniques – 1 S.H. (Elective)

A guided study review of the basic components of physical assessment and an opportunity for performance evaluation at completion of course. Content relative to obtaining a complete health history and performing a physical examination, with appropriate documentation of each. Designed to ensure readiness for Advanced Practice Health Assessment. Prerequisite: instructor's permission. P/NC option.

418 – Computer Applications in Nursing - 2 S.H. (Elective)

This course is designed to provide knowledge of technological modalities presently used to assist in the diagnosis and treatment of patients, planning and monitoring of care, management of information, and data analysis. The application of nursing informatics in nursing research,

administration, education, and practice will be explored. Emphasis in this course is on extensive hands-on experience in Windows 98, word processing, spreadsheet and database applications, presentation software, the internet, and other computer-related applications. Prerequisite: sophomore standing. P/NC option.

419 - Advanced Health Promotion - 3 S.H. (Elective, RN-to-MS Professional Pathway)

Concepts related to health promotion and maintenance are analyzed from theoretical- and research-based perspectives. Using principles of epidemiology, advanced practice nurses identify risk factors for specific populations and examine variables that influence wellness. Interventions for promotion of optimal health are designed with particular consideration for age and cultural differences. A community-based practicum allows the student to explore possibilities for enacting the advanced practice role outside traditional biomedical settings and within the context of families and communities. (2 S.H. seminar; 1 S.H. clinical). Prerequisite: admission to the graduate program in nursing or instructor's permission and N410. Grade only.

421 - Nursing of Childbearing Families - 2 S.H. (Generic Option)

Studies the theoretical basis of nursing care dealing with sexuality, reproductive health promotion and prenatal through postpartum health promotion. Prerequisite: N330; prerequisite or corequisite: N331. Grade only.

422 - Nursing of Childrearing Families - 2 S.H. (Generic Option)

Studies the theoretical basis of nursing care for families with children. Prerequisite: N330; prerequisite or corequisite: N331. Grade only.

423 – Role Development III – 4 S.H. (Generic Option)

Focuses on the development of the professional nursing roles in restoring, maintaining, and promoting the health of individuals and families. Students care for selected populations (mothers, children, adults, those with mental illness) in various settings. 120 hours practicum for semester. This is a companion course to N433, Role Development III Seminar. The core content related to the populations in the student's site-based experiences must be completed prior to or with this course. Prerequisite: N331. Corequisite: N433. Prerequisite or corequisite depending upon client populations: N411, N471, N413, N421, N422. Grade only.

425 – Transcultural Issues in Health Care – 3 S.H. (Elective)

Explores the importance of transcultural concepts that are present in health care delivery systems. It is designed to assist learners to increase awareness of all types of human diversity, understand the importance of these diverse differences, and incorporate ways of utilizing this knowledge to deliver culturally competent health care in all settings within the global community. P/NC option.

432 - Principles of OR Nursing - 3 S.H. (Elective)

Students will learn the nurse's role during the intraoperative phase of patient care. Experiences include circulating and scrub nurse roles. Course includes a clinical laboratory experience. Prerequisite: N300 and N301 or instructor's permission. P/NC option.

433 – Role Development III Seminar – 1 S.H. (Generic Option)

Seminar course that integrates major concepts and professional roles through presentations and discussion of clinical exemplars, nursing research, and nursing literature. Includes Care Group activities. This is a companion course to N423, Role Development III. Corequisite: N423. Grade only.

435 - Holistic Assessment - 4 S.H. (RN Option)

This course teaches the student to assess the client and family in a holistic manner. Traditional physical history and assessment of the individual is expanded to include multiple variables. Prerequisite: admission to RN Option; Corequisite: N415 and N475. Grade only.

445 - Management and Leadership - 3 S.H. (RN Option)

This course explores the management and leadership roles of the professional nurse, analyzing current nursing practices as well as applying the change process to a nursing situation. Prerequisite: N375, N415, N435, N475. Corequisite: N455, N465, N491. Grade only.

455 - Continuity of Care - 4 S.H. (RN Option)

This course explores selected professional nursing situations or populations involving continuity of care issues: complex acute/chronic care issues; loss; the elderly; and other cultures. Teaching-learning theory and skills are applied to the adult learner. Prerequisite: N375, N415, N435, N475. Corequisite: N445, N465, N491. Grade only.

465 - Nursing Roles and Health Promotion - 4 S.H. (RN Option)

Focuses on the professional nursing roles of provider of care, advocate, teacher, case manager, change agent and researcher of individuals and families in a variety of situations. Students will apply communication

skills in various interpersonal situations. Sixty hours of site-based experiences. Prerequisite: N375, N415, N435, N475; corequisite: N445, N455, N491. Grade only.

471 - Community Health Care - 2 S.H. (Generic Option)

Explores the historical roots of public health care and addresses public health issues for vulnerable populations and ways nursing deals with chronic needs. Prerequisite: N321, N331, N346. Prerequisite or corequisite: N411. Grade only.

472 - Leadership/Management in Nursing - 2 S.H. (Generic Option)

Explores leadership and management theories, attributes and behaviors within the culture of nursing. Prerequisite: N400, N423. Grade only.

474 - Role Development IV - 4 S.H. (Generic Option)

Focuses on professional role development with special emphasis on the leadership role in caring for groups of selected populations (mothers, children, adults, those with mental illness) in various settings. 120 hours practicum for semester. This is a companion course to N484, Role Development IV Seminar. The core content related to the populations in the student's site-based experiences must be completed prior to or with this course. Prerequisite: N423; corequisite: N484 and N472. Prerequisite or corequisite depending upon client populations: N411, N471, N413, N421, N422. Grade only.

475 - Community Health Nursing - 4 S.H. (RN Option)

Focuses on the nursing roles and functions of the community health nurse in maintaining and restoring health of individuals, families and groups in a variety of situations and settings. Prerequisite: admission to RN Option; prerequisite or corequisite: N375, N415, N435. Grade only.

480 - Holistic Approaches to Health - 3 S.H. (Elective)

This course examines the relationship of the body, mind and spirit within the field of health, healing and nursing. Holism, the view that an integrated whole has a reality independent of and greater than the sum of its parts, forms the framework for this inquiry. The concepts of healing, psychophysiology, the transpersonal, the transpersonal self, body-mind-spirit and the nurse as healer will be discussed. Prerequisite: sophomore standing or instructor's permission. P/NC option.

484 - Role Development IV Seminar - 1 S.H. (Generic Option)

Seminar course that integrates major concepts and professional roles, especially the leadership role, through group activities and application of nursing research. Includes Care Group activities. This is a companion course to N474, Role Development IV. Corequisite: N4474. Grade only.

490 - Independent Study in Nursing - 1-3 S.H. (Elective)

Offers an opportunity for nursing students to do independent study or research in nursing in an area of special interest. Prerequisite: instructor's permission. Written objectives and evaluation required. P/NC option.

491 - Capstone Experience in Role Synthesis - 3 S.H. (Generic & RN Options)

Intense site-based experiences of student's choice; designed to encapsulate the essence of baccalaureate-level professional role development. This course is flagged for University Studies and is designed to meet 3 S.H. of the Oral Flag requirement. Ninety hours practicum for semester including seminar. Prerequisite: last semester of nursing major or instructor's permission. Grade only.

492 - Jamaica Studies: Health Care in an Emerging Country - 3 S.H. (Elective)

This international course will focus on the health care delivery system in Jamaica and the factors which influence the effectiveness of the system. The specific focus will be on the nursing aspects of the system. Students will be exposed to both public and private aspects of nursing. Expert Jamaicans will present on a variety of topics which influence health care including economics, politics, culture and society. Prerequisite: admission to major and instructor's permission. Grade only.

493-The Patient's Voice: Experiences of Illness - 2 S.H. (Elective)

This course is designed to introduce students to contemporary autobiographical accounts of illness, both physical and psychiatric. The content can be applied to the practice of nursing. Prerequisite: sophomore standing or instructor's permission. P/NC option.

494-Contemporary Film: Understanding the Patient's Experience - 2 S.H. (Elective)

Utilizing contemporary film, this course explores the experiences of patients experiencing both physiological and psychiatric illness, and assists students to utilize this information in developing a caring nursing practice. Prerequisite: sophomore standing or instructor's permission. P/NC option.

495 - Seminar/Workshop in Nursing - 1-3 S.H. (Elective)

Subject matter of current interest arranged by the Department. Course may be repeated when offered with different content and title. Prerequisite: admission to major or instructor's permission. P/NC option.

496 - Feminist Perspectives in Nursing - 2 S.H. (Elective)

This seminar explores the relationship of the feminist movement, feminist theory and gender issues for nursing history and practice. Prerequisite: admission to major or instructor's permission. P/NC option.

497 - Nursing Care of the Aged - 3 S.H. (Elective)

The focus of this course is the bio-psycho-social-spiritual and holistic care of the elderly, given within the nursing process framework. The uniqueness of the aged person is considered as students plan the care and management of altered health states including chronic and high-risk pathophysiological conditions. The course is designed to increase students' awareness and understanding of the aging process. The strengths and life experience of the aged client are recognized and reinforced to encourage their maximal coping abilities. Course includes a clinical laboratory experience. Prerequisite: admission to major or instructor's permission. P/NC option.

ORIENTATION

For information about new student orientation, see "New Student Orientation" on page 29.

PARALEGAL

Minne Hall, Room 212 (507-457-5400)
T. Paino (Program Director)

FACULTY

Troy Paino, Associate Professor, History; B.A., Evangel College; J.D., Indiana University School of Law; M.A., Ph.D., Michigan State University; 1997 –

PURPOSE

The purpose of the Paralegal Program is to enable students to develop both intellectual and professional skills in the law. The program is designed to meet the needs of students wishing to enter into a career that demands knowledge and experience with legal systems and institutions. This includes careers working for law firms, government agencies, insurance companies, banking institutions, and more. It also serves as an excellent preparation for law school.

The program is an interdisciplinary program within the College of Liberal Arts that develops skills in legal research, writing and investigation alongside a deeper understanding of the substance, politics and history of the law. The American Bar Association approves the WSU Paralegal Program.

ADMISSION REQUIREMENTS

A high school diploma and admission to WSU are required for admission to the program. It is recommended those candidates for admission be in the upper half of the class or have a score of at least 20 on the ACT. Students wishing to enter the program must seek advising from the Director of the Paralegal Program.

PARALEGAL PHASES

The Paralegal Program has three phases:

Phase I - Interdisciplinary Foundations: These courses address topics related to the U.S. legal system in a variety of academic disciplines ranging from history and political science to business and accounting.

Phase II - Legal Specialty Courses: These courses concentrate on specific aspects of the legal profession. Legal specialty courses are offered in sequence and typically begin in the fall of the junior year. History 370: Legal Research and Writing I must be taken as the first course in the sequence.

Phase III – Option A or Option B: Students choose either Option A or B to complete the requirements of the Paralegal Program. Option A requires an additional 35 semester hours in a variety of law-related courses from various disciplines. Option B requires a student to successfully complete a minor of her/his choice in addition to completing the first two phases of the program.

ADDITIONAL COURSE AND GPA REQUIREMENTS

- Students are required to have substantially completed their University Studies requirements and Phase II requirements before they enroll in Legal Research. They also must have the academic advisor's approval.
- Except for Legal Research, transfer students cannot substitute a 100- or 200-level legal specialty course taken at another school for a similar course at a 300- or 400-level at WSU.
- All students must provide the Paralegal Program Director with a copy of their transcripts with recorded GPAs before enrolling in History 370 Legal Research and Writing I.
- Coursework below a grade of "C" in legal specialty courses does not count toward completion of the paralegal major.

For a checklist of the University's graduation requirements, see page 24.

PASS/NO CREDIT COURSES

Except for the Paralegal Internship and Paralegal Institute, no classes taken on a P/NC basis can be used to satisfy any specific course requirements of the Paralegal Program or coursework in the options.

B.S. MAJOR – PARALEGAL

128 S.H.

CORE REQUIREMENTS

- Option A (91 S.H.)
- Option B (56 S.H. plus Minor)

I. INTERDISCIPLINARY FOUNDATIONS (27 S.H.)

Communication Studies (3 S.H.)

- 261 Public Speaking (3) OR
- 389 Persuasive Communication (3)

English/Writing (3 S.H.)

- 210 Advanced Composition (3) OR
- 439 Technical Writing (3)

History (12 S.H.)

- * 150 U.S. History to 1865 (3)
- 151 U.S. History Since 1865 (3)
- ** 365 American Legal History (3) OR
- ** 488 American Constitutional History (3)

One of the following:

- 220 Introduction to African American History (3)

- 235 History of the American Indian (3)
- 315 Women in U.S. History (3)
- 350 The History of Attitudes Toward Death (3)
- 355 European Intellectual and Cultural History (3)
- 461 Latin American Social Revolution (3)
- 485 Contemporary America 1945-Present (3)
- 486 American Intellectual and Cultural History (3)

Political Science (9 S.H.)

- * 120 Intro to American Politics (3)
- 320 Constitutional Law (3)
- 420 Administrative Law (3)

** A student may also choose to take both 365 American Legal History and 488 Constitutional History to satisfy this requirement.

II. LEGAL SPECIALTY SEQUENCE (29 S.H.)

History

- 370 Legal Research & Writing I (3)
- 371 Substantive Law & Ethics I (3)
- 372 Legal Research & Writing II (2)
- 373 Adversary Systems - Civil (2)
- 374 Evidentiary Rules (2)
- 375 Substantive Law & Ethics II (3)

- 376 Adversary Systems - Criminal (2)
- 380 Paralegal Internship (12)

III. OPTIONS

Option A: 35 S.H.

Business Administration

- 210 Business Law (3)

History

- 377 Practical Legal Investigation Techniques (3)

Physics

- 310 Science and Technology in Litigation (4)

Sociology

- * 150 Introduction to Sociology (2)
- 216 Social Problems (3)
- 376 Intro to Social Research (3)

Approved Electives (16)

Courses approved by Paralegal Director and academic advisor

Option B: Minor required.

* This is an "additional requirement" and may be used to satisfy certain University Studies requirements. Although there are no other specific general education requirements, students should consider what area of paralegal work they want to pursue when choosing University Studies courses. For example, Biology 117 Human Biology is recommended for those interested in personal injury law.

PARALEGAL COURSE DESCRIPTIONS

370 - Legal Research and Writing I—3 S.H.

The student will become acquainted with commonly used terminology, the need for precision in meaning, and how courts interpret documents; and techniques of legal research, the process of judicial review, the extent of legal reporting, and methods of researching court decisions. Students will draft legal briefs and legal memoranda. Prerequisites: admission to the Paralegal Major and advanced sophomore standing. Grade only. Offered yearly.

371 - Substantive Law and Ethics I—2 S.H.

Students will learn the basic rules of contract law, torts, and legal ethics, and will be expected to practice their skills in legal research and writing. Grade only. Offered yearly.

372 - Legal Research and Writing II—3 S.H.

The students will expand use of research and writing techniques gained in Legal Research and Writing I by drafting deeds, leases, negotiable instruments, business agreements, corporate minutes and by-laws, wills and researching issues that are relevant to these topics. Students will continue to draft legal briefs and memoranda reflecting their research findings. Prerequisite: HIST 370. Grade only. Offered yearly.

373 - Adversary System: Civil Procedure—2 S.H.

Basic civil court procedures, such as pleadings; pre-trial discovery; trials and appeals; background of the adversary system; the role of the advocate, judge and jury in the search for justice. Prerequisite: HIST 370. Grade only. Offered yearly.

374 - Evidentiary Rules—2 S.H.

Acquaints the student with logic of evidentiary rules, value of first-hand evidence, burden of proof, qualification of witnesses, impeachment of witnesses, differentiation between proof and argument, order of proof. Prerequisite: HIST 370. Grade only. Offered yearly.

375 - Substantive Law and Ethics II—3 S.H.

Students will study the basic elements of probate law, bankruptcy, and extensive coverage of family law (divorce, separation, and paternity), including the study of motion practice and the Minnesota Rules of Family Court Procedure, pre-trial discovery and conflict resolution techniques as well as ethical issues associated with each. Prerequisites: HIST 370, 371, and 372. Grade only. Offered yearly.

376 - Adversary System: Criminal Procedure—2 S.H.

Supplements the course on the Adversary System - Civil and covers criminal pleadings, the grand jury system, criminal pretrial discovery, jury instructions, post-trial sentencing, requirements of a fair hearing and constitutional legal defenses. Prerequisites: HIST 370 and 372. Grade only. Offered yearly.

377 - Practical Legal Investigation Techniques—3 S.H.

Students will learn the practical techniques used in investigating cases involving traffic, aircraft, personal negligence, employer negligence, product liability, professional malpractice and criminal investigation. Students also will become acquainted with the technique of working with witnesses. Prerequisites: admission to the Paralegal Major. Grade only. Offered yearly.

380 - Paralegal Internship—12 S.H.

Field placement in a selected organization for the purpose of experience and training as a professional paralegal. Prerequisites: HIST 370, HIST 371, HIST 372, HIST 373, HIST 374, HIST 375, HIST 376 and completion of portfolio. Enrolled by permission only. P/NC only.

381 - Paralegal Topics and Issues—3 S.H.

This course is an approved elective for Paralegal majors taken in conjunction with the program-required internship. In addition to selected readings on some aspect of law in contemporary American society, students will engage in a weekly discussion via e-mail with the instructor and fellow students on topics relating to the readings and their internship experience. Students will be evaluated both by the quality of their contribution to these discussions and a final paper that grows out of the readings, internship and e-mail discussions. Grade only.

383 - Paralegal Institute—1-3 S.H.

The Paralegal Institute will cover various specialized topics which directly relate to areas of the paralegal profession. The specialized institutes will be offered for 1-3 credits and may be repeated to a maximum of 3 credits toward the WSU Paralegal degree. P/NC only.

PHILOSOPHY

Minne Hall, Room 329 (507-457-5475)
Possin (chairperson)

FACULTY

Kevin Possin, Professor; B.A., Southwest State University; Ph.D., University of Wisconsin-Madison; 1990 –
Don E. Scheid, Professor; B.A., Colorado College; M.A., J.D., University of Utah; Ph.D., New York University; 1986 –
Edward Slowik, Assistant Professor; B.A., University of Illinois at Chicago; M.A., Ph.D., Ohio State University; 1998 –

"The unexamined life is not worth living." – Socrates
"He who knows only his own side of the case knows little of that." -- Mill

Philosophy is the examination of ideas and the evaluation of first principles. In addition to studying its own traditional areas such as ethics, logic, metaphysics and epistemology, philosophy investigates other disciplines by critically reviewing their foundations and methods. Philosophy helps us free ourselves from dogmatic or unreflective habits of mind. It instills habits of intellectual integrity, impartiality, and rationality. Philosophy enlarges our conception of what is possible and enriches our intellectual imagination. Accordingly, philosophy is an essential ingredient of any sound education.

Besides providing individual courses, the Philosophy Department offers a well-rounded minor in philosophy. The minor provides an introduction to ethics, logic, and the history of philosophy. It also helps students develop crucial intellectual skills such as critical thinking, logical reasoning, and conceptual analysis; in short, it helps students learn to think for themselves. Emphasis is balanced between philosophical content and the cultivation of philosophical thinking.

* Course may be used to satisfy certain University Studies requirements.

Most of the philosophy courses are also University Studies courses. Therefore, students can complete most of the requirements for a philosophy minor while satisfying their University Studies requirements. The electives in the minor enable students to tailor the program to their own interests and major.

PASS/NO CREDIT COURSES

Students must take all courses for the minor on a grade-only basis. The P/NC option is available to non-minors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

B.A. MINOR – PHILOSOPHY 18 S.H.

REQUIRED COURSES (12 S.H.)

One of the following courses in logic:

- * 110 Critical Thinking (3)
- * 210 Inductive Reasoning (3)
- * 250 Symbolic Logic (3)

One of the following courses in moral philosophy:

- * 220 Philosophy of Democracy (3)
- * 230 Moral Theory (3)
- * 330 Biomedical Ethics (3)
- * 332 Philosophy of Law (3)
- * 335 Constitutional Philosophy (3)
- 401 Independent Readings in Philosophy, for appropriate readings (3)
- 430 Topics in Social and Political Philosophy (3)

One of the following courses in the early history of philosophy:

- * 201 Classical Philosophy (3)
- 401 Independent Readings in Philosophy, for appropriate readings (3)
- 460 Great Philosophers (3)

One of the following courses in the later history of philosophy:

- * 301 Early Modern Philosophy (3)
- * 302 Contemporary Philosophy (3)
- 401 Independent Readings in Philosophy, for appropriate readings (3)
- 460 Great Philosophers (3)

ELECTIVES (6 S.H.)

Any two philosophy courses not used to satisfy the preceding requirements.

PHILOSOPHY COURSE DESCRIPTIONS

110 - Critical Thinking—3 S.H.

This computer-assisted, self-mastery course teaches you how to employ good reasoning skills and how to avoid being fooled by bad reasoning and rhetorical tricks. Competencies acquired in the course include the following: Identifying, evaluating, and constructing arguments; identifying informal fallacies; and testing syllogisms and propositional arguments for validity and overall cogency. Practice exercises and exams are done on computer. Offered each year.

120 - Introductory Philosophy—3 S.H.

An introduction to major areas in philosophy, considering some fundamental problems and concepts. Typical issues include some of the following: the existence of God, what we can know, what reality is, how mind and body are related, whether we have free will. Traditional and intellectually chic theories on these or other topics are critically reviewed. Offered each year.

130 - Moral Problems—3 S.H.

A practical course in ethics, involving concrete issues and their impact on the individual, society, and social policy. Topics may include: Abortion, euthanasia, sexuality and sexual morality, feminism, welfare, capital punishment, pornography and censorship, animal rights, world hunger, war and terrorism. Offered each year.

201 - Classical Philosophy—3 S.H.

A study of the philosophical ideas, values, and world views of ancient Greece, especially its views on the nature of the universe, humanity, knowledge, religion, ethics, and politics. Theories from the Presocratics, Socrates, Plato, and Aristotle will be critically examined and contrasted with contemporary beliefs and values. Offered each year.

210 - Inductive Reasoning—3 S.H.

Introduction to inductive reasoning and how to avoid being tricked by faulty or pseudo scientific claims and arguments, and how to critically assess public policy in light of good scientific reasoning. Students study how to use experimentation and the scientific method to test theoretical, statistical, and causal hypotheses. Famous discoveries in the history of science are used as illustrations. Other topics include fundamental

concepts of probability, sampling, causation and correlation. Offered each year.

220 - Philosophy of Democracy—3 S.H.

An introductory course in political philosophy, investigating the nature and implications of liberal democracy. Topics may include: Social-contract theory, notions of natural rights, the moral virtues of democracy, voting paradoxes, limitations of and various critiques of democracy. Offered each year.

230 - Moral Theory—3 S.H.

A study of major ethical theories, concepts, and issues; for instance, Kantianism, utilitarianism, ethical relativism, concepts of justice, human rights, moral responsibility and free will. Offered each year.

240 - Philosophy of Science—3 S.H.

Examines basic issues in the philosophy and foundations of science, such as the testing of hypotheses, the construction and confirmation of theories, the nature of scientific explanation and the concept of laws of nature. The course also investigates the distinction between science and pseudoscience, and studies to what extent each has influenced recent public policy, social debates, and school curricula. Offered each year.

250 - Symbolic Logic—3 S.H.

An examination of methods for putting ordinary deductive reasoning into symbols in order to test its validity. Topics include ways to translate English into symbols, uses of truth tables, rules for deduction in propositional and predicate logic, models for showing invalidity, and strategies for constructing proofs. Offered as appropriate.

260 - Problems in Philosophy—3 S.H.

A variable-content course considering salient problems in philosophy. May be repeated as University Studies credit as issues change. Offered as appropriate.

270 - Philosophy of Religion—3 S.H.

Topics will include: Arguments for and against the existence of God; the nature of religious belief, miracles, religious language, faith, and reason; as well as Freudian, Existentialist, and Postmodern approaches to religion. This course also briefly reviews the historical and theological background of the main Western religions. Offered as appropriate.

280 - Philosophy of Art—3 S.H.

An introduction to the fundamental concepts and issues in the philosophy of art. Topics include: The definition of art, art's role and function, taste and judgment, interpretation and intention, representation and expression. The course covers a wide range of views and spans the length of Western philosophy, within the larger realm of social, political, moral, gender, and scientific issues. Offered as appropriate.

301 - Early Modern Philosophy—3 S.H.

This course examines the main themes of early modern philosophy by investigating the views of some of the principal European philosophers of the 17th and 18th centuries: The rationalism of such philosophers as Descartes, Spinoza and Leibniz; the empiricism of Locke, Berkeley, and Hume; and the constructivism of Kant. Offered each year.

302 - Contemporary Philosophy—3 S.H.

A study of major figures and issues from the 19th and 20th centuries. Philosophers may include Mill, Marx, and Wittgenstein. Issues may include the nature of knowledge, the nature of mind, and the nature of the state. Offered each year.

330 - Biomedical Ethics—3 S.H.

Ethical issues in health care; for example, abortion, termination of treatment, euthanasia, truth-telling and confidentiality, medical experimentation and informed consent, transplant surgery, artificial insemination, surrogate pregnancy, the allocation of medical resources. Offered each year.

332 - Philosophy of Law—3 S.H.

Consideration of the philosophical foundations of law. Topics may include the nature of law, concepts of responsibility and liability, theories of punishment, causation in the law, discrimination and equality, the relation of law and morality, the obligation to obey the law, civil disobedience, liberty and privacy, theories in private law (tort, contract, property). Offered each year.

335 - Constitutional Philosophy—3 S.H.

At the crossroads of political philosophy and philosophy of law, this course investigates the philosophical foundations of the American constitution and contemporary philosophical issues arising from its enforcement in a liberal democracy. Topics may include: Natural law theory, the separations of powers, theories of constitutional interpretation, theories of free speech, privacy doctrine, equal protection, affirmative action, criminal due process, and the Constitution's relation to American society. Offered as appropriate.

401 - Independent Readings in Philosophy—1-3 S.H.

An individually planned program of readings. May be repeated to a maximum of 9 semester hours. Prerequisites: one philosophy course and instructor's permission. Offered by arrangement.

430 - Topics in Social and Political Philosophy—1-3 S.H.

A variable-content course considering issues in social and political philosophy. May be repeated as topics change. Offered as appropriate.

460 - Great Philosophers—1-3 S.H.

An intensive study of a single philosopher. May be repeated for different philosophers. Prerequisites: one philosophy course and instructor's permission. Offered as appropriate.

PHYSICAL EDUCATION AND RECREATION

Memorial Hall, Room 122 (507-457-5200; Fax: 507-457-5606)

Olson (Chairperson)

FACULTY

Douglas Callahan, Assistant Professor; B.S., M.A., University of Denver; Ph.D. University of Kansas, 2000 -

Stephen Juare, Professor; B.S., M.S., Winona State University; Ph.D., Florida State University; 1975 -

Michael Leaf, Assistant Professor, Men's Basketball Head Coach; B.A., St. Mary's College of Minnesota; B.S., M.A., M.S., Winona State University; 1987 -

Christa Matter, Assistant Professor, Women's Track Coach, Assistant Women's Volleyball Coach; B.A., Luther College; M.S., Indiana University; 1995 -

Lorene Olson, Professor; B.S., M.S., University of Wisconsin-La Crosse; Ph.D., University of New Mexico; 1989 -

James Reidy, Assistant Professor; B.S., M.S., Ed.D., Oklahoma State University; 2000 -

Roger Riley, Associate Professor; B.S., M.S., University of Wisconsin-La Crosse; Ph.D., Texas A&M University; 2000 -

Tom Sawyer, Assistant Professor, Football Coach; B.S., M.S., Winona State University; 1996 -

Terese Sheridan, Assistant Professor; Women's Basketball Coach; B.S., University of Wisconsin-La Crosse; M.A., Ohio State University; 1992 -

Don Wistrill, Assistant Professor; B.S., M.S., Winona State University; 1990 -

PURPOSE

The Department of Physical Education and Recreation (PER) exists within the College of Education. Through traditional as well as experiential methods, PER faculty prepare PER majors to become physical education (PE) teachers and recreation, tourism, and therapeutic recreation (RTTR) professionals. The physical education major leads to a Bachelor of Science (teaching) degree. The RTTR major leads to a non-teaching Bachelor of Science degree. In addition, the department offers numerous PE and RTTR courses, which fulfill the 2-semester hour University Studies requirement for Physical Development and Wellness. The intent of the experiential-based courses is to encourage all students to establish and/or maintain a healthy leisure lifestyle.

CAREER OPPORTUNITIES

Physical Education (PE)

Graduates in the physical education major are employed as K-12 educators in private and public schools. Students can expand their career options by combining a health education major and a coaching minor and/or an adapted PE licensure and/or an adventure tourism minor with the PE major.

Recreation and Tourism (RT)

Graduates in the recreation and tourism major are qualified to obtain entry-level positions in the following settings:

- Non-profit or voluntary agencies (e.g., YMCA-YWCA, Scouts)
- Private settings that require memberships (e.g., golf or tennis clubs)
- Military recreation
- Commercial or "for-profit" agencies (e.g., theme parks, fitness centers)
- Public, corporate, campus or correctional recreation
- Adventure-based outdoor programs and adventure travel/outfitting companies
- Federal programs (e.g., U.S. Forest Service, national parks, Bureau of Land Management)

Therapeutic Recreation (TR)

Graduates in the therapeutic recreation major are qualified to obtain entry-level positions in the following settings:

- Special rehabilitation centers for persons with physical disabilities
- Mental health facilities that treat a variety of psychological impairments
- Nursing homes and retirement centers
- Residential centers that care for persons with developmental disabilities
- Some TR specialists also find employment in schools, half-way houses, community recreation programs, or correctional institutions

Department Programs

- B.S. Major: Physical Education (Teaching). It is recommended that students take a double major in health education and/or a coaching minor and/or a licensure in developmental adapted PE and/or a minor in adventure tourism.
- B.S. Major: Recreation, Tourism and Therapeutic Recreation. Students in this major may elect the recreation and tourism emphasis or the therapeutic recreation emphasis. While a minor is not required for the RTTR programs, many students elect to complete both emphasis areas and/or add an additional minor such as the adventure tourism or coaching minor.
- B.S. Minor: Adventure tourism. (This program is interdisciplinary, sponsored by the RTTR and Marketing departments.)
- B.S. Minor: Coaching.
- B.A. Minor: Dance. (This program is interdisciplinary, sponsored by the PER and Theatre and Dance departments.)
- Developmental Adapted Physical Education Licensure

* Course may be used to satisfy certain University Studies requirements.

TRAVEL STUDY OPPORTUNITIES

Within the department's interdisciplinary Adventure Tourism (ADVT) minor, travel/study opportunities are offered in Australia, New Zealand, Costa Rica, and the Northern Plain States. Students are not required to be RTTR majors or ADVT minors to take advantage of these programs. Students should see the department chairperson for details.

ADDITIONAL DEGREE REQUIREMENTS

Each major has specific grade point averages that must be met. Please refer to the requirements listed with each major.

PASS/NO CREDIT COURSES

Except for internships, students majoring or minoring in PER programs must take all courses in the major, minor, and options on a grade-only basis. Courses offered for pass/no credit-only or grade-only are so designated in the course descriptions. If no grading method is listed for a particular course in the course descriptions, the course may be taken for either grade or pass/no credit.

B.S. MAJOR – RECREATION, TOURISM AND THERAPEUTIC RECREATION

64-65 S.H. (No Minor Required)

This major is designed to prepare students for professional leadership roles in a variety of public, commercial, clinical, community, and natural-resource settings offering recreational and/or therapeutic recreation services. Within the major, students may select the Recreation and Tourism Option and/or the Therapeutic Recreation Option. Students who graduate with the Therapeutic Recreation Option are qualified to sit for the National Council for Therapeutic Recreation Certification (NCTRC) examination. See page 155 for information about career opportunities available to graduates of both these options.

Students entering the RTTR major as of August 2001 must obtain a 2.50 overall GPA prior to registering for their internship experience.

Option A: Recreation and Tourism (64-68 S.H.)

PER COURSES REQUIRED BY OPTION A AND OPTION B

- 229 Foundations of Recreation and Leisure Studies (3)
- 245 Therapeutic Recreation and Services (3)
- 326 Organization & Administration of Recreation (3)
- 350 Legal & Financial Aspects of Recreation (3)
- 393 Evaluation in Recreation, Therapeutic Recreation & Tourism (3)
- 399 Internship in Recreation and Tourism or Therapeutic Recreation (10-12)
- 414 Recreational Leadership (3)
- 426 Recreation Facilities & Area Design (3)

PER REQUIREMENTS FOR OPTION A ONLY (25 S.H.)

- 203 Recreation Programming (3)
 - 239 Outdoor Pursuits (3)
 - 290 Foundations of Tourism (3)
 - 302 Adventure Travel and Tourism Development (3)
 - 339 Wilderness Ethics, Safety and Survival (3)
 - 398 Practicum in Recreation/Therapeutic Recreation (3)
 - 421 Outdoor Education and Interpretive Services (3)
- Plus 4 S.H. of any 100-level PE activity courses OR 417 (1-3 S.H. Clinic)

INTERDISCIPLINARY REQUIREMENTS FOR OPTION A (8-10 S.H.)

Biology/Geography (3-4 S.H. in this area)

- GEOG 270 Geography of Tourism (3) OR
- * BIOL 104 Conservation of the Environment (3) OR
- BIOL 203 Natural History (4) OR

Theatre and Dance/Music (2-3 S.H. in this area)

- * THAD 141 Oral Interpretation (3) OR
- THAD 239 Creative Dramatics for Children (2) OR
- MUS 324 Recreational Music (2)

Computer Science (3 S.H.)

- * CS 115 Using Personal Computers (3)

Recreation and tourism students are encouraged to take additional coursework related to the natural environment, business concepts, public speaking, marketing, historical and social aspects of American culture, and the use of technology and statistical analysis.

Option B: Therapeutic Recreation (64-66 S.H.)

PER COURSES REQUIRED BY OPTION A AND OPTION B

- 229 Foundations of Recreation and Leisure Studies (3)
- 245 Therapeutic Recreation and Services (3)
- 326 Organization & Administration of Recreation (3)
- 350 Legal & Financial Aspects of Recreation (3)
- 393 Evaluation in Recreation, Therapeutic Recreation & Tourism (3)
- 399 Internship in Recreation and Tourism or Therapeutic Recreation (10-12)

Recreation (10-12)

- 415 Recreational Leadership (3)
- 426 Recreation Facilities & Area Design (3)

PER REQUIREMENTS FOR OPTION B ONLY (15 S.H.)

- 332 Leisure and Aging in Therapeutic Recreation (3)
- 342 Intervention Techniques in Therapeutic Recreation (3)
- 468 Programming in Therapeutic Recreation (3)
- 475 Trends and Issues in Therapeutic Recreation (3)

Choose one of the following:

- 239 Outdoor Pursuits (3) OR
- 290 Foundations of Tourism (3) OR
- 302 Adventure Travel and Tourism Development (3)

ADDITIONAL REQUIREMENTS FOR OPTION B (18 S.H.)

Psychology (6 S.H.)

- 250 Developmental Psychology (3)
- 420 Abnormal Psychology (3)

Biology (4 S.H.)

- * 211 Anatomy and Physiology (4)

Section I – Counselor Education/Health and Human Performance (6 S.H.)

Psychology/Sociology (Select from two disciplines.)

Counselor Education

- 220 Emotions and Behavior (2)

Health and Human Performance

- 340 Physiology of Exercise (4)

Psychology

- 210 General Psychology (3)
- 303 Brain and Behavior (3)
- 305 Theories of Personality (3)
- 325 Social Psychology (3)

Sociology

- 150 Introduction to Sociology (3)
- 205 Social Interaction (3)
- 212 The Family (3)
- 216 Social Problems (3)

Section II – Biology/Physical Education and Recreation/Music (2 S.H.)

(Any combination)

Biology

- 303 Medical Terminology I (1)
- 304 Medical Terminology II (1)

Physical Education and Recreation

- 416 Physical Education/Recreation/Dance Clinic (1-3)

Music

- 324 Recreational Music (2)

PREPARATION FOR THE NCTRC EXAMINATION

Therapeutic recreation students are strongly encouraged to take additional biology, sociology, psychology, and health promotion courses to fill their University Studies requirements. Through such courses, therapeutic recreation students gain additional exposure to content areas included in their National Council for Therapeutic Recreation Certification (NCTRC) examination. Personal computer usage and other technology-related courses and workshops are also highly recommended.

In addition to completing the TR curriculum outlined above, students who choose to sit for the NCTRC examination after graduation must meet specific non-curricular eligibility requirements related to their ability to provide professional and competent performance of TR services. Students can obtain more information about the NCTRC examination requirements from any TR faculty member.

B.S. MINOR – ADVENTURE TOURISM (27 S.H.)

Adventure tourism is a rapidly expanding segment of the travel and tourism industry, fueled by a societal need to escape routine lifestyles. People who provide adventure tourism services are likely to engage tourists in such activities as rock and mountain climbing, spelunking, river rafting, whitewater canoeing, trekking, wilderness camping, snow-shoeing and a variety of other pursuits in which the participant is challenged by the natural environment. Students who pursue this minor develop a repertoire of skills related to planning, marketing, and providing successful adventure tourism programs and services.

REQUIRED COURSES (24 S.H.)

PER	239	Outdoor Pursuits (3)
PER	290	Foundations of Tourism (3) OR GEOG 270 Geography of Tourism (3)
PER	302	Adventure Travel and Tourism Development (3)
PER	339	Wilderness Ethics, Safety and Survival (3)
PER	350	Legal and Financial Aspects of Recreation (3)
PER	421	Outdoor Education and Interpretive Services (3)
MKT	335	Tourism Marketing (3)
MKT	337	Qualitative Research Methods (3)

ADDITIONAL REQUIREMENTS (3 S.H.)

Choose one of the following:

*	PER	265	Leisure in Different Cultures (3)
	GEOG	270	Geography of Tourism (3) if not taken above
‡	MKT	333	Topics in Marketing (3)
‡	MKT	399	Internship Experience (2)
	PER	240	Outdoor Pursuits (3)
	PER	290	Foundations of Tourism (3) if not taken above
‡	PER	398	Practicum in Recreation and Tourism or Therapeutic Recreation (3)
‡	PER	417	Physical Education/Recreation/Dance Clinic (3)

‡ Course content must relate to tourism and be pre-approved by the ADVT advisor.

B.S. MAJOR – PHYSICAL EDUCATION (Teaching)

46 S.H. (No Minor Required)

Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to the Professional Education Sequence in the Education Department's section of this catalog (page 87). To be admitted into the Professional Education Sequence and to qualify for graduation, students majoring in physical education must have both a 2.75 overall GPA and a 2.5 GPA in the major. Students can expand their career options by taking dual majors, minors, adapted physical education licensure, or a coaching minor.

All physical education majors are required to obtain knowledge of and demonstrate the ability to apply safety, first aid, and CPR procedures. Completion of PER 214 (Standard First Aid and CPR) or evidence of current Standard First Aid/CPR certification is a prerequisite for graduation with a degree in physical education. To ensure compliance, the Registrar's Office will monitor the credentials of students as they apply for graduation.

REQUIRED PHYSICAL EDUCATION

Theory Courses (17 S.H.)

129	Perspectives of Physical Education (1)
200	Teaching Elementary Physical Education (3)
201	Teaching Dance (2)
300	Motor Learning (2)
317	Curriculum & Methods of Physical Education (3)
337	Developmental/Adapted Physical Education (3)
402	Organization & Administration of Physical Education and Sport (3)

Activity Cores (12 S.H.)

130	Badminton, Golf, Tennis, Bowling (3)
131	Track & Field, Softball, Conditioning, Weight Training (3)
132	Tumbling, Rhythmic & Recreational Activities (3)
133	Flag Football, Volleyball, Basketball, Soccer (3)

Activity Course Required (1 S.H.)

123	Swimming & Water Safety (1) OR
124	Water Safety Instructor (1)

Biology (8 S.H.)

*	211	Anatomy & Physiology I (4)
*	212	Anatomy & Physiology II (4)

Health and Human Performance (6 S.H.)

340	Physiology of Exercise (4) (See Note below.)
314	Anatomical Kinesiology (2)

Prerequisites for Student Teaching

PER 129, 200, 201, 317, BIOL 211 and BIOL 212
(Students must earn a "C" or better in each course.)

Note: Students must earn a "C" or better in BIOL 211 and 212 to enroll in HHP 340, Physiology of Exercise.

DEVELOPMENTAL/ADAPTED PHYSICAL EDUCATION LICENSURE

Candidates seeking licensure in developmental/adapted physical education (D/APE) must:

1. Hold a baccalaureate degree and a valid teaching license in physical education (K-12) or be enrolled in the physical education teaching major.
2. Complete 9 credits of core skills area requirements in special education:
 - SPED 400 Exceptional Children and Youth (3)
 - SPED 405 Student Management Systems (3)
 - SPED 420 Special Education Administrative Procedures (3)
3. Complete the physical education teacher preparation program, which consists of 46 credits.
4. Complete the D/APE licensure course requirements not included in the PE major: PER 331 Perceptual Motor Development (2) and PER 434 D/APE Practicum (4).

Developmental/adapted physical educators will be eligible for licensure in the State of Minnesota when the preceding process is implemented.

Practicing teachers may request that their teaching experience and preparation in D/APE be evaluated and credited. Teachers will be asked to complete evaluation forms, documenting their teaching experience and preparation in D/APE. The candidate will be expected to file a formal application with the WSU Office of Admissions and to schedule a consultation regarding deficiencies or additional requirements needed prior to receiving licensure certification. For additional information, candidates should contact the Department of PER, Adapted Physical Education, Memorial Hall, Winona State University, Winona, MN 55987.

B.S. MINOR – COACHING (20 S.H.)

REQUIRED COURSES

Physical Education and Recreation (14 S.H.)

214	Standard First Aid and CPR (3)
251	Sports Science (Note 1 below) (2)
280	Psychology of Physical Activity and Sport (2)
300	Motor Learning (Note 2 below) (2)
406	Coaching Practicum (2)
402	Organization and Administration of Physical Education and Sport (3)

Health and Human Performance (5 S.H.)

205	Nutrition for Lifetime Wellness (Note 3 below) (3)
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* Course may be used to satisfy certain University Studies requirements.

291 Prevention and Care of Athletic Injuries (2)

Choose one of the following:

- PER 304 Techniques of Coaching Football (1)
- 305 Techniques of Coaching Basketball (1)
- 306 Techniques of Coaching Track and Field and Cross Country (1)
- 307 Techniques of Coaching Softball and Baseball (1)
- 308 Techniques of Coaching Wrestling (1)
- 311 Techniques of Coaching Tennis (1)
- 328 Techniques of Coaching Volleyball (1)
- 329 Techniques of Coaching Gymnastics (1)

Notes:

1. PER 251 is waived for students taking HHP 340.
2. PER 300 is waived for physical education majors (part of the major curriculum).
3. HHP 205 fulfills the University Studies physical development and wellness requirement.

B.A. MINOR – DANCE (THAD/PER CO-OP)

26 S.H.

REQUIRED COURSES (21 S.H.)

Theory (13 S.H.)

- * BIOL 211 Anatomy & Physiology I (4)
- * THAD 115 Dance Appreciation (3)
- * THAD 131 Performance I For Everyone (3)
- THAD 322 Dance Composition (3)

Technique (8 S.H.):

Must include at least 5 S.H. in either ballet or modern dance from the following list; 2-credit technique courses may be repeated twice for credit:

PER

- * 118 Jazz Dance I (1)
- 228 Jazz Dance II (2)
- * 116 Modern Dance I (1)
- 216 Modern Dance II (2)
- 316 Modern Dance III (2)
- 416 Modern Dance IV (2)
- * 128 Ballet I (1)
- 227 Ballet II (2)
- 327 Ballet III (2)
- 427 Ballet IV (2)

ADDITIONAL REQUIREMENTS

Enrollment in THAD 090 Showcase (0 cr.) with a grade of P is required each semester any other THAD dance course is taken. At least one of these enrollments must be in the senior year, when the student will assemble the required portfolio (see Portfolio Requirement below).

ELECTIVES (5 S.H.)

PER

- * 112 Folk/Square Dance (1)
- * 120 Ballroom Dance (1)
- 121 Introduction to Movement and Music (1)
- * 136 Tap Dance (1)
- * 137 Fencing (1)
- * 199 Lifetime Fitness (2)
- 201 Teaching Dance (2)

PER advanced-level dance technique courses if not used as requirements.

HHP

- * 205 Nutrition for Lifetime Wellness (3)
- 291 Prevention/Care of Athletic Injuries (2)
- 370 Kinesiology/Biomechanics (4)

THAD

- 107 Introduction to Technical Theatre (2)
- * 141 Oral Interpretation (2)
- 231 Performance II (3)
- 331 Performance III (3)
- 137 Dance Repertory I (2)
- 237 Dance Repertory II (2)
- 337 Dance Repertory III (2)
- 437 Dance Repertory IV (2)

Note: Each dance repertory class may be repeated once for a total of 4 S.H.

PORTFOLIO REQUIREMENT

Dance minors are required to document their development by maintaining videotapes and supporting written and visual materials and to submit a portfolio for faculty review by April 1 in the year of graduation (or by November 1 for mid-year graduates).

PHYSICAL EDUCATION AND RTRR COURSE DESCRIPTIONS

In this section, courses are listed in the following sequence:

- Physical education courses: (1) theory, (2) activity cores for PE majors only, and (3) activity courses for all students.
- Recreation and tourism/therapeutic recreation courses.

Physical Education Courses

Theory Courses

121 - Introduction to Movement & Music—1 S.H.

A comprehensive, practical study of fundamental dance movement and its relationship with music. World music and dance will be investigated.

129 - Perspectives of Physical Education—1 S.H.

Introduction and orientation to the field of Physical Education. Includes brief historical perspective, aims, objectives, values, issues, qualifications and opportunities in the profession. Majors only. Grade only.

200 - Teaching Elementary Physical Education—3 S.H.

Program planning, games, materials, methods and techniques of teaching physical education activities to children for early childhood, elementary and middle school. Grade only.

201 - Teaching Dance—2 S.H.

Techniques of teaching dance. Theory and practical experience in methods of teaching dance to all grade levels. Prerequisite: PER 121 plus one additional dance activity course. Grade only.

214 - Standard First Aid and CPR—3 S.H.

Accident scene management, victim assessment and basic life support, injury management and victim care knowledge and practice are emphasized. Certification can be earned. Grade only.

251 - Sports Science—2 S.H.

The study of anatomical, mechanical, maturational, psychological and physiological kinesiology as it applies to the practice of coaching. The major focus is to present the scientific principles that constitute the basis for sound athletic coaching practices. Grade only.

280 - Psychology of Physical Activity and Sport—2 S.H.

A detailed study of the application of selected psychological variables for coaches and individuals who participate in physical activity and sport. Grade only.

300 - Motor Learning—2 S.H.

Theoretical foundations of motor learning and development and practical applications of theories in the teaching of motor skills across a life span. Prerequisites: STAT 208 or instructor's permission. Grade only.

304 - Techniques of Coaching Football—1 S.H.

Theory and practice of teaching and coaching football. Grade only.

305 - Techniques of Coaching Basketball—1 S.H.

Theory and practice of teaching and coaching basketball. Grade only.

306 - Techniques of Coaching Track/Field & Cross Country—1 S.H.

Theory and practice of teaching and coaching track/field and cross country. Grade only.

307 - Techniques of Coaching Baseball & Softball—1 S.H.

Theory and practice of teaching and coaching baseball and softball. Grade only.

308 - Techniques of Coaching Wrestling—1 S.H.

Theory and practice of teaching and coaching wrestling. Grade only.

311 - Techniques of Coaching Tennis—1 S.H.

Theory and practice of teaching and coaching tennis. Grade only.

317 - Curriculum & Methods of Physical Education—3 S.H.

Curriculum and teaching methods of physical education. Prerequisites: PER 129, PER 200 and one activity core course. Grade only.

328 - Techniques of Coaching Volleyball—1 S.H.

Theory and practice of teaching and coaching volleyball. Grade only.

329 - Techniques of Coaching Gymnastics—1 S.H.

Theory and practice of teaching and coaching gymnastics. Grade only.

331 - Perceptual Motor Development—2 S.H.

In-depth examination of contemporary motor developmental theories, principles of normal and abnormal motor development and clinical applications of immature locomotor patterns. Grade only.

337 - Developmental/Adapted Physical Education—3 S.H.

Methods, techniques and special programs of physical education for the atypical child. Emphasis will be on those disabling conditions most prevalent in the school system and the laws that govern them. Lab and practical experiences are included. Grade only.

402 - Organization and Administration of Physical Education and Sport—3 S.H.

Plans of organization, administration, policies, budget, finance, legal aspects, staff, physical plant, publicity, public relations, time schedules, student leaders and programs. Prerequisites: PER 129, PER 200 and PER 327, senior standing or instructor's permission. Grade only.

406 - Coaching Practicum—2 S.H.

Directed supervision in coaching. The student proposes the sport and location when he/she is interested in coaching. After approval of the supervising coach, school athletic director, WSU-affiliated coach and the PER Department chairperson, the student will be granted a coaching practicum under direct supervision. Prerequisite: all coursework in the coaching program must be completed before practicum begins. Grade only.

410 - Coaching Clinic—2 S.H.

Lectures, videos, demonstrations and discussions covering skills, techniques of coaching, pre-/off-season conditioning, practice sessions, conditioning, and care and prevention of injuries relative to the designated sport. May be repeated when offered with a different title.

412 - Independent Study in Physical Education, Recreation or Dance—1-3 S.H.

Opportunity to work independently. Prerequisite: Junior or senior, preparation of proposed outline and major advisor's permission. Grade only.

417 - Physical Education/Recreation or Dance Clinic—1-3 S.H.

Subject matter determined by area. May be repeated when offered with a different title.

422 - Standard First Aid/Personal Safety Instructor and Basic First Aid/Cardiopulmonary Resuscitation Instructor Course—2 S.H.

Red Cross instructor certification in Basic First Aid and CPR.

434 - Developmental/Adapted Physical Education Practicum—4 S.H.

The application of skills, knowledge and concepts necessary for planning, organizing and conducting developmental/adapted physical education programs through supervised field experience. Prerequisites: PER 331, PER 337. Grade only.

435 - Assessment in Adapted Physical Education—3 S.H.

Instruction in the assessment, prescription and use of instructional methods, materials and equipment relevant to specific handicapping conditions in the adaptive physical education setting. Offered on demand. Grade only.

436 - Programming/Special Populations in Developmental/Adapted Physical Education—3 S.H.

Fundamental concepts and skills essential to programming and adaptation of methods, materials, physical activities and facilities to meet the needs of physically, mentally and emotionally challenged individuals. Offered on demand. Grade only.

Activity Cores for PE Majors Only

Courses in this category include comprehensive development of skills, knowledge of rules, strategies, terminology, and participation in the designated activities.

130 - Badminton, Golf, Tennis, Bowling—3 S.H. Grade only.

Additional fee.

131 - Track/Field, Softball, Conditioning, Weight Training—3 S.H.

Grade only

132 - Tumbling, Rhythmic & Recreational Activities—3 S.H. Grade only.

Additional fee.

133 - Flag Football, Volleyball, Basketball, Soccer—3 S.H. Grade only.

Grade only.

Activity Courses for All Students

Activity courses are offered on an optional pass/no credit basis except those designated P/NC-only or grade-only. Activity courses required for physical education majors and dance minors must be taken for letter grade. If physical education activity courses are repeated to improve competency, only the final grade will count in calculating GPA. All activity courses are offered yearly or on demand.

100 - Soccer—1 S.H.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play.

101 - Basketball—1 S.H.

The development of basic fundamental skills, knowledge and strategies

involved in beginning basketball in order to be able to enjoy recreational basketball.

102 - Slow-Pitch Softball—1 S.H.

This course will develop skills and techniques in softball, including rules and strategies of play.

103 - Racquetball—1 S.H.

The development of basic fundamental skills, knowledge and strategies involved in beginning racquetball in order to be able to enjoy playing recreational racquetball.

104 - Volleyball—1 S.H.

The development of basic fundamental skills, knowledge and strategies involved in volleyball in order to be able to enjoy recreational volleyball.

112 - Folk and Square Dance—1 S.H.

Fundamental skills and knowledge necessary for the recreational purposes of the participant.

116 - Modern Dance I—1 S.H.

A theory and lab course introducing technique and history of modern dance and its place among other dance forms. Grade only.

118 - Jazz Dance I—1 S.H.

A theory and lab course introducing technique and history of jazz dance and its place among other dance forms. Grade only.

120 - Ballroom Dance—1 S.H.

Introduction to the basic techniques of recreational ballroom dancing. Includes the foxtrot, waltz, lindy and rumba.

122 - Beginning Swimming—1 S.H.

This course covers basic water safety skills and knowledge including physical and mental adjustment to water for non-swimmers.

123 - Swimming & Water Safety—1 S.H.

Fundamental skills and endurance related to swimming strokes and aquatic safety. For swimmers who can handle themselves in deep water.

124 - Water Safety Instructor—1 S.H.

Teaching methods for swimming, diving, basic water safety and program development. Culminates with Red Cross certification. Prerequisite: PER 123 or demonstrated competency.

128 - Ballet I—1 S.H.

This course is the study of the basic barre and center technique used in ballet. Additionally, it serves as an introduction to ballet as a craft and as an art. This course work is centered around developing physical competence in dance technique. Grade only.

134 - Skiing—1 S.H.

Fundamental skills and knowledge appropriate for the beginner, intermediate and advanced skier. Additional fee for those who need to rent equipment.

135 - Weight Training—1 S.H.

Fundamental skills and knowledge necessary for the recreational purposes of the participant.

136 - Tap Dance—1 S.H.

Introduction to tap technique emphasizing musicality, expression and style in performance within the cultural and historical context of the form. Grade only.

137 - Fencing—1 S.H.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play.

139 - Tennis—1 S.H.

Fundamental skills and knowledge appropriate for the beginner, intermediate and advanced plays, including rules, conditioning and strategy of play. Students must supply their own racquet and balls.

140 - Bowling—1 S.H.

Fundamental skills and knowledge necessary for the recreational purposes are provided for the participant. The course includes rules and strategies of play. Additional fee.

141 - Golf—1 S.H.

This course will teach students the techniques of a golf swing. Golf course strategies and etiquette will be explained and examined on an authentic golf course. Additional fee.

142 - Badminton—1 S.H.

The development of basic fundamental skills, knowledge and strategies involved in beginning badminton in order to be able to enjoy playing recreational badminton.

144 - Contemporary Activities—1 S.H.

This course introduces the student to varied contemporary, movement-based activities. A variety of activities will be introduced as a means of encouraging movement and expanding the student's leisure interest profile. May be repeated for credit under different subtitle.

* Course may be used to satisfy certain University Studies requirements.

199 - Lifetime Fitness—2 S.H.

A theory and lab course designed to encourage a lifetime commitment to regular physical fitness. Includes wellness topics, laboratory sessions and aerobic activities. Activities vary according to semester offered. Grade only.

216 - Modern Dance II—2 S.H.

A theory and lab course extending technique, history and basic elements of choreography and performance. Prerequisite: PER 116 or instructor's permission. May be repeated twice for credit. Grade only.

227 - Ballet II—2 S.H.

A theory and lab course extending technique, history and elements of choreography and performance. Prerequisite: PER 128 or instructor's permission. May be repeated twice for credit. Grade only.

228 - Jazz Dance II—2 S.H.

A continuation of Jazz Dance I with more extensive theory and technique emphasizing the development and refinement of skills and deepening conceptual understandings in the style and movement principles of form. Prerequisite: PER 118 or instructor's permission. May be repeated twice for credit. Grade only.

316 - Modern Dance III—2 S.H.

Intermediate to advanced modern dance theory and technique emphasizing the development and refinement of movement skills and aesthetic awareness. May be repeated twice for credit. Grade only.

327 - Ballet III—2 S.H.

Intermediate to advanced ballet theory and technique emphasizing the development and refinement of movement skills and aesthetic awareness. May be repeated twice for credit. Grade only.

416 - Modern Dance IV—2 S.H.

Advanced modern dance theory and technique emphasizing the development and refinement of movement skills and aesthetic awareness. May be repeated twice for credit. Grade only.

427 - Ballet IV—2 S.H.

Advanced ballet theory and technique emphasizing further development and refinement of movement skills and aesthetic awareness. May be repeated twice for credit. Grade only.

Recreation and Tourism/Therapeutic Recreation

203 - Recreational Programming—3 S.H.

This course provides an introduction to recreational and sports programming and leadership concepts. Grade only.

229 - Foundations of Recreation and Leisure Studies—3 S.H.

History and development of recreation, and principles, and philosophies of leisure. Modern-day concepts of leisure will also be addressed. Grade only.

239 - Outdoor Pursuits—3 S.H.

An overview of the theory and practice of adventure/challenge education. Processing skills included. Classroom as well as experiential involvement. Additional fee. Challenge by choice philosophy. Grade only.

240 - Outdoor Pursuits II—3 S.H.

Use of the environment for year-round adventure recreation activities and learning of advanced camping/canoeing and/or kayaking and/or rafting skills. Several day- to month-long camping experiences. Additional fee. Grade only.

245 - Therapeutic Recreation and Services—3 S.H.

History, philosophy, theories and professionalism of therapeutic recreation. Factors influencing service delivery and models of service delivery will also be addressed. Grade only.

265 - Leisure in Different Cultures—3 S.H.

The purpose of this course is to introduce students to different cultures through travel study. Applies only to travel education programs offered through PER and the ADVT minor. Repeatable for credit when students enroll in different travel/study programs. Grade only.

290 - Foundations of Tourism—3 S.H.

Foundations of Tourism will explore the tourism system and expose the students to the delineations of tourists and tourism enterprises, travel trends, governmental and non-governmental roles, transportation providers, and destination services and attractions. Attention will also be given to the impacts of tourism. Grade only.

302 - Adventure Travel and Tourism Development—3 S.H.

An overview of the rapidly growing adventure tourism industry, and its relation to the field of recreation and leisure studies. Course emphasis will be placed on adventure tourism and national and international "ecotourism," which promotes cultural and environmental sensitivity. Field trip is an additional fee. Grade only.

326 - Organization and Administration of Recreation—3 S.H.

Principles of supervision and administration as applied to

tourism/outdoor/recreation and therapeutic recreation settings.

Prerequisites: PER 229 and PER 245. Grade only.

332 - Leisure and Aging in Therapeutic Recreation—3 S.H.

Leisure needs and perceptions of the elderly. Implications for therapeutic recreation services in clinical and community settings. Prerequisite: PER 245. Grade only.

339 - Wilderness Ethics, Safety, and Survival—3 S.H.

Students will examine the elements of ethical wilderness trip planning, low impact activities, and select appropriate gear and equipment for trip safety. Survival and rescue skills will also be examined in this course. Grade only.

342 - Intervention Techniques in Therapeutic Recreation—3 S.H.

Helping strategies, processes and techniques utilized by the therapeutic recreation specialist. Prerequisite: PER 245. Grade only.

350 - Legal and Financial Aspects—3 S.H.

Legislation, liability and legal matters concerning recreation services; technical and behavioral aspects of budgeting; traditional and recent methods of financial park and recreation operations. Prerequisites: PER 229 and PER 245. Grade only.

393 - Evaluation in Recreation, Tourism, and TR—3 S.H.

The procedures and applications of social science research and evaluation methods are applied to recreation settings. Course content includes design, methods of data collection, interpretation, and presentation of the data. Emphasis is given to evaluation techniques used by recreation professionals. Grade only.

398 - Practicum in Recreation and Tourism or Therapeutic Recreation—3 S.H.

This course offers one an opportunity to learn by experience and further one's professional development under the careful guidance of experienced professionals and college supervisors. May be repeated once for credit in a different setting. Prerequisite: must have completed PER 229 and 245 and have consent or special permission of department.

399 - Internship in Recreation and Tourism or Therapeutic Recreation—1-12 S.H.

The application of skill, knowledge and concepts necessary for planning, organizing and conducting recreation and leisure services. Permission and 2.50 GPA prior to placement. Therapeutic Recreation interns also must obtain a copy of their intern supervisor's current NCTRC certification certificate. Interns must complete a 12 (or more) consecutive week, 480-hour placement under a qualified recreation specialist.

Prerequisite: Senior standing in the RTTR major and completion of recreation core courses, or permission of instructor. P/NC only.

412 - Independent Study in Physical Education/Recreation or Dance—1-3 S.H.

Opportunity to work independently. Prerequisites: junior or senior standing, preparation of proposed outline and major advisor's permission. Grade only.

414 - Recreational Leadership—3 S.H.

A study of leadership principles, leadership techniques and leadership theories. Required recreation leader competencies and group dynamic issues also will be addressed. Prerequisites: sophomore, preferably higher standing; PER 229 and PER 245. Grade only.

417 - Physical Education/Recreation/Dance Clinic—1-3 S.H.

Typically offered on a workshop basis. Subject matter determined by department. Course may be repeated when offered with different subject matter, content and title.

421 - Outdoor Education and Interpretive Services—3 S.H.

Exploration of the out-of-doors as a medium to enhance cognitive, affective and psychomotor learning for persons of all ages. Outdoor recreation as a component of outdoor education is also addressed. Grade only.

426 - Recreation Facilities and Area Design—3 S.H.

Principles and procedures related to the design, operation and care of leisure resources, areas and facilities. Prerequisites: sophomore, preferably with higher standing; PER 229 and PER 245. Grade only.

468 - Programming in Therapeutic Recreation—3 S.H.

An overview of functional problems commonly associated with various diseases and/or disabling conditions. Therapeutic recreation program development, implementation and modification considerations. Prerequisites: sophomore, preferably higher standing; PER 229 and PER 245. Grade only.

475 - Trends and Issues in Therapeutic Recreation—3 S.H.

Professional concerns and implication related to contemporary trends and issues in the field of therapeutic recreation. Internship site selection, assessment techniques and national exam criteria also will be addressed. Prerequisites: junior, preferably senior standing; PER 229, PER 245 and PER 342. Grade only.

PHYSICS

Pasteur Hall, Room 114 (507-457-5260)

www.winona.edu/physics

Shields (Chairperson)

FACULTY

Danning Bloom, Professor; B.A., Illinois Wesleyan University; Ph.D., University of Colorado; 1976 –

George Bolon, Professor; B.S., M.S., Oregon State University; Ph.D., University of Utah; 1968 –

Andrew Ferstl, Assistant Professor; B.S., University of Wisconsin; Ph.D., University of Minnesota; 2000 -

David E. Hamerski, Professor; B.S., St. Mary's College of Minnesota; M.S., University of Minnesota-Twin Cities; Ph.D., Washington University (St. Louis, Missouri); 1961-

Frederick Otto, Professor; B.A., B.S., Humboldt State University; Ph.D., University of California-Berkeley; 1990 -

Richard H. Shields, Professor; B.S., M.S., Eastern Illinois University; Ph.D., University of Missouri-Rolla; 1973 -

PURPOSE

The Department of Physics provides quality undergraduate instruction to meet the needs and special interests of those students who wish to acquire an understanding and appreciation of physics. A knowledge of physics provides a basis for creative careers in many areas of engineering and technology. Physicists find employment in teaching, research and development, and management. The B.S. physics major provides three options:

- Option I is the traditional physics major, designed principally for those students who wish to pursue graduate study in physics and related fields.
- Option II is a major designed for those who wish to work in the nuclear power industry.
- Option III is for those who have interests in electronics engineering. Many students in Option III take additional coursework in computer science.

The Physics Department offers a physics teaching major. This major started in August 2001 and replaces the physical science teaching major. This new major has been approved by the Minnesota Board of Teaching (BOT) and will certify teachers for grades 5-12 in middle school science, physical science and high school physics. The BOT has allowed the Physics Department, with the cooperation of the Education Department, to develop a grades 9-12 physics teaching major and a separate middle school science teaching major. Students should consult with their advisor about the latest changes.

The Physics Department also offers minors in physics, aviation, and electronics. The aviation minor, in conjunction with majors in business management or computer science, is certified by the Federal Aviation Administration as an Airway Science curriculum.

PASS/NO PASS CREDIT COURSES

Except for internships and practica, students must take all courses in their major, minor, options, concentrations and licensures on a grade-only basis. Any course not required for a major or minor may be taken on a pass/no credit basis. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

HONORS IN PHYSICS PROGRAM

Philosophy

The physics faculty believe that experience in the process of doing science—that is, conducting research—is invaluable for students who wish to pursue advanced degrees in physics. It is important that students be familiar not only with the body of knowledge that physics encompasses, but also with the procedures of scientific inquiry used to advance this body of knowledge.

Student Benefits

Students benefit from the experience of planning, conducting, and completing a coherent undergraduate research project. They add to their skills and understanding in a particular area of physics and practice communicating their results to their peers and the physics community. Successful completion of the project enhances their opportunities for admission to graduate school or for scientific employment following graduation.

Eligibility

To be accepted into the Honors in Physics Program, a student must:

1. Be a physics major and have completed 20 semester hours of physics.
2. Have at least a 3.0 GPA both overall and within the major.
3. Identify a WSU faculty member who is willing to serve as a research advisor
4. Apply to the Physics Department for admission to the program.

Participation

Students who are accepted into the program are expected to:

1. Maintain a 3.0 GPA overall and within the major
2. Make steady progress toward the goals of the research program
3. Write an acceptable honors thesis describing the research
4. Give a seminar describing the research to fellow honors students and faculty
5. Present the results of the research study at an appropriate regional meeting

Completion

Upon graduation, students who successfully complete the Honors in Physics Program receive the following recognition of their accomplishments:

1. Official transcripts are stamped with the words "Graduated with Honors in Physics."
2. Transcripts include the title of their honors thesis.
3. Graduation status (Honors in Physics) is acknowledged on the graduation program and during the graduation ceremonies.

B.S. MAJOR – PHYSICS: OPTION I

77 S.H. (No Minor Required)

REQUIRED COURSES (71 S.H.)

Physics (47 S.H.)

- 221, 222, *223 University Physics I, II, III (12)
- 320 Computational Physics (2)
- 330 Electronics (4)
- 340 Modern Physics (4)
- 345 Thermodynamics and Statistical Physics (4)
- 350 Mechanics (4)
- 370 Optics (4)
- 430, 431 Electromagnetic Theory I, II (6)
- 451 Quantum Mechanics (3)
- 460 Undergraduate Research (4)

Mathematics (16 S.H.)

- * 160, *165 Calculus I, II (8)
- 260 Multivariable Calculus (4)
- 270 Differential Equations (4)

Chemistry (8 S.H.)

- * 212, *213 Inorganic Chemistry I, II (8)

ELECTIVES (6 S.H. from the list below)

- 328 Electrical Circuits I (4)
- 329 Electrical Circuits II (4)
- 332 Computer Organization (2)
- 333 Microprocessor Electronics (4)
- 399 Internship (1-4)
- 400 Seminar (1-4)
- 404 Nuclear Radiation Physics (4)
- 420 Control Theory (3)
- 425 Physics of Semiconductor (3)

B.S. MAJOR – PHYSICS: OPTION II – APPLIED NUCLEAR SCIENCE

60 S.H. (No Minor Required)

REQUIRED COURSES (37 S.H.)

Physics (25 S.H.)

- 221, 222, University Physics I, II (8)
- 330 Electronics (4)
- 345 Thermodynamics and Statistical Physics (4)
- 399 Internship (5)
- 404 Nuclear Radiation Physics (4)

Chemistry (4 S.H.)

- * 212 Principles of Chemistry I (4)

Mathematics (8 S.H.)

- * 160, *165 Calculus I & II (8)

Note: Students not prepared to take MATH 160 should take MATH 120

ELECTIVES (23 S.H.)

Physics

- 400 Seminars (may be repeated for credit)
 - Nuclear Instrumentation & Control (3)
 - Reactor Theory I (2)
 - Reactor Theory II (2)
 - Reactor Theory III (2)
- 440 Math Methods in Physics I (3)
- 441 Math Methods in Physics II (3)

Engineering

- 284 Properties of Materials (4)
- 350 Fluid Mechanics (3)
- 370 Heat & Mass Transfer (3)

B.S. MAJOR – PHYSICS: OPTION III – ELECTRONICS

78 S.H. (No Minor Required)

REQUIRED COURSES (72 S.H.)

Physics (45 S.H.)

- 221, 222, *223 University Physics I, II, III (12)

- 320 Computational Physics (2)
- 328 Electrical Circuits I (4)
- 330 Electronics (4)
- 332 Computer Organization (2)
- 333 Microprocessor Electronics (3)
- 340 Modern Physics (4)
- 420 Control Theory (3)
- 425 Semiconductor Physics (3)
- 430 Electromagnetic Theory I (3)
- 460 Undergraduate Research (4)

Mathematics (16 S.H.)

- * 160, *165 Calculus I, II (8)
- 260 Multivariable Calculus (4)
- 270 Differential Equations I (4)

Chemistry (8 S.H.)

- * 212, *213 Chemistry I, II (8)

Computer Science (3 S.H.)

- 231 Fortran for Engineering and Science (3) OR
- * 234 Algorithms and Problem Solving (3) OR
- 298 Unix and C Programming (3)

ELECTIVES (6 S.H.)

- 329 Electrical Circuits II (4)
- 345 Thermodynamics and Statistical Physics (4)
- 350 Mechanics (4)
- 370 Optics (4)
- 399 Internship (1-4)
- 400 Seminar (1-4)
- 404 Nuclear Radiation Physics (4)
- 431 Electromagnetic Theory II (3)
- 451 Quantum Mechanics (3)

B.S. MINOR – PHYSICS

33 S.H.

REQUIRED COURSES (16 S.H.)

Physics (8 S.H.)

- 201 General Physics I (4)
- 202 General Physics II (4) OR
- 221 University Physics I (4)
- 222 University Physics II (4)

Mathematics (8 S.H.)

- * 160 Calculus I (4)
- * 165 Calculus II (4)

Note: Students not prepared to take MATH 160 should take MATH 120.

ELECTIVES (17 S.H.)

Physics

- 223, 320, 328, 329, 330, 332, 333, 340, 345, 350, 370, 400, 404, 405, 420, 425, 430, 431, 435, 451, 460, 461

B.S. MINOR – ELECTRONICS

33 S.H.

REQUIRED COURSES (25 S.H.)

Physics (17 S.H.)

- 201, 202 General Physics I, II (8) OR
- 221, 222 University Physics I, II (8)
- 330 Electronics (4)
- 332 Computer Organization (2)
- 333 Microprocessor Electronics (3)

Mathematics (8 S.H.)

- * 160, *165 Calculus I, II (8)

Note: Students not prepared to take MATH 160 should take MATH 120.

ELECTIVES (8 S.H.)

Physics

- 223, 320, 328, 329, 350, 370, 399, 420, 425, 430, 431, 435, 451, 460, 461, 490

B.S. MAJOR – PHYSICS (Teaching)

113 S.H. (No Minor Required)

Note: The Minnesota Board of Teaching (BOT) has approved the following major, which certifies graduates to teach general science, physical science, and physics for grades 5-12. The BOT has allowed the Physics Department, with the cooperation of the Education Department, to develop a grades 9-12 physics teaching major and a middle school science teaching major. Students should consult with their advisor about the latest changes.

REQUIRED COURSES (113 S.H.)**Additional Requirements (42 S.H.)****Chemistry (8 S.H.)**

* 212, *213 Principles of Chemistry I, II (8)

Mathematics (12 S.H.)

* 160, *165 Calculus I, II (8)

270 Differential Equations I (4)

Biology (8 S.H.)

* 241, *242 Basics of Life, Organismal Diversity (8)

Geoscience (8 S.H.)

* 120 Dynamic Earth (4)

* 130 Earth Through Life and Time (4)

Health and Human Performance (3 S.H.)

* 204 Personal and Community Health (3)

Special Education (3 S.H.)

* 400 Exceptional Children and Youth (3)

Physics (39 S.H.)

* 221, *222, *223 University Physics I, II, III (12)

311 Science Teaching Methods (4)

345 Thermodynamics and Statistical Physics (4) OR ENGR 300

350 Mechanics (3) OR ENGR 270

370 Optics (4)

430 Electromagnetic Theory (3)

451 Quantum Mechanics (3)

460 Advanced Lab (2)

Education (32 S.H.)

305 Human Development and Learning (4)

* 308 Human Relations and Student Diversity (3)

312 Instructional Planning and Assessment (3)

429 Secondary Reading and Teaching Strategies (4)

449 Middle School Philosophy, Organization and Interdisciplinary Planning (3)

459 The Professional Educator (3)

465 Student Teaching (12)

students with credits in higher numbered, non-aviation physics courses. No prerequisites. Offered each semester.

140 – Energy—3 S.H.

This course focuses on energy needs, trends, and long-term prospects and resource supplies. The physics of energy, atoms, nuclei, thermal energy, solar energy, alternative energies and consequences of energy production are discussed. The present governmental energy policy will be discussed along with proposed changes to the policies. No Prerequisite. Offered every semester.

201 – General Physics I—4 S.H.

An algebra-based course covering the principles of mechanics, waves, sound and fluids for those contemplating the study of biology, medicine, etc. or seeking a general education course in the physical sciences. Lecture and laboratory. Prerequisite: MATH 120. Offered each semester.

202 – General Physics II—4 S.H.

A continuation of 201. Principles of thermodynamics, electricity and magnetism, light and modern physics. Lecture and laboratory. Prerequisite: PHYS 201. Offered each semester.

221 – University Physics I—4 S.H.

A calculus-based course covering mechanics, sound and waves which aims to meet the specific requirements of students who expect to major in physics, mathematics, chemistry, or engineering. Lecture and laboratory. Prerequisite: MATH 160. Offered each semester.

222 – University Physics II—4 S.H.

A continuation of PHYS 221, covering thermodynamics, electricity and magnetism. Lecture and laboratory. Prerequisites: PHYS 221 and MATH 165. Offered each semester.

223 – University Physics III—4 S.H.

A continuation of PHYS 222 covering light, relativity, nuclear physics and special topics in modern physics. Lecture and laboratory. Prerequisite: PHYS 222. Offered yearly.

302 – Electrical Circuits—3 S.H.

DC and AC circuit analysis, including RC, RL, RLC and three-phase network analysis. Lecture only. Prerequisites: PHYS 222 and MATH 165. Offered yearly.

310 – Science and Technology in Litigation—4 S.H.

Designed to provide a working knowledge of investigative procedures; basic science, especially dynamics, sound, and radiation; and recent technological advances employed in litigation in the areas of automobile collisions, accidents and product liabilities. Grade only. Offered yearly. Prerequisite: HIST 365, HIST 370 and HIST 377 or instructor's permission.

311 – Science Teaching Methods—4 S.H.

The application of current research trends and modern technology in science education are used to prepare science majors for the teaching of secondary school science content and process. Prerequisites: acceptance in the Education Department, two years of coursework in a science major and PHYS 201 or PHYS 221. Science Teaching Methods is a prerequisite to student teaching. Offered yearly.

320 – Computational Physics—2 S.H.

A laptop course in computational physics. Numerical methods for integration and differential equations. Symbolic manipulation. Graphics animations, 3-D plots, density plots, three-body problem, potentials and fields, chaos, and quantum mechanics. Prerequisites: PHY 223 and MATH 270. Offered yearly.

328 – Electrical Circuits and Measurements I—4 S.H.

DC and AC circuit analysis, including RC, RL, RLC and three phase network analysis. Includes laboratory. Prerequisites: PHYS 202 or PHYS 222 and MATH 165. Offered yearly.

329 – Electrical Circuits and Measurement II—4 S.H.

A continuation of PHYS 328 covering magnetically coupled circuits, complex frequency approach, and the application of Laplace and Fourier transform techniques. Introduces computer analysis and design of linear circuits. Lecture and laboratory. Prerequisite: PHYS 328. Offered on demand.

330 – Electronics—4 S.H.

A lecture-laboratory course in solid state electronics including circuit theory, diodes, transistors, power supplies, amplifiers, wave-form generators and integrated circuits. Prerequisites: PHYS 222 or PHYS 202 and MATH 165 or instructor's permission. Offered every year.

332 – Computer Organization—2 S.H.

A lecture-laboratory course in fundamentals of digital computers and digital electronics; Boolean algebra, logic circuits, counters, registers, arithmetic-logic units, sequential circuits, sequence detectors. Prerequisites: PHYS 202 or PHYS 222 or CS 250. Offered yearly.

* Course may be used to satisfy certain University Studies requirements.

B.S. MINOR – AIRWAY SCIENCE/AVIATION

26 S.H.

REQUIRED COURSES (26 S.H.)**Physics**

* 201, 202 General Physics I, II (8)

Mathematics (3 S.H.)

* 140 Applied Calculus (3)

Note: Students not prepared to take MATH 140 should take MATH 120.

Management and Marketing (3 S.H.)

310 Business Law (3)

Aviation (12 S.H.)

* 200 Fundamentals of Aviation (3)

205 Airspace, Communications and Regulations (1)

383 Air Traffic Control (3)

387 Flight Safety (3)

388 Legislative & Legal Aspects of Aviation (2)

Note: For a complete listing of the FAA-approved Airway Science Program, see page 182.

PHYSICS COURSE DESCRIPTIONS**Physics****115 – Conceptual Physics—4 S.H.**

Many demonstrations, everyday applications and hands-on interactive simulations are used to make physics understandable to the general education student. Non-mathematical approach. Lab. Not open to

333 - Microprocessor Electronics—4 S.H.

A lecture-laboratory course on the programming and interfacing of the Z80 microprocessor. Analog and digital conversion, input/output devices, data transmission and data manipulation will be covered. Examples will be programmable interface chips, UART and microcomputer interfacing. Prerequisite: PHYS 332. Offered yearly.

340 - Modern Physics—4 S.H.

A lecture-laboratory course in modern physics. Special relativity, kinetic theory, Bohr Atom, quantum mechanics, atomic physics, nuclear physics and condensed matter physics. Prerequisites: PHY 223 and MATH 165. Offered yearly.

345 - Thermodynamics and Statistical Physics—4 S.H.

Equation of state, first and second law, entropy, equilibrium, reversible and irreversible processes, heat engines, probability distributions, statistical representation of entropy, quantum fluids. Prerequisites: PHYS 202 or PHYS 221 and MATH 165. Offered every two years.

350 - Mechanics—4 S.H.

Rectilinear motion, motion in three dimensions, oscillations, central forces, rigid body motion, non inertial reference frame, Lagrangian mechanics. Prerequisites: PHYS 202 or PHYS 222 and MATH 165. Offered every two years.

370 - Optics—4 S.H.

A study of geometrical optics, the wave theory of light, interference, diffraction, polarization, magneto-and electro-optics, lasers and holography. Lecture-laboratory course. Prerequisites: PHYS 203 or PHYS 223 and MATH 165. Offered every two years.

399 - Internship—1-8 S.H.

Supervised industrial, business or government experience designed by the WSU physics advisor, the work supervisor, and the student. Open only to junior or senior level physics major or minor. P/NC only. Prerequisite: Department approval. Offered on demand.

400 - Seminars—1-4 S.H.

This course consists of one or more seminars offered from time to time on a variety of topics in physics. Students may repeat the course under a different topic. Prerequisite: instructor's permission. Offered on demand.

404 - Nuclear Radiation Physics—4 S.H.

A first course in health physics; includes atomic and nuclear structure, radioactivity, interaction of radiation with matter, radiation dosimetry, health physics instrumentation, external and internal radiation protection. Lecture-laboratory course. Prerequisite: PHYS 202 or PHYS 222 or instructor's permission. Offered on demand.

420 - Control Theory—3 S.H.

An introduction to the design, analysis techniques and behavior of linear feedback control systems. Both transfer function and state variable models are used to study the input and output characteristics and interactions of the functional blocks which comprise the system model. Prerequisites: PHYS 202 or PHYS 222 and MATH 270. Offered every two years.

425 - The Physics of Semiconductors—3 S.H.

A study of the physics of semiconductors, pn junctions and transistors; fabrication of semiconductor devices including integrated circuits; and the electrical characteristics and behavior of these devices. Prerequisite: PHYS 451. Offered every two years.

430 - Electromagnetic Theory I—3 S.H.

Electrostatics including Gauss's law and Laplace's equation. Magnetostatics. Introduction to Maxwell's equations. Prerequisites: PHYS 202 or PHYS 222 and MATH 270. Offered every two years.

431 - Electromagnetic Theory II—3 S.H.

A continuation of PHYS 430 with applications of Maxwell's equation to wave guides, optics and special relativity. Prerequisite: PHYS 430. Offered every two years.

440 - Mathematical Methods in Physics I—3 S.H.

Partial differential equations of mathematical physics. Orthogonal functions. Fourier series. Prerequisites: PHYS 202 or PHYS 222 and MATH 270. Offered on demand.

441 - Mathematical Methods in Physics II—3 S.H.

Eigenvalue problems, Sturm-Liouville theory, Matrix theory, numerical techniques, special functions, and Laplace and Fourier transforms. Prerequisite: PHYS 440. Offered on demand.

451 - Quantum Mechanics—3 S.H.

A continuation of PHYS 223. Interpretation of wave functions. Systems in one dimension. Hermitian operators and angular momentum. Electron spin. Systems in two or three dimensions. Prerequisite: PHYS 223. Offered every two years.

460 - Undergraduate Research 1—4 S.H.

An opportunity for an advanced physics student to work with a faculty member on an independent research project. A written report and oral presentation are required on results of the research. Offered every semester.

490 - Individual Problems in Physics—1-3 S.H.

An opportunity for the qualified advanced undergraduate to work independently. Topics may include research, development of special skills, selected readings, etc. Prerequisite: permission of the physics advisor. May be repeated to a total of 3 credits. Offered on demand as an arranged class.

Aviation

200 - Fundamentals of Aviation—3 S.H.

An applied science course covering, but not limited to, the principles of physics, earth science and physiology as they relate to aviation. Offered each semester.

204 - Private Flight Laboratory—3 S.H.

This course equates to the FAA Practical Test Standards and covers airplane operations and the use of radio for voice communications; emphasis on basic piloting techniques such as stalls, landings, short and soft field operation; and cross-country flight procedures. Student must enroll in course to earn credit. Offered yearly.

205 - Airspace, Communications and Regulations—1 S.H.

This course complements PHYS 200 and meets the requirements for FAA 141 approval. Subject areas covered include Code of Federal Regulation 14, airspace, ATC Communications, and standard operating procedure. Prerequisite: PHYS 200 or instructor's permission.

300 - Fundamentals of Instrument Flight—4 S.H.

Provides the student with aeronautical understanding, knowledge and competencies for successful completion of the FAA instrument written knowledge examination. Additional subjects covered in depth are advanced meteorology, integrated and inertial Instrument flight and ground systems, national and international airspace, and sophisticated radio communications and navigation. Offered yearly.

301 - Instrument Flight Laboratory—3 S.H.

This course equates to the FAA Practical Test Standards and covers ground and airplane operations for instrument flight at an advanced level; instrument piloting techniques such as aircraft maneuvers, IFR, departure, en route and approach procedures and ADF, ILS, GPS and VOR approach techniques and proficiencies. Student must enroll in the course to receive credit. Offered yearly.

380 - Seminars in Aviation Organization—1-3 S.H.

Seminars on topics relevant to organization and administration of aviation. The series will cover airline, commuter, corporate, federal and general aviation topics. Prerequisites: junior standing and/or instructor's permission. May be repeated. Offered yearly.

381 - Corporate Operations—2 S.H.

This course covers aircraft operations as they relate to U.S. business for both the chief executive officer as well as corporate aviation personnel. Major areas covered are proposals, utilization, operations, insurance and legal aspects of FAR 91 and 135 operations. Taught by staff and adjunct industry personnel. Prerequisites: PHYS 200 and BA 310 or instructor's permission. Offered every two years.

382 - Airline Operations—2 S.H.

An overview of the U.S. airline industry covering historical background, regulations and current operational entities and procedures for U.S. flag carrier airlines. Taught by staff and adjunct industry personnel. Prerequisite: PHYS 381 or instructor's consent. Offered every two years.

383 - Air Traffic Control—3 S.H.

An overview of the U.S. and Canadian airspace system. Special emphasis on the en route and terminal environment and pilot/controller actions and responsibilities. Taught by staff and ATC adjunct faculty. Prerequisite: PHYS 200 or instructor's permission. Offered yearly.

384 - Airport Operations—2 S.H.

A study of airport administrative functions, planning, development and operations. Special emphasis on regulations, financing, revenue, security and environmental/economic impacts. Taught by airport operations adjunct faculty. Prerequisites: PHYS 200 and BA 310 or instructor's permission. Offered every two years.

387 - Flight Safety—3 S.H.

This course covers the certification process for FAR 23 and 25 aircraft. Flight deck management objectives and procedures, and the study of human factors for flight and ground personnel. Taught by staff and adjunct industry personnel. Prerequisite: PHYS 200 or instructor's permission. Offered yearly.

388 - Legislative and Legal Aspects of Aviation—2 S.H.

This course covers an overview of the role of governmental bodies, their policies and procedures on aviation. To include a brief overview of aviation litigation for airlines, general aviation and airports. Taught by staff and adjunct industry personnel. Prerequisite: PHYS 200 and BA 310 or instructor's permission. Offered yearly.

401 - Advanced Fundamentals of Aviation—4 S.H.

Provides the student with aeronautical understanding, knowledge and competencies that are necessary for successful completion of the FAA commercial pilot written knowledge examination. Additional subjects covered in depth are advanced aerodynamics and performance, gas turbine engines, servo and hydraulic systems, environmental control, safety, and interface of the flight crew and maintenance crews. Offered yearly.

402 - Commercial Flight Laboratory—3 S.H.

This course equates to the FAA Practical Test Standards and covers all airplane operational areas for commercial flight. Emphasis on advanced piloting techniques for commercial operations such as aircraft maneuvers, takeoffs and landings, passenger comfort, cross-country

flight, voice and radio navigation, night operation, primary instrument flight and safety. Students must enroll in this course to earn credit. Offered yearly.

410 - Turbojet-Prop. Transport Seminar—1-3 S.H.

This course fulfills the FAA's ground requirements for pilots of heavy, sophisticated aircraft. Basic aircraft systems theory, design, function, operation and procedures are covered in depth. Prerequisite: PHYS 300 and 401 or equivalent. Offered yearly. May be repeated.

411 - Cessna Citation Pilot School—3 S.H.

This FAA-approved course covers the equipment knowledge, training and competencies necessary to qualify as pilot or second in command of the Citation I or II jet aircraft. Prerequisites: PHYS 301 and PHYS 402 or instructor's permission. Offered on demand.

412 - F-27 Pilot School-Initial—4 S.H.

This FAA-approved course covers the equipment, knowledge, training and competencies necessary to qualify as pilot in command or second in command of the Fairchild or Fokker F-27 as provided under FAR 121. Prerequisites: PHYS 301 and PHYS 402 or instructor's permission. Offered as required.

POLITICAL SCIENCE

Minne Hall, Room 120 (507-457-5500)

www.winona.edu/politicalscience

Grover (Chairperson)

FACULTY

Matthew Bosworth, Assistant Professor; B.A., Johns Hopkins University; M.A., Ph.D., University of Wisconsin-Madison; 1997-

James Bromeland, Associate Professor; B.A., M.S., Mankato State University; 1971 -

Karen Csajko, Associate Professor; B.A., M.A., Portland State University; Ph.D., University of California-Berkeley; 1996-

Darrell Downs, Associate Professor; B.A., B.S., Montana State University; M.S., Oregon State University; Ph.D., Colorado State University; 1992 -

Ahmed El-Afandi, Professor; B.Com., University of Alexandria; M.A., Ph.D., University of Missouri-Columbia; 1968 -

Yogesh Grover, Professor; B.A., M.A., University of Delhi (India); Ph.D., University of Missouri-Columbia; 1988 -

Frederick Lee, Associate Professor; A.B., University of New Orleans; A.M., Ph.D., University of Michigan; 1992 -

PURPOSE

Political science deals with the theory and practice of politics, government and administration. As an academic discipline, it includes political theory, public law, public administration, American politics and public policy, foreign policy and international relations, and governments and politics of different countries.

The primary objective of the political science curriculum is to prepare students for graduate studies and/or careers in government, business or education. The study of political science also provides a strong background for success in law school and related careers found in public service. Generally, students majoring in political science find that it helps them understand the changing political environment and prepares them to take responsibility in their community, nation and world at large.

PASS/NO CREDIT COURSES

Except for internships, students must take all courses in the major and minor on a grade-only basis. The P/NC option is available to non-majors for all courses.

DOUBLE MAJORS

For students majoring in both political science and public administration, required courses for one major can be applied to the requirements of the other, but at least 15 semester hours must be non-duplicative.

COURSES FOR POLITICAL SCIENCE AND PUBLIC ADMINISTRATION PROGRAMS

The Department of Political Science and Public Administration offers the following courses for political science and public administration programs.

American Politics	425 Policy Studies (3)	International Politics
120 Introduction to American Politics (3)	426 The Politics of Public Budgeting (3)	130 Introduction to International Relations (3)
201 Politics and Violence (3)	429 Policy Reform (3)	205 United Nations in World Affairs (3)
218 Community Service (3)	430 Agency Performance (3)	342 International Political Economy (3)
220 Civil Rights and Civil Liberties (3)	Comparative Politics	346 International Law (3)
221 State & Local Government (3)	135 Comparative Political Systems (3)	347 International Organization (3)
227 Judicial Process & Politics (3)	224 Politics & Society in Latin America (3)	422 American Foreign Policy (3)
228 Public Service (3)	225 Ethnic Conflict & Nationalism (3)	488 Issues in International Politics (3)
315 American Political Thought (3)	226 Politics & Society in Africa (3)	Political Theory
320 Constitutional Law (3)	240 Human Rights in Theory and Practice (3)	150 Introduction to Political Theory (3)
321 The American Presidency (3)	270 Politics & Society in the Middle East (3)	260 Classical Political Thought (3)
322 Political Parties & Pressure Groups (3)	332 European Political Systems (3)	315 American Political Thought (3)
330 Race and American Politics (3)	335 Latin American Political Systems (3)	325 Modern Political Theory (3)
333 Media & Politics (3)	336 Post-Communist Political Systems (3)	358 Contemporary Political Thought (3)
340 Environmental Policy (3)	337 Asian Political Systems (3)	450 Feminist Political Theory (3)
341 Health Care Politics & Policy (3)	390 Comparative Politics of the Third World (3)	Research and Methodology
360 American Congress (3)	475 Democratization & Its Challenges (3)	380 Political Research I - Secondary (3)
420 Administrative Law (3)		410 Political Research II - Primary (3)
421 The First Amendment (3)		

* Course may be used to satisfy certain University Studies requirements.

Note: Independent Readings (401) and Internship (416) credits may apply toward the major requirements, but internships will be limited to 3 semester credits in Option A, Option B, and the public administration major. Students are allowed to take up to 12 credits for internships, but only 3 credits will count toward the major.

B.A. MAJOR POLITICAL SCIENCE— GENERAL (OPTION A)

42 S.H. (Minor Required)

REQUIRED COURSES (6 S.H.)

- 120 Introduction to American Politics (3)
- 380 Political Research I - Secondary (3)

ELECTIVES (36 S.H.)

Students should note the following two requirements:

- They must take at least 3 credits (one course) from each of the four sub-fields in political science: American politics, comparative politics, international politics, and political theory.
- Of the 36 credits (12 courses) required for electives, at least 15 credits (five courses) must be at the 300-400 level. See course listings.

B.A. MAJOR POLITICAL SCIENCE – INTERNATIONAL STUDIES (OPTION B)

42 S.H. (Minor Required)

This option enables students to get a B.A. degree in political science by specializing in international relations. A degree in political science with an emphasis on international relations may be combined with either a minor or a major in international business, economics or foreign languages to broaden the scope of opportunities after graduation. Most of the requirements for this major can be met by taking electives, although a core of five courses is required.

REQUIRED COURSES (15 S.H.)

- 120 Introduction to American Politics (3)
- 130 Introduction to International Relations (3)
- 135 Comparative Political Systems (3)
- 380 Political Research I - Secondary (3)
- 422 American Foreign Policy (3)

ELECTIVES (27 S.H.)

Students must take the remaining nine courses from International Politics and Comparative Politics sub-fields. No more than three 200-level courses will apply toward the major requirements.

B.A. MINOR – POLITICAL SCIENCE

21 S.H.

REQUIRED COURSE (3 S.H.)

- 120 Introduction to American Politics (3)

ELECTIVES (18 S.H.)

Students must take at least one course (3 credits) from three of the four sub-fields in political science: American politics, comparative politics, international politics, and political theory. See course listings.

PUBLIC ADMINISTRATION

The Bachelor of Science major and minor in public administration are designed to prepare students for an administrative career in public and non-profit agencies. The core curriculum of this program provides students with the competency areas recommended by the National Association of Schools of Public Affairs and Administration.

This program is uniquely designed to serve students seeking employment in the traditional fields of public service, as well as those intending to pursue graduate study in the more specialized areas of policy analysis and program management. Students in this program are strongly encouraged to work closely with their advisor to select a major/minor combination that serves the student's career goals. See the Department of Political Science and Public Administration for more information and advising.

B.S. MAJOR – PUBLIC ADMINISTRATION

33 S.H. (Minor Required)

REQUIRED COURSES (33 S.H.)

- 120 Introduction to American Politics (3)
- 221 State & Local Government (3)
- 228 Public Service (3)
- 380 Political Research I - Secondary (3)
- 320 Constitutional Law (3)
- 410 Political Research II - Primary (3)
- 416 Internship (minimum of 3)
- 420 Administrative Law (3)
- 425 Policy Studies (3)
- 426 Politics of Public Budgeting (3)
- 429 Policy Reform (3)

B.S. MINOR – PUBLIC ADMINISTRATION

24 S.H.

REQUIRED COURSES (24 S.H.)

- 120 Introduction to American Politics (3)
- 221 State & Local Government (3)
- 228 Public Service (3)
- 380 Political Research I - Secondary (3)
- 410 Political Research II - Primary (3)
- 425 Policy Studies (3)
- 426 Politics of Public Budgeting (3)
- 429 Policy Reform (3)

POLITICAL SCIENCE COURSE DESCRIPTIONS

120 - Introduction to American Politics-3 S.H.

A study of the purposes of American government, civil rights, the federal system, the powers and functions of the three branches of government, political parties and interest groups, and contemporary problems. Offered every semester.

130 - Introduction to International Relations-3 S.H.

A general introduction to the major concepts and theories employed to analyze world affairs, and to the behavior of major actors involved - states, international organizations and multinational corporations and international organizations. Offered every semester.

135 - Comparative Political Systems-3 S.H.

Comparative study of different political systems with an emphasis on the frameworks used to compare them, and the concepts used to analyze and describe politics in different countries. Also includes case studies. Offered every semester.

150 - Introduction to Political Theory – 3 S.H.

This course is an introduction to the study, reading, and analysis of political texts, designed for students who do not have much familiarity with politics or theory, but are interested in investigating enduring questions of political thought, such as: What is freedom? What is the relationship between politics and conflict? What does it mean to be a member of a polity? What is justice? Offered every year.

199 - First-Year Seminar-1-3 S.H.

An open discussion of some political topics of current interest. Discussion centers around causes and possible remedies of some of the maladies of modern society. The different alternatives are discussed with an eye toward acquiring a better understanding of the problems. May be taken for up to 3 semester hours.

201 - Politics and Violence-3 S.H.

A study of the modern and enduring questions about violence, its origins, causes, and its cures. This course explores violence from a political science as well as from an interdisciplinary perspective. Offered every semester.

205 - The United Nations in World Affairs-3 S.H.

This course deals with the goals, structure, and functions of the United Nations and the way it deals with international issues of war, peace, and development. Offered every two years.

218 - Community Service-3 S.H.

Democratic theory calls for participation of citizens not only in decision-making but also in community affairs. Students will be offered the opportunity to be involved in their community by volunteering their services and time to not-for-profit organizations as a community service.

Such participation would foster community asset building and be beneficial to both the student volunteer and the community at large.

220 – Civil Rights and Civil Liberties-3 S.H.

A survey of current controversies regarding civil rights and civil liberties, such as the right to privacy, freedom of speech, affirmative action, sexual harassment, gay rights, etc. Recommended: POLS 120.

221 - State & Local Government-3 S.H.

An examination of the structure and policies of state and local governments in the U.S. and the relationships among national, state and local governments in the areas of education, welfare, criminal justice, economic development and environmental protection.

224 - Politics & Society in Latin American-3 S.H.

A study of the impact of factors such as religion, wealth, natural resources, modern ideologies, nationalism, etc. on the lives of individuals, groups and countries of Latin America and their politics.

225 - Ethnic Conflict and Nationalism-3 S.H.

Since the end of the Cold War, there has been an increase in nationalism and ethnic conflict throughout the world. This course analyzes this increasingly important international phenomenon, focusing on the causes and the characteristics of nationalism, the international consequences of what might appear to be national problems, and the prospects of conflict resolution and political reform in areas suffering from these problems. Offered every year.

226 - Politics & Society in Africa-3 S.H.

A study of the political cultures of African nations north and south of the Sahara. A study of the impact of factors such as religion, wealth, natural resources, geographic location, ethnic mix, modern ideologies, etc. on the lives of individuals and nations and on the politics of the African nations. Offered fall semester.

227- Judicial Process & Politics – 3 S.H.

This course provides an overview of the American legal process from a political perspective, covering basic court structure; legal actors, criminal and civil procedures, judicial impact, and comparative court systems. Offered yearly. Prerequisite: POLS 120 or instructor's permission.

228 - Public Service-3 S.H.

The theory and practice of public service and administration. The emphasis is on political processes as they affect administrative policy and problem solving in public and non-profit organizations. Offered every year. Prerequisite: POLS 120.

240 – Human Rights in Theory and Practice-3 S.H.

Human rights are those rights possessed by individuals by virtue of being human. They are distinct from civil rights, which are guaranteed by civil societies. This course seeks to identify the basic human rights of individuals as human beings, the evolution of these rights, the philosophical foundations of those rights, and the legal remedies available to victims of violations. The course discusses the roles of national and international communities in protecting human rights including the establishment of a permanent criminal court to prosecute human rights violations.

260 – Classical Political Thought-3 S.H.

What is politics? This course looks at Greek and Christian thinkers who first considered this question, from Sophocles to Plato to St. Augustine. Offered once every two years.

270 - Politics and Society in the Middle East-3 S.H.

A study of the impact of factors such as religion, wealth, natural resources, traditional ideologies, modern ideologies, etc., on the lives of individuals and nations and on politics in the countries of the Middle East and among them. Offered every year.

315 - American Political Thought-3 S.H.

An examination of the role of ideas in shaping American politics. Covering major political movements in the U.S. including revolutionary thought, constitutionalism, populism, pragmatism, socialism, conservatism, communitarianism and feminism. Prerequisite: POLS 120.

320 - Constitutional Law-3 S.H.

Judicial function in constitutional cases; division of powers between the nation and the states, and within the national government; powers of the President, limitations on the powers of government, separation of powers; protection of individual rights. Prerequisite: POLS 120.

321 - American Presidency-3 S.H.

A study of the institution of the presidency, the gradual growth of formal and informal tools of presidential power, the influence that different presidents have brought to the office, the significance of presidential style and character, recruitment patterns for the presidency, and various suggestions to reform the institution. Prerequisite: POLS 120.

322 - Political Parties & Pressure Groups-3 S.H.

Development, characteristics, organization and politics of the major American political parties. Includes an examination of the nominating process, party campaigns and finances, elections, voting behavior and the role and techniques of interest groups. Prerequisite: POLS 120.

325 - Modern Political Theory-3 S.H.

A study of the political ideas central to liberalism and its critics. Focus will be on Hobbes, Locke, Rousseau, and Marx. Offered every two years.

330 - Race & American Politics-3 S.H.

A study of the impact, effects and consequences of race and racism in American politics. Emphasis is placed on the origins, definitions and political consequences of race and racism within American politics. Offered every year. Prerequisite: POLS 120 or instructor's permission.

332 - European Political Systems-3 S.H.

A comparative study of the political ideological, social and economic development in European political systems with emphasis on the British, French and German systems. Emphasis is placed on cultural and institutional aspects with a systems approach. Offered every year. Prerequisite: POLS 135 or instructor's permission

333 - Media and Politics-3 S.H.

An examination of the role, process and power of the mass media in American politics. Includes an examination of media impact and effects at the individual, group, institutional, and cultural levels in American politics. Prerequisite: POLS 120 or instructor's permission.

335 -Latin American Political Systems—3 S.H.

A comparative study of the structure and dynamics of Latin American governments and politics. Prerequisite: POLS 135 or instructor's permission.

336 - Post Communist Political Systems-3 S.H.

A comparative study of transitions from communistic to liberal political and economic systems, and an analysis of unique problems of conversion from totalitarian systems to democracy, and from command economies to market economies. The course also includes discussion of countries that did not make the above transition. Offered every two years. Prerequisite: POLS 135 or instructor's permission.

337 - Asian Political Systems-3 S.H.

A comparative study of the political systems in Asia with an emphasis on the structure of governments, the extent of their effectiveness and the role of non-governmental actors: army; political parties; economic, social and cultural groups in politics. Variable focus on either the major powers like China, Japan and India or the Asia Pacific countries, and the factors responsible for their economic dynamism. Offered every two years. Prerequisite: POLS 135 or instructor's permission.

340 - Environmental Policy-3 S.H.

A seminar in environmental policy analysis. Students examine and assess a variety of global, national, local and inter-governmental environmental problems and governmental efforts in response to these problems. Special emphasis is placed on air and water pollution, erosion, toxic wastes, species loss and population growth.

341 - Health Care Politics & Policy-3 S.H.

An analysis of the politics of health care. Special emphasis is placed on the formulation of health care policy and policy reform in the United States, but health care systems of other industrialized nations and developing nations also are examined.

342 – International Political Economy-3 S.H.

An introduction to the relationship between international politics and international economics, and the theories of international political economy. The topics cover the following: the politics of international trade, investment and foreign aid; the consequences of the multi-national corporations on international relations and their political role; economic foreign policy-making and its implications for national and international politics. Offered every two years. Prerequisite: POLS 130 or instructor's permission.

346 - International Law-3 S.H.

The nature and sources of international law; jurisdiction of states over persons and territory; recognition of states and governments; law of the sea; principle of state responsibility; law of treaties; and transnational legal problems. Offered every two years. Prerequisite: POLS 130 or instructor's permission.

347 - International Organizations-3 S.H.

An analysis of the background organization, aims, activities and accomplishments of the United Nations and its specialized agencies. A consideration of the factors affecting the success or failure of world organizations. Offered every two years. Prerequisite: POLS 130 or instructor's permission.

* Course may be used to satisfy certain University Studies requirements.

358 – Contemporary Political Thought

This is the third part of a three-part survey course on The History of Political Thought series offered in the Political Science department. This course studies major contemporary thinkers in the canon, such as Nietzsche, Foucault, Arendt, Camus, and Rawls. Offered every two years.

360 – American Congress -3 S.H.

An examination of the role of Congress in shaping policy and representing constituents. Topics covered include the organization of Congress, Congressional leadership, voting coalitions and proposals for reform. Prerequisite: POLS 120.

380 - Political Research I-Secondary-3 S.H.

An introduction to political research. Topics covered include, approaches and methods used in political research, framing research questions, developing and testing hypotheses, evaluating research, defining concepts, measuring variables, making observations, analyzing data, and presenting research findings. It is recommended that students complete this course before enrolling in other 300- or 400-level courses.

Offered every year. Prerequisite: POLS 120 or instructor's permission.

390 - Comparative Politics-Third World-3 S.H.

A comparative study of the political ideological, social and economic development in selected countries from the Third World. Countries covered may vary each time the course is offered but will include examples from the African, Asian and Latin American continents. Prerequisite: POLS 135 or instructor's permission.

401 - Independent Readings in Political Science-1-3 S.H.

Readings in an area of political science of particular interest to the student. Credit arranged.

410 - Political Research II-Primary-3 S.H.

Capstone experience that allows students to do original primary research using the various primary research tools and approaches used in the study of practical phenomena and processes. Emphasis is placed on problem-solving and critical thinking. Students have a capstone experience in which they apply knowledge gained in this and other courses to an original research problem. Survey research techniques are studied and a practical survey project is undertaken. Offered every year. Prerequisite: POLS 380.

416 - Internship Program-1-12 S.H.

Provides practical experience in local, state and national government, and public administration (limited enrollment). Credit arranged. (Cannot apply toward a graduate degree. Only three credits count toward major.)

420 - Administrative Law-3 S.H.

An exploration of the law of the administrative process: legislative, executive and judicial control of administrative action, the formal administrative process; administrative discretion; with due consideration to the Federal Administrative Procedure Act. Prerequisite: POLS 120; recommended prerequisite: POLS 320.

421 – The First Amendment-3 S.H.

A seminar class on one of the most contentious constitutional amendments. Topics include: freedom of speech, free exercise of religion, separation of church and state, and freedom of association. Prerequisites: POLS 120 and POLS 320 or instructor's permission.

422 - American Foreign Policy-3 S.H.

A study of contemporary United States foreign policy. The course includes an analysis of threats and issues originating from the external world and facing America, and the suitable American response, responsibilities and commitments. Offered every two years. Prerequisite: POLS 130 or instructor's permission.

425 - Policy Studies-3 S.H.

An introduction to the evaluation of public policy in the United States. Students assess the process and substance of policy on various topics such as pollution, poverty, crime, illness and violence. Offered every two years. Prerequisite: POLS 120.

426 - Politics of Public Budgeting-3 S.H.

An examination of the politics of budgeting at the state, local and national level. Consideration is given to program planning, inter-governmental relations, the government and the economy, and reforms in budgetary systems. Prerequisites: POLS 120 and POLS 228.

429 - Policy Reform-3 S.H.

Strategies and problems of making, implementing and changing public policy. Discussion addresses policy stakeholders as they are involved in developing and reforming public policy. Offered every two years. Prerequisite: POLS 120.

430 - Agency Performance-3 S.H.

The civil service movement, public personnel systems and contemporary strategies to manage personnel for higher levels of performance. Prerequisites: POLS 120 and POLS 228.

450 – Feminist Political Theory – 3 S.H.

This course investigates different perspectives in feminist political thought. Students will consider psychological, marxist, radical, liberal, utopian, and French Feminist arguments, in order to understand the ways that political theorists have wrestled with the question of woman/women. Offered every two years.

475 - Democratization and Its Challenges-3 S.H.

The emphasis of this course is on the wave of democratization that is sweeping the world and the challenges that the new democracies face in consolidating themselves. This course covers the theory of democracy and the institutional, cultural and socio-economic challenges that countries face as they seek to make the transition from dictatorship to democracy. Offered every two years. Prerequisite: 135 or instructor's permission.

488 - Issues in International Politics-3 S.H.

The purpose of the course is to enable students to have an opportunity to discuss a variety of contemporary global issues, which may not be covered in a regular course, e.g. terrorism, religious fundamentalism, human rights and state sovereignty and ethno-nationalism. Topics vary from year to year, depending upon their prominence or the instructor's judgment that they should receive consideration. Offered every two years. Prerequisite: POLS 130 or instructor's permission.

499 - Seminar-1-3 S.H.

The subject matter is arranged by the instructor before the course is offered. Students can repeat the course without limitation on the number of credits as long as the subject matter is different.

PRE-PROFESSIONAL SEQUENCES

Pre-professional sequences are not degree programs (e.g. major or minor) at WSU. They are programs that are preparatory for a degree at another college or university. WSU offers pre-professional sequences in dental hygiene, dentistry, engineering, health science, law, medicine (allopathic and osteopathic), mortuary science, optometry, pharmacy, physician assistant, physical therapy, podiatry, veterinary medicine.

PRE-DENTAL HYGIENE

Pasteur Hall, Room 215B (507-457-5272)

http://bio.winona.edu/biohp/acad_deg.htm

Dr. David Essar, Advisor

Programs are custom-designed to meet preliminary or basic sciences of the University of Minnesota, University of Minnesota-Duluth, Minnesota State University-Mankato, Normandale Community College and RCTC/Minnesota Riverland Technical College.

PRE-DENTISTRY

Pasteur Hall, Room 215B (507-457-5272)

Dr. David Essar, Advisor

<http://bio.winona.edu/biohp/acad-deg.htm>

Recommended Courses

This program has been planned especially for students expecting to enter the School of Dentistry at the University of Minnesota. However, this program also meets the needs of at least 90 percent of U.S. dental schools. Most entering dental students have a bachelor's degree. Students planning to enter dental schools other than the University of Minnesota should consult the catalog of their chosen schools. All pre-dentistry students are encouraged to consult with the advisor to help plan their program. Most pre-dental students follow either the allied health option or the cell and molecular option as described under the Biology Department's programs.

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|---------------|--|
| ENG * 111 | College Reading and Writing (4) |
| ENG * 201/223 | An upper-division English writing intensive course (3) |
| CMST * 191 | Fundamentals of Speech Communication (3) |

BIOL *241, *242	Basics of Life, Organismal Diversity (8)
MATH *120	Precalculus and MATH *160 Calculus (8)
CHEM *212, *213	Principles of Chemistry I, II (8)
CHEM 350, 351	Organic Chemistry I, II (9)
BIOL 201	Human Anatomy (4)
PHYS *201, 202	General Physics I, II (8)
PSY *210	General Psychology (3)
CHEM 400, 401	Biochemistry I, II (7)

Electives

Electives should be chosen to give students a broad liberal education within the limits of time available. Electives from the following areas are suggested: sculpturing, cell biology, developmental biology, immunology, microbiology, histology, accounting, computer science, business, economics, history, and sociology.

Students must take the Dental Admission Test no later than October of the academic year prior to the planned entrance date into the dental school of choice.

PRE-ENGINEERING

Stark Hall, Room 203 (507-457-5685)
Department of Engineering Advisor

The following courses are recommended for a pre-engineering sequence. However, it is strongly recommended that students seek the advice of an advisor from the Department of Engineering for specific course recommendations and class schedules.

Chemistry

212	Principles of Chemistry I (4)
213	Principles of Chemistry II (4)

Computer Science

130	Introduction to BASIC (3)
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Mathematics

160	Calculus I (4)
165	Calculus II (4)
260	Multivariable Calculus (4)
270	Differential Equations and Linear Algebra (4)

Physics

221	University Physics I (4)
222	University Physics II (4)
302	Electrical Circuits and Systems (3)

Engineering

102	Introduction to Engineering (2)
182	Engineering Graphics and Design (2)
250	Statics (3)
260	Mechanics of Materials (3)
270	Dynamics (3)
300	Thermodynamics (3)

English

111	College Reading and Writing (4)
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University Studies Courses

PRE-HEALTH SCIENCE

Memorial Hall, Room 103 (507-457-5219)

<http://www.winona.edu/hhp/>

Dr. Gary Kastello, Advisor

The course of study is designed according to the graduate school chosen by the student. Most students major in exercise science with elective courses designed to meet requirements of the graduate school chosen by the student. Typical graduate programs consist of biomechanics, exercise physiology, kinesiology, motor learning, or other health care fields including occupational therapy, physical therapy, and respiratory therapy. Soon after enrolling at WSU, students should meet with their advisor to plan their program of courses.

PRE-LAW

Minne Hall, Room 212 (507-457-5400)

Dr. Troy Paino, Advisor

University law schools require completion of a bachelor's degree or its equivalent before entering law school. It is therefore suggested that interested students follow a program that provides a breadth of knowledge with in-depth study in areas of special interest. It is also suggested that electives be taken in areas not too closely related to a major field or study. Many pre-law students major in English, history,

law and society, paralegal, political Science, or economics. Other departmental majors also provide an excellent background for law school.

All students interested in pre-law are encouraged to contact the pre-law advisor concerning questions on majors, minors, grade point averages, law school admission tests, Law School Data Assembly Services, and law schools in the United States.

PRE-MEDICINE (ALLOPATHIC AND OSTEOPATHIC)

Pasteur Hall, Room 215B (507-457-5272)

http://bio.winona.edu/biohp/acad_deg.htm

Dr. David Essar, Advisor (Biology)

Pasteur Hall, Room 312A (507-457-5291)

Dr. Bruce A. Svingen, Advisor (Chemistry)

<http://course1.winona.edu/chemistry/premed.htm>

With few exceptions, admission into a medical school requires a bachelor's degree. Each pre-medicine student should, therefore, choose an area of interest in which to major. In the Biology Department, most pre-medical students choose the cell and molecular option. In the Chemistry Department, most pre-medical students choose option A.

The minimum requirements for admission to the University of Minnesota Medical School, Mayo School of Medicine, and the two-year program at Duluth, Minnesota are:

Biology with lab (2 semesters/1 year)
General chemistry with lab (2 semesters/1 year)
Organic chemistry with lab (2 semesters/1 year)
Physics with lab (2 semesters/1 year)
Biochemistry (1 semester)
Completion of a 4-year degree

The University of Minnesota and University of Minnesota-Duluth also require:

Math-Calculus (1 semester)
English (2 semesters/1 year)
Social and behavioral sciences (4 semesters/2 years)

These same requirements are applicable to the majority of medical schools in the United States and to osteopathic schools.

Pre-medical students should seek the advice of a pre-medical advisor and should consult the catalogs of the medical schools of their choice for more specific requirements. The Medical College Admissions Test (MCAT) should be taken no later than August prior to the year in which applications will be submitted. MCAT application and AMCAS packets are available through the pre-medical advisors.

Recommended Courses

Note: ENG 111, CHEM 212 and 213, and BIOL 241 and 242 should be taken during the first year of college.

ENG *111	College Reading and Writing (4)
BIOL *241, *242	Basics of Life, Organismal Diversity (8)
MATH 160	Calculus I (4) OR
MATH 140	Applied Calculus (3)
BIOL 201,323	Human Anatomy (4), General Physiology (4)
STAT 305	Biometry (3)
CHEM *212, *213	Principles of Chemistry I, II (8)
CHEM 350, 351	Organic Chemistry I, II (9)
BIOL 308	Cell Biology (3)
BIOL 310	Genetics (3)
CHEM 400, 401	Biochemistry I, II (7)
BIOL 409	General Microbiology (4)
PHYS *201, 202	General Physics I, II (8) OR
PHYS 221, 222	University Physics I, II (8)]
PSY *210	General Psychology (3)
PSY 250	Developmental Psychology (3)

300-400 level Humanities (3)

300-400 level Psychology (3)

Other Courses to Complete Required Credit

Students should consult with their advisor for those courses necessary to complete a B.S. or B.A. degree.

* Course may be used to satisfy certain University Studies requirements.

PRE-MORTUARY SCIENCE

Pasteur Hall, Room 219

http://bio.winona.edu/biohp/acad_deg.htm

Dr. Frances Ragsdale, Advisor

The course of study is designed according to the graduate school chosen by the student. All applicants must have completed at least two years of college work.

PRE-OPTOMETRY

Pasteur Hall, Room 219

Dr. Frances Ragsdale, Advisor

The course of study is designed according to the graduate school chosen by the student. All applicants must have completed at least three years of college work. The Optometry Admissions Test is required for admission to a professional optometry school. This test is usually given in February and October. Most pre-optometry students follow the pre-medical curriculum with a major in Biology, either the allied health option or the cell and molecular option. Students should meet early with an advisor to plan their programs of courses.

PRE-PHARMACY

Pasteur Hall, Room 312B (507) 457-2476

<http://course1.winona.edu/chemistry/prepharm.htm>

Dr. Thomas W. Nalli, Advisor

This program meets the requirements of most pharmacy colleges but especially those of the University of Minnesota and the University of Wisconsin. Students planning to attend other schools should consult the pre-pharmacy advisor and respective catalogs.

Biology - 8 or 11 S.H.

For the University of Minnesota-Twin Cities

BIOL 201 Human Anatomy (4)

BIOL 209 Microbiology (3) OR BIO 409 General Microbiology (4)

BIOL 241 Basics of Life (4)

For the University of Wisconsin-Madison

BIOL 241 Basics of Life (4)

BIOL 242 Organismal Diversity (4)

Chemistry - 17 S.H.

CHEM 212 Principles of Chemistry I (4)

CHEM 213 Principles of Chemistry II (4)

CHEM 350 Principles of Organic Chemistry I (4)

CHEM 351 Principles of Organic Chemistry II (5)

Mathematics And Physics - 12 S.H.

MATH 160 Calculus I (4)

PHYS 201 General Physics I (4) OR PHYS 221 University Physics I (4)

PHYS 202 General Physics II (4) OR PHYS 222 University Physics II (4)

Language Skills - 10 S.H.

ENG 111 College Reading and Writing (4)

ENG 210 Advanced Expository Writing (3)

CMST 191 Fundamentals of Speech (3)

Social Sciences - 9 S.H.

ECON 201 Principles of Microeconomics (3)

PSY 210 General Psychology (3)

SOC 150 Introduction to Sociology (3)

Students must choose additional elective courses from the social sciences and the humanities. Students should consult with their advisor for recommendations on these electives. Students not meeting the prerequisites for Mathematics 160 must take additional lower-level math courses. Students exempted from English 111 must elect higher-level English courses.

PRE-PHYSICAL THERAPY

Pasteur Hall, Room 215F (507) 457-5271

http://bio.winona.edu/biohp/acad_deg.htm

Dr. Edward Thompson, Advisor

Admission into a physical therapy school requires a bachelor's degree. Each pre-physical therapy student should, therefore, choose an area in which to major that provides a background of skills and competencies and allows application to and successful admission into a physical therapy program upon graduation from WSU.

Admission to a graduate-level physical therapy program is very competitive; the minimum requirements are:

- Biology: 12 S.H., including a complete introductory course in the principles of biology or zoology and advanced coursework in biology or zoology, which builds upon the introductory courses.
- Chemistry: 8 S. H., consisting of a complete introductory course.
- Physics: 8 S. H., consisting of a complete introductory course.
- Psychology: 6 S. H.
- Human Physiology: 3 S. H.
- Statistics: 3 S.H. at the college level.
- Mathematics: 3 S. H. at the level of college trigonometry or higher.
- A GPA of 3.5 or better, a GRE (general test) of 1000 (verbal and quantitative).
- A genuine interest in people and the health of others, especially as shown by about six months of involvement (volunteer or otherwise) in patient care and/or research at a health care facility.

Many physical therapy schools require at least three upper-division courses in biology such as histology, endocrinology, genetics, microbiology, parasitology, molecular biology, neuroscience, cell biology, cell physiology and embryology. Some physical therapy schools also require additional upper-level courses such as calculus, organic chemistry and biochemistry. All of these upper-level science courses have chemistry or biology prerequisites. It is expected that applicants will exceed the minimum admission requirements in several of the above subject categories. It is strongly suggested that students consider career-related courses such as biomechanics, kinesiology, exercise physiology, pharmacology and pathophysiology whenever possible.

Most pre-physical therapy students at WSU major in the biology allied health option, which is described under the Biology Department's program descriptions elsewhere in this catalog. This biology major does not require a minor and provides the student with extensive training in the life and physical sciences as well as mathematics. With the biology major, the student is eligible to apply to master's-level and doctorate-level physical therapy programs.

When they arrive on campus, students who are interested in entering a physical therapy program after graduation should meet with the pre-physical therapy advisor, Dr. Thompson, to plan their programs of study.

Students majoring in pre-physical therapy are encouraged to apply to the physical therapy program of their choice early in their senior year. Since physical therapy programs are graduate-level programs, students must have achieved a grade point average of 3.0 on the 4.0 system to be eligible to apply. In addition, most of the programs require that students present proof of having taken the Graduate Record Examination (G.R.E.) in order to be considered for entry into their program. Students should see their advisor for assistance in arranging to take this examination. Many WSU students tend to favor the physical therapy programs offered by Northwestern University (Chicago, IL), University of Osteopathic Medicine and Health Sciences (Des Moines, IA), Chicago Medical School (Chicago, IL), and Wichita State University (Wichita, KS). The faculty at these institutions are familiar with the quality of student from this University and student selections have been highly favorable.

Students also should be aware that the WSU Department of Health and Human Performance provides additional opportunities for pre-physical therapy majors and for those students who decide to pursue School and Community Health, Exercise Science, Worksite Health Promotion, Cardiac Rehabilitation or an Athletic Trainer certificate. Dr. Gary Castello, Department of Health and Human Performance at WSU has a Ph.D. in Biological Science and an M.S. in Exercise Physiology, and is available to advise students on issues of careers and career choices in allied health.

PRE-PHYSICIAN ASSISTANT

Pasteur Hall, Room 215B, (507) 457-5272

http://bio.winona.edu/biohp/acad_deg.htm

Dr. David Essar, Advisor

The course of study is designed according to the school chosen by the student. Most pre-physician assistant students follow the pre-medical curriculum with a major in biology, either the allied health option or the cell and molecular option. Students should meet early with an advisor to plan their programs of courses

PRE-PODIATRY

Pasteur Hall, Room 215F, (507) 457-5271
http://bio.winona.edu/biohp/acad_deg.htm
 Dr. Edward Thompson, Advisor

The course of study is designed according to the graduate school chosen by the student. Most pre-podiatry students follow the pre-medical curriculum with a major in biology, either the allied health option or the cell and molecular option. Students should meet early with an advisor to plan their programs of study.

PRE-VETERINARY MEDICINE

Pasteur Hall, Room 232, (507) 457-5855
http://bio.winona.edu/biohp/acad_deg.htm
 Dr. Emmanuel Brako, Advisor

This program is designed for entry into the University of Minnesota (U of M) College of Veterinary Medicine. All applicants must have completed at least three years of college work. A degree in biology or chemistry fits best with the required courses, but other degrees are acceptable.

All applicants must take the Graduate Record Examination (GRE). Applicants must also apply through the Veterinary Medical College Application Service (VMCAS), and they must meet the application deadline of October 1. Students planning to apply to other schools of veterinary medicine should consult the entry requirements of their chosen veterinary schools. Students should meet early with an advisor to plan their programs of study.

Required Courses

These courses fulfill the entrance requirements of the University of Minnesota School of Veterinary Medicine. These courses do not constitute a degree. For degree requirements, see the Biology Program or Chemistry Program requirements in this catalog.

BIOL *241, *242	Basics of Life, Organismal Diversity (8.)
BIOL 310	Genetics (4)
BIOL 319	Vertebrate Biology (4)
BIOL 409	General Microbiology (4)
CHEM *212, *213	Principles of Chemistry I, II (8)
CHEM 350, 351	Organic Chemistry I, II (9)
CHEM 400	Biochemistry (4)
CMST *191	Fundamentals of Speech Communications (3)
ENG *111	College Reading and Writing (4)
MATH *120	Precalculus (4) AND MATH *160 Calculus I (4)
PHYS *201, *202	General Physics I, II (8)

Electives

- STAT 110 Fundamentals of Statistics (3) is recommended by the University of Minnesota College of Veterinary Medicine.
- 12 to 18 elective credits to be chosen from the two groups below:
 1. History and Social Sciences (6-9 credits). Economics (recommended), geography, history, political science, psychology, sociology.
 2. Arts and Humanities (6-9 credits): Art, literature, music, philosophy, theater. The U of M College of Veterinary Medicine does not accept introductory and intermediate language courses as arts and humanities courses. (Additional courses are required for students not earning a bachelor's degree at WSU; see U of M College of Veterinary Medicine Catalog.)

PROFESSIONAL STUDIES

Somsen Hall, Room 109 (507-457-5080)
 Christensen (Chairperson); Director of Continuing Education and Graduate Studies

FACULTY

Pauline Christensen, Professor; Adult, Continuing Education & Extension; B. S., Iowa State University of Science and Technology; M.S., Winona State University; Ph.D., University of Minnesota-Twin Cities; 1973 -
Ann MacDonald, Coordinator/Customized Training; Adult, Continuing Education & Extension; B.S., N.E. Missouri State University; M.S., Winona State University; 1998 -

PURPOSE

This program allows students to pursue individualized academic interests and personal/professional goals within the framework of an academically sound Bachelor of Arts degree program. It is an excellent alternative for the mature student who wants to build on past experience and design his or her own degree program for current or future needs. It offers students a great deal of flexibility and allows for intellectual growth in a variety of academic areas.

Professional studies majors are advised by the Adult, Continuing Education and Extension Department (ACEED) faculty. When declaring the major, students must submit a statement of their goals and objectives for the major; this statement will be reviewed by the ACEED advisor and retained in the student's file.

B.A. MAJOR PROFESSIONAL STUDIES: GENERAL OPTION

48 S.H. Upper-Division Courses (300- and 400-level)

This program allows students to create a major utilizing several departments to meet their particular educational goals. Students may declare up to two minors within the requirements of this major.

REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. For the professional studies majors/minor, students must:

- Complete the standard WSU University Studies program, 48 upper-division credits, and electives to reach a minimum of 128 credits. It is expected that all course prerequisites will be completed.
- Submit a statement of goals and objectives for the major; this statement will be retained in the student's file.

A maximum of 9 credits applying to the major may be taken on a P/NC basis. All other WSU policies apply.

B.A. MINOR - PROFESSIONAL STUDIES

21 S.H.

This program allows students to create a minor utilizing several departments to meet their particular educational goals or to create a minor from departments in which a minor is not currently available. The credits in the professional studies minor must not duplicate any other courses in the student's program and cannot count any place except in the minor.

REQUIRED COURSES

- 15 semester hours must be upper-division courses (300- and 400-level)
- 6 semester hours may be any level

ADDITIONAL REQUIREMENTS

Students declaring the professional studies minor must have on file a statement of goals and objectives for the minor.

* Course may be used to satisfy certain University Studies requirements.

B.A. MAJOR PROFESSIONAL STUDIES: AVIATION MAINTENANCE MANAGEMENT OPTION

Degree program: 128 S.H.; Certification pending: 138 S.H.
(No Minor Required)

Pasteur Hall, Room 114D (507-457-5260)
Dr. George Bolon, Advisor

FACULTY

George Bolon, Professor, Physics; B.S., M.S., Oregon State University;
Ph.D., University of Utah; 1968 -

PURPOSE

The Professional Studies Aviation Maintenance Management Option prepares students to manage systems and technicians within the aviation maintenance industry. Graduates with this option can meet the needs of air carriers, the federal government, and corporate and commercial aviation.

This option is open to students who have completed the aviation maintenance program at the Minnesota State College—Southeast Technical (Red Wing); however, other students may petition for admission. Forty credits can be transferred from the technical college and applied toward this option.

There are six aspects to this degree program: (1) University Studies, (2) management core, (3) advanced aviation courses, (4) computer understanding and application, (5) the upper-division electives, and (6) technical college transfer credits, which are limited to 40 credits.

UNIVERSITY STUDIES (USP) (47 S.H.)

BASIC SKILLS (12 S.H.)

ARTS AND SCIENCES CORE (23 S.H.)

Humanities (6 S.H.)

Natural Sciences (8 S.H.)

CHEM 212 Principles of Chemistry (4)

PHYS 201 General Physics I (4)

Social Science (6 S.H.)

PSY 210 General Psychology (3)

ECON 201 Principles of Microeconomics (3)

Fine and Performing Arts (3 S.H.)

UNITY AND DIVERSITY (12 S.H.)

Critical Analysis (3 S.H.)

Science and Social Policy (3 S.H.)

Global or Multicultural Perspectives (3 S.H.)

Contemporary Citizenship or Democratic Institutions (3 S.H.)

USP Flag Requirements (12 S.H.)

MANAGEMENT (18 S.H.)

DIS 220 Business Statistics (3)

MKT 300 Principles of Marketing (3)

BUSA 301 Business Law (3)

MGMT 315 Principles of Management (3) OR

MGMT 317 Management of Human Resources (3)

POM 334 Production/Operations Management (3)

DIS 362 Management Information Systems (3)

AVIATION (12 S.H.)

PHYS 200 Fundamentals of Aviation (3)

PHYS 205 Airspace, Communications and Regulations (1)

PHYS 383 Air Traffic Control (3)

PHYS 387 Flight Safety (3)

PHYS 388 Legislative and Legal Aspects (2)

COMPUTER APPLICATION (6 S.H.)

CS 130 Introduction to BASIC Programming (3) OR

DIS 312 Business Computer Programming (3)

Any computer science elective and/or

DIS 202 Microcomputers in Business (3)

UPPER-DIVISION ELECTIVES (5 S.H.)

These electives must be approved by AWS faculty advisor.

TECHNICAL COLLEGE TRANSFER (40 S.H.)

ADDITIONAL REQUIREMENTS FOR CERTIFICATION (10 S.H.)

STAT 110 Fundamentals of Statistics (3) OR

DIS 320 Intermediate Business Statistics (3)

PHYS 202 General Physics II (4)

MATH 140 Applied Calculus (3)

PSYCHOLOGY

Phelps Hall, Room 231 (507-457-5435)

www.winona.edu/psychology

K. Williams (Chairperson)

FACULTY

Richard A. Deyo, Professor; B.S., Viterbo College; M.A., Ph.D., Bowling Green State University; 1990 -

Carrie Fried, Assistant Professor; B.S., Iowa State University; M.S., Ph.D., University of California; 1999 -

John Johanson, Assistant Professor; B.S., University of South Dakota; M.A., University of Nebraska-Omaha; Ph.D., University of Nebraska; 1999 -

Mary S. Kesler, Professor; B.M.Ed., M.A., Ph.D., University of Kansas-Lawrence; 1987 -

Kristi Lane, Professor; B.A., University of North Carolina; M.A., Ph.D., George Peabody College of Vanderbilt University; 1980 -

Gloria Marmolejo, Associate Professor; B.S. National Autonomous University of Mexico; M.S., Ph.D. University of Wisconsin-Madison, 1994 -

Peter K. Miene, Associate Professor; B.A., University of Kansas-Lawrence; Ph.D., University of Minnesota-Twin Cities; 1992 -

Susan B. Sefkow, Professor; B.A., Yale University; M.S., Ph.D., University of Massachusetts-Amherst; 1978 -

Janette P. Williams, Professor; B.A., Northwestern University; M.A., Ph.D., University of Illinois; 1987 -

Kerry G. Williams, Professor; B.S., University of Washington; M.A., Ph.D., University of Illinois; 1981 -

PURPOSE

Psychology is the science of behavior, including mental processes. The department's goal is to foster students' understanding of the many factors that influence behavior, the methods employed by psychologists to identify such factors and the means by which behavior can be modified. Students are attracted to the discipline because they wish to become professional psychologists, they plan to pursue careers in fields that emphasize interpersonal skills, or they want to better understand themselves as well as others.

Those majoring in psychology can choose between Options A and Option B. Option A is attractive because its semester-hour requirement allows students to combine a major in psychology with one or more additional majors or minors. Students' career and/or graduate school opportunities are

greatly enhanced by such multidisciplinary programs of study. Option B is available for those preferring to concentrate their studies in psychology for more in-depth experience.

Students must consult with a Psychology Department advisor to plan a major in psychology. All psychology majors are strongly encouraged to take Statistics (PSY 231) and Experimental Psychology (PSY 308) as early as possible in their educational career. The particular elective courses students take, along with their sequencing, depends upon their background, special interests, and goals.

CAREER OPTIONS

Students majoring in psychology who do not plan on graduate study receive a liberal arts education and are qualified for a wide variety of vocations that involve an understanding of human behavior, including careers in human services, technical and/or laboratory work, and business.

Students can prepare for graduate study in psychology by completing either option A or B. An advanced degree in psychology allows the pursuit of many different kinds of careers, including but not limited to the following: clinical or counseling psychologist, child psychologist, school psychologist, industrial psychologist, rehabilitation counselor, experimental psychologist, and college professor.

PASS/NO CREDIT COURSES

Except for independent study, PSY 400, students must take all courses in the major and minor on a grade-only basis. The P/NC option is available to non-majors/minors unless otherwise noted. Courses offered on a pass/no-credit basis are designated in the course descriptions.

COURSE REPETITION POLICY

Students cannot enroll in any psychology course more than three times whether due to official withdrawal (W) or a grade less than "C."

ADDITIONAL GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page 24. Specific requirements for psychology majors/minors are as follows:

- A minimum WSU overall cumulative GPA of 2.50 is required for graduation with a psychology major.
- A minimum GPA of 2.50 is required of majors in all grade-only psychology courses.
- Individual course grades lower than a "C" do not count toward either psychology major.
- Students cannot substitute a first- or second-year course (100- or 200-level or equivalent) taken at another school for a similar course offered at the junior or senior level (300 or 400) at WSU.
- No more than 3 S.H. credits of general introductory psychology transferred to WSU can be credited toward a psychology major or minor.
- No more than 6 S.H. credits in developmental psychology (child, adolescent, adult, lifespan, etc.) transferred to WSU can be credited toward a psychology major or minor.
- Transfer students must complete at least 18 S.H. in psychology at WSU for the Option A major, 25 S.H. for the Option B major, and 12 S.H. for the psychology minor.
- No more than 6 S.H. credits of PSY 400 may count toward a psychology major and 3 S.H. toward a psychology minor.

ROCHESTER CENTER

The Option A psychology major and the psychology minor are available through the 2+2 Program at the Rochester Center. See page 41 for the articulation of both these psychology degree programs.

HONORS IN PSYCHOLOGY

Students have the option of completing additional requirements in order to graduate with Honors in Psychology. Students completing the requirements have it noted on their transcript along with the title of their thesis. Students are responsible for applying to the department Honors Program by submitting a formal proposal to the department through their academic advisor and meeting all the departmental requirements for graduation with Honors in Psychology. Students must meet the following requirements for Honors in Psychology:

1. Declare a major in psychology.
2. Have and maintain a minimum GPA of 3.50 (magna cum laude) overall and in psychology at the time they submit their proposal.
3. Successfully complete at least 20 S.H. in psychology, including PSY 308, before they submit a proposal.
4. Identify a full-time WSU Psychology Department faculty member willing to serve as a research advisor. No individual faculty member is required to participate in this program. It is the student's obligation to obtain the permission of a faculty member to serve in this capacity.
5. Submit a formal research (empirical) proposal (APA format) to the Honors Research Review Committee for approval. The proposal must be approved before students complete 96 of the 128 semester hour credits or equivalent required for graduation. That is, there must be at least one academic year available in which to complete the honors thesis. Honors theses cannot involve collaborative student projects; they must be individual efforts. The Psychology Department establishes an Honors Research Review Committee composed of a minimum of two full-time faculty members who volunteer to serve. The committee meets as necessary to consider pending proposals.
6. Work under the direction of a research advisor to complete, in a timely fashion, a project satisfactory to the advisor.
7. Write an acceptable honors research thesis (APA format). The thesis must be completed no later than April 30 for students planning to graduate in May.
8. Present the results of the research at a national, regional or local conference. If, for reasons acceptable to the research advisor, students cannot meet this requirement, students must then present the thesis research at a WSU Psychology Department/Psi Chi symposium.
9. Supply two bound copies of the thesis—one for the department, the other for the WSU library. Students are encouraged, though not required, to construct a poster presentation of the research for display in the department.

B.A. MAJOR – PSYCHOLOGY: OPTION A

35 S.H. (Minor Required)

REQUIRED COURSES (17 S.H.)

210	General Psychology (3)
231	Statistics (3)
308	Experimental Psychology (5)
350	Psychological Testing and Measurement (3)
434	History and Systems of Psychology (3)

ELECTIVES (18 S.H.)

Psychology electives to total at least 18 S.H.

B.A. MAJOR – PSYCHOLOGY: OPTION B

49-52 S.H. (No Minor Required)

CORE REQUIRED COURSES (17 S.H.)

210	General Psychology (3)
231	Statistics (3)
308	Experimental Psychology (5)
350	Psychological Testing and Measurement (3)
434	History and Systems of Psychology (3)

FOUNDATION/DISTRIBUTION REQUIREMENTS (12–13 S.H.)

Cluster A: Select at least two of the following (6 S.H.):

250	Developmental Psychology (3)
305	Theories of Personality (3)
325	Social Psychology (3)
420	Abnormal Psychology (3)

Cluster B: Select at least two of the following (6-7 S.H.):

301	Introduction to Learning (3)
303	Brain and Behavior (3)
369	Cognitive Psychology (3 or 4)
410	Sensation and Perception (3)

ELECTIVES (15 S.H.)

Psychology electives to total at least 15 S.H. These may include courses from Clusters A and B taken beyond the above requirements.

ADDITIONAL REQUIREMENTS (5–7 S.H.)

Courses meeting the following requirements are listed below.

- Students who have not earned at least a "B" in ENG 111 must select an additional English course from those listed. Additionally, they must complete 2-3 S.H. in mathematics/statistics OR 3 S.H. in computer and information sciences.
- Students who have earned an "A" or a "B" in ENG 111 may select coursework from any two of the three designated departments for a total of 5-6 S.H.

English (3 S.H.)

An approved course in advanced writing such as English 210, 314, 439, 449, etc.

Mathematics and Statistics (2-3 S.H.)

One or two approved courses in mathematics or advanced statistics such as MATH 110, 120, 140, 160, 210, etc. or STAT 115, 255, 289, 310, 330, 350, 355, 360, 365, etc.

Computer and Information Sciences (3-4 S.H.)

An approved computer science course such as CS 115, 130, 150, 231, 234, etc.

B.A. MINOR – PSYCHOLOGY

21 S.H.

REQUIRED COURSES (3 S.H.)

- * 210 General Psychology (3)

ELECTIVES (18 S.H.)

Psychology electives to total at least 18 S.H.

PSYCHOLOGY COURSE DESCRIPTIONS

210 - General Psychology—3 S.H.

A broad introduction to psychology: the science of human behavior and mental processes, focusing on its questions, methods, research findings, theories and applications. Offered each semester.

231 - Statistics—3 S.H.

An overview of the theories, procedures and applications of descriptive, correlational and inferential statistics in the behavioral sciences. Topics include central tendency, variability, correlation, special correlational procedures, linear regression, parametric and non-parametric tests of significance. Prerequisite: PSY 210 and completion of Math/Statistics Basic Skills Requirement. Offered each semester. Grade only.

250 - Developmental Psychology—3 S.H.

A survey of the patterns of change and stability in human behavior from conception to death. Theories and research pertaining to growth and change in physical, cognitive, personality and social functioning across the life span are examined. Prerequisite: PSY 210. Offered each semester. Grade only.

275 - Psychology of Women—3 or 4 S.H.

A survey of scientific research into the nature of female behavior contrasted with male, including implications for modern living. Topics include gender stereotypes, gender development/typing, gender comparisons in social, personality, and cognitive areas, education and work, love relationships, sexuality, mental and physical health issues and violence. Prerequisite: PSY 210. May be offered with a discussion/writing lab (4 S.H.) or without (3 S.H.). Offered each semester.

280 - Persuasion and Social Influence—3 S.H.

A survey of theory, research, and application in the areas of persuasion and social influence. Theories include heuristics and cognitive models of persuasion, group influence effects, and motivational theories. Areas of application include mass media, politics, and social movements. Prerequisite: PSY 210. Offered yearly. Grade only.

298 - Health Psychology—3 S.H.

Explores psychological factors in optimal maintenance of health, treatment of illness and recovery from or adjustment to ongoing health problems. Theories, research methods and clinical applications from the biopsychosocial context as applied to health psychology are examined. Prerequisite: PSY 210. Offered each semester.

301 - Introduction to Learning—3 S.H.

Behavioral, associative and cognitive theories of learning and memory are reviewed. Topics include reinforcement, punishment, extinction, generalization, discrimination, observational learning and motivation. Prerequisite: PSY 210. Offered yearly. Grade only.

303 - Brain and Behavior—3 S.H.

A survey of how neuron physiology directs behavior. Topics include a discussion of functional neuroanatomy as applied to the study of emotion, consciousness, social behavior, feeding, and memory, and a discussion of neurological and psychological disorders, and the diseases of aging. Prerequisite: PSY 210. Offered yearly. Grade only.

305 - Theories of Personality—3 S.H.

A survey of major theoretical perspectives. Personality theory, research and assessment are considered from a variety of viewpoints including the psychodynamic, behavioral, dispositional and phenomenological perspectives. Prerequisite: PSY 210. Offered each semester. Grade only.

308 - Experimental Psychology—5 S.H.

Introduction to scientific methods and research techniques in psychology. Laboratory experiences are included. Prerequisites: PSY 210, PSY 231. Offered each semester. Grade only.

325 - Social Psychology—3 S.H.

Overview of theories and research in social psychology. Topics include person perception, the self, stereotyping and prejudice, attitudes and persuasion, interpersonal relationships, and group behavior. Prerequisite: PSY 210. Offered each semester. Grade only.

330 - Psychology and the Law—3 S.H.

Psychological analysis of the legal system, focusing on perception, memory, and decision-making processes by individuals in the system. Topics include eyewitnesses, expert witnesses, the identification and evaluation of suspects, jury trials, capital punishment, and current topics. Prerequisite: PSY 210. Offered yearly. Grade only.

335 - Human Factors Psychology—3 S.H.

An examination of psychological principles applied to the relationship between technology and human capabilities in the design and operation of both human-machine systems and environments in which humans live, work, and play. Specific topics include human perceptual and motor

capabilities, machine displays and controls, and workspace design.

Prerequisite: PSY 210. Offered yearly. Grade only.

350 - Psychological Testing and Measurement—3 S.H.

Principles and practice of psychological measurement. Topics include basic statistical concepts; reliability and validity; widely used ability, personality, and interest tests and their application in educational, employment, clinical and basic research settings; social and legal issues arising from test use. Prerequisites: PSY 210, PSY 231. Offered each semester. Grade only.

360 - Personnel Psychology—3 S.H.

Analysis and review of applied psychology in the field of work including job analysis, personnel selection, performance evaluation, training design and evaluation, job design, human engineering, fatigue, safety and physical working conditions. Prerequisite: PSY 210. Offered yearly. Grade only.

369 - Cognitive Psychology—3 or 4 S.H.

Contemporary scientific approaches to understanding human mental activity - the acquisition, storage, retrieval and use of knowledge. Topics include pattern recognition, attention, memory, concept formation, language, imagery, reasoning, problem-solving, and decision-making. Both theory and applications to other disciplines and everyday life are addressed. Prerequisite: PSY 210. May be offered with a lab (4 S.H.) or without (3 S.H.). Offered yearly. Grade only.

400 - Independent Study or Research-1—3 S.H.

Independent study or research for credit under the guidance of a faculty member with prior permission. Can be repeated. Grade only. Teaching assistantships and field experience may be available but only on a P/NC basis. Only 6 S.H. credits of Psychology 400 may count toward a Psychology Major. Only 3 S.H. may count toward the Psychology Minor. Prerequisites: PSY 210 and as determined by the instructor. Offered each semester.

408 - Advanced Experimental Psychology—3 S.H.

Theory and methods of advanced research techniques in psychology. Individual student research projects are conducted. Prerequisites: PSY 210 and PSY 231 or equivalent and PSY 308. Offered yearly. Grade only.

410 - Sensation and Perception—3 S.H.

A careful consideration of how we come to know about our world through our senses. Emphasis on vision and audition, including clinical aspects. Also addresses taste, smell, and skin senses including pain, orientation and time perception. Both theory and applications to other disciplines and everyday life are addressed. Prerequisite: PSY 210. Offered yearly. Grade only.

418 - Behavioral Pharmacology—3 S.H.

An analysis of the psychological, sociological and physiological factors related to pharmacological treatment of psychological disorders and chemical dependency. Additionally, a discussion of traditional medicine and drug development is included. This course does not meet teacher certification. It is designed for non-education majors. Prerequisites: PSY 210 and PSY 303. Offered every two years. Grade only.

420 - Abnormal Psychology—3 S.H.

The origins, development and treatment of abnormal behavior. Topics include mood, anxiety and schizophrenic disorders as well as selected topics, which may include somatoform and dissociative disorders, life-span related disorders, substance use disorders, organic disorders, psychological aspects of illness, and prevention. Prerequisites: PSY 210 and 3 additional S.H. in Psychology. Offered each semester. Grade only.

421 - Cognitive Behavior Therapy—3 S.H.

Current principles, research methods and therapeutic interventions for behavioral change are discussed as applied to the behavior of individuals and groups in mental health settings, schools, hospitals and interpersonal situations. Prerequisites: PSY 210 and PSY 420. Offered every two years. Grade only.

423 - Psychopathology of Childhood—3 S.H.

Examines classification of disorders in children and adolescents. Core topics include mood, anxiety and psychotic disorders. Selected topics may include eating disorders, psychosomatic disorders, autism, psychosis, phobias, developmental deviations. Therapeutic issues are discussed. Prerequisites: PSY 210, PSY 250 and PSY 420. Offered yearly. Grade only.

424 - Women and Mental Health—3 S.H.

Diagnosis and treatment is discussed with mood disorders as a central focus, followed by themes in therapy selected from topics such as anger, autonomy, identity, integration of marriage and career, lesbianism, poverty, consciousness raising and gender role development. Traditional and alternative therapeutic approaches are discussed in light of socioeconomic factors affecting women. Current issues related to women's needs are addressed. Prerequisites: PSY 210 and 6 S.H. in Psychology or PSY 210 and PSY 275 (or WS 148) or instructor's permission. Offered yearly. Grade only.

425 - Organizational Psychology—3 S.H.

An analytical survey of theory and research in organizational socialization, decision-making, motivation, leadership and the use of power and authority, communication, organizational change and development, and the evaluation of organizational effectiveness. Prerequisite: PSY 210. Offered yearly. Grade only.

430 - Forensic Psychology—3 S.H.

A seminar examining issues at the intersection of clinical psychology and the legal system. Topics include criminal psychology, insanity and competency, predictions of dangerousness, the psychology of victims, issues involving children, civil law issues, and other current topics. Prerequisite: PSY 210. PSY 330 is recommended, but not required. Offered yearly. Grade only.

431 - Counseling and Clinical Psychology—3 S.H.

Issues of clinical and counseling practice include ethics, informed consent, malpractice, confidentiality and duty to warn, special populations, and personal characteristics of professionals. Practice in interviewing strategies as part of clinical assessment is included. Prerequisites: PSY 210 and PSY 420. Offered yearly. Grade only.

433 - Neuroscience—4 S.H.

A survey of contemporary theories and research methods in neuroscience. Topics include a discussion of functional neuroanatomy as applied to the regulation of homeostasis, motor systems, cognitive processing and a discussion of advanced topics in the areas of motor, neurological and psychological disorders. Lecture and laboratory. Prerequisites: 9 S.H. in psychology including PSY 303 or 9 S.H. in biology. Offered yearly. Grade only.

434 - History and Systems of Psychology—3 S.H.

A historical overview of psychology and its antecedents are considered to provide a richer understanding of contemporary psychology as an evolving, conceptual system. Majors are encouraged to complete all other core requirements before registering in PSY 434. Prerequisite for non-majors: minimum of 12 S.H. in Psychology. Prerequisites for majors: PSY 210 and PSY 231 or equivalent and PSY 308 and a minimum of two other courses in Psychology (6 S.H.). Offered each semester. Grade only.

435 - Psychology of Adulthood and Aging—3 S.H.

Current theory and research dealing with psychological development from early adulthood through old age. Topics include change and continuity in intellectual and personality functioning, and psychological consequences of marriage, parenthood, work, retirement, widowhood and declining health. Prerequisites: PSY 210 and PSY 250 or instructor's permission. Offered biannually. Grade only.

498 - Seminar in Psychology—3 S.H.

A variable-topic course involving in-depth study of a specialized subject area within psychology. Can be repeated with different topics. Prerequisites: PSY 210 and as determined by the instructor. Offered yearly. Grade only.

* Course may be used to satisfy certain University Studies requirements.

SOCIAL SCIENCE/HISTORY (SECONDARY SOCIAL STUDIES TEACHING)

Minne Hall, Room 212, (507) 457-5400

Alexander Yard, Program Director (email: ayard@winona.edu)

FACULTY

Alexander Yard, Professor; M.A., University of Missouri-St Louis; A.B., A.M., Ph.D., Washington University (St Louis, Missouri); 1986 -

PURPOSE

This program is designed for prospective middle school and high school teachers. WSU established the major to meet the secondary social studies teacher certification requirements for the state of Minnesota.

Students who wish to teach high school-level history or government or geography or another social science field need to complete this program and the other requirements for a so-called "broad field" teaching license for secondary social studies. Minnesota and other surrounding states do not offer secondary-level licenses to teach only history or any of the other traditional social science disciplines by themselves.

PASS/NO CREDIT COURSES

All courses must be taken on a grade-only basis. Courses taken at either WSU or another institution on a pass/no credit basis do not count toward fulfillment of the program requirement.

GRADE AND GPA REQUIREMENTS

Coursework must receive a grade of "C" or better to count toward fulfillment of the program requirements. Students must achieve a GPA in program courses of 2.75 or better to successfully complete the major.

EDUCATION DEPARTMENT COURSES & OTHER REQUIREMENTS FOR TEACHING LICENSURE

Students should consult the Education department section on page 86 of this catalog and the Education Department office (Gildemeister Hall, Room 152) for information concerning:

- The Professional Education Sequence of education courses required of students who wish to become licensed as secondary teachers.
- The admission process required to enter the Professional Education Sequence.
- Other required courses outside the Education Department (such as HHP 204, Personal and Community Health, and work in the field of special education).
- Other requirements that students must complete in order to qualify for a Minnesota social studies teaching license.

Social science/history students will have an opportunity to acquire the experience with educational technology required for a Minnesota teaching license in Education 331, Teaching Social Studies in Secondary Schools.

Students who need to complete the new University Studies program should consult the program director concerning the required upper-division flagged courses.

B.S. MAJOR – SOCIAL SCIENCE/HISTORY (SECONDARY SOCIAL STUDIES TEACHING)

81-83 S.H. (No Minor Required)

REQUIRED COURSES (66–68 S.H.)

Economics (6 S.H.)

- * 201 Principles of Microeconomics (3)
- * 202 Principles of Macroeconomics (3)

Geography (12 S.H.)

- * 110 World Regional Geography (3)
- * 211 Economic Geography (3)
- * 212 Physical Geography (3)
- * 213 Cultural Geography (3)

History (12 S.H.)

- * 150 U.S. History to 1856 (3)
- * 151 U.S. History Since 1865 (3)

And select two of the following:

- * 120 Western Civilization to 1500 (3)
- * 121 Western Civilization, 1500-1815 (3)
- * 122 Western Civilization, 1815-Present (3)

Political Science (9 S.H.)

- * 120 Introduction to American Politics (3)
- * 130 Introduction to International Relations (3)

One of the following:

- * 135 Introduction to Comparative Politics (3)
- * 150 Introduction to Political Theory (3)

Psychology (3 S.H.)

- * 210 General Psychology (3)

Sociology (6 S.H.)

- * 150 Introduction to Sociology (3)
- * 325 Social-Cultural Anthropology (3)

Social Psychology (3 S.H.)

One of the following:

- * SOC 205 Social Interaction (3) OR
- * PSY 325 Social Psychology (3)

Research Methods (6-8 S.H.)

- * HIST 298 Historical Methods and Historiography (3)

AND one of the following:

- POLS 380 Political Research I - Secondary (3) OR
- SOC 376 Introduction to Social Research (3) OR
- * PSY 308 Experimental Psychology (5)

GLOBAL PERSPECTIVES (3 S.H.)

Students in the program will complete the University Studies global or multicultural perspectives requirements by taking one of the following courses:

- * HIST 123 East Asian Civilization
- * HIST 165 Latin American History
- * HIST 170 African Civilization

This requirement follows the guideline established by the National Council for the Social Studies.

EDUCATION (3 S.H.)

- 331 Teaching Social Studies in Secondary Schools (3)

ELECTIVES (18 S.H.)

Students complete a concentration of 18 semester hours at the 300- or 400-level in one of the following disciplines: economics, geography, history, political science, psychology, or sociology. The course selections are subject to the program director's approval.

SOCIOLOGY/SOCIAL WORK

Minne Hall, Room 228 (507-457-5420)

Criminal Justice: www.winona.edu/criminaljustice/default.htm

Social Work: www.winona.edu/socialwork/default.htm

Sociology: www.winona.edu/sociology/default.htm

Schwartz (Chairperson)

FACULTY

Brian Aldrich, Professor; A.B., Lewis and Clark College; M.S., Ph.D., University of Wisconsin-Madison; 1976 –

Ervin G. Bubnitz, Professor; B.A., St. Mary's College (Minnesota); B.S., M.S., Winona State University; Ph.D., University of Utah; 1970 –

John E. Burdick, Professor; B.A., Allegheny College; M.S.W., State University of New York-Buffalo; 1984 –

Ruth A. Charles, Assistant Professor; B.A., Gordon College; M.S.W., Ph.D., Syracuse University; 1997 –

John W. Collins, Associate Professor; B.A., Tarkio College; M.S., University of Minnesota; Ph.D., Saint Louis University; 1993 –

Helen Dachelet, Associate Professor; B.A., B.S., M.S., Winona State University; Psy.D., University of St. Thomas; 1996 –

Cathy Jo Faruque, Assistant Professor; B.S., Winona State University; M.S.W., San Diego State University; Ph.D., North Central University, 1997 –

Ellen Holmgren, Assistant Professor; B.S.W., Winona State University; M.S.W., University of Minnesota; 1996 –

James R. Kobolt, Assistant Professor; B.A., M.P.A., Park College; 2000 -

Carole Madland, Associate Professor; M.S.W., University of Tennessee-Nashville; B.A., Ph.D., Washington University (St. Louis, Missouri); 1991 –

J. Mark Norman, Associate Professor; B.A., M.S., St. Cloud State University; Ph.D. South Dakota State University; 1996 –

James Reynolds, Professor; B.S., Winona State University; M.A., University of North Dakota; 1969 –

R. Stephen Schwartz, Professor; B.S., M.S., University of Oklahoma; Post-Graduate Certificate, University of Zambia (University of London, external); Ph.D., University of Iowa; 1973 –

Ronald A. Stevens, Professor; Ph.B., M.S., University of North Dakota; 1968 -

PURPOSE

Sociology, social work, and criminal justice students who complete one of these programs are well prepared for professional employment in administrative and management positions in the private and public sectors, law enforcement and corrections, social welfare and casework, and graduate school.

PASS/NO CREDIT COURSES

Except for field experiences and internships, students must take all courses on a grade-only basis. Only grades of "C" or better in courses offered in the department can be used to meet major and minor requirements.

B.A. MAJOR – SOCIOLOGY (43 S.H.)

(Minor Required)

Sociology examines how people's social experiences shape their beliefs and behavior. As one of the social sciences, sociology also stresses the use of scientific research methods and theories to study human social behavior in a wide variety of settings. Thus, the sociology major is designed to provide multiple opportunities for students to study how larger social processes influence people's thoughts and actions. The required courses are also designed to provide experience in building and testing theory as well as in collecting and evaluating data. Well-developed communication and research skills are highly valued in a variety of professions for which an education in sociology is desirable.

The program goals are (1) to develop knowledge and skills in foundation areas of sociology (basic concepts, sociological theory, research methods and statistics); (2) to provide opportunities to apply the sociological perspective to asking, understanding and explaining sociological questions; (3) to provide knowledge in one or more specialized areas within sociology; (4) to develop an understanding of the internal diversity of U.S. society and its place within the international context; (5) to develop an understanding of the nature and effects of social inequality; and (6) to develop career and/or graduate school readiness.

The B.A. Sociology Program not only contributes to the overall liberal arts education of students, it also teaches valuable analytical skills that include understanding and appreciating the experiences of diverse groups in society, identifying the various causes of social problems, and the application of quantitative and qualitative reasoning. These skills prepare students for a wide variety of careers including business, government, human services, criminal justice, law, and public and private research. The program emphasizes developing these skills through the integration of classroom study with supervised field instruction in a wide variety of placements.

ADMISSION REQUIREMENTS

Students wishing to major in sociology must apply for admission by meeting the following requirements:

1. Complete a minimum of 32 semester hours of coursework with a minimum GPA of 2.2 in the B.A. sociology foundation courses (or transfer equivalent courses) and no grade less than a "C" prior to admission.

2. Complete the program admission application form (including one letter of reference).
3. Complete the program admission diagnostic assessment instrument.

RETENTION AND GRADUATION REQUIREMENTS

Retention and graduation from the program requires that students meet the following requirements:

1. Maintain a minimum, cumulative GPA of 2.5 in all B.A. sociology courses taken at WSU.
2. Maintain and complete a student portfolio prior to graduation and at a level acceptable to the student's advisor.
3. Participate in an exit interview and student satisfaction survey prior to graduation.
4. Complete the program graduation diagnostic assessment instrument.

FOUNDATION COURSES TO BE COMPLETED PRIOR TO ADMISSION

ENG	111	College Reading and Writing
SOC	150	Introduction to Sociology
CMST	191	Fundamentals of Speech Communication
STAT	110	Fundamentals of Statistics and 115 Laboratory in Statistics OR
PSY	231	Statistics
SOC	376	Introduction to Social Research (Prereq: STAT 110 and 115 or PSY 231)

REQUIRED COURSES (21–22 S.H.)

Sociology (18 S.H.)

SOC	150	Introduction to Sociology (3)
STAT	110	Fundamentals of Statistics AND
STAT	115	Laboratory in Statistics OR
PSY	231	Statistics
SOC	376	Introduction to Social Research (3)
SOC	377	Theory & Methods in Sociology (3)
SOC	378	Lab in Social Research (3)
SOC	385/460	Field Experience/Internship (3)
SOC	499	Senior Seminar (3)

* Course may be used to satisfy certain University Studies requirements.

ELECTIVES (21–22 S.H.)

Students will select an area of specialization from among the following: applied/clinical sociology, family studies, general sociology, gerontology, or organizations/institutions. Courses selected within the student's chosen area must come from the 300-level and above, be selected in consultation with the advisor, and contribute to meeting the goals of the sociology program and student portfolio requirement.

A maximum of 6 semester hours of field experience or internship may be counted toward the major; an additional 6 S.H. may be taken and counted as electives toward graduation. (Note that all field courses require an additional fee to cover malpractice liability insurance.)

ROCHESTER CENTER

The social work major is available at the Rochester Center through the 2+2 Program. See page 41 for the 2 + 2 program articulations for social work.

B.A. MINOR – SOCIOLOGY (18 S.H.)

REQUIRED COURSES (9 S.H.)

- * 150 Introduction to Sociology (3)
- * 205 Social Interaction (3)
- * 216 Social Problems (3)

ELECTIVES (9 S.H.)

Electives within the department must total 9 S.H. and be selected from 300-level or above in sociology and/or social work.

B.A. MINOR – GERONTOLOGY (27 S.H.)

REQUIRED COURSES (18 S.H.)

- * 150 Introduction to Sociology (3)
- 434 Medical Sociology (3)
- 435 Family Roles and Relationships (3)
- 440 Dying and Death (3)
- 450 Sociology of Aging (3)

Field Experience, SOC 385 or SOC 386 (1-6)

Note: Field experience is required for sociology, social work, and all other students except nursing students. This is not meant as a substitute for SOC 460. Equivalency credit may be granted; see coordinator of gerontology minor.

ELECTIVES (9 S.H.)

Recommended electives are to be selected at the 300-level or above in consultation with an advisor.

- 340 Social-Cultural Anthropology (3)
- 350 Population Analysis (3)
- 412 Sexuality in American Society (3)
- 421 Urban Sociology (3)
- 425 Social Change and Social Movements (3)
- 431 Social Class and Power (3 S.H.)
- 437 Sociology of Organizations (3)
- 488 Health and Human Services Organization

Other electives may be considered. See the coordinator of the gerontology minor.

B.S. MAJOR – SOCIOLOGY: CRIMINAL JUSTICE (62–63 S.H.)

ADMISSION REQUIREMENTS

The B.S. Sociology: Criminal Justice major is designed to prepare students (1) for entry-level positions in criminal justice and (2) for entry into a number of graduate programs such as criminal justice, corrections, police administration, and other related disciplines. Students who wish to major in criminal justice must make application for admission into the program by obtaining a Criminal Justice Student Handbook from the Sociology/Social Work Office in Minne Hall, Room 228. The handbook includes specific requirements and application procedures. In addition to completing an application form, each student is responsible for meeting the following requirements.

ADMISSION AND ACADEMIC STANDARDS

1. Completion of a minimum of 32 semester hours of coursework with a minimum cumulative GPA of 2.00 for all courses taken at WSU.
2. Completion of ENG 111 or equivalent with grade no lower than a "C."
3. Completion of the four (4) admissions courses with a minimum GPA of 2.50 and with grades no lower than "C." There are no exceptions to this requirement.

RETENTION REQUIREMENTS

Once admitted to the program, students must demonstrate acceptable progress in order to remain in good standing. Acceptable progress is defined as meeting the following retention requirements:

1. Students must maintain a 2.50 cumulative GPA for all courses taken within the Criminal Justice Program at WSU.
2. Students must complete all coursework in the criminal justice program without a grade lower than a "C." If a student completes a course with a grade lower than "C," the student must repeat the course.
3. Students must maintain their portfolio at a level acceptable to their faculty advisor and must complete their portfolio prior to graduation. (The portfolio is a representation of the student's knowledge base and skills; it includes research papers, report writing, videotapes, etc.). Students should consult with their individual faculty advisors.

REQUIRED COURSES—BOTH TRACKS (30–31 S.H.)

- * 150 Introduction to Sociology (3)
- 210 Introduction to Criminal Justice (3)
- 205 Social Interaction (3) OR

* PSY 210 General Psychology (3)

* POLS 120 Introduction to American Politics (3)

Note: A student must apply to the Criminal Justice Program upon completion of all 100- and 200-level courses noted above.

* STAT 110 Fundamentals of Statistics (3) and STAT 115 Laboratory in Statistics (1) OR

PSY 231 Statistics (3)

SOC 314 Juvenile Delinquency (3)

SOC 315 Criminology (3)

SOC 376 Introduction to Social Research (3)

SOC 418 Criminal Law and Procedure (3)

SOC 423 Race Relations and Minority Groups (3)

Notes:

1. STAT 110 is not a prerequisite for admission to the Criminal Justice Program.
2. Computer skills are a necessary requirement for employment in the profession of criminal justice. It is strongly recommended that the student complete a computer science course as outlined in the natural science section of University Studies.
3. The student must also be admitted to the Criminal Justice Program in order to enroll in any 400-level or track course.
4. Note that all field courses have an additional fee to cover malpractice liability insurance.

TRACK SPECIALIZATION

Upon application to the criminal justice program, students select one or both of the specialization tracks. If both tracks are selected, the student must complete two separate internships: one in corrections (SOC 461, Criminal Justice Internship, Corrections) and one in law enforcement (SOC 462, Criminal Justice Internship, Law Enforcement). See required courses for corrections and law enforcement below.

LAW ENFORCEMENT OPTION – SCJL (32 S.H.)

REQUIRED COURSES (21 S.H.)

- 404 Law Enforcement Investigation and Communication (3)
- 417 Operations & Procedures in Law Enforcement (3)
- 491 Community Policing and Administration (3)
- 462 Criminal Justice Internship Law Enforcement (12)

ELECTIVES (11 S.H.)

11 S.H. at the 300- or 400-level within the department
420 Minnesota Criminal Code & POST Review (3)
(Required for POST certification in Minnesota. Students seeking peace officer licensure in the State of Minnesota must successfully complete 420,

plus the summer skills component. Only students seeking licensure will be admitted.)

CORRECTIONS OPTION – SCJC (32 S.H.)

REQUIRED COURSES (24 S.H.)

- 355 Corrections (3)
- 405 Models and Strategies of Intervention (3)
- 406 Probation and Parole (3)
- 407 Offender Assessment (3)
- 461 Criminal Justice Internship, Corrections (12)

ELECTIVES (8 S.H.)

8 S.H. at the 300- or 400-level within the department

Note: Law violations may limit employment opportunities; students should consult with their advisor.

B.S. MAJOR – SOCIAL WORK

(CSWE Accredited)

64 S.H. (No Minor Required)

This BSW Program prepares students for beginning social work practice. The program is fully accredited by the Council on Social Work Education. Employment in most states following graduation will require the graduate to take the State Board Licensing Examination.

The Social Work Program serves students on both the Winona and Rochester campuses. Administrative Offices are located on-campus in Minne Hall, Room 228 (507-457-5420); in Rochester, the faculty office is located in the UCR Building ST129 (507-285-7583).

Admission to the Bachelor of Social Work Program is a separate application process that takes place at the beginning of the junior year. Specific eligibility requirements in addition to the academic requirements for both admission and retention must be met. A program admissions packet is included in the Social Work Handbook available in the WSU bookstore; the information is also available on the social work web page.

Required foundation courses are to be completed prior to application for the professional social work program. Students apply during Social Work 365. Students who have not met the program requirements may be accepted conditionally. Students, however, may not continue on to Practice II, SOCW 385, until all requirements are met.

Admission

Social work faculty are available to assist prospective social workers with this process. First-year and sophomore students interested in the social work major are advised to become well informed regarding the courses required for admission to the social work program. Admission into the program is limited to a specific number of students based on satisfactory completion of required courses. The prerequisite for SOCW 365 is SOCW 340 and the satisfactory completion of all foundation courses. The prerequisite for SOCW 385 is the faculty's notification to the student that he/she has been admitted into the professional social work program.

ADMISSION AND ACADEMIC STANDARDS

Admission

Students must have a "C" or better and an overall GPA of 2.5 in the following courses: all five foundation courses, ENG 111, CMST 191 and a satisfactory evaluation in SOCW 350.

Academic Standards

Students must have a "C" or better and an overall GPA of 2.5 in all courses considered for admission. In addition, students must also have a 2.5 GPA and a "C" or better in all courses required within the department.

Student Association of Social Workers (SASW)

Membership offers students the opportunity to organize and act on social issues of concern to students at the local level as well as the state and national levels. In addition SASW provides a social network for the students. Membership is strongly encouraged.

REQUIRED FOUNDATION COURSES (18 S.H.)

Social Sciences (15 S.H.)

Psychology (6 S.H.)

- 210 General Psychology (3)
- 250 Developmental Psychology (3)

Sociology (3 S.H.)

- 150 Introduction to Sociology (3)

Social Work (6 S.H.)

- 340 Intro to Social Work (3)
- 350 Field Experience (3)

Natural Sciences

Biology (3 S.H.)

- * 117 Human Biology (3)

REQUIRED COURSES (46 S.H.)

Statistics (3 S.H.)

- * STAT 110 Fundamentals of Statistics (3) OR
- PSY 231 Statistics (3)

Research (3 S.H.)

- SOCW 390 Social Work Research Process and Skills (3)

Minorities (3 S.H.)

- SOC 423 Race Relations (3)

Social Work (37 S.H.)

- 365 Social Work Practice I – Ethics and Interviewing (3)
- 370 Human Behavior in the Social Environment (3)
- 380 Social Welfare Policy I (3)
- 385 Social Work Practice II – Families and Groups (3)
- 400 Social Work Practicum Preparation (4)
- 410 Analysis of Social Welfare Policy II (3)
- 415 Social Work Practice III – Organizations and Communities (3)
- 475 Social Work Senior Practicum (12)
- 480 Integrative Social Work Seminar (3)

Note: SOCW 475 is an extended application of practical experience within a social service agency. Restricted to senior social work majors. Students majoring in both Sociology: Criminal Justice and Social Work will be required to take 24 S.H. of practicum.

School Social Work Licensure: Recommendations – Department of Education

The Department of Education no longer requires school social workers to retain an additional license. After April 1, 2000, a BSW and valid Minnesota State Social Work licensure will suffice. It is recommended that students interested in pursuing a career in school social work take the following additional courses:

RECOMMENDED COURSES (15 S.H.)

Social Work (6 S.H.)

- 420 Child Welfare (3)
- 425 Law and Social Work (3)

Other (9 S.H.)

Special Education (3 S.H.)

- 400 Exceptional Children and Youth (3)

Education (3 S.H.)

- 459 Professional Topics and Issues (3)

HHP (3 S.H.)

- 204 Personal and Community Health (3)

SOCIOLOGY AND SOCIAL WORK COURSE DESCRIPTIONS

All courses in the major, minor, options, concentrations and licensures must be taken on a grade-only basis except internships and field experiences.

SOCIOLOGY COURSE DESCRIPTIONS

150 – Introduction to Sociology-3 S.H.

An introduction to sociology as a social science concerned with the systematic study of human society; consideration of individuals, groups and relationships. Grade only. Offered every semester.

201 - Scandinavian Culture-3 S.H.

A sociological analysis of the culture and social institutions of modern Scandinavia with emphasis on developments in selected Nordic countries. Grade only. Offered yearly.

205 - Social Interaction-3 S.H.

A study of human interactions and relations among people, how social situations affect behavior, how people acquire the ability to interact as members of society, and the methods used to study human interaction. Recommended prerequisite: SOC 150. Grade only. Offered every semester.

* Course may be used to satisfy certain University Studies requirements.

212 - The Family-3 S.H.

Analysis of the family as a group, historical, cultural and institutional aspects including the analysis of group processes. Recommended prerequisite: SOC 150. Grade only. Offered every semester.

216 - Social Problems-3 S.H.

The nature, characteristics and proposed solutions for selected social problems. Recommended prerequisite: SOC 150. Grade only. Offered every semester.

314 - Juvenile Delinquency

In-depth analysis of juvenile delinquency, its development, control, treatment and prevention. Prerequisites: SOC 150, SOC 210, SOC 315 and/or instructor's permission. Limited to 30 students. Grade only. Offered twice yearly.

315 - Criminology-3 S.H.

An analysis of the theory and measurement of crime. Prerequisites: SOC 150 and, for Criminal Justice students, SOC 210 or instructor's permission. Limited to 30 students. Grade only. Offered twice yearly.

334 - Sociology of Education-3 S.H.

An analysis of the American educational system in terms of its functions, formal and informal organization, and effects on social stratification and change. A selection of contemporary educational issues will be considered from a sociological perspective. Prerequisite: SOC 150. Grade only. Offered every two years.

340 - Social-Cultural Anthropology-3 S.H.

The cross-cultural and comparative examination of different cultures with emphasis on the varieties and ranges of human behavior. Prerequisite: SOC 150. Grade only. Offered yearly.

350 - Population Analysis-3 S.H.

Ways in which demographic factors (births, deaths and migration) explain variations in social structures and processes. Examination of causes and consequences of current population growth at the regional, national and international levels. Prerequisite: SOC 150. Grade only. Offered yearly.

376 - Introduction to Social Research-3 S.H.

An introductory course in the use of social research methods. Basic knowledge and skills are developed in all phases of the social research process. Sections of this course are taught by Sociology, Criminal Justice and Social Work faculty. Prerequisite: SOC 150 and for B.A. Sociology majors, STAT 110 or PSY 231. Limited to 30 students. Grade only. Offered every semester.

377 - Sociological Theory and Methods-3 S.H.

The examination of major schools of sociological theory with consideration of the interrelationship of theory with research methods. Prerequisites: SOC 150, STAT 110 or PSY 231, SOC 376 and admission to the B.A. Sociology Program. Limited to 25 students. Grade only. Offered yearly.

378 - Laboratory in Social Research-3 S.H.

A "hands-on" experience in the collection and interpretation of research data and the preparation of an empirical research report. Prerequisites: SOC150, STAT 110 or PSY 231, SOC 376, SOC 377 and admission to the B.A. Sociology Program. Limited to 25 students. Grade only. Offered yearly.

385 - Field Experience-1-6 S.H.

An introductory field experience designed to acquaint students with professional responsibilities in an organization relevant to sociological practice. SOC 385 and SOC 460, separately or in combination, may be taken for a total of six (6) credits within the B.A. Sociology Major; an additional six (6) credits may be taken and applied as electives toward graduation. Prerequisites: SOC 150, STAT 110 or PSY 231, SOC 376, and admission to the B.A. Sociology Program. P/NC only. Arranged.

386 - Field Experience—Gerontology - 1-6 S.H.

This takes place in a supervised environment in which the student is relevantly involved with selected aspects of social gerontology and working with the aged population. P/NC only. Arranged.

411 - Sociology of Religion-3 S.H.

Comparative study of religious beliefs, institutions and symbols and their roles in different societies. Prerequisite: SOC 150. Grade only. Offered every three years.

412 - Sexuality in American Society-3 S.H.

An extensive review of recent research in the area with specific emphasis on behavioral and cultural aspects of sexuality. Prerequisite: SOC 150. Limit to 25 students. Grade only. Offered yearly.

421 - Urban Sociology-3 S.H.

Growth, structure and function of cities, spatial patterning, neighborhoods and ethnic groups; social life of city dwellers and urban social change at the regional, national and international level. Prerequisite: SOC 150. Grade only. Offered yearly.

423 - Race Relations and Minority Groups-3 S.H.

This course examines race and ethnic relations. It explores the concepts pertaining to such relations, e.g., discrimination, minorities, prejudice. It looks at the theories which attempt to explain prejudice and discrimination. It looks at the various minority groups from both current and historical perspectives. Finally, the course looks at oppression and the impact of oppression on people's lives. Prerequisite: SOC 150. Grade only. Offered every semester.

425 - Social Change and Social Movements-3 S.H.

An examination of the processes through which values, norms, institutions, stratification systems and social relationships are altered over time; the role of social movements in promoting or resisting these changes. Prerequisite: SOC150. Grade only. Offered every three years.

428 - Small Towns and Non-Metro Regions-3 S.H.

The study of the social organization of the non-metropolitan towns and regions in the U.S. and selected other countries. Prerequisite: SOC 150. Grade only. Offered every three years.

430 - Political Sociology-3 S.H.

The organization of power into political structures and the social dynamics of this process. Prerequisite: SOC 150. Grade only. Offered every three years.

431 - Social Class and Power-3 S.H.

Social classes, their membership and their use of social, economic and political power. Prerequisite: SOC 150. Offered periodically.

434 - Medical Sociology-3 S.H.

Social factors associated with the incidence and treatment of illness and the social organization of medical institutions and distribution of medical services. Prerequisite: SOC 150. Grade only. Offered yearly.

435 - Family Roles and Relationship-3 S.H.

Specific study of family roles, communication patterns, decision-making and interpersonal relationships. Limited to 25 students. Prerequisite: SOC 150 and SOC 212. Grade only. Offered yearly.

437 - Sociology of Organizations-3 S.H.

Analysis of patterns, regularities, design and behavior of organizations in different environments and societies. Prerequisite: SOC 150. Grade only. Offered yearly.

438 - Health in Human Services Organizations-3 S.H.

Analysis of patterns, regularities, design and behavior in organizations providing health and human services. Prerequisite: SOC 150. Grade only. Offered yearly.

440 - Sociology of Dying and Death-3 S.H.

An examination of various aspects of dying and death from a sociological perspective. Emphasis is on dying and death in American society, but a cross-cultural perspective is included. Prerequisite: SOC 150. Grade only. Offered yearly.

450 - Sociology of Aging-3 S.H.

Gerontology is the analytical examination of the aging process. Using a sociological perspective, this course studies the changing roles of the aged, problems confronting the aged and other important issues. Prerequisite: SOC 150. Grade only. Offered yearly.

460 - Internship-1-15 S.H.

An intensive, professionally supervised placement within an organization relevant to sociological practice. Emphasis is on the student assuming professional responsibilities and applying relevant knowledge and skills within the organization where they are placed. SOC 385 and SOC 460, separately or in combination, may be taken for a total of six (6) credits within the B.A. Sociology Major; an additional six (6) credits may be taken and applied as electives toward graduation. Prerequisites: SOC 150, STAT 110 or PSY 231, SOC 376, SOC 377, SOC 378 and admission to the B.A. Sociology Program. P/NC only. Arranged.

499 - Senior Seminar in Sociology-3 S.H.

A culminating experience for senior sociology majors designed to synthesize, integrate, and assess what students have learned with respect to the stated goals of the B.A. Sociology Program. Prerequisites: SOC 150, STAT 110 or PSY 231, SOC 376, SOC 377, SOC 378, admission to the B.A. Sociology Program and senior standing. Grade only. Offered yearly.

SOCIOLOGY TOPICS AND INDEPENDENT STUDIES COURSES

480 - Variable Topics in Sociology-1-3 S.H.

A seminar course that analyzed selected topics and problems from the sociological perspective (subject to be chosen by instructor and announced before registration.) Prerequisite: 12 credits of Sociology or instructor's permission. Offered on demand. Grade only.

485 - Independent Readings in Sociology-1-3 S.H.

Intended to aid the student who has a special area of interest that goes beyond formal course limits. By arrangement.

487 - Special Projects in Sociology-1-3 S.H.

For the student interested in pursuing an independent research in Sociology. Grade only. By arrangement.

CRIMINAL JUSTICE COURSE DESCRIPTIONS

210 - Introduction to Criminal Justice-3 S.H.

An introductory examination of the criminal justice system from a practitioner's perspective. This course provides an applied framework for the study of criminal justice by examining and analyzing the agencies of justice and the procedures they use to identify and manage criminal and juvenile offenders. Grade only. Offered each semester.

314 - Juvenile Delinquency

In-depth analysis of juvenile delinquency, its development, control, treatment and prevention. Prerequisites: SOC 150, SOC 210, SOC 315 and/or instructor's permission. Limited to 30 students. Grade only. Offered each semester.

315 - Criminology-3 S.H.

An analysis of the theory and measurement of crime. Prerequisites: SOC 150, SOC 210 and/or instructor's permission. Limited to 30 students. Grade only. Offered each semester.

355 - Corrections-3 S.H.

An analysis of the systems and functions of corrections including the areas of administration of programs and security. Limited to 30 students. Prerequisite: admission to Sociology: Criminal Justice Program and instructor's permission. Offered each semester. Grade only.

387- Field Experience Corrections-1-6 S.H.

An introductory experience designed to acquaint students with the structure, processes, and policies involved in professional human services agencies. Open to sociology: criminal justice majors only. May be repeated once. Arranged placement. Prerequisite: SOC 150. Offered each semester. P/NC only.

388- Field Experience Law Enforcement-1-6 S.H.

An introductory experience designed to acquaint students with the structure, processes, and policies involved in professional human services agencies. Open to sociology: criminal justice majors only. May be repeated once. Arranged placement. Prerequisite: SOC 150. Offered each semester. P/NC only.

404 - Law Enforcement Investigation and Communication-3 S.H.

This course is designed to introduce the student to law enforcement investigative and communication processes. The course identifies the four sources of investigative information, and provides practice in interviewing, interrogation, and investigative report writing. Prerequisites: Admission to Sociology: Criminal Justice Program and instructor's permission. Limited to 25 students. Grade only. Offered each semester.

405 - Models and Strategies of Intervention-3 S.H.

An in-depth study of therapeutic methodologies and skills used in the correctional services. Special emphasis is on Reality Therapy to assist individual clients and small groups with behavioral and cognitive changes. Prerequisites: admission to Sociology: Criminal Justice Program and instructor's permission. Limited to 20 students. Grade only. Offered each semester.

406 - Probation and Parole-3 S.H.

This course is designed to introduce the criminal justice student to the responsibilities of probation and parole officers. This course provides knowledge of probation and parole services, skill building in supervision of offenders and practical writing skills. Prerequisites: admission to Sociology: Criminal Justice Program and instructor's permission. Limited to 25 students. Grade only. Offered each semester.

407 - Offender Assessment and Management-3 S.H.

This course addresses the knowledge and skills required in assessing offender custody and program needs, and the management of offenders in institutions and the community. Prerequisites: admission to Sociology: Criminal Justice Program and instructor's permission. Limited to 20 students. Grade only. Offered each semester.

417 - Operations and Procedures in Law Enforcement-3 S.H.

Operational and procedural requirements in law enforcement including community relations, testifying and criminal investigation, the police subculture, use of force, ethics and patrol activities. Prerequisite: admission to Sociology: Criminal Justice Program and instructor's permission. Limited to 30 students. Grade only. Offered each semester.

418 - Criminal Law and Procedure-3 S.H.

Analysis and study of substantive criminal law and procedure from arrest through sentencing. The criminal process is examined in terms of legal steps and decision-making. Prerequisites: admission to Sociology Criminal Justice Program and instructor's permission. Limited to 30 students. Grade only. Offered each semester.

420 - Minnesota Criminal Code and Post Review-3 S.H.

This course deals with an analysis of the Minnesota Criminal Code and review of POST requirements. Limited to students seeking POST certification. Limited to 15 students. Prerequisites: admission to the Sociology Criminal Justice L.E. Track, SOC 418 and instructor's permission. Grade only. Offered yearly.

461 - Criminal Justice Internship Corrections-1-15 S.H.

An intensive, professionally supervised placement in a selected criminal justice organization for the purpose of providing the student with an experience that integrates knowledge, methodology, and skills in a practical setting. Prerequisites: admission to Sociology: Criminal Justice Program; at least junior standing; and/or instructor's permission. Offered each semester. P/NC only.

462 - Criminal Justice Internship Law Enforcement-1-15 S.H.

An intensive, professionally supervised placement in a selected criminal justice organization for the purpose of providing the student with an experience that integrates knowledge, methodology, and skills in a practical setting. Prerequisites: admission to Sociology: Criminal Justice Program; at least junior standing; and/or instructor's permission. Offered each semester. P/NC only.

478 - Seminar in Criminal Justice-1-3 S.H.

An integrated examination of the problem areas in the present criminal justice system and an analysis of potential solutions. Limited to 20 students. Prerequisites: admission to Sociology: Criminal Justice Program and instructor's permission. Grade only. Offered yearly.

490 - Correctional Administration-3 S.H.

An analysis of current topics in correctional administration. A survey of theories or management styles will be examined. Prerequisites: admission to Sociology: Criminal Justice Program and instructor's permission. Limited to 20 students. Grade only. Offered every other year.

491 - Community Policing and Administration-3 S.H.

This course is designed to assist the student in identifying and implementing a community policing philosophy using contemporary law enforcement organizational management processes. Prerequisites: admission to Sociology: Criminal Justice Program and instructor's permission. Limited to 25 students. Grade only. Offered each semester.

SOCIAL WORK COURSE DESCRIPTIONS

340 - Introduction to Social Work and Social Welfare-3 S.H.

Introduction to Social Work and Social Welfare looks at the profession of social work and U.S. social welfare policy both historically and in the present. Offered each semester. Grade only.

365 - Social Work Practice I - Ethics and Interviewing-3 S.H.

The first of three practice courses to prepare students as generalist practitioners able to provide services and intervene for change at all systems levels. Values, ethics and interviewing skills with diverse populations stressed. Prerequisite: SOCW 340, completion of foundation courses or instructor's permission. Limited to 25 students. Grade only. Offered each semester.

370 - Human Behavior and the Social Environment-3 S.H.

An introduction to systems theory in understanding human behavior. The major focus is the theoretical perspectives of human behavior in the social environment and the relationships of these to social work practice intervention. Prerequisites: SOC 150, BIO 117, PSY 210 and 250, and SOCW 340 or instructor's permission. Junior class standing minimum. Grade only. Offered each semester.

380 - Social Welfare Policy-3 S.H.

American social welfare policy has shaped the nature of income maintenance, health, education, employment and housing in the U.S. Concepts of equality, adequacy and efficiency, as well as dignity and community, are used to evaluate the nature and structure of social welfare policies. Prerequisite: SOCW 340. Grade only. Offered each semester.

* Course may be used to satisfy certain University Studies requirements.

385 – Social Work Practice II – Families and Groups-3 S.H.

This course is a continuation of Practice I (SOC 365). It looks at generalist practice skills needed in assessment and to affect change utilizing a strengths perspective. Students learn to utilize these skills working with groups, families and individuals of different backgrounds and cultures. Prerequisite: SOCW 365 and acceptance into the Social Work Program. Grade only. Offered each semester.

390 – Social Work Research: Process and Skills—3 S.H.

This is an introductory course in social work research. The focus is on the relationships, process and skills which are used to evaluate social work practice. The students work in groups with a variety of human service organization practitioners to gather data to answer critical questions. Prerequisite: Completion of ENG 111.

400 – Practicum Preparation—4 S.H.

Facilitate student's preparation for the practicum experience. Includes development of interview skills, resume building, selection of a practicum placement site, development of a learning contract, and preparation of a capstone research project. This course is taken concurrently with SOCW 415. Grade only.

410 – Analysis of Social Welfare Policy-3 S.H.

The focus of this course is the ideology and content of social welfare policy, the process by which it is developed, its implications for social work practitioners at all levels and methods of affecting change. Prerequisite: SOCW 380. Grade only. Offered each semester.

415 – Social Work Practice III – Organizations and Communities-3 S.H.

This is the final of the practice courses designed to prepare students as generalist practitioners able to provide services to client systems at all levels. The focus of this course is on the evaluation and termination processes of planned change, crisis intervention and macro skills of intervention. Prerequisite: SOCW 385 and formal acceptance into the Social Work Program. This course is taken concurrently with SOCW 400. Grade only. Offered each semester.

420 - Child Welfare-3 S.H.

This course looks at the problems vulnerable children face, and the skills, policies and programs needed to serve them. Prerequisite: SOCW 340 or instructor's permission. Grade only.

425 - Law and Social Work-3 S.H.

This course is an overview of the law, the legal system, the hearing process and the role of social workers in the legal arena. Prerequisite: SOCW 340 or instructor's permission. Grade only.

430 - Aging: Policies and Services-3 S.H.

This course covers the problems faced by the elderly, and the policies and programs created to help them. Prerequisite: SOCW 340 or instructor's permission. Grade only.

435 – Social Work Practice with Diverse Populations – 3 S.H.

This course is designed as an introduction to social work students in the field of social work and diverse populations. This course focuses on social work practice with individuals, families, groups, organizations, and communities with an emphasis on transcultural practice. Variables of race, ethnicity, gender, class, and sexual orientation are all considered as they relate to generalist social work practitioners. This course will examine individual and institutional racism, sexism, classism, and homophobia. Prerequisite: SOCW 340.

440 - Variable Topics in Social Work-1-3 S.H.

A seminar course that analyzes topics and problems from the social work perspective (subject to be chosen by instructor and announced before registration). Grade only.

450 - Independent Studies in Social Work-1-3 S.H.

Intended to aid the student who has a special area of interest that goes beyond formal course limits. By arrangement. Offered each semester. Grade only.

460 - Special Projects in Social Work-1-3 S.H.

For the student interested in pursuing an independent research project in Social Work. By arrangement. Grade only. Offered each semester.

480 – Integrative Social Work Seminar -3 S.H.

This course is designed as an introduction to social work students in the field of social work and diverse populations. This course focuses on social work practice with individuals, families, groups, organizations, and communities with an emphasis on transcultural practice. Variables of race, ethnicity, gender, class, and sexual orientation are all considered as they relate to generalist social work practitioners. This course will examine individual and institutional racism, sexism, classism, and homophobia. Corequisite: To be taken concurrently with SOCW 475. Grade only.

SOCIAL WORK – FIELD COURSES

Note: All field courses require an additional fee to cover malpractice liability insurance.

350 - Field Experience I-3 S.H.

351 – Field Experience II-3 S.H.

These courses provide students with an experience in a human service agency through 120 hours of volunteer service. Students meet regularly to share information about their respective placements. For 350, prerequisite or corequisite: SOCW 340; can be taken with SOCW 365. For 351, prerequisite: SOCW 350. P/NC only.

475 – Social Work Senior Practicum- 12 S.H.

Field placement in selected social service agencies under professional instruction. Includes the development and completion of a learning contract and a research project. Prerequisite: Satisfactory completion of all coursework required in the social work major. Corequisite: To be taken concurrently with SOCW 480. P/NC only.

SPECIAL ACADEMIC PROGRAMS

In addition to an Associate of Arts degree program (page 24), baccalaureate degree programs with majors in specific disciplines and cross-discipline studies, and pre-professional sequences leading to enrollment in several different kinds of professional schools, WSU offers special academic programs to meet other needs. Currently there are two such programs: (1) the FAA-approved Airway Science Certification Program and (2) the Residential College program.

FAA AIRWAY SCIENCE CERTIFICATION PROGRAM

146-162 S.H. (FAA Airway Science Certification)

Pasteur Hall, Room 114A (507-457-5264)
Dr. George Bolon, Advisor

PURPOSE

The Federal Aviation Administration (FAA), along with the aviation industry, has recognized the need for a cadre of well-qualified men and women to support the national airspace system of the future. Therefore, the FAA initiated the Airway Science curriculum to prepare the next generation of aviation technicians, managers, and aircraft crew members. The FAA has approved WSU as an Airway Science University; WSU offers an Airway Science Program with two options: Computer Science Option and Management Option. When students in the Airway Science

Program satisfy the respective major department degree requirements, they are granted either of the following degrees:

- B.S. in Computer Science with a Physics/Airway Science/Aviation minor
- B.S. in Business Administration with a Physics/Airway Science/Aviation minor

To fulfill the curriculum for FAA Airway Science Certification, students must complete additional requirements beyond the bachelor degree as outlined in this section.

Airway Science Options

The FAA Airway Science curriculum requirements are subject to change by the Federal Aviation Administration. Therefore, this catalog may not show the latest requirements. See the Airway Science faculty advisor for more information.

COMPUTER SCIENCE OPTION

Degree program: 128 S.H.; Certification: 141 S.H.

UNIVERSITY STUDIES (USP) (46 S.H.)

BASIC SKILLS (12 S.H.)

ARTS AND SCIENCES (22 S.H.)

Humanities (6 S.H. - two departments)

HIST 122 Western Civilization 1815 to Present (3)

Electives from USP-approved courses offered by another department other than History

Natural Science (7 S.H.)

GEOS 115 Meteorology (4)

PHYS 200 Fundamentals of Aviation (3)

Social Science (6 S.H.)

ECON 201 Principles of Microeconomics (3)

PSY 210 General Psychology (3)

Fine and Performing Arts (3 S.H.)

UNITY AND DIVERSITY (12 S.H.)

Critical Analysis (3 S.H.)

Science and Social Policy (3 S.H.)

Global or Multicultural Perspectives (3 S.H.)

Contemporary Citizenship or Democratic Institutions (3 S.H.)

Note: All students must fulfill 12 S.H. of flag requirements.

REQUIRED COURSES (47 S. H.)

Computer Science (33 S.H.)

234 Algorithms and Problem Solving (4)

250 Algorithms and Data Structures (4)

301 Discrete Structures for Computer Science (3)

341 Advanced Data Structure (4)

351 Introduction to Assembler and Architecture (3)

371 Object Oriented Design and Development (3)

405 Operating Systems (3)

410 Software Engineering (3)

415 Principles of Program Language (3)

435 Theory of Computation (3)

Mathematics (12 S.H.)

160 Calculus I (4)

165 Calculus II (4)

210 Discrete Mathematics and Foundations (4)

Physics (2 S.H.)

332 Computer Organization (2)

ELECTIVES (21 S. H.)

Computer Science

385 Applied Database Management Systems (3)

411 Software Testing (3)

412 Networking/Telecommunications (3)

413 Advanced Networking (3)

420 Computer Architecture (3)

425 Numerical Analysis (4)

430 Computer Graphics (3)

440 Theory of Algorithms (3)

445 Artificial Intelligence (3)

450 Compilers (3)

465 Topics: Computing Theory (1-3)

466 Topics: General Computing Applications (3) OR

470 System Design with CASE/Tools (3)

476 Distributed System: Concepts and Designs (3)

485 Database System Design (3)

491 Practicum in Computer Science (6)

Physics (4)

333 Microprocessor Electronics (4)

REQUIRED AVIATION/PHYSICS (9 S.H.)

205 Airspace, Communications and Regulations (1)

383 Air Traffic Control (3)

387 Flight Safety (3)

388 Legislative and Legal Aspects (2)

ADDITIONAL REQUIREMENTS FOR FAA AIRWAY SCIENCE CERTIFICATION

30 S.H.

Business Administration (3 S.H.)

DIS 220 Business Statistics (3)

BUSA 301 Business Law I (3)

MGMT 315 Principles of Management (3) OR

MGMT 317 Management of Human Resources (3)

MGMT 325 Organization of Dynamics (3)

POM 334 Production and Operations Management (3)

Chemistry (4 S.H.)

212 Principles of Chemistry (4)

Geography (3 S.H.)

212 Physical Geography (3)

Physics (8 S.H.)

201 General Physics I (4)

202 General Physics II (4)

MANAGEMENT OPTION

Degree Requirement: 128 S.H. Certification: 163 S.H.

UNIVERSITY STUDIES (USP) (53 S.H.)

BASIC SKILLS (12 S.H.)

Selected courses must include MATH 140 Applied Calculus (3).

ARTS AND SCIENCES (29 S.H.)

Humanities (6 S.H.—two departments)

HIST 122 Western Civilization 1815 to Present (3)

Electives from USP-approved courses offered by another department other than History

Natural Science (8 S.H.)

GEOS 115 Meteorology (4)

PHYS 201 General Physics I (4)

Social Science (12 S.H.)

ECON 201 Principles of Microeconomics (3)

ECON 202 Principles of Macroeconomics (3)

POLS 103 Introduction to Politics (3)

PSY 210 General Psychology (3)

Fine and Performing Arts (3 S.H.)

UNITY AND DIVERSITY (12 S.H.)

Critical Analysis (3 S.H.)

Science and Social Policy (3 S.H.)

Global or Multicultural Perspectives (3 S.H.)

Contemporary Citizenship or Democratic Institutions (3 S.H.)

Note: All students must fulfill 12 S.H. of flag requirements.

MANAGEMENT (60 S.H.)

Business Administration (36 S.H.)

DIS 202 Microcomputers in Business (3)

DIS 220 Business Statistics (3)

BUSA 301 Business Law I (3)

BUSA 311 Business Law II (3)

MGMT 315 Principles of Management (3) OR

MGMT 325 Organization of Dynamics (3)

MGMT 317 Management of Human Resources (3)

DIS 320 Intermediate Business Statistics (3)

POM 334 Production and Operations Management (3)

MGMT 340 Management Science (3)

DIS 362 Management Information Systems (3)

POM 434 Quality and Productivity Management (3) OR

MGMT 435 Managing for Quality (3) OR

MGMT 445 Quality Improvement Methods (3)

MGMT 495 Strategic Management (3)

Accounting (3 S.H.)

212 Managerial Accounting (3)

Finance (3 S.H.)

360 Corporate Finance (3)

Marketing (3 S.H.)

315 Principles of Marketing (3)

Business Administration Electives (15 S.H.)

Select electives from either Option A or Option B below.

Option A:

MIS course (3)

Management course (3)

International Business/Management (3) OR

* Course may be used to satisfy certain University Studies requirements.

An international course from Accounting, Business Administration, Economics and Finance, or Marketing (3)

Any course from the Department of Business Administration (3)

Any course from the Departments of Business Administration, Accounting, Economics and Finance, or Marketing (3)

Option B:

A minor or second major from the Departments of Accounting, Business Administration, Finance and Economics, or Marketing, which includes a minimum of 15 S.H. of non-duplicative courses.

COMPUTER SCIENCE (3 S.H.)

210 Computers in Society (3)

AVIATION (18 S.H.)

Physics (18 S.H.)

- 200 Fundamentals of Aviation (3)
- 205 Airspace, Communications and Regulations (1)
- 381 Corporate Operations (2)
- 382 Airline Operations (2)
- 383 Air Traffic Control (3)
- 384 Airport Operations (2)
- 387 Flight Safety (3)
- 388 Legal and Legislative Aspects (2)

ADDITIONAL REQUIREMENTS FOR FAA AIRWAY SCIENCE CERTIFICATION

32 S.H.

Chemistry (4 S.H.)

212 General Inorganic Chemistry (4)

Communication Studies (9 S.H.)

387 Interpersonal Communications (3)

466 Organization Communication (3)

485 Senior Seminar in Communications (3)

Geography (3 S.H.)

212 Physical Geography (3)

Mathematics (6 S.H.)

See advisor for specific recommendations.

Physics (4 S.H.)

202 General Physics II (4)

Psychology (3 S.H.)

305 Theories of Personality (3)

Sociology (3 S.H.)

150 Introduction to Sociology (3)

RESIDENTIAL COLLEGE

Lourdes Hall (507-453-2500)

—, Director

FACULTY

Linda D'Amico, Assistant Professor; B.S., M.A., Ph.D., Indiana University; 2000 -

Daniel Eastman, Professor; B.A., Western Washington University; M.F.A., Wayne State University; M.F.A., Bard College; 1989 -

PURPOSE

The mission of the Residential College is "to provide an enhanced learning environment for highly motivated students to promote excellence in the achievement of their undergraduate education."

The Residential College offers students both housing and a unique educational opportunity. Students are encouraged to discover the love of learning, tolerance for individual differences, and benefits of a liberal education by developing their talents through participation in a topical interdisciplinary curriculum that emphasizes in-class and extracurricular learning. Within the relaxed residential environment of Lourdes Hall, WSU is able to create an atmosphere of collaborative learning. This is accomplished, in part, through a required First-Year Experience Seminar during the fall semester, which focuses on critical thinking as well as financial support for banquets, speaker series, world forum dinners and floor activities.

RESIDENTIAL COLLEGE (RESC) COURSE DESCRIPTIONS

232—Interdisciplinary Approach an Overview of Latin America and the Caribbean—3 S.H.

The Latin America -Caribbean region is one of the world's most misunderstood regions. Geographically, this region is very complex and culturally diverse; historically, it has been the scene of constant abuse and violent changes. In this introductory course, a global explanation of the processes that link the three major cultural groups (indigenous peoples, Afro-Americans and Iberian or Portuguese settlers) will be explored. The interactions will be examined within social, historical and ethnographic contexts. Offered every other year. Grade only.

233—Interdisciplinary Approach to Latin American and Caribbean Immigrants in U.S. Society—3 S.H.

This course focuses on immigration as a process, not an event, and on the diversity of the Hispanic experience in the U.S. It integrates historical, economic, and cultural sources to achieve a broad perspective in understanding the fastest growing ethnic group in the 21st century. Offered every other year. Grade only.

234—Interdisciplinary Approach to Gender and Latin American Society through 20th Century Literature—3 S.H.

Latin American literature conveys a vibrant sense of social history and nuanced perspective of gendered realities. This course will explore 20th century writers from Chile, Uruguay, and El Salvador as a means to better comprehend the underlying worldviews, social structure, and gender relations. Offered every other year. Grade only.

235—Interdisciplinary Approach to Women and Social Justice Issues in Latin America—3 S.H.

This course demonstrates how ordinary women have had transformational roles in the social and political spheres of their countries. It will explore how women have chosen to participate in collective action in Chile, Guatemala, El Salvador, and Mexico to address human rights issues and how family values can become a part of public life.

Recommended Prerequisite: SOC 150. Offered every other year. Grade only.

SPECIAL EDUCATION

Gildemeister Hall, Room 221 (507-457-5535)
Rocco (Chairperson)
www.winona.edu/specialeducation
email: jpickart@winona.edu

FACULTY

Barbara Boseker, Professor; B.S., University of Wisconsin-Milwaukee; M.A., Ph.D., University of Wisconsin-Madison; 1995 -
Carol A. Long, Associate Professor; B.S., M.A., Ph.D., University of Missouri-Columbia, 1993 -
Lyelle Palmer, Professor; B.M., M.M., Southern Methodist University; Ph.D., University of North Texas; 1977 -
Frank Rocco, Professor; B.S., Clarion College; M.Ed., Boston College; Ph.D., Michigan State University; 1972 -

SPECIAL EDUCATION (SPED)

WSU offers two undergraduate programs and one graduate program leading to full K-12 licensure by the State of Minnesota:

- Learning Disabilities K-12 Licensure (109 credits)
- Developmental Disabilities, (Mild/Moderate/Severe/Profound) K-12 Licensure (121 credits)
- Emotional Behavioral Disorders (graduate level only). This licensure is offered in cooperation with the University of Minnesota and requires the WSU Learning Disabilities licensure as prerequisite. Please refer to the SPED section of the WSU Graduate Catalog.

PROGRAM REQUIREMENTS

B.S. IN EDUCATION, LEARNING DISABILITIES K-12 LICENSURE

I. UNIVERSITY STUDIES (See page 19.)

- Basic Skills (13 S.H.)
- ENG 111 College Reading and Writing (4) [Grade of B or better required]
- CMST 191 Speech Communication (3) [Grade of B or better required]
- MATH 100 or higher Mathematics (3) [Grade of C or better required]
- HHP 204 Personal & Comm. Health (3)
- Arts And Sciences Core (22 S.H.)
- † Humanities elective (3)
- † Humanities elective (3)
- Social Science: PSY 210 General Psychology (3)
- Social Science: SPED 400 Exceptional Children & Youth (3) [sophomore status required; see also licensure courses below]
- † Natural Science elective (with lab) (4)
- † Natural Science elective (3)
- † Fine & Performing Arts elective (3)
- Unity And Diversity (12 S.H.)
- † Critical Analysis elective (3)
- † Science & Social Policies elective (3)
- † Global Studies/Multicultural: EDUC 308 Human Relations (admission to teacher education required)
- † Contemporary Citizenship/Democratic Institutions elective (3)

- † Course to be chosen from the University Studies list of approved courses.

II. PROFESSIONAL EDUCATION SEQUENCE

(minimum 17 S.H.; admission to teacher Education required.)

- EDUC 305 Human Development and Learning (4)
- EDUC 308 Human Relations (3) [see also global studies/multicultural above]
- EDUC 312 Instructional Planning and Assessment (3)
- EDUC 429 Secondary Reading (4) OR
- SPED 414 Basic Orton Gillingham Rdg/Lang I (5) AND
- SPED 415 Adv. Orton Gillingham Rdg/Lang II (5)
- EDUC 449 Middle School Philosophy (3)
- EDUC 459 Professional Educator (3)

III. SPECIALTY COURSES (minimum 12 S.H.)

- EDUC 328 Reading Methods I (3) AND
- EDUC 329 Reading Methods II (3) OR
- SPED 414 Basic Orton Gillingham Rdg/Lang I (5) AND
- SPED 415 Adv. Orton Gillingham Rdg/Lang II (5)
- EDUC 334 Math Methods (3)
- SPED 425 Inclusion in Regular Classrooms (3)

IV. LICENSURE COURSES (admission to special education required)

- Learning Disabilities (33 S.H.)
- SPED 400 Exceptional Children and Youth (3) [sophomore status required; see also social science requirement above]
- SPED 405 Behavioral Management (3)
- SPED 420 Administrative Procedures (3)
- SPED 430 Characteristics of Students w/Disabilities (3)
- SPED 410 Intro to Assessment/Methods (3)
- SPED 411 Practicum A (3)
- SPED 445 Assessment/Methods LD (3)
- SPED 446 Practicum B (15)

Note: SPED 410 and SPED 411 must be taken concurrently.

PROGRAM REQUIREMENTS

B.S. IN EDUCATION, DEVELOPMENTAL DISABILITIES K-12 LICENSURE

I. UNIVERSITY STUDIES (See page 19.)

- Basic Skills (13 S.H.)
- ENG 111 College Reading and Writing (4) [Grade of B or better required]
- CMST 191 Speech Communication (3) [Grade of B or better required]
- MATH 100 or higher Mathematics (3) [Grade of C or better required]
- HHP 204 Personal & Comm. Health (3)
- Arts And Sciences Core (22 S.H.)
- † Humanities elective (3)
- † Humanities elective (3)
- Social Science: PSY 210 General Psychology (3)
- Social Science: SPED 400 Exceptional Children & Youth (3) [sophomore status required; see also licensure courses below]
- † Natural Science elective (with lab) (4)
- † Natural Science elective (3)
- † Fine & Performing Arts elective (3)
- Unity And Diversity (12 S.H.)
- † Critical Analysis elective (3)
- † Science & Social Policies elective (3)
- † Global Studies/Multicultural: EDUC 308 Human Relations (admission to teacher education required)
- † Contemporary Citizenship/Democratic Institutions elective (3)

- † Course to be chosen from the University Studies list of approved courses.

II. PROFESSIONAL EDUCATION SEQUENCE (minimum 17 S.H.; admission to teacher education required.)

- EDUC 305 Human Development and Learning (4)
- EDUC 308 Human Relations (3) [see also global studies/multicultural above]
- EDUC 312 Instructional Planning and Assessment (3)
- EDUC 429 Secondary Reading (4) OR
- SPED 414 Basic Orton Gillingham Rdg/Lang I (5) AND
- SPED 415 Adv. Orton Gillingham Rdg/Lang II (5)
- EDUC 449 Middle School Philosophy (3)
- EDUC 459 Professional Educator (3)

III. SPECIALTY COURSES (minimum 12 S.H.)

- EDUC 328 Reading Methods I (3) AND
- EDUC 329 Reading Methods II (3) OR
- SPED 414 Basic Orton Gillingham Rdg/Lang I (5) AND

* Course may be used to satisfy certain University Studies requirements.

- SPED 415 Adv. Orton Gillingham Rdg/Lang II (5)
 EDUC 334 Math Methods (3)
 SPED 425 Inclusion in Regular Classrooms (3)

IV. LICENSURE COURSES (admission to special education required)

- Developmental Disabilities (45 S.H.)
 SPED 400 Exceptional Children and Youth (3) [sophomore status required; see also social science requirement above]
 SPED 405 Behavioral Management (3)
 SPED 420 Administrative Procedures (3)
 SPED 430 Characteristics of Students w/Disabilities (3)
 SPED 410 Intro to Assessment/Methods (3)
 SPED 411 Practicum A (3)
 SPED 407 Management/Severe DD (3)
 SPED 408 Functional Skills Development (3)
 SPED 409 Medical Aspects (3)
 SPED 431 Language/Sensory Stimulation (3)
 SPED 440 Assessment/Methods DD (3)
 SPED 441 Practicum B (15)

Note: SPED 410 and SPED 411 must be taken concurrently.

DOUBLE MAJOR WITH OTHER TEACHING LICENSURES

Students wishing to double major in SPED and a second teaching licensure (elementary education, math education, English education, music education, science education, etc.) may do so; however, they will be required to spend additional time at the University. A double education major may be accomplished through the efficient use of summer classes and/or additional semesters as needed. Students should consult with a special education advisor for guidance.

REQUIREMENTS FOR MAJORING IN SPECIAL EDUCATION (LD, DD)

Note: It is of critical importance that applicants to the program see a SPED advisor immediately upon making the decision to major in SPED. This is true for double majors as well.

The SPED programs have courses which can be taken during each college year. The University Studies courses are NOT taken first followed by the courses in the major. Both are taken together. Again, it is imperative that students see a SPED advisor immediately.

REQUIREMENTS FOR APPLICATION AS A SPED MAJOR

- 2.75 GPA for at least 30 consecutive credits.
- "B" or better in ENG 111 and CMST 191.
- "C" or better in MATH 100 or higher mathematics.
- Completion of the Reading, Math, and Writing sections of the Pre-Professional Skills Test (PPST) before applying to the program. (It is suggested that the test be taken during the first semester of the freshman year or before entering college.)
- Attend an Education Department Handbook Meeting and complete an Application to Teacher Education.
- Complete a SPED Department application form.
- Maintain a GPA of 2.75 as a requirement of student teaching with no major course below a grade of C.

SPECIAL EDUCATION COURSE DESCRIPTIONS

400 - Exceptional Children and Youth—3 S.H.

An overview of information to assist human service professionals in understanding the educational, vocational and other transitional needs of individuals in preschool through post-school who are speech impaired, learning disabled, emotionally disturbed, behaviorally disordered, deaf, blind, mentally disabled, physically disabled, health impaired or gifted. IDEA, ADA and SEC 504 as well as parent participation are stressed. Offered twice yearly and summer. Grade only.

405 - Student Management Systems—3 S.H.

A study of management systems used in modern preschool through high school education settings with emphasis upon preventive, proactive techniques. The course has a video laboratory component of four hours per week wherein students are given guided practice in the use of each technique learned. Both regulated and unregulated management systems for regular education and special education students are taught. Enrollees may choose to obtain certification from the National Crisis Prevention Institute as a result of course completion. Offered twice yearly and summer. Grade only.

407 - Management Techniques for Severe Developmental Disabilities—3 S.H.

Management of extremely challenging behavior problems (e.g., self-stimulation, self-injurious behavior, ritualistic behavior, severe attention deficits, etc.). Included are less severe behaviors which inhibit acquisition, maintenance, and generalization of newly learned skills. Offered summer only. Prerequisites: SPED 400, 405, 420. Grade only.

408 - Functional Skills Development—3 S.H.

Methods and materials utilized in teaching functional skills to persons with severe handicaps. Motor-physical mobility, self-help/care, independent living, self-sufficiency, pre-employment, and daily living skills are emphasized. Objective is to develop skills that may be used in self-care and assistive care environments. Offered summer only. Prerequisites: SPED 400, 405, 420. Grade only.

409 - Medical Aspects of Developmental Disabilities—3 S.H.

Emphasis is placed upon acquiring knowledge in the medical aspects of severe disability which assist the teacher in communicating with the medical profession and other caregivers in a multidisciplinary setting. The learning of first-response techniques that increase the safety of all students/clients is also emphasized. Offered summer only. Prerequisites: SPED 400, 405, 420. Grade only.

410 - Introduction to Assessment/Methods—3 S.H.

An introduction to the basic components of Special Education assessment, curriculum, instruction and IEP development. Standardized and informal assessment procedures and their relationship to direct instruction are emphasized. Offered twice yearly. Prerequisites: SPED 400, 405, EDUC 305 or equivalent, EDUC 312 or equivalent; methods courses in math and reading recommended. Concurrent enrollment in SPED 411. Grade only.

411 - Practicum A—3 S.H.

Practical application and guided practice in effective teaching procedures for students with disabilities. Involves placement in a special education classroom or inclusive setting daily for three to four hours. Offered twice yearly. Prerequisites: admission to the Special Education Program; SPED 400, 405, EDUC 305 or equivalent, EDUC 312 or equivalent; methods courses in math and reading recommended. Concurrent enrollment in SPED 410; advance application, departmental permission to enroll. P/NC only.

420 - Special Education Administrative Procedures—3 S.H.

An overview of special education delivery models including finances, legislation, philosophic considerations, least restrictive approaches, parent involvement and due process safeguards. Local, state and federal rules and regulations are studied as are federal legislation including IDEA, ADA and Section 504. Offered twice yearly and summer. Prerequisite or co-requisite: SPED 400. Grade only.

425 - Inclusion in Regular Classrooms—3 S.H.

Procedures for modification of the regular classroom curriculum and instruction to meet the individual needs of students with disabilities. Special attention to professional collaboration with regular educators. Offered yearly. Prerequisites: SPED 400, 405, 420, 410, 411. Grade only.

430 - Characteristics of Students with Disabilities—3 S.H.

This course is designed to provide the student with an understanding of the characteristics of students who are developmentally disabled, learning disabled, or emotionally/behaviorally disturbed. Implications for planning instruction and issues related to the field of Special Education are identified. Offered twice yearly. Prerequisites: SPED 400, 405, 420. Grade only.

431 - Language/Sensory Stimulation—3 S.H.

Methods and procedures for the stimulation, development, and augmentation of communication skills among the severely disabled. Included are alternative communication methods such as basic signing and technological augmentation, etc., that will assist the severely disabled in participating in less restrictive environments and their own care. Offered summer only. Prerequisites: SPED 400, 405, 420. Grade only.

440 - Assessment/Methods for Students with Developmental Disabilities—3 S.H.

Knowledge and skills for professional entry-level assessment and program development/adaptation for students with developmental disabilities including transition and paraprofessional supervision. Offered yearly. Prerequisite: concurrent enrollment in SPED 441. Grade only.

441 - Practicum B Developmental Disabilities—15 S.H.

Demonstration of competencies by the student teacher in professional entry-level knowledge and skills in assessment and program development/adaptation for students with developmental disabilities in all-day, supervised school settings. Student teaching experience is full-time daily for a full semester. Offered twice yearly. Advance application; department permission to enroll.

445 - Assessment/Methods for Students with Learning Disabilities—3 S.H.

Advanced skills and understanding of academic, processing and behavioral assessments, curriculum and instruction for planning the least restrictive educational programs for students with learning disabilities. Offered twice yearly. Prerequisites: concurrent enrollment in SPED 446. Grade only.

446 - Practicum B Learning Disabilities—15 S.H.

Demonstration of competencies by the student teacher in professional entry-level knowledge and skills in assessment and program development/adaptation for students with learning disabilities in all-day, supervised school settings. Student teaching experience is full-time daily for a full semester. Offered twice yearly. Advance application; department permission to enroll.

449 - Practicum B Learning Disabilities/Developmental Disabilities — 15 S.H.**490 - Seminar/ Workshop—1-3 S.H.****499 - Individual Study—1-3 S.H.**

THEATRE AND DANCE

Performing Arts Center, Room 215 (507-457-5230)

www.winona.edu/thad/thadhome.html

Bratt (Chairperson)

FACULTY

David Bratt, Professor; B.A., Calvin College; M.A., University of Iowa; Ph.D., University of California-Santa Barbara; 1976 -

Gretchen Cohenour, Professor; B.A., Rockford College; M.F.A., University of Wisconsin-Madison; 1989-

Vivian Fusillo, Professor; B.A., Marymount College; M.A., Stephen F. Austin State University; 1968 -

E.M. Lewis IV, Assistant Professor; B. A, B.F.A., Marietta College; M.F.A., University of Massachusetts-Amherst; 1997 -

PURPOSE

The Department of Theatre and Dance (THAD) offers the B.A. major in theatre and minors in theatre and dance (in cooperation with the Physical Education and Recreation Department).

The liberal arts theatre major offers cognitive, creative and practical classes, which integrate the study of theory and history into performance. The program develops kinesthetic, cognitive, and creative understanding as well as skills (keen perception, imaginative problem-solving, concentration and respect for craft), which are important to original work in all fields.

The theatre minor trains students to produce and present material effectively through the medium of performance. The dance minor provides an opportunity for students in any discipline to use the dance experience to enhance body/mind integration and to gain access to creative potential through the art of movement.

Theatre majors take coursework in acting, directing, theatre history, design and technical production, and then demonstrate their artistic ability by presenting Senior Capstone Production work as a performer, designer, or director. In addition, students may arrange to do independent study with a faculty member or gain hands-on experience in the professional world through an internship.

Students interested in theatre and dance have ample opportunity to practice their craft under the guidance of experienced faculty. For example, in a recent year, the department's four major productions and two studio recitals gave 150 students the chance to fill nearly 300 performance, design and crew roles.

Department alumni have successfully built careers in fields ranging from professional theatre to high school and college teaching to marketing analysis, county court management, and small business ownership. Recent alumni report an average career satisfaction between 3.0 and 3.8 on a 4.0 scale.

PASS/NO CREDIT COURSES

Except for the THAD Showcase, internships, and practica, students must take all courses in their major and minor on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit-only or grade-only basis are so designated in the course descriptions.

090-THAD SHOWCASE AND LAB/PRODUCTION CREW REQUIREMENTS

THAD major and minor students enrolled in a course eligible for that major or minor are required to enroll concurrently in THAD 090 (THAD Showcase) for 0 credits, unless excused by the department chairperson. THAD 090 meets once a week during the semester.

THAD major and minor students enrolled in a course eligible for that major or minor are also required to complete a specified number of hours of work on a Main Season production crew during the semester. All students cast in a Main Season production have the same responsibility. Some THAD courses carry additional production responsibilities; see Course Descriptions for details.

THAD MAJORS AND MINORS

1. Theatre majors may minor in dance, but they may not minor in theatre.
2. New students who intend to major in theatre or minor in dance are strongly encouraged to consult with a THAD Department faculty member before registering for courses in their first semester. Failure to do so may delay graduation as much as a year. Continuing theatre majors are required to confer with their departmental advisor before registering for classes each semester.
3. Students majoring in theatre are required to complete THAD 291 six (6) times with a grade of "P." Theatre minors are required to complete THAD 291 two times. If students believe they should be excused from all or a portion of this requirement, they must petition the department faculty for an exemption. This petition must be filed in the semester during which the student first declares his/her major or minor.
4. Students are strongly encouraged to take ENG 111 and CMST 191 in the first year and are required to complete these courses with a grade of "C" or better before enrolling in 300-level THAD courses. History 121 is required prior to enrollment in THAD 210 or 310.
5. The THAD web page contains the most recent curriculum updates; refer to the web page for revisions made since the printing of this catalog.

* Course may be used to satisfy certain University Studies requirements.

TRANSFER STUDENTS

1. Theatre majors and minors transferring to WSU with an Associate of Arts degree will be exempted from 50% of the THAD 291 requirements listed above.
2. In order to graduate from WSU with a theatre major, a transfer student must complete at least 15 credits of WSU Theatre and Dance Department coursework numbered 300 or above.

ADDITIONAL GRADUATION REQUIREMENTS

For a checklist of the University's graduation requirements, see page

24. Specific requirements for THAD majors are as follows:

1. Earn a grade of "C" or better in each course taken for the theatre major.
2. Earn an overall GPA of 2.5 or better in the theatre major.

B.A. MAJOR – THEATRE

44 S.H. (Minor Required)

REQUIRED COURSES (41 S.H.)

090 Showcase (0; enrollment with a grade of "P" required each semester any other major course is taken)

107 Introduction to Technical Theatre (2)

119 Play Reading (3)

131 Performance I (3)

207 Design Communication (3)

210 Theatre History/Dramatic Literature I (3)

231 Performance II (3)

291 Rehearsal & Performance (1; 6 S.H. required)

307 Design II Scenery and Costumes (3) OR 309 Design II Lighting and Sound (3)

310 Theatre History/Dramatic Literature II (3)

321 Play Directing (3)

331 Performance III (3)

395 Topics (1-3; 2 S.H. required)

490 Capstone Production Project (3)

495 Theatre Senior Seminar (1)

ADDITIONAL REQUIREMENTS (3 S.H.)

* HIST 121 Western Civilization, 1500-1815 (3)

B.A. MINOR – THEATRE

19 S.H.

REQUIRED COURSES (16 S.H.)

090 Showcase (0; enrollment with a grade of "P" required each semester any other minor course is taken)

107 Introduction to Technical Theatre (2)

* 119 Play Reading (3)

* 131 Performance I (3)

207 Design Communication (3) OR

231 Performance II (3)

* 210 Theatre History/Dramatic Literature I (3) OR

* 310 Theatre History/Dramatic Literature II (3)

291 Rehearsal & Performance (1; 2 S.H. required)

ELECTIVES (3 S.H.)

3 S.H. from 300- or 400-level THAD courses for which prerequisites have been met.

B.A. MINOR – DANCE

(THAD/PER Co-op)

26 S.H.

REQUIRED COURSES (21 S.H.)

Theory (13 S.H.)

† THAD 090 THAD Showcase (00)

* BIOL 211 Anatomy & Physiology I (4)

* THAD 115 Dance Appreciation (3)

* THAD 131 Performance I (3)

THAD 322 Dance Composition (3)

† Enrollment in THAD 090 THAD Showcase (0 S.H.) with a grade of P is

required each semester any other THAD dance course is taken. At least one of these enrollments must be in the senior year, when the student will assemble the required portfolio (see "Portfolio Requirement" section).

TECHNIQUE (8 S.H.)

Must include at least 5 S.H. in either ballet or modern dance from the following list. Each technique class may be repeated once for credit.

PER

* 127 Ballet I (1)

227 Ballet II (2)

327 Ballet III (2)

427 Ballet IV (2)

* 116 Modern Dance I (1)

216 Modern Dance II (2)

316 Modern Dance III (2)

416 Modern Dance IV (2)

* 118 Jazz Dance I (1)

228 Jazz Dance II (2)

ELECTIVES (5 S.H.)

HHP

* 205 Nutrition for Lifetime Wellness (3)

291 Prevention/Care of Athletic Injuries (2)

370 Kinesiology/Biomechanics (4)

THAD

107 Introduction to Technical Theatre (2)

* 141 Oral Interpretation (3)

231 Performance II (3)

331 Performance III (3)

137 Dance Repertory I (2)

237 Dance Repertory II (2)

337 Dance Repertory III (2)

437 Dance Repertory IV (2)

Each Dance Repertory class may be repeated once for a total of 4 S.H.

PER

* 112 Folk/Square Dance (1)

* 120 Ballroom Dance (1)

121 Introduction to Movement/Music (1)

* 136 Tap Dance (1)

* 137 Fencing (1)

* 199 Lifetime Fitness (2)

201 Teaching Dance (2)

In addition, advanced level PER dance technique courses may be used as electives if not taken to fulfill requirements in the Required or Technique category.

MUSIC

* 114 World Music (3)

PORTFOLIO REQUIREMENT

Upon declaring a dance minor, students should schedule a "portfolio appointment" with Professor Gretchen Cohenour, PAC Room 212 (457-5665). Dance minors are required to document their development while at WSU by maintaining chronological videotapes of their work and other supporting written and visual materials, organized in portfolio form. The completed portfolio must be submitted for faculty review by April 1 in the year of graduation or by November 1 for mid-year graduates.

THEATRE AND DANCE COURSE DESCRIPTIONS

090 - THAD Showcase-0 S.H.

Once-weekly sessions present creative work in theatre and dance courses, critiques of productions, discussions of professional, educational and employment issues. Repeatable: Grade of P in 8 enrollments normally required of theatre majors; 4 of theatre minors and dance minors. Offered each semester. P/NC only.

100 - Theatre Activities-1 S.H.

Active participation in a major theatre or dance production as performer or in box office, scenic studio or costume studio. Course may be repeated up to 6 S.H.; maximum of 3 credits may be taken for University Studies. Offered each semester.

107 - Introduction to Technical Theatre-2 S.H.

Study of non-performance aspects of theatre for theatre and teaching majors and minors. Course contains production crew requirement; concurrent registration in THAD 090 required unless excused by the depart-

ment. In addition, THAD majors and minors must concurrently enroll in THAD 291; all other students must concurrently enroll in THAD 100. Offered yearly. Grade only.

111 - What is Theatre-3 S.H.

Designed for the general student who wishes to become familiar with theatre. Students will explore the question, "What is theatre?" through class lectures and discussion, individual and group projects, production attendance, and play readings. Students will be expected to attend theatre productions outside normal class time. Offered each semester.

115 - Dance Appreciation-3 S.H.

Analysis and appreciation of theatrical dance styles, 20th century trends and diverse world cultures through historical and theoretical roots. Emphasis on kinesthetic involvement as a basis for response to the dance experience via film, video and movement. Concurrent registration in THAD 090 required of dance minors unless excused by the department. Offered each semester.

119 - Play Reading-3 S.H.

Study and applications of analytical methods to modern theatrical styles; introduction to relationships between designers, directors and performers, and to research methods and library resources in theatre. Concurrent registration in THAD 090 required of theatre majors and minors unless excused by the department. Offered yearly.

131 - Performance I For Everyone-3 S.H.

Integration of vocal, physical and mental components of performance through solo and group improvisational and collaborative work. Concurrent registration in THAD 090 required of THAD majors and minors unless excused by the department. Offered yearly. P/NC option.

137 - Dance Repertory I-1-2 S.H.

May be taken by students preparing for public performance of new or previously-created dance which is choreographed by faculty or guest artists; or by student choreographers preparing dance for public performance under direct faculty supervision. Prerequisite: instructor's permission. May be repeated once. Concurrent registration in THAD 090 required of dance minors unless excused by the department. Offered each semester. Grade only.

141 - Oral Interpretation-3 S.H.

Study of prose, poetry and drama through performance. Brings to life the printed symbol. Offered yearly.

205 - Make Up for the Performer - 1 S.H.

In-depth study of design and execution of traditional and non-traditional theatrical make up for the performer. Each student must purchase a personal theatrical make up kit to instructor's specifications. Concurrent registration in THAD 090 required of all majors and minors unless excused by the department. Offered yearly. Grade only.

207 - Design Communication-3 S.H.

The study and practice of the aesthetic principles and graphic skills involved in scenery, lighting and costume design. Development of the student's abilities in external research, mechanical drawing, freehand sketching and rendering. Concurrent registration in THAD 090 required unless excused by the department. Prerequisites: THAD 107 and THAD 119 or instructor's approval. Offered yearly. Grade only.

209 - Stage Management-1 S.H.

Study and practice of the functions of a stage manager. Concurrent registration in THAD 090 required of all majors and minors unless excused by the department. Offered by arrangement.

210 - Theatre History and Dramatic Literature I-3 S.H.

Survey of the works of major Western playwrights through 1800, their cultural contexts and staging practices. No prerequisite for non-majors fulfilling University Studies requirements. Prerequisites for THAD majors/minors: THAD 119, HIST 121. Additional assignments required. Concurrent registration in THAD 090 required of majors and minors unless excused by the department. Offered yearly.

231 - Performance II-3 S.H.

Theories and practice of acting in realistic styles. Concurrent registration in THAD 090 required unless excused by the department. Prerequisites: THAD 119 and THAD 131. Offered yearly. Grade only.

237 - Dance Repertory II-1-2 S.H.

Continuation of THAD 137. Prerequisite: THAD 137. May be repeated once. Concurrent registration in THAD 090 required unless excused by the department. Offered each semester. Grade only.

239 - Creative Dramatics for Children-2 S.H.

Study and application of techniques which enable teachers and group leaders to guide others to imagine, enact and reflect upon human experiences through dramatic activity. Offered yearly.

290 - Creativity Across the Curriculum-2 S.H.

Study and practice of skills to improve teaching and learning; emphasis on creative thinking, bringing information to life and fostering conditions favorable to participatory learning. Offered yearly.

291 - Rehearsal and Performance-1 S.H.

Responsible work as performer, crew head or running crew on the creation of theatrical productions for public presentation. Theatre majors must normally repeat to 6 S.H.; Theatre minors to 2 S.H. Concurrent registration in THAD 090 required unless excused by the department. Offered each semester. Grade only.

307 - Design II Scenery and Costumes-3 S.H.

Study of the process for creating scenery and costume designs for the stage, including research, conceptualization, and creation of the pieces necessary to communicate a design to a director. Concurrent registration in THAD 090 required unless excused by the department. Prerequisite: CMST 191, THAD 107, THAD 207, or instructor's approval. Offered alternate years.

309 - Design II Lighting and Sound-3 S.H.

Study of the process of creating lighting and sound designs for the stage including research, conceptualization, and creation. Concurrent registration in THAD 090 required of majors and minors unless excused by the department. Prerequisite: CMST 191, THAD 107. Open to majors and minors or with instructor approval. Offered alternate years.

310 - Theatre History and Dramatic Literature II-3 S.H.

Survey of the works of major Western playwrights 1800-1970, their cultural contexts and staging practices. Prerequisites for THAD majors/minors: ENG 111, HIST 121, and THAD 119. Additional assignments required. Concurrent registration in THAD 090 required of majors and minors unless excused by the department. Offered yearly.

315 - Dancing Through History-3 S.H.

Broad survey of world dance history from origins to the present within specific cultural and aesthetic contexts. No prerequisite for non-THAD major/minors although THAD 115 is strongly recommended. Prerequisite for THAD majors/minors: THAD 115. Offered every third semester.

321 - Play Directing-3 S.H.

Study and application of processes affecting play selection, casting and rehearsals. Prerequisites: University Studies math basic skills course, THAD 210, THAD 231, THAD 307 and THAD 310. Open to declared theatre majors and minors only. Concurrent registration in THAD 090 required unless excused by the department. Offered yearly. Grade only.

322 - Dance Composition-3 S.H.

Compositional theory, methods and conceptual approaches to traditional and non-literal choreography. Explores relationships between form, content, technique and projection of the dance image. Concurrent registration in THAD 090 required unless excused by the department. Prerequisites: THAD 115 and THAD 131 or instructor's permission. Offered alternate years. Grade only.

331 - Performance III-3 S.H.

Theories and practice of acting in non-realistic styles. Concurrent registration in THAD 090 required unless excused by the department. Prerequisite: ENG 111 and THAD 231. Open to declared Theatre or Teaching majors and minors only. Offered yearly. Grade only.

337 - Dance Repertory III-1-2 S.H.

Continuation of THAD 237. Prerequisite: THAD 237. May be repeated once. Concurrent registration in THAD 090 required unless excused by the department. Offered each semester. Grade only.

395 - Topics in Theatre-1-3 S.H.

Study of a specific topic in dramatic theory/literature/history, performance or theatrical design/stagecraft. Topics and course credits vary. May be repeated as topics change. Course may contain production crew requirement. Concurrent registration in THAD 090 required unless excused by the department. Prerequisite: junior standing. Open to declared majors and minors or instructor's permission. Offered yearly.

399 - Internship-1-16 S.H.

Supervised work experience designed by student, advisor and employer. Prerequisites: faculty advisor's permission and a minimum overall GPA of 2.5. Open to declared theatre and dance majors and minors only. Offered by arrangement. P/NC only.

437 - Dance Repertory IV-1-2 S.H.

Continuation of THAD 337. Prerequisite: THAD 337. May be repeated once. Concurrent registration in THAD 090 required unless excused by the department. Offered each semester. Grade only.

* Course may be used to satisfy certain University Studies requirements.

490 - Capstone Production Project-3 S.H.

Full responsibility for work as a designer or performer on a Main Season theatre production or as a director in the Studio Season. Concurrent registration in THAD 090 required unless excused by the department. Prerequisites: THAD 307, THAD 321 and THAD 331. Open to declared Theatre majors and minors only. Offered yearly. Grade only.

495 - Theatre Senior Seminar-1 S.H.

Review, editing, organization and submission of theatre major portfolio. Prerequisites: senior standing and satisfactory completion of 35 S.H. of theatre major curriculum. Concurrent registration in THAD 090 required unless excused by the department. Offered yearly. Grade only.

499 - Independent Studies in THAD-1-8 S.H.

Offers the advanced student an opportunity to study independently in an area of special interest. May be repeated to a total of 8 S.H. Prerequisite: instructor's permission. Offered by arrangement. Grade only.

WOMEN'S STUDIES

Minne Hall, Room 328 (507-457-5460)

www.winona.edu/womensstudies

Tamara Berg, Director

Purpose

Women's Studies is a multidisciplinary program that looks at the lives and experiences of women through many different disciplines—history, art, psychology, economics, literature, sociology and public health, among others. Women's studies students explore the ways in which gender shapes women's and men's identities and experiences in national global cultures. They also consider how cultural differences affect women's lives within multicultural societies.

The Women's Studies Program is committed to integrating classroom and community. Women's studies students apply feminist theories and analyses to current social issues and develop the skills necessary for citizenship through a field experience with a community organization or agency.

The Women's Studies Program sponsors and coordinates campus opportunities and events that promote understanding and awareness of women's perspectives and gender-related issues among WSU students, faculty and staff. The program centralizes information relevant to women's studies opportunities at WSU and provides students, faculty and staff convenient access to and use of that information.

The Women's Studies Program functions for and with all segments of WSU including Adult, Continuing Education and Extension, the Rochester campus, and the larger Winona community. The program focuses on five major objectives:

1. Promoting understanding of gender issues on campus and in the wider community
2. Supporting gender-related social change activities on campus and in the wider community
3. Guidance and leadership in the process of integrating gender issues into the WSU curriculum
4. Centralization of information about existing opportunities for exploring and addressing gender issues
5. Coordination and administration of women's studies course offerings

The program operates in the following areas:

- Academic Opportunities: The program offers a women's studies minor composed of courses that focus on women and/or gender. The program identifies and promotes additional academic opportunities for all students and faculty interested in expanding their knowledge of women's and gender issues.
- Campus and Community Events: The program works with campus constituencies in developing and planning workshops, lectures, performances and other events related to women's issues.

The women's studies minor provides students the opportunity to develop a clearer understanding of the lives and experiences of women, and the impact of gender differences on social development and experience. Women's studies students explore the ways in which gender shapes women's and men's experiences in different global cultures and consider how cultural differences affect women's lives within multicultural societies. The women's studies minor also develops among students an understanding of feminism both as a body of theory and an approach to social change. Through a combination of interdisciplinary women's studies courses, courses in other departments, and a field experience, the women's studies minor prepares students to assume roles as active citizens in addressing issues shaping women's lives. Each student is required to complete a portfolio that represents and explains her/his growth and development as a women's studies minor.

PASS/NO CREDIT COURSES

Except for internships and practica, students must take all courses in the minor on a grade-only basis. The P/NC option is available to non-majors unless otherwise noted. Courses offered on a pass/no credit only or grade only basis are so designated in the course descriptions.

B.A. MINOR – WOMEN'S STUDIES

23-25 S.H.

CORE COURSES (14 S.H.)

- 148 Introduction to Women's Studies (3)
- 220 Power, Privilege and Gender (3)
- 373 Feminist Theory/Process (3)
- 420 Field Experience (3)
- 448 Senior Seminar (2)

- NURS 260 Women's Health Issues (3)
- PSY 275 Psychology of Women (3-4)
- PHIL 130 Moral Problems (3)
- POLS 450 Feminist Political Theory (3)
- PSY 424 Women & Mental Health (3)
- RESC 234 Interdisciplinary Approach to Gender and Latin American Society through 20th Century Literature (3)
- RESC 235 Interdisciplinary Approach to Women and Social Justice Issues in Latin America (3)
- WS 348 Topics in Women's Studies (3)

CORE DISCIPLINARY COURSES (6-8 S.H.)

Students take 6-8 S.H. from the following list of courses; see the Women's Studies Director for an updated list:

- AIS 350 Quality of Work Life (3)
- ART 252 Survey of Women Artists (3)
- HIST 315 Women in U.S. History (4)

ELECTIVES (3 S.H.)

Electives may be chosen from courses listed above that are not used to fulfill core disciplinary course requirements and from a list of courses approved for women's studies elective credit. The following is a partial list of courses approved as WS electives:

History

HIST 315 Women in U.S. History

Music

MUS 113 Women in Music

Nursing

NURS 260 Women's Health Issues

Philosophy

PHIL 130 Moral Problems

PHIL 240 Philosophy of Science

Psychology

PSY 275 Psychology of Women

Political Science

POLS 450 Feminist Political Theory

Residential College

RESC 232 Interdisciplinary Approach to an Overview of Latin America and the Caribbean

RESC 233 Interdisciplinary Approach to Latin American and Caribbean Immigrants in U.S. Society

RESC 234 Interdisciplinary Approach to Gender and Latin American Society through 20th Century Literature

RESC 235 Interdisciplinary Approach to Women and Social Justice Issues in Latin America

Note: For descriptions of the RESC courses, see Residential College on page 184.

Social Work

SOCW 340 Introduction to Social Work and Social Welfare

SOCW 380 Social Welfare Policy

See the Women's Studies Program Director for a complete list of approved WS electives.

WOMEN'S STUDIES (WS) COURSE DESCRIPTIONS**148 - Introduction to Women's Studies-3 S.H.**

An introduction to the interdisciplinary study of women and gender in society. The course, which is team-taught by faculty from different disciplines, examines women's social roles and contributions in various social groups, cultures and areas of the globe, and explores gender as a socially constructed category of human experience. It introduces students to feminism, both as a body of theory and as an approach to social change.

220 - Power, Privilege, and Gender

Explores the social construction of differences that lead to power and privilege in modern society. Issues of race, class, and sex and gender are considered. Offered at least once a year.

320 - Independent Readings-1-3 S.H.

This course allows students to pursue a project or topic of their own design with supervision and evaluation by the instructor. Instructor's written permission is required.

348 - Topics in Women's Studies-3 S.H.

In-depth study of topics of current interest in the field of Women's Studies. Offered as needed.

373 - Feminist Theory/Process-3 S.H.

This course seeks to understand the creation and perpetuation of gender inequalities and their relation to other systems of inequality. This course seeks a broad understanding of the historical development of various strands of Western feminist thought and the range of interpretive possibilities such thought has opened up. Interdisciplinary readings investigate how feminist theory and process have affected our lives and our understanding of literature, philosophy, political science, law, science, film, history, sociology and medicine. Offered at least once a year. Prerequisites: WS 120, 220 or instructor's permission.

420 - Field Experience-3-6 S.H.

The Field Experience gives students an opportunity to explore gender-related issues and the gender dimension of social issues through experiences outside the classroom; integrate practical experience with feminist analyses developed in Women's Studies courses; and develop the skills and knowledge necessary to act effectively as citizens of their communities.

448 - Senior Seminar-2 S.H.

As the capstone for the Women's Studies minor, this class requires students to review and assess their work in Women's Studies and the relationship between the minor and their major. Prerequisites: WS 148, WS 220, WS 348, WS 420, and Women's Studies minor status or instructor's permission.

FACULTY

- Beckry Abdel-Magid*, Professor, Engineering; B.S., University of Khartoum; M.S., Ph.D., University of Wisconsin; 1990 -
- Brian Aldrich*, Professor, Sociology; A.B., Lewis and Clark College; M.S., Ph.D., University of Wisconsin; 1976 -
- Carol Anderson*, Dean, College of Education; B.S., M.S., University of Minnesota; Ph.D., Utah State University; 1987 -
- Dawn Anderson*, Professor, Health & Human Performance; B.A., University of Minnesota; M.S., Iowa State University; Ph.D., Ball State University, Muncie (IN); 1992 -
- Jeffrey Anderson*, Professor, Mathematics & Statistics; B.A., University of Minnesota, Morris; Ph.D., Iowa State University; 1992 -
- Phillip Appicelli*, Assistant Professor, Health and Human Performance; B.A., College of St. Scholastica; M.A., Ph.D., Kent State University; 1998 -
- James Armstrong*, Assistant Professor, English; B.A., Northwestern University; M.F.A., Western Michigan University; Ph.D., Boston University; 1999 -
- Theresa Arrick-Kruger*, Director, Human Resources, Affirmative Action, Sexual Harassment Officer; B.S., Fort Wright College; J.D., St. Mary's School of Law; M.B.A., Winona State University; 1988 -
- Marzie Astanti*, Associate Professor, Business Administration; B.A., Tehran University; M.S., Ph.D., Iowa State University of Science and Technology; M.B.A., Central Michigan University; 1987 -
- Susan Ballard*, Associate Professor, Nursing; B.S.N., University of Illinois; M.S.N., University of Minnesota; 1984 -
- Mark Bambenek*, Intramural Director; B.S., M.S., University of Wisconsin; 1988 -
- Sara Barbor*, Professor, Business Administration; B.A., Earlham College; M.A., Ball State University; M.B.A., Ph.D., University of Kansas; 1988 -
- Kimberly M. Bates*, Assistant Professor, Biology; A.A., Berkshire Community College; B.S., University of Massachusetts; M.S., Ph.D., University of Missouri; 1997 -
- Judith Bautch*, Professor, Nursing; B.S., University of Wisconsin; M.N., University of Washington; Ph.D., University of Wisconsin; 1997 -
- Sandra Bennett*, Professor, English; B.A., Brigham-Young University; M.A., Ph.D., University of Utah; 1976 -
- Sandra Benning*, Assistant Registrar; B.S., Winona State University; 1985 -
- Charles Bentley*, ACEED Coordinator; B.A., Macalester College; M.S., Winona State University; 1968 -
- Steven Berg*, Professor; Biology; B.S., Pacific Lutheran University; Ph.D., Purdue University; 1986 -
- Tamara Berg*, Assistant Professor; Women's Studies; B.A., University of Wisconsin; M.A., Indiana University; 1995 -
- J. Lawrence Bergin*, Professor, Accounting; B.S., M.B.A., Northeastern University; 1981 -
- JoEll W. Bjorke*, Professor, Business Administration; B.S., St. Cloud State University; J.D., William Mitchell College of Law; 1981 -
- Norma Blankenfeld*, Associate Professor, Nursing; B.S.N., M.S., University of Minnesota; 1980 -
- Danning Bloom*, Professor, Physics; B.A., Illinois Wesleyan University; Ph.D., University of Colorado; 1976 -
- Kim Blum*, Senior Women's Administrator, Athletics; B.S., M.S., University of Wisconsin; 1997 -
- Carol Joyce Blumberg*, Professor, Mathematics & Statistics; B.A., M.A., University of Michigan; M.S., Ph.D., Michigan State University; 1987 -
- George Bolon*, Professor, Physics; B.S., M.S., Oregon State University; Ph.D., University of Utah; 1968 -
- Cynthia Bork*, Assistant Professor, Nursing; B.S.N., College of St. Teresa; M.S., Winona State University; Ed.D., St. Mary's University of Minnesota; 1993 -
- Gaylia Borrer*, Professor, Counselor Education; B.S., Davis & Elkins College; M.S., West Virginia University; Ph.D., University of Iowa; 1989 -
- Barbara Boseker*, Professor, Special Education; B.S., M.A., Ph.D., University of Wisconsin; 1995 -
- Matthew Bosworth*, Assistant Professor, Political Science; B.A., Johns Hopkins University; M.A., Ph.D., University of Wisconsin; 1997 -
- James W. Bovinet*, Professor, Marketing; B.S. Drake University; M.B.A., D.B.A., Southern Illinois University-Carbondale; 1990 -
- Richard Bowman*, Professor, Education; B.S.Ed., M.S.Ed., Ohio University; Ph.D., University of Toledo; 1995 -
- Emmanuel Brako*, Professor, Biology; B.V.M., University of Nairobi (Kenya); B.S., Tuskegee University, M.S., Ph.D., Louisiana State University and A & M College; 1989 -
- David Bratt*, Professor, Theatre & Dance; B.A., Calvin College; M.A., University of Iowa; Ph.D., University of California; 1976 -
- Lymna Brenner*, Residence Hall Director; Residence Life; B.S., M.S., South Dakota State University; 2001 -
- Brian Briggs*, Associate Professor, Accounting; B.S., University of Connecticut; M.S., Northeastern University; 1979 -
- James Bromeland*, Associate Professor, Political Science; B.A., M.S., Mankato State University; 1971 -
- Nancy Brown*, Fund Development Director; B.A., University of Wisconsin; M.S.A., University of Notre Dame; 1989-1995; 2000 -
- Lynda Brzezinski*, Assistant Professor, Counseling Center; B.A., University of Wisconsin; M.S., Ph.D., University of Utah; 2000 -
- Ervin G. Bublitz*, Professor, Sociology; B.A., St. Mary's College (Minnesota); B.S., M.S., Winona State University; Ph.D., University of Utah; 1970 -
- Gary Bunce*, Professor, Computer Science/Mathematics & Statistics; B.S., North Dakota State University; M.A., Ph.D., University of New Mexico; 1971 -
- John E. Burdick*, Professor, Social Work; B.A., Allegheny College; M.S.W., State University of New York; 1984 -
- Elizabeth Burke*, Professor, Counseling Center; B.A., St. Norbert College; M.A., St. Mary's University of Minnesota; 1979 -
- Chris Buttrani*, Assistant Professor, English; B.A., Emory University; M.A., M.Phil., Ph.D., Columbia University; 2000 -
- Marianna Westbrook Byman*, Associate Professor, History; B.A., Baylor University; M.S., Winona State University; D.A., University of North Dakota at Grand Forks, 1988 -
- Seymour Byman*, Professor, History; B.A., University of Illinois; M.A., Roosevelt University; Ph.D., Northwestern University, 1970 -
- Douglas Callahan*, Assistant Professor, Physical Education and Recreation; B.S., M.A., University of Denver; Ph.D. University of Kansas, 2000 -
- John Campbell*, Associate Professor; History; B.A., Wesleyan University; M.A., Ph.D., University of Minnesota; 1996 -
- Jane Carducci*, Professor, English; B.A., Colorado College; M.A., Ph.D., University of Nevada; 1992 -
- Ruth Charles*, Assistant Professor, Social Work; Ph.D. Syracuse University; 1997 -
- Pauline Christensen*, Professor; Director of Graduate Studies; Adult, Continuing Education & Extension; B.S., Iowa State University of Science and Technology; M.S., Winona State University; Ph.D., University of Minnesota; 1973 -
- Gloria Chuang*, Assistant Professor, Music; B.M., M.M., Julliard School; D.M.A., University of Michigan; 1997 -
- Gerald W. Cichanowski*, Professor, Computer Science; B.A., Winona State University; M.S., University of Minnesota; Ph.D., Michigan State University; 1983 -
- Robert Clay*, Associate Professor, Education; B.S., Bemidji State University; M.A., University of Northern Colorado; Ph.D., Colorado State University; 1990 -
- Christine Clements*, Associate Vice President, Academic Affairs; B.S., M.S., University of Wisconsin; Ph.D., University of Minnesota; 2000 -
- Gretchen Cohenour*, Professor, Theatre & Dance; B.A., Rockford College; M.F.A., University of Wisconsin; 1989 -
- John W. Collins*, Associate Professor, Social Work; B.A., Tarkio College, M.S., University of Minnesota; Ph.D., Saint Louis University; 1993 -
- Karen Csajko*, Associate Professor, Political Science; B.A., M.A., Portland State University; Ph.D., University of California; 1996 -
- Sarah Curtin*, Admissions Counselor; B.A., Winona State University; 1999 -
- Linda D'Amico*, Assistant Professor, Residential College; B.S., M.A., Ph.D., Indiana University; 2000 -
- Helen Dachelet*, Associate Professor, Sociology; B.A., B.S., M.S., Winona State University; Psy.D., University of St. Thomas; 1996 -
- Ajit Daniel*, Professor, Mass Communications; B.A., St. Stephen's College, Delhi University, India; B.S., M.S. Southern Illinois University; Ph.D., The Union Institute; 1982 -
- David Dapkus*, Professor, Biology; B.S., M.S., Ph.D., University of Minnesota; 1974 -
- Richard Davis*, Director, Publications and Print Shop; B.S., Winona State University; 1971 -
- Joyati Debnath*, Professor, Mathematics & Statistics; B.Sc., M.Sc., Jadavpur University; M.S., Ph.D., Iowa State University; 1989 -
- Narayan Debnath*, Professor, Computer Science; B.S., M.Phil., Calcutta University; M.S. Visva Bharati University; M.S., East Carolina University; M.S., Ohio State University; Ph.D., D.S.C., Jadavpur University; 1989 -
- Vicki Decker*, Director, Career Services; B.A., M.S., Winona State University; 1988 -
- Michael D. DeLong*, Professor, Biology; B.S., University of Southern Mississippi; M.S., Memphis State University; Ph.D., University of Idaho-Moscow; 1992 -
- Keith Dennehy*, Professor, Engineering; B.S., Rensselaer Polytechnic Institute; M.S., Youngstown State University; M.B.A., University of Utah; Ph.D. Rensselaer Polytechnic Institute; 1990 -
- Russell Dennison*, Professor, Library; B.A., Central College; M.A.L.S., University of Wisconsin; 1980 -
- Brant Deppa*, Professor; B.S., M.S., University of Minnesota, Duluth; Ph.D., University of Minnesota; 1992 -
- Shashi Devan*, Professor, Business Administration; B.S., Malviya Regional Engineering College; M.B.A., Ph.D., Indian Institute of Technology; 1988 -
- Richard A. Dejo*, Professor, Psychology; B.S., Viterbo College; M.A., Ph.D., Bowling Green State University; 1990 -
- John F. Donovan*, Professor, Geoscience; B.Sc., St. Francis Xavier University; M.S., University of Iowa; Ph.D., Cornell University; 1968 -
- Darrell Downs*, Associate Professor, Political Science; B.A., B.S., Montana State University; M.S., Oregon State University; Ph.D., Colorado State University; 1992 -
- Suzanne Rhodes Draayer*, Professor, Music; B.M. Furman University; M.S., George Peabody College of Vanderbilt University; D.M.A. University of Maryland College Park, 1993 -

- Jeffrey Draskoci-Johnson*, Associate Professor, Mathematics & Statistics; B.A., Ohio Wesleyan University; M.S., Ph.D., Ohio State University; 1996 -
- Nancy Dummke*, Assistant Director/504 Coordinator, Advising and Retention Office; B.A., St. Olaf College; M.S., University of Notre Dame; 1989 -
- Edward Duplaga*, Associate Professor, Business Administration; B.S., Bowling Green State University; MBA and Ph.D., University of Iowa; 2001 -
- Daniel Eastman*, Professor, Director, Residential College; B.A., Western Washington University; M.F.A., Wayne State University; M.F.A., Bard College; 1989 -
- Nancy Ann Eckerson*, Assistant Professor, Education; B.S., M.S., Minnesota State University-Mankato; Ph.D., Iowa State University; 2000 -
- Gary Eddy*, Professor, English; B.A., State University of New York-Brockport; M.A., University of Texas at El Paso; M.F.A., University of Arizona; Ph.D., State University of New York-Binghamton; 1988 -
- Ahmed El-Afandi*, Professor, Political Science; B.Com., University of Alexandria; M.A., Ph.D., University of Missouri; 1968 -
- Ronald Elcombe*, Associate Professor, Mass Communications; B.S., University of Minnesota; M.M., Mankato State University; Ph.D., The Union Institute; 1991 -
- Scott Ellinghuysen*, Comptroller/Chief Financial Officer; B.S., Winona State University; M.B.A., University of Wisconsin; 1989 -
- Mark A. Engen*, Associate Professor, Chemistry; B.S., Bemidji State University; Ph.D., Montana State University; 1997 -
- Mark J. Eriksen*, Assistant Professor, Library; B.A., Ohio State University; M.L.S., Kent State University; M.S., South Dakota State University; 1998 -
- Maryam Eslamloo-Grani*, Associate Professor, Engineering; B.S., M.S., Shiraz University, Iran; Ph.D. University of California, 1993 -
- David Essar*, Associate Professor, Biology; B.S., Ferris State College; M.S., Ph.D., University of Iowa; 1992 -
- Amber Evans*, Admissions Counselor, Admissions; B.S., University of Wisconsin; 1999 -
- Kimberly J. Evenson*, Associate Professor, Biology; B.S., M.S., North Dakota State University, Fargo; Ph.D., University of Minnesota; 1995 -
- Emilie Falc*, Assistant Professor, Communication Studies; B.A., University of Illinois; M.A., Ph.D., Ohio University; 2001 -
- Cathy Jo Farique*, Assistant Professor, Social Work; B.S., Winona State University; M.S.W., San Diego State University; Ph.D., North Central University; 1997 -
- Mary Faucett*, Assistant Professor, Counselor Education; B.A., University of North Carolina; M.A., Appalachian State University; Ph.D., University of South Carolina; 1999 -
- Tracy Ferber*, Residence Hall Director; Residence Life; B.A., Winona State University; 2000 -
- John Ferden*, Director, Auxiliary Enterprises; B.A., Luther College; 1974 -
- Patricia Ferden*, Professor, Counseling Center; B.S., M.S., Winona State University; 1988 -
- Andrew Ferstl*, Assistant Professor, Physics; B.S., University of Wisconsin; Ph.D., University of Minnesota; 2000 -
- Joseph Foegen*, Professor, Business Administration; B.B.A., M.B.A., Ph.D., University of Wisconsin; 1958 -
- Ruth Forsythe*, Professor, English; B.A., St. Olaf College; M.A., Ph.D., University of Minnesota; 1977 -
- Joan Francioni*, Professor, Computer Science; B.S., University of New Orleans; M.S., Ph.D., Florida State University; 1998 -
- Jeanne Franz*, Associate Professor, Chemistry; B.A., Augustana College; Ph.D., University of Minnesota; 1996 -
- Carrie Fried*, Assistant Professor, Psychology; B.S., Iowa State University; M.S., Ph.D., University of California; 1999 -
- Timothy Frisk*, Associate Professor, Foreign Languages; B.A., M.A., Ph.D., University of Minnesota; 1990 -
- Vivian Fusillo*, Professor, Theatre & Dance; B.A., Marymount College; M.A., Stephen F. Austin State University; 1968 -
- Carol Galbus*, Associate Professor, English; B.S., Edgewood College; M.A.T., St. Mary's College of Minnesota; 1986 -
- Alejandro Gallegos*, Professor, Economics; B.A., Instituto Tecnológico y de Estudios Superiores de Monterrey; M.A., Ph.D., University of Wisconsin; 1988 -
- Mary Gander*, Professor, Business Administration; B.A., M.S., Ph.D., University of Wisconsin; 1986 -
- Karen L. Gardner*, Associate Professor, Nursing; B.S.N., Florida State University; M.S.N., Texas Woman's University; 1985 -
- Phyllis Gaspar*, Associate Professor, Nursing; B.S.N., M.S.N., University of Nebraska; Ph.D., Case Western Reserve University; 1995 -
- Timothy Gaspar*, Dean, College of Nursing and Health Sciences; B.S., South Dakota State University; M.S.N., University of Nebraska Medical Center; Ph.D., University of Utah; 1995 -
- Jerry Gerlach*, Professor, Geography; B.A., M.A., University of Nebraska; Ph.D., University of Oklahoma; 1988
- Judy M. Gernander*, Professor, Business Administration; B.A., Minnesota State University-Mankato; J.D., University of Minnesota; 1970 -
- Michael Gieske*, Professor, Economics; B.S., Iowa State University of Science and Technology; 1972 -
- Jill Gilbertson*, Student Support Services; B.A., Winona State University; M.A., University of Wisconsin-Milwaukee; 1996 -
- Lisa Gluck*, Associate Professor, Communication Studies; B.A., M.A., Washington State University; Ph.D. University of Wisconsin; 1993 -
- Kenneth Gorman*, Dean, College of Business; B.S., M.S., Ed.D., Northern Illinois University; 1980 -
- Joseph Goto*, Dean, Liberal Arts; B.A., Pennsylvania State University; M.A., University of Alabama; Ph.D., Pennsylvania State University; 2001 -
- Paul H. Grave*, Professor, English; B.A., Carleton College; M.A., Ph.D., Northwestern University; 1968 -
- Lee Gray*, Professor, Educational Leadership; B.S., University of Nebraska; M.S., Ed.D., University of Minnesota; 1989 -
- Tom Grier*, Director, Public Information; B.A., M.A., Winona State University; Ed.D., University of Minnesota; 1989 -
- Gail Grimm*, Professor, Health & Human Performance; B.S., M.S., University of Wisconsin; Ph.D., University of Arkansas-Fayetteville; 1989 -
- George Gross*, Assistant Professor, Mathematics & Statistics; B.S., M.A., University of South Dakota; 1987 -
- Cynthia Groth*, Counselor, Financial Aid; B.A., Winona State University; 1984 -
- Yogesh Grover*, Professor, Political Science; B.A., M.A., University of Delhi (India); Ph.D., University of Missouri; 1988 -
- John Gustafson*, Assistant Professor, Education; B.A., Bemidji State University; M.A., California State University; Ed.D., University of South Dakota; 1998 -
- David E. Hamerski*, Professor, Physics; B.S., St. Mary's University of Minnesota; M.S., University of Minnesota; Ph.D., Washington University; 1961 -
- Patricia Hartkopf*, Professor, Nursing; B.S.N., B.S., Winona State University; M.S.P.H., Ph.D., University of Minnesota; 1990 -
- Richard Hastings*, Professor, Library; B.S., M.S., Wayne State University; 1967 -
- Susan Hatfield*, Professor, Communication Studies/Assessment; B.S., M.A., Miami University; Ph.D., University of Minnesota; 1981 -
- Tim Hatfield*, Professor, Counselor Education; B.A., Harvard University; M.Ed., Harvard Graduate School of Education; Ph.D. University of Minnesota; 1980 -
- Jacqueline Hatlevig*, Professor, Nursing; B.S.N., Winona State University; M.S.N., Ph.D., University of Wisconsin; 1987 -
- Douglas Hayes*, Assistant Professor, English; B.A., M.A., University of Alberta; Ph.D., University of Toronto; 2001 -
- Linda Heath*, Associate Professor, Nursing; B.S., M.S.N., University of Wisconsin; Ph.D., Walden University; 1993 -
- Sara Hein*, Assistant Professor, Chemistry; B.S., University of Wisconsin-La Crosse; Ph.D., University of Iowa; 2000 -
- Donna Helble*, Professor, Education; B.A., Simpson College, Iowa; M.S., Winona State University; Ed.D., University of Northern Colorado; 1984 -
- Peter Henderson*, Associate Professor, History; B.A., J.D., Vanderbilt University; Ph.D., University of Nebraska-Lincoln; 1989 -
- Amy Hermodson*, Assistant Professor, Communication Studies; B.A., Concordia College; M.A. Michigan State University; Ph.D., University of Denver; 2000 -
- Kelly Herold*, Associate Professor, Communication Studies; B.C.S., Dickinson State University; M.A., University of Northern Colorado, Greeley; Ph.D., University of Southern Mississippi; 1996 --
- Michael Herzberg*, Sports Information Director; B.A., Winona State University; 1992-
- Doanna Heyer*, Assistant Registrar; B.A., Winona State University; 1985 -
- James S. Hoch*, Professor, Music; B.M., University of the Pacific; M.M., D.M.A., University of Colorado; 1992 -
- Drake Hokanson*, Assistant Professor, Mass Communication; B.A., M.A., University of Iowa; 1997 -
- Ellen Holmgren*, Assistant Professor, Social Work; B.S.W., Winona State University; M.S.W., University of Minnesota; 1996 -
- Larry Holstad*, Director, Athletics; B.S., Winona State University; M.A., Minnesota State University-Mankato; 1997 -
- Karen Holte*, Infant Teacher, Maxwell Children's Center; B.S., Winona State University; 1991 -
- Judy Hovelson*, Assistant Professor, Nursing; B.S.N., University of Vermont; M.S.N., University of Minnesota; 1984 -
- James F. Hurley*, Associate Professor, Accounting; B.S., M.A., Ph.D., University of Nebraska; 1983 -
- Matthew Hyle*, Professor, Economics; B.A., Indiana University; Ph.D., University of Maryland; 1988 -
- Colette Hymann*, Professor, History; B.A., Brown University; M.A., Ph.D., University of Minnesota; 1990 -
- Frederic Ihrke*, Professor, Accounting; B.S., Bemidji State University; M.B.T., University of Minnesota; J.D., William Mitchell College of Law; 1981 -
- Sudharsan Iyengar*, Professor, Computer Science; B.E., Burdwan University; M.S., Ph.D., Louisiana State University and A & M College; 1989 -
- Joe Jackson*, Assistant Professor, Library; B.A., University of Minnesota; B.A., University of Lyon (France); M.S., Simmons College; M.A., Arizona State University; 1997 -
- Nancy O. Jannik*, Dean, College of Science and Engineering; B.S., College of William & Mary; M.S., Rutgers University; Ph.D., New Mexico Institute of Mining & Technology; 1986 -
- Richard Jarvinen*, Professor, Mathematics & Statistics; B.A., St. John's University; M.A.T., Vanderbilt University; Ph.D., Syracuse University; 1989 -
- Carol Jefferson*, Professor, Biology; B.A., St. Olaf College; Ph.D., Oregon State University; 1976 -
- John Johanson*, Assistant Professor, Psychology; B.S., University of South Dakota; M.A., Ph.D., University of Nebraska at Omaha; 1999 -
- Goldie Johnson*, Associate Professor, English; B.S., M.S., University of Wisconsin-Superior; 1988 -
- Karen Johnson*, Director, Student Support Services; B.A., University of Saskatchewan; M.A., University of Northern Colorado; Ph.D., University of Southern Mississippi; 1998 -
- J. Paul Johnson*, Associate Professor, English; B.S., Valley City State University; M.A., University of North Dakota; Ph.D., University of Minnesota; 1987 -
- Lola Johnson*, Associate Professor, Nursing; B.S.N., Minnesota State University-Mankato; M.S.N., Washington University; 1989 -

- Mary Joyce, Associate Professor, Education; B.A., College of St. Catherine; M.S., Winona State University; 1980 -
- Stephen Juare, Professor; B.S., M.S., Winona State University; Ph.D., Florida State University; 1975 -
- Jeanette Karjala, Professor, Administrative Information Systems; B.A., M.A., Western Washington University; Ph.D., University of North Dakota; 1992 -
- Gary Kastello, Assistant Professor, Health & Human Performance; B.S., University of Wisconsin-La Crosse; M.A., Ball State University; Ph.D., University of Wisconsin-Milwaukee; 1997 -
- Daniel E. Kauffman, Professor, Economics; B.A., St. Cloud State University; M.A., Ph.D., University of Nebraska; 1983 -
- Kathryn Kelley, Associate Professor, Communication Studies; B.A., Rosary College; M.A., University of Michigan; Ph.D., University of Minnesota; 1992 -
- David W. Kesler, Professor, Finance; B.S., Pacific Lutheran University; M.B.A., University of Kansas; Ph.D., University of Wisconsin - Milwaukee; 1984 -
- Mary S. Kesler, Professor, Psychology; B.M.Ed., M.A., Ph.D., University of Kansas-Lawrence; 1987 -
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- Tom Sawyer*, Assistant Professor, Football Coach; B.S., M.S., Winona State University; 1996 -
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- Holly Shi*, Associate Professor, English; B.A., Shanghai International Studies University; M.A., Ph.D., Indiana University of Pennsylvania; 1995 -
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