

Winona

*State
University*

WINONA STATE
UNIVERSITY

Winona

*State
University*

Winona

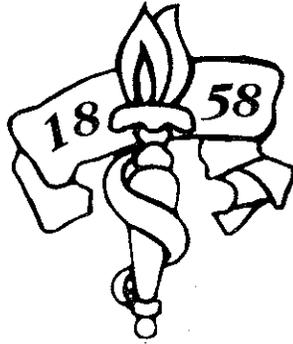
*State
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UNDERGRADUATE CATALOG 1998 - 2000

Winona

*State
University*

1998-2000 GENERAL CATALOG



Winona State University

Winona, Minnesota

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, status, date of WSU graduation, class schedule and photograph.

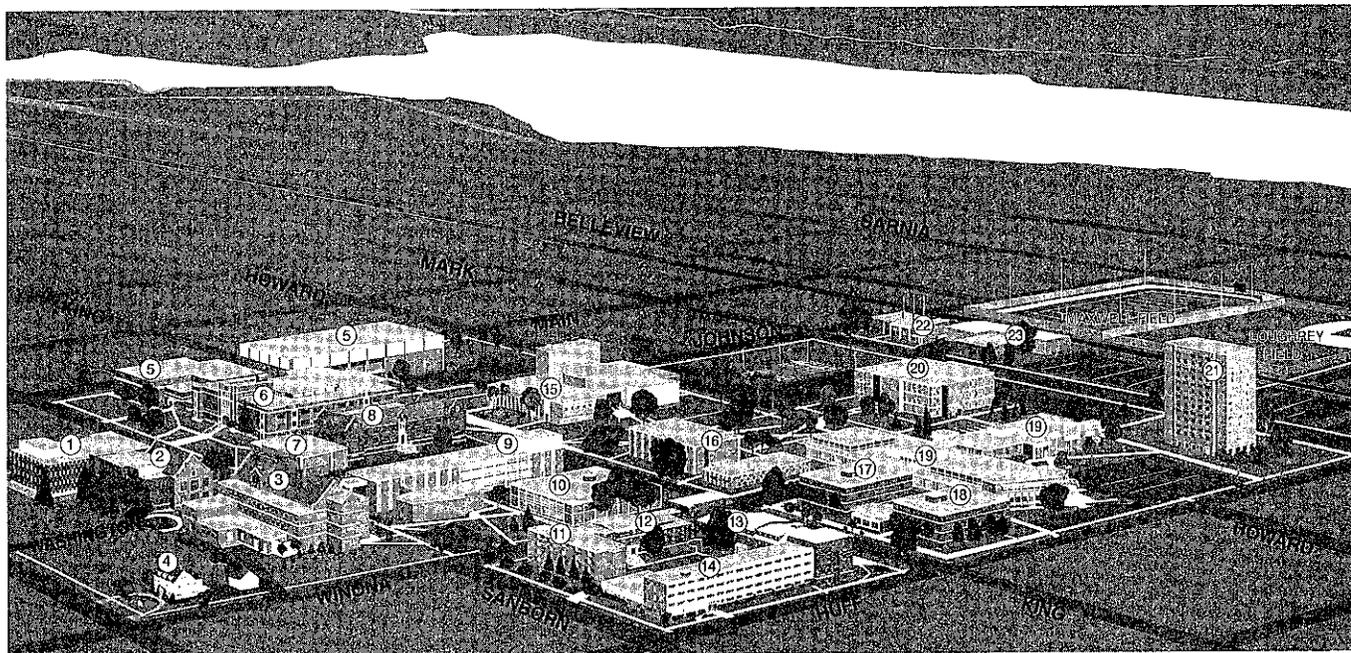
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The provisions of this publication are not to be regarded as an irrevocable contract between the student and WSU. The University reserves the right to change any provision or requirement at any time.

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 1-(507)-457-5008.

Visit us on the world wide web at:
<http://www.winona.msus.edu>

Campus Map



1. **Maxwell Library** — contains the University's library holdings
 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, 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 Relations, News Services, Facilities Management, Business, academic and administrative computer centers, Publications Office and the Print Shop
 7. **Howell Hall** — houses Student Support Services, the television studio, Audiovisual Services (IRC) and the Nursing School
 8. **Phelps Hall** — houses the Mass Communication and Psychology departments, Advising and Retention, the Academic Skills Center and the University Honors Program
 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, the Women's Studies Program and the Global Studies Program
 21. **Sheehan Hall** — women's residence hall
 22. **Heating Plant**
 23. **Maintenance Building**
 24. **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.*

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Administration

Office of the President

Darrell W. Krueger, President
Theresa Arrick-Kruger, Affirmative Action Officer, Human Resources Director, Sexual Harassment Office
Dennis Martin, Director, Institutional Research/Planning
James Mootz, Director, Admissions

Office of Vice President for Academic Affairs

Dennis Nielsen, Vice President of Academic Affairs
Carol Anderson, Dean, College of Education
Peter Henderson, Dean, College of Liberal Arts
Tim Gaspar, Dean, College of Nursing and Health Sciences
Kenneth Gorman, Dean, College of Business
Richard Bazillion, Dean, Library and Information Services
Robert J. Herickhoff, Dean, College of Science & Engineering
Russell Lohmann, Director, Rochester Center
Shelly Allen, Director, Interactive Television
Barbara Brown, Director, Advising & Retention
Pauline Christensen, Chair, Adult, Continuing Education & Extension and Graduate Director
Dan Eastman, Director, Residential College
Larry Holstad, Director, Athletics
Daniel Pecarina, Director, Academic and Administrative Computing
Nancy Kay Peterson, Director, Grants and Sponsored Research
Joanne Rosczyk, Director of Telecommunications and Safety
Judy Routhe, Director, Audio Visual Services
Stewart Shaw, Registrar

Office of Dean of Student Affairs

Cal Winbush, Dean of Student Affairs
Charles Bentley, Director, Counseling Center
John Burros, Director, Facilities Management
Darrin Dahl, Director, Lourdes Hall
Ryan Yonkers, Director, Morey-Shepard Residence Hall
Marc Spieler, Director, Prentiss-Lucas Residence Hall
Licinia Barrueco, Director, Sheehan Residence Hall
John Ferden, Director, Residence Life
Richard Lande, Superintendent, Plant Operations
Gregory Peterson, Director, Student Financial Aid
Terri Markos, Director, International Student Program
Vicki Decker, Director, Student Placement
Joe Reed, Director, Student Union/Student Activities

Office of Comptroller

Fred Naas, Comptroller/Director, Major Gifts
Marie Bush, Budget Director
Karen Krause, Bookstore Director

Office of Development and University Relations

Gary Evans, Vice President for Development and University Relations
Richard Davis, Director Publications/Print Shop
Tom Grier, Director, Public Information
Gloria Miller, Director, Alumni Affairs
Linda Wood, Director, Annual Fund

Minnesota State College and Universities (MnSCU) Board of Trustees

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Term expires June 30, 2002

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Legislative District #8A
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Legislative District #24A
Term expires June 30, 20002

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West Publishing Company, 610 Opperman, Eagan, MN 55123
Term expires June 30, 2000

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Term expires June 30, 2002

Christine Fritsche, Vice Chair
Congressional District #2, Legislative District #21A
Route 4, Box 79, Marshall, MN 56258
Term expires June 30, 2000

Stephen L. Maxwell, Treasurer
Congressional District #4, Legislative District #65A
882 Carroll Avenue, St. Paul, MN 55104
Term expires June 30, 1998

Gary W. Mohrenweiser, Immediate Past Chair
Congressional District #3,
Legislative District #42B,
Eden Prairie, MN
Term expires June 30, 1998

Michael Nesdahl, Congressional District #2,
Legislative District #21A
State University Student Member
Southwest State University
Term expires June 30, 1999

Denise Stephens, Secretary
Congressional District #6, Legislative District #56A
Community College Student Member
Metropolitan State University
Term expires June 30, 1998

William Ulland, Chair
Congressional District #8
Legislative District #7B
Duluth, MN
Term expires June 30, 1998

Michael M. Vekich
Congressional District #5
Legislative District #44B
St. Louis Park, MN
Term expires June 30, 20002

Jame Wafler, Congressional District #4,
Legislative District #54B
Little Canada, MN
Term expires June 30, 2000

Administrative and Service Faculty

Admissions Office

- Kim Carlson, Admission Counselor; B.A., Winona State University; 1996 -
Margaret Gernes, Admissions Counselor; B.A., College of St. Teresa; 1995 -
Jon P. Kosidowski, Admissions Counselor; B.S., Winona State University; M.S., Bemidji State University; 1984 -
Kathryn Parsi, Admissions Counselor; B.A., Winona State University; 1995 -
Carl Stange, Assistant Director, Admissions; B.A., Winona State University; 1984 -
Carol Ziehlsdorf, Associate Director of Admissions; B.S., M.S., University of Wisconsin-La Crosse; 1986 -

Advising and Retention Office

- Nancy Dumke, Assistant Director of Learning Center; B.A., St. Olaf College; M.S.A., University of Notre Dame; August, 1989 -

Child Care Center

- Karen Holte, Infant Teacher; B.S. Winona State University; 1991 -
Maria Langowski, Child Care Teacher; B.A., College of St. Teresa; 1990 -
Barbara Nagel, Director, Child Care Center; B.A., College of Saint Teresa; 1988 -
Scott Smedberg, Child Care Teacher; B.A., University of Minnesota; 1988 -

Counseling Center

- Elizabeth Burke, Counselor; M.A., St. Mary's College; 1979 -
Patricia Ferden, Assistant Professor, Counseling Center; B.S., M.S., Winona State University; March, 1988 -

Financial Aid

- Charlene Kreuzer, Financial Aid Counselor; B.S., Winona State University; 1991 -
Sandra R. Roraff, Associate Director, Financial Aid; B.A., College of St. Teresa; 1976 -

Library

- Russell F. Dennison, Associate Professor; B.A., Central College; M.S., University of Wisconsin-Madison; 1980 -
Connie Braun, Electronic Resources; B.A., Athabasca University; M.S., Mercer University; 1997 -
Joe Jackson, Assistant Professor; B.A., University of Minnesota; M.S., Simmons College; M.A. Arizona State University; 1997 -
Richard Hastings, Automation Librarian; B.S., M.S. Wayne State University; 1967 -
H. Vernon Leighton, Government Documents Librarian; B.S., Bucknell University; M.S., University of Illinois; 1990 -
Joe D. Mount, Assistant Professor; B.A. Wake Forest University; M.A. Ohio University; M.S. Indiana University-Bloomington, 1994 -
Helen Neavill, Interlibrary Loans; B.A., College of St. Teresa; M.S., Catholic University of America; 1987 -
William Palzer, Reference Librarian; B.A., College of St. Teresa; M.A., University of Minnesota; 1970 -
Kathryn A. Sullivan, Professor, Library; B.A., M.A., Northern Illinois University; D.S., Ph.D., Nova University; 1978-

Registrar's Office

- Sandra Benning, Assistant Registrar; B.S., Winona State University; 1985 -
Donna Heyer, Assistant Registrar; B.S., Winona State University; 1985
Joanne Landers, Associate Registrar; B.S., Winona State University; 1982 -

Student Support Services

- Karen Owen, Director, Student Support Services; B.S., Winona State University; M.S., University of Wisconsin-La Crosse; 1987 -

Sports

- Michael Herzberg, Sports Information Director; B.A., Winona State University; 1992 -

- Mark Bambenek, Intramural Director, Assistant Men's Basketball Coach; B.S., M.S., University of Wisconsin-La Crosse; 1988 -

Emeriti

- Amanda B. Aarestad, Education; B.E., Moorhead State University; M.A., University of Minnesota
Carlis M. Anderson, Music; B.F.A., University of South Dakota; M.Ed., University of Colorado
Dwight L. Anderson, Biology; B.A., Peru State College; M.A., Ph.D., University of South Dakota
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Arthur Barsky, History; B.A., Pepperdine College; M.A., University of Southern California; Ph.D., University of California at Los Angeles
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Margaret P. Boddy, English; B.A., M.A., Ph.D., University of Minnesota
Raymond Brooks, Mass Communications; B.S., Valley City State College; M.S., Moorhead State University
J. Hugh Capron, Industrial Education; B.S., Winona State University; M.A., Stout State University; Ed.D., University of Florida
*Roger Carlson, Professor, Geography; B.A., M.A., University of California-Los Angeles; Ph.D., University of Nebraska; 1967 -
George Christensen, Counseling Center; B.S., M.A., Ph.D., University of Minnesota
Betty Darby, Nursing; B.S., University of Minnesota; M.S., Winona State University; M.S.N., University of Wisconsin, Madison
Marion F. Davis, Foreign Languages; B.A., College of Saint Teresa; M.A., University of Minnesota
Susan Day, Health, Physical Education & Recreation; B.S., University of Wisconsin-LaCrosse; M.S., Winona State University; Ed.S., Northern Illinois University
Norma Dison, Nursing; B.S., Valparaiso University; M.A., Ed.D., University of Minnesota
Robert A. DuFresne, President 1967-1977, Distinguished Service Professor; B.S., St. Cloud University; M.Ed., University of Colorado; Ed.D., University of North Dakota
*Glenn F. Dukes, Professor, Computer Science; B.S., M.S., Ph.D., Iowa State University of Science and Technology; 1969 -
Wayne Dunbar, Chemistry; B.A., Career Community College; M.A., Purdue University; Ph.D., Northern Illinois University
Kathryn Dunlay, Education; B.S., M.A., Northwestern College
*James Howard Eddy, Professor, Political Science; B.S., St. John's University; M.A., Ph.D., University of Oklahoma; 1965 -
Joseph Emanuel, Biology; B.S., University of Minnesota-Duluth; M.S., University of Minnesota
William Emmons, Mathematics; B.A., Luther College; M.S., Winona State University; M.N.S., University of Idaho
James Erickson, Adult Continuing Education and Extension; B.S., M.S. Winona State University
*Wayne C. Erickson, Professor, Education; B.A., Concordia College (Minnesota); M.S., North Dakota State University; Ed.S., Northern Arizona University; Ed.D., University of North Dakota; 1967 -
Don Fick, Chemistry; B.S., University of North Dakota; Ed.D., Oregon State University
Gertrude Finch, Business; B.A., University of Iowa; M.A., Columbia University
Otto Frank, B.S., Dickinson State College; M.S., Ed.D., University of North Dakota
Calvin Fremling, Biology; B.S., M.S., St. Cloud State University; Ph.D., Iowa State University
George Grangaard, Education; B.S., University of Wisconsin, La Crosse; M.S., Winona State University; Ed.D., Ball State University
Marceline Gratiaa, Mathematics/Computer Science; B.S., M.S., St. Louis University

Robert Gunner, Physical Education and Recreation; B.S., M.A., Michigan State University; Ph.D., Indiana State University

Warren Haesly, Health Service; M.D., Northwestern University

Robert A. Hanson, President 1977-1983; B.S., M.S., Ph.D., University of Minnesota

Roderick Henry, History; B.S., M.A., Ball State University

Walter R. Hinds, Jr., Music; B.P.S.M., Capitol University; B.S., M.S., Juilliard School of Music

Thomas Hirsch, Mass Communications; B.S., University of Wisconsin, La Crosse; M.S., University of Wisconsin, Stout

Ruth Hopf, Business Education and Office Administration; B.S., Winona State University; M.A., University of Northern Colorado; Ph.D., University of Iowa

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Daniel B. Hoyt, History; B.A., Dakota Wesleyan University; M.A., Ph.D., University of Iowa

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Donald J. Hunter, Economics/Finance; B.S., University of Illinois; M.S., Ph.D., Iowa State University

Edward Jacobsen, Learning Resources; A.B., Ripon College; M.A., University of Oklahoma; M.A., University of Wisconsin-Madison

Herbert N. Johnson, Mathematics and Statistics; B.S., Moorhead State University; M.S., New Mexico Highlands University; Ed.D., University of Oregon

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John Kane, Student Affairs/Facilities Management; B.S., University of Wisconsin-La Crosse; M.S., Winona State University; Ed.D. Oregon State University

James Keill, Education; A.B., Doan College; M.A., University of Northern Colorado; Ed.D., University of Nebraska

Robert Keister, Health, Physical Education, and Recreation; B.A., Wartburg College; M.S., Winona State University

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Eldon Koplin, Education; B.A., M.A., University of South Dakota; Ed.D., University of Northern Colorado.

Rosemary Langston, Dean, College of Nursing & Health Sciences; B.S.N., University of Buffalo; M.S.N., Texas Woman's University; Ph.D., University of Minnesota-Twin Cities; 1978 -

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Madeo Molinari, Health Physical Education and Recreation; B.A., Ripon College; M.S., University of Wisconsin-Madison

Marjorie Moravec, Health, Physical Education, and Recreation; B.S., College of St. Scholastica; M.A., University of Iowa

Frank Morello, Political Science; B.S., Fordham University; M.A., Ph.D., St. John's University

Leo Morgan, Sr., Industrial Education; B.S., St. Cloud State University; M.A., University of Minnesota; Ed.D., University of Northern Colorado

Howard Munson, Education; B.S., University of Minnesota-Duluth; M.Ed., Macalester College; Ed.D., Washington State University

Floretta M. Murray, Art; B.S., Winona State University; M.A., University of Minnesota

Frederick M. Olson, Mathematics and Statistics; B.S., St. Cloud State University; M.S., Northern State College, South Dakota; Ed.D., University of Northern Colorado

Ivan Olson, Music; B.M.E., M.M., Northwestern University; Ed.D., University of Michigan

Sandra Olson, Mathematics and Statistics; B.S., Colorado State University; M.N.S., Arizona State University; Ed.D., University of Northern Colorado

Marvin Palecek, History; B.A., Northwestern Schools; M.A., Ph.D., University of Minnesota

Doris Pennell, Education; B.S., Iowa State Teachers College; M.A., University of Northern Colorado; Ed.S., Southern Illinois University

Hosea Perry, Sociology/Social Work; A.B., Allen University; M.A., North Carolina Central University; M.S.W., University of Iowa

M. R. Raymond, Administration; B.A., Michigan State Normal School; M.A. Ph.D., University of Michigan

Robert Raz, English; B.A., University of Michigan; M.A., Wayne State University; Ph.D., University of Michigan

Jacque Reidelberger, Communication Studies; A.B., Beloit College; M.A., St. Louis University

Cleo Reiter, Education; B.A., University of Minnesota; M.A., Winona State University

Ruby Richardson, Business Education & Office Administration; B.A., Valley City State College; M.S., Winona State University

Eugene Ridings, History; B.S., Davidson College; M.A., University of North Carolina; Ph.D., University of Florida

Marguerita Ritman, Administration; Ph.B., University of Chicago; M.A., Ohio University

Wayne Sanford, Education; B.S., M.A., Ph.D., University of Minnesota

Verlie Sather, Education; B.E., Winona State University; M.A., University of Minnesota

Ann R. Sawyer, Administration; B.S., University of Minnesota; M.S., Winona State University; Ed.D., University of Northern Colorado

Dolores Schiller, Nursing; B.S., M.N.A., University of Minnesota

Judy Schlawin, Art; B.S., University of Minnesota; M.S., Winona State University

Robert Sheehan, Philosophy; A.B., Merrimack College; M.A., Ph.D., The Catholic University of America

Curtis Siemers, Communication Studies; B.A., University of Omaha; Ed.D., Ph.D., University of Nebraska

Lois A. Simons, Administration; B.E., Winona State University; M.S., Wellesley College

Myron Smith, Health, Physical Education & Recreation; B.S., Mankato State University; M.S., Colorado State University

Richard Sovinee, Music; B.Mus., M.Mus., D.Mus., Northwestern University

Jacob Steigerwald, Foreign Languages; B.A., Columbia College; B.A., M.A., University of Illinois; Ph.D., University of Cincinnati

Magda Talle, Education; B.S., M.A., University of Minnesota

Frank L. Van Alstine, Administration; B.S., Southwestern State Teachers College; M.S., Oklahoma A & M; Ph.D., University of Minnesota

Virginia H. Vint, Art; B.D., M.A., University of Michigan; Ed.D., Stanford University

Everett Walden, Educational Administration; B.A., M.A., University of Iowa; Ed.D., University of Colorado

Robert Wilson, Library; B.A., Nebraska Wesleyan University; M.L.S., Kansas State Teachers College

Dan L. Willson, Science & Technology; B.S., M.S., Kansas State College-Pittsburg; Ph.D., University of Oklahoma

Duane W. Wolfe, Professor, Mathematics and Statistics; B.S., Winona State University; M.A., Central Michigan University;

Sandra Wunderlich, Nursing; B.S.N., University of Wisconsin-Madison; M.S., Winona State University; M.S.N., University of Wisconsin-Eau Claire

Marlys Youngck, Curriculum Laboratory Librarian; B.S., M.S., Mankato State University; M.A., Indiana University

Ronald Zwonitzer, Biology, B.S., M.S., Ph.D., University of Wyoming

Undergraduate Programs

ASSOCIATE IN ARTS

General

BACHELOR OF ARTS MAJORS (Non-Teaching)

Art

Communication

Communication Studies Option

Organizational Communication

Option

Economics

English

First Combining Option

Second Combining Option

Writing Option

French

German

History

Mass Communication

Advertising Option

Broadcast Option

Journalism Option

Photojournalism Option

Public Relations Option

Mathematics

Music

Political Science

General Option

International Studies Option

Professional Studies

General Option

Aviation Maintenance

Management Option

Psychology

Sociology

Spanish

Theatre

Design Option

Performance Option

BACHELOR OF ARTS MINORS (Non-Teaching)

Art

Biology

Communication Studies

Cross-Cultural Communication

Dance

Economics

English

Creative Writing Option

Writing Option

French

German

Global Studies

Geography

History

Mass Communication

Mathematics

Music

Political Science

Philosophy

Psychology

Sociology

General Option

Gerontology Option

Spanish

Theatre

Women's Studies

BACHELOR OF SCIENCE MAJORS (Non-Teaching)

Accounting

Administrative Information Systems

Biology

Allied Health Option

Cell and Molecular Option

Ecology Option

Business Administration

General Administration Option

Public Administration Option

Chemistry

Composites Materials Engineering

Chemical Option

Mechanical Option

Computer Science

Computer Information Systems

Option

Cytotechnology

Exercise Science

Athletic Training Option

Cardiac Rehabilitation Option

Work Site Health Promotion Option

Finance

Banking Option

Investment Option

Geosciences

Option A

Option B: Applied Hydrogeology

Option C: Water Resources

Management

Health Care Management

Human Resources Management

Management Information Systems

Marketing

Mathematics

Statistics Option

Medical Technology

Music

Business Emphasis

Liberal Arts Option

Performance Option

Nursing

Generic Option

RN Option

Paralegal

Business Administration Option

Multi-Legal Option

Sociology Option

Physics

Applied Nuclear Science Option

Electronics Option

Physics Option

Production and Operations Management

Public Administration

Recreation and Leisure Studies

General Recreation Option

Therapeutic Recreation Option

School and Community Health Education

Public Administration Option

Social Work

Sociology: Criminal Justice

Corrections Option

Law Enforcement Option

BACHELOR OF SCIENCE MINORS (Non-Teaching)

Accounting

Airway Science

Biochemistry

Business Administration

Business Law

Chemistry

Computer Science

Geosciences

International Business

Management Information Systems

Mathematics

Statistics Option

Physics

Electronics Option

Production and Operations Management

Public Administration

Training and Development

BACHELOR OF SCIENCE MAJORS (Teaching)

Art

Biology: Life Sciences

Business Education

Earth Science
Elementary Education
English
English: Writing
French
German
Mathematics
Middle School Science
Music
Physical Education
Physical Science
School and Community Health Education
Social Science/History
Spanish
Special Education
Speech/Theatre Arts

**BACHELOR OF SCIENCE MINORS
FOR ELEMENTARY TEACHERS**

(Not for Licensures)

General Science
Language Arts
Mathematics
Multi-Cultural Global Studies
Social Studies

BACHELOR OF SCIENCE MINORS

(Teaching)

Early Childhood Education
English
French
German
Mathematics
 Secondary Option
Spanish
Speech/Theatre Arts

BACHELOR OF SCIENCE

CONCENTRATIONS *(Teaching)*

General Science
Language Arts
Mathematics
Multi-Cultural Global
Social Studies

PRE-PROFESSIONAL SEQUENCES

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

LICENSURES

Developmental Adapted
 Physical Education
Family Education: Early Childhood
Family Education: Parent Education
Middle School
Prekindergarten Licensure
School Social Work

1998-99 Academic Calendar Winona State University

FALL SEMESTER - 1998-99

Registration begins, Thursday	April 30, 1998
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Fall Semester, Monday	July 27, 1998
New Student Orientation Experience, Wednesday, Thursday, Friday	Aug. 19, 20, 21, 1998
Final application deadline for Arranged Classes, Internships, Independent Studies (GRADUATE and UNDERGRADUATE), Friday	Aug. 21, 1998
Mass Registration, Friday	Aug. 21, 1998
Day classes begin, Monday	Aug. 24, 1998
Evening classes begin, Monday	Aug. 24, 1998
Evening Class Registration - Evening Graduate and Undergraduate students ONLY, Monday, Tuesday, Wednesday, Thursday	Aug. 24, 25, 26, 27, 1998
** Class schedule change (Drop/Add), Monday, Tuesday, Wednesday, Thursday, Friday, Monday	Aug. 24, 25, 26, 27, 28, 31, 1998
Last day to drop on-campus classes with tuition refund, Wednesday	Aug. 26, 1998
Labor Day Holiday, Monday	Sept. 7, 1998
Midterm Day, (Last day for undergraduates to make up work from Spring and Summer Terms, Wednesday)	Oct. 14, 1998
* Last day to notify the Office of Graduate Studies of intent to take Spring Semester Comprehensive Examinations, Wednesday	Oct. 14, 1998
Last day to withdraw from classes, Friday	Oct. 30, 1998
Registration for Spring Semester begins on Thursday	Nov. 12, 1998
Veterans' Day Holiday, (observed) Friday	Nov. 13, 1998
Thanksgiving break begins at 10 p.m., Tuesday	Nov. 25, 1998
Classes resume, Monday	Nov. 30, 1998
Final Examinations, Monday, Tuesday, Wednesday, Thursday	Dec. 14, 15, 16, 17, 1998
Fall Semester Commencement, Friday	Dec. 18, 1998
Fall Semester Break begins at 6 p.m., Friday	Dec. 18, 1998
Grading Days, Friday and Saturday	Dec. 18, 19, 1998

SPRING SEMESTER - 1998-99

Registration begins, Thursday	Nov. 12, 1998
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Fall Semester, Wednesday	Dec. 9, 1998
Final application deadline for Arranged Classes, Internships, Independent Studies (GRADUATE and UNDERGRADUATE), Monday	Jan. 11, 1999
Mass Registration, Monday	Jan. 11, 1999
Evening classes begin, Monday	Jan. 11, 1999
Evening Class Registration - Evening Graduate and Undergraduate students ONLY, Monday, Tuesday, Wednesday, Thursday	Jan. 11, 12, 13, 14, 1999
Day classes begin, Tuesday	Jan. 12, 1999
** Class schedule change (Drop/Add), Tuesday, Wednesday, Thursday, Friday, Tuesday, Wednesday	Jan. 12, 13, 14, 15, 19, 20, 1999
Last day to drop on-campus classes with tuition refund, Thursday	Jan. 14, 1999
Martin Luther King Holiday (no classes), Monday	Jan. 18, 1999
February Break Day, Friday	Feb. 19, 1999
Spring Break begins at 10 p.m., Friday	March 5, 1999
Midterm Day, (Last day for undergraduates to make up incompletes from Fall Semester), Friday	March 5, 1999
* Last day to notify the Office of Graduate Studies of intent to take Summer Semester Comprehensive Examinations, Monday	March 22, 1999
Classes resume, Monday	March 22, 1999
Last day to withdraw from classes, Friday	April 9, 1999
Registration for Fall Semester, 1999-2000 begins, Thursday	April 29, 1999
Final Examinations, Monday, Tuesday, Wednesday, Thursday	May 17, 18, 19, 20, 1999
Spring Semester Commencement, Friday	May 21, 1999
Grading Days, Friday and Saturday	May 21, 22, 1999

* Pertains to Graduate students ONLY

** No refund for reduction in credits during the last 3 days of Drop/Add

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, extra curricular 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.

1999-2000 Academic Calendar Winona State University

FALL SEMESTER - 1999-2000

Registration begins, Thursday	April 29, 1999
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Fall Semester, Monday	July 26, 1999
Freshman Orientation Experience, Wednesday, Thursday, Friday,	Aug. 18,19,20, 1999
Final application deadline for Arranged Classes, Internships, Independent Studies (GRADUATE and UNDERGRADUATE), Friday	August 20, 1999
Day classes begin, Monday	Aug. 23, 1999
Evening classes begin, Monday	Aug. 23, 1999
Evening Class Registration - Evening Graduate and Undergraduate students ONLY, Monday, Tuesday, Wednesday, Thursday	Aug. 23,24,25,26, 1999
** Class schedule change (Drop/Add), Monday, Tuesday, Wednesday, Thursday, Friday, Monday	Aug. 23,24,25,26,27,30, 1999
Last day to drop on-campus classes with tuition refund, Wednesday	Aug. 25, 1999
Labor Day Holiday, Monday	Sept. 6, 1999
Midterm Day, (Last day for undergraduates to make up work from Spring & Summer Terms), Wednesday	Oct. 13, 1999
* Last day to notify the Office of Graduate Studies of intent to take Spring Semester Comprehensive Examinations, Wednesday	Oct. 13, 1999
Last day to withdraw from classes, Friday	Oct. 29, 1999
Registration for Spring Semester begins on Thursday	Nov. 11, 1999
Veterans' Day Holiday, (observed) Friday	Nov. 12, 1999
Thanksgiving break begins at 10:00 p.m., Tuesday	Nov. 23, 1999
Classes resume, Monday	Nov. 29, 1999
Final Examinations, Monday, Tuesday, Wednesday, Thursday,	Dec. 13,14,15,16, 1999
Fall Semester Commencement, Friday	Dec. 17, 1999
Fall Semester Break begins at 6:00 p.m., Friday	Dec. 17, 1999
Grading Days, Friday and Saturday	Dec. 17,18, 1999

SPRING SEMESTER - 1999-2000

Registration begins, Thursday	Nov. 11, 1999
Last day for new and former Graduate and Undergraduate students to complete application and file intent to return for Spring Semester, Wednesday	Dec. 8, 1999
Final application deadline for Arranged Classes, Internships, Independent Studies, (GRADUATE and UNDERGRADUATE), Monday	Jan. 10, 2000
Evening classes begin, Monday	Jan. 10, 2000
Evening Class Registration - Evening Graduate and Undergraduate students ONLY, Monday, Tuesday, Wednesday, Thursday	Jan. 10,11,12,13, 2000
Day classes begin, Tuesday	Jan. 11, 2000
** Class schedule change (Drop/Add), Tuesday, Wednesday, Thursday, Friday, Tuesday, Wednesday	Jan. 11,12,13,14,18,19, 2000
Last day to drop on-campus classes with tuition refund, Thursday	Jan. 13, 2000
Martin Luther King Holiday (no classes), Monday	Jan. 17, 2000
February Break Day, Friday	Feb. 18, 2000
Spring Break begins at 10:00 p.m., Friday	March 3, 2000
Midterm Day (Last day for undergraduates to make up incompletes from Fall Semester), Friday	March 3, 2000
* Last day to notify the Office of Graduate Studies of intent to take Summer Comprehensive Examinations, Monday	March 20, 2000
Classes resume, Monday	March 20, 2000
Last day to withdraw from classes, Friday	April 7, 2000
Registration for Fall Semester, 2000-2001 begins, Thursday	April 27, 2000
Final Examinations, Monday, Tuesday, Wednesday, Thursday,	May 15,16,17,18, 2000
Spring Semester Commencement, Friday	May 19, 2000
Grading Days, Friday and Saturday	May 19,20, 2000

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, extra curricular 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.

* Pertains to Graduate students ONLY.

** No refund for reduction in credits during the last 3 days of Drop/Add.

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.

Winona State University

Winona State University, established Sept. 3, 1860, as the first teacher preparation institution west of the Mississippi River, is one of seven state universities that are part of the 53-member Minnesota State Colleges and Universities system (MnSCU). The University has three campuses: its original, main campus and a Residential College are located in the city of Winona; a non-residential campus is located in Rochester, Minn., 45 miles to the west.

Mission

Winona State University is a dynamic learning community that provides rigorous, high-quality baccalaureate and graduate education opportunities to students. We believe learning is the liberating force in human development. An information-based society is better served when individuals function at higher levels of learning, thinking and doing. Our mission is to serve the people of Minnesota and the world by developing human capacity for excellence in learning, service and leadership.

Goals of the University

WSU is dedicated to the following goals:

* Student Success:

All WSU students will graduate possessing the skills, capacities and talents required for high performance in subsequent endeavors by offering undergraduate programs and degrees which provide direct entry into graduate programs or employment opportunities that require significant educational preparation.

* Student Satisfaction:

WSU students and alumni will report high levels of satisfaction with their experience at WSU. WSU will provide for the education, personal and social development of students through effective academic advising and counseling, and through high quality cultural, recreational and extra-curricular programs.

* General Education:

All WSU students will have a solid foundation in general education. WSU will provide a comprehensive base of liberal studies as the foundation for university degrees in the arts, letter, and sciences as well as offering specialized professional, technological and occupational degrees.

* Faculty and Staff Development:

WSU will develop the human resources to accomplish the goals of the University by supporting a commitment to research and to scholarly and creative activities which enhance instructional programs and teaching excellence.

* Partnership Development:

WSU graduates will meet or exceed the expectations of the citizens, businesses, and communities that we serve. WSU will

- Provide pre-professional sequences that are coordinated with professional programs at other universities.
- Maintain a special commitment to lifelong learning by meeting off-campus instruction and continuing educational needs of the citizens of the service region.
- Provide public service to the region and serve as a cultural center and a source of problem-solving expertise.
- Assume leadership in consortia relationship and cooperate with private business and research organizations to maximize educational and employment opportunities for citizens of the region through the sharing of expertise and resources.

* Technology:

There will be a seamless integration of technology into the academy at all levels.

* Enrollment:

WSU will effectively manage enrollment to meet the needs of the University. WSU will provide educational opportunities for all individuals including minorities, the disadvantaged, handicapped, and non-traditional students.

* Assessment:

WSU will evaluate all programs to meet the needs of a changing educational and technical environment.

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's mission is to serve 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 (as outlined in the Wingspread Journal) 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 each 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:

1. 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 life-long learning process.
2. Standards of excellence: WSU students are expected to meet the high expectations expressed by faculty and staff members. Additionally, 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.
3. 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. A significant amount of time outside of class is expected to be spent on individual studying, in laboratory settings, in the library or engaged in academic-related discussion with peers, faculty and administrative staff.
4. 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, multi-cultural interactions and internships.
5. Personal growth and development: WSU students are encouraged to take advantage of the wide range of activities, clubs and organizations available on campus both within their major area of study as well as those activities for their own pleasure. Such experiences contribute to the creation 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 which 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 which 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 which 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 support services that increase the quality of the 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.

Accreditation and Membership

WSU is accredited for undergraduate and graduate programs by the North Central Association of Colleges and Secondary Schools. In addition, the Education Program is accredited by the National Council for the Accreditation of Teacher Education and

the Minnesota Board of Teaching for the preparation of elementary and secondary teachers, elementary and secondary principals, school superintendents and guidance counselors; the Chemistry Department's program is approved by the American Chemical Society; the Nursing Program is accredited by the National League of Nursing; the Social Work Program is nationally accredited by the Council on Social Work Education; and the Engineering Program is accredited by the Accrediting Board for Engineering and Technology.

WSU also is a member of the American Association of Colleges for Teacher Education, the American Council on Education, the Midwest Association of Graduate Schools, the American Assembly of Collegiate Schools of Business and the National Association Schools of Music (NASM).

Location and Community

WSU's 47-acre campus is located near the heart of downtown Winona. The 4.25-acre Residential College campus, located two miles across town, is connected to the main campus via free, convenient bus service.

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 LaCrosse, Wis. (30 miles away) and in the Twin Cities (120 miles away).

Winona also is home to three institutions of higher learning: WSU, Saint Mary's University and Red Wing/Winona Technical College. WSU cooperates with these area institutions, as well as institutions throughout the MnSCU system, to enrich the educational and cultural opportunities for students at all institutions by sharing their programs and resources.

WSU's Rochester Center is an example of the sharing characteristics of Minnesota institutions. The Center is housed in the same facility as the Rochester Community and Technical College. ITV and computing connections link the Center to Winona sites, and Winona students can avail themselves to cultural opportunities in Rochester.

Campus Facilities

The main WSU campus provides students ample facilities for educational activities that combine traditional charm with modern convenience. Highlighting the educational facilities is Maxwell Library, which contains nearly 245,000 volumes and more than 831,000 units of microfilm documents. The library also maintains on-going subscriptions to approximately 1,350 journals. It houses a new bibliographic instruction room, which is used to teach students how to use the library's catalogs and indexes as well as how to navigate the internet.

Stark Hall, dedicated in September of 1992, houses the unique undergraduate Composite Materials Engineering Program and the accredited Nursing Program as well as elements of Biology and other programs.

In addition to the academic buildings, exceptional facilities are provided for students' social, cultural and recreational interests. The Performing Arts Center contains facilities for musical performances, theater productions and studio work. Memorial Hall is one of the finest physical education/athletic facilities in Minnesota. Its swimming pool, six full-sized gymnasiums, indoor track and tennis facilities, handball/racquetball courts, weight training room, 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 University Center (Kryzsko Commons) is home to student lounges, dining facilities, a bowling alley, student organization offices, conference rooms and various other accommodations for student activities and relaxation.

While emphasis has been placed on providing students with exemplary facilities for academic work, the University also provides students with comfortable, satisfying living accommoda-

tions. WSU has excellent facilities for student living and activities. There are seven residence halls that can accommodate 1800 students, including the Lourdes Hall Residential College.

The Residential College, housed in Lourdes Hall, offers students both housing and a unique educational opportunity. The Residential College's general mission is "to provide an enhanced learning environment for highly motivated students to promote excellence in the achievement of their undergraduate education." Students are encouraged to discover the love of learning, tolerance for individual differences and benefits of a liberal education by developing their talents through strong student pursuit and high expectations from the University. Having the intimacy of a smaller environment and the resources of a state university system, 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.

Academic Programs

WSU offers more than 80 academic programs through the University's five colleges:

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

All programs are offered by highly qualified faculty in an environment committed to a love of learning and student service. Approximately 400 faculty dedicate themselves to delivering rigorous academic programs while maintaining a 'small school closeness' to individual students.

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. Special programs also may be developed to meet the continuing education needs of specific agencies, schools, businesses and industries. For more information, schedules or appointments contact the Adult, Continuing Education and Extension Office, Room 109, Somsen Hall, WSU, Winona, MN 55987; (507) 457-5080 or 1-800-242-8978.

WSU-Rochester

Center General Information

WSU has had a strong commitment to students in the Rochester area for 70 years. The WSU-Rochester Center serves approximately 2,000 students.

WSU, along with the University of Minnesota and Rochester Community and Technical College, have combined to create the University Center at Rochester. The Center opened in 1993 and is equipped with state-of-the-art technology for interactive television and computer systems that link UCR students with main campuses and the world.

WSU has a formal 2 + 2 program with RCTC leading to 14 baccalaureate degrees. There also are five master's degrees offered by WSU in Rochester.

WSU also 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.

Location and Community

Olmsted County has a population of over 100,000 people. It is home to the Mayo Clinic and IBM Rochester. Olmsted County residents have a high level of educational attainment and are highly receptive to the life-long learning opportunities offered by WSU. WSU cooperates with both IBM and Mayo Clinic for specialized classes in computer science and the health professions.

WSU-Rochester is part of the University Center at Rochester, located at U.S. Highway 14 and 30th Ave. SE.

Degrees/Programs

Undergraduate Programs (2 + 2)

WSU-Rochester cooperates with Rochester Community and Technical College to offer complete educational programs to the area. Through the 2 + 2 program, students can complete 14 baccalaureate degree programs by transferring lower-division credits from RCTC and completing upper-level courses at WSU-Rochester. Students also can complete numerous undergraduate minors and five graduate degrees containing 14 different graduate programs — all at the Rochester campus of WSU.

Undergraduate Programs

- Accounting
- Administrative Information Systems Management
- Business Administration
- Business Education
- Computer Information Systems
- Computer Science
- Elementary Education
- Finance
- Management Information Systems
- Marketing
- Nursing
- Professional Studies
- Psychology
- Social Work
- Sociology

Graduate Programs

- Master of Business Administration
- Master of Science in Counselor Education
- Community Counseling
- Elementary School Counseling
- Secondary School Counseling
- Professional Development
- Master of Science in Nursing
- Master of Science degrees:
 - 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
- Master of Science in Education
- Master of Science in Educational Leadership
- Specialist Degree in Educational Leadership

Special Programs

Certification/Licensure-College of Education

Certification programs include two special education licensure programs offered by the Special Education Department. These programs can be taken at the undergraduate and graduate level. They include licensure in the following areas: Mild/Moderate Mental Handicaps and Learning Disabilities. At the graduate level, in conjunction with the University of Minnesota, a program in Emotional/Behavioral Disorders is offered.

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 the Department of Adult Continuing Education and Extension to provide non-credit continuing education programs.

Adult Entry Program

The Adult Entry Program is designed for mature students who have never attended college or are returning to college. Counselors are available in Rochester on a regular basis to assist adult students seeking a college education. Awarding college credit for life/work experience is possible under this program. (See Adult Continuing Education and Extension Section for more information.)

Faculty

All program areas offered at WSU-Rochester have residential faculty. These faculty members live and work in the Rochester area. Courses also are taught by WSU faculty who commute from the main campus.

Student Services

Counseling

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

Career Planning

Both undergraduate and graduate students receive personalized career testing and planning, as well as job search assistance from counselors available in Rochester on a weekly basis.

Financial Aid

Counseling is available for students concerning long- and short-term plans for financing their education. An Application for Financial Aid should be requested when you apply for admission. Representatives from the WSU Financial Aid Office are available at WSU-Rochester on a weekly basis. Preliminary information is available at WSU-Rochester.

Joint WSU/RCTC Services

Other areas of student support, i.e., services to disabled students and child care, are coordinated by WSU-Rochester staff members.

Computer Facilities

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 campus.

Library

WSU-Rochester's library holdings are integrated into UCR's Goddard Library. This arrangement provides students with an extensive resource of reference and research material. Library holdings number over 57,000 volumes. There is an overnight courier service to WSU's Maxwell Library for articles and books, which gives WSU-Rochester students access to both the UCR and WSU libraries. On-line computer searches are possible through both the PALS and Luminet systems.

Campus Visits

Students are encouraged to visit WSU-Rochester at the University Center in Rochester any time. For more information about programs and services, call (507) 285-7100.

Degrees and Programs

Four-Year Undergraduate

Bachelor of Arts

Art
Biology
Communication Studies
Economics
English
French
German
Mass Communication
Mathematics
Music
Political Science
Professional Studies
Psychology
Sociology
Theatre Arts

Bachelor of Science

Accounting
Administrative Information Systems
Art (Teaching)
Biology
Business Administration
Business (Teaching)
Chemistry
Composite Materials Engineering
Computer Science
Cytotechnology
Earth Science (Teaching)
Elementary Education
English (Teaching)
Exercise Science
Finance
French (Teaching)
Geology
German (Teaching)
Health Care Management
Human Resources Management
Life Science (Teaching)
Management Information Systems
Marketing
Mathematics (Teaching and Non-Teaching)
Mathematics: Statistics
Medical Technology
Middle School Science (Teaching)
Music:
Music (Teaching)
Nursing
Paralegal
Physical Education (Teaching)

Physical Science (Teaching)
Physics
Production and Operations Management
Public Administration
Recreational and Leisure Studies
School and Community Health Education
(Teaching and Non-Teaching)
Social Science: History (Teaching)
Social Work
Sociology: Criminal Justice
Spanish (Teaching)
Special Education (Teaching)
Speech and Theatre Arts (Teaching)

Two-Year Undergraduate

Associate of Arts

General Education

Special Licensure Programs

(Graduate and Undergraduate)

Developmental/Adapted Physical Education
Early Childhood
Early Childhood: Family Educator
Early Childhood: Parent Educator
Emotional/Behavioral Disorders (Graduate only)
(in cooperation with U of M)
Kindergarten Endorsement
Learning Disabilities
Middle School
Mental Impairment
Minnesota School Social Worker Level I
Prekindergarten
Special Education
 Learning Disabilities
 Mental Impairment

Pre-Professional Sequences

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

Admission Information

Students can apply for admission to either semester during the academic year. All admissions material must be submitted and received in the Admissions Office one month before the first day of registration for any semester.

A \$20 non-refundable application fee must accompany all new applications.

The ACT and the SAT are considered for admission decisions regarding those students coming 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.

Students still can be considered for admission even if they haven't graduated from high school if they have a High School Equivalency Certificate based on successful completion of the GED test, and if they achieve an acceptable score on one of the college entrance examinations and have completed the 16 units of high school preparation requirements.

All new students must take the English and Mathematics placement exams before enrolling in an English composition or Mathematics course. Exempt are transfer students who have credit for college-level English and/or Mathematics. Placement tests are offered regularly before all pre-registration and mass registration periods. The Advising and Retention Center has information on specific dates, times and locations of exam periods.

Entering students must have a medical examination from their own physician and provide proof of immunization against measles, rubella, mumps, diphtheria and tetanus. The University supplies forms for this purpose.

High School Preparation Requirements

The following high school curriculum must be completed in grades 9-12 if a student is seeking admission to Winona State University:

- 4 years of English (includes composition, literature and speech)
- 3 years of Math 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)
 - Computers

Admission Requirements

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

Distinctive Admission

Students are admitted with distinction if they rank in the upper 15 percent of their high school graduating class and have ACT scores of 26 or above or SAT scores of 1100 or above and have completed the 16 units of high school preparation requirements.

University Admission

Students are admitted if they rank in the top 50 percent of their high school graduating class or they have ACT scores of 21 or above or SAT scores of 1000 or above and have completed the 16 units of high school preparation requirements.

Special Admission

First-year applicants coming directly from high school who do not meet any of the above requirements because of special and unique circumstances may be considered for admission by special petition. Students in this category might include minorities, disadvantaged students and others who have potential for college success, yet their high school rank and college admission scores do not provide admissibility under the above categories.

In cases where unusual circumstances exist, students must request the Director of Admissions to schedule a review of their application for admission. The University Admissions Review Committee considers these requests.

Application Procedure

(for students coming directly from high school)

- Complete an application form.
- Return the completed application with a \$20 non-refundable fee.
- Request that the student's official high school transcript be forwarded to the Office of Admissions; the transcript should include high school rank and admission test score.

An alternate application procedure for students coming directly from high school is ACT-APP. Students coming directly from high school who achieve appropriate scores on the ACT and indicate WSU (2162) as a choice are sent an application form. After receiving the ACT test scores, the University advises you of your admissions status, and requests the \$20 application fee and high school transcript.

Other means of obtaining information about WSU and/or applying to WSU can be found by viewing various electronic sources:

1. World Wide Web: admissions@vax2.winona.msus.edu
Students will find the Viewbook, a request for more information and an electronic application.
2. ACT - College Connector
Students can apply electronically to WSU if their high school participates in the ACT College Connector software.
3. College View
Students can observe WSU on an interactive CD-ROM if their high school participates with College View. Students also can request more information, as well as apply electronically, through College View.

Early Admission

Students may be considered as applicants if they currently are enrolled in high school and have demonstrated an unusually high ability and/or achievement and they're recommended by a high school counselor or principal. Students must have completed the 10th grade before they are eligible for consideration. If they are a high school junior, they must be in the top 15 percent of their class. If they are a senior, they must be in the top 25 percent of their class. WSU participates in the Post-Secondary Enrollment Options Program.

International Students

Students must satisfy all WSU application procedures if they are not U.S. citizens. 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 also must submit a TOEFL score with a minimum of 500. The University requires all non-native speakers of English to complete an on-campus English placement exam. The English test determines the appropriate English placement.

In addition to official academic credentials and the TOEFL score, 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 also are required to have health insurance and if they don't have a health insurance policy, they are required to purchase one through the University.

Although the deadline for submitting admissions material is one month before the first day of registration for any semester, the Admissions Office encourages students who are not U.S. citizens to complete the application process **three months** before the first day of registration for the semester in which studies are to begin. Submitting application material earlier allows the application to be processed correctly and lets University officials more effectively plan the required orientation programs for international students.

International students interested in obtaining more information about the University or wanting an application packet should direct their initial inquiries to the Director of International Students, Kryzsko Commons, Winona State University, Winona, MN 55987.

Planning to Transfer?

Minnesota's technical schools, community colleges and universities are working to make transfer easier. Students can help make it much easier if they **PLAN AHEAD, ASK QUESTIONS** and **USE PATHWAYS** created by transfer agreements.

Preparing for Transfer

Those students who currently are enrolled in a college or university should:

1. Discuss their plans with the campus transfer specialist — Room 106, Somsen Hall.
2. Call or visit their intended transfer college. The students should get the following materials and information:
 - college catalog
 - transfer brochure
 - information about admissions 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)
3. After reviewing the materials, make an appointment to visit with an advisor/counselor in the college or program you would like to enter. Be sure to ask about course transfer and admission criteria.

Students who are not currently enrolled in a college or university might begin by meeting with a transfer specialist or an admission officer at their intended transfer college.

Understanding How Transfer of Credit Works

1. 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.
2. 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.'
3. 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 is, 'Will earned credits fulfill requirements of the chosen degree or program?'
4. 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.

Applying for Transfer Admission

1. Students should complete transfer application as early as they can before the deadline (**one month prior to the semester in which students wish to begin**). Enclose the application fee.
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 is enclosed with the acceptance letter. The written evaluation tells students what courses transfer and what courses did not transfer. How the courses specifically meet degree requirements may not be decided until students arrive for orientation or have declared a major.
4. Students with questions about the evaluation should call the Office of Admissions and ask to speak with a transfer specialist. Ask why judgments were made about specific courses. Many concerns can be eliminated if you understand why decisions were made. You can appeal if you are not satisfied. See 'Your Rights as a Transfer Student' below.

Rights as a Transfer Student

Students have the right to:

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

For help with transfer questions or problems, see a campus transfer specialist.

Transfer Students to WSU

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:

1. Students are admitted if they have completed 24 transferable academic semester hours and have a cumulative 2.40 GPA for all colleges attended.
2. Students may be considered for admission to WSU if they have completed 24 transferable academic semester hours or fewer and have a cumulative GPA of 2.00 to 2.39 for all colleges attended. If this is the case, students *must* visit campus and interview with a transfer specialist. Students are required to provide a high school transcript so an evaluation can be made as to high school preparation requirements, class rank and admission test scores. If students fall within this category, they should meet the admission requirements for students coming directly from high school. Should admission be offered, it will be on a space-available basis.
3. Students also may be considered for admission by special petition if they are a transfer student who doesn't meet any of the above requirements because of special and unique circumstances. Students in this category might include minorities, disadvantaged students and others who have potential for college success, yet their transfer grades or high school academic background do not provide admissibility under the above categories. In cases where unusual circumstances exist, students may request a review by the Director of Admissions. The University Admission Review Committee considers these requests.

Some departments have higher standards for admission into their majors. These programs also may have additional applications that must be filed. Students must consult the WSU catalog and departments for more detailed information about these standards.

Students having earned credits in other colleges (including institutions in the MnSCU system) which are members of the North Central Association of Colleges and Schools or corresponding regional accrediting associations can receive credit to the extent that completed courses can be applied to the chosen curriculum. Students receive credit for courses taken at accredited institutions in which the grades A, B, C, P or the equivalents were attained.

Students should be academically and socially 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 Office of Admissions, Winona State University. Students are subject to suspension if they fail to comply with the transcript requirement and they are inadvertently admitted to the university.

General Education Transfer Policy

Students transferring to WSU with an AA degree awarded by a Minnesota Community College or having met the Minnesota Transfer Curriculum awarded by MnSCU have their general education requirements waived except where special departmental requirements exist.

Students transferring to WSU with an associate degree (i.e. A.S. or A.A. S.) from an accredited Minnesota community college, non-Minnesota community college or any four-year college of university can normally anticipate that they will meet the WSU general education requirements once they have a total of 40 semester hours in liberal studies as defined by WSU. Those 40 hours must include at least six hours each in the humanities, the natural sciences and the social sciences (as defined by WSU) and must include coursework equivalent to the courses required in the basic skills: English composition, speech communication, mathematics and physical education.

Students with an associate degree that meet all the above requirements, WSU waives the Different Culture and Allied Studies requirements in general education.

All WSU general education requirements are waived, except where special departmental requirements exist, for students transferring to WSU from any Minnesota institution participating in the *Minnesota Transfer Curriculum* and they have completed that school's general education requirements. Students' former schools must certify, on the *official transcript*, the completion of its general education program.

Students transferring to WSU with an associate degree but who have deficiencies (i.e. they have fewer than 40 credits in liberal studies or fewer than 6 hours each in the humanities, natural sciences and social sciences), can take WSU general education courses to eliminate the deficiencies. If students qualify for this particular transfer policy, they must check for official sanction with the Registrar's Office after they've completed the defined 40 credits of liberal studies. If they are enrolled in off-campus programs, they should consult with their advisor about these requirements.

Students must meet all WSU general education requirements if they are transferring to WSU without an associate degree or baccalaureate degree.

Most credits earned at a community or junior college may be accepted in transfer (remedial classes are not transferable); however, to get a bachelor's degree, 64 semester credits must be taken from a four-year institution. If students have a total of 64 semester hours earned at a community or junior college, any credits exceeding the 64 semester hours from courses at a community or junior college are not counted toward the 128 required credits. However, it is not necessary to take the corresponding required course at WSU. Transferred credits must have at least a 'C' grade to transfer.

A department may require a minimum number of WSU credits in a departmental major program in order to graduate with that major from WSU.

Procedures (transfer)

1. Students should get transfer application forms from the Admissions Office.
2. Students should submit the completed application along with a \$20 non-refundable application fee (if they have never attended WSU and paid the fee previously).
3. Students should submit official transcripts from all colleges, vocational schools or universities attended. High school transcripts may be required if fewer than 24 semester credits were earned.

Returning Students

WSU students who have not attended WSU for one semester or more (summer excluded) are classified as 'Returning' students.

Returning students must complete the Intent to Return Application, which students can get in the Registrar's Office. The Registrar's Office then evaluates their record for possible re-admission.

Students are considered returning transfer students if they attend another college or university (summer excluded), and they must apply as returning transfer students. Official transcripts are required for *all* college/university attendance.

Returning transfer students must complete the WSU Application for Transfer and Returning Transfer Admission, a form they can get in the Admissions Office. The Admissions Office evaluates the transcripts for possible admission.

Returning students who have been academically suspended should refer to the 'Suspension Policy' in the Academic section of this catalog about re-admission guidelines.

Undergraduate Special Students

Students are classified as undergraduate specials if they are taking undergraduate courses for enrichment, general interest, to transfer to another school or they have no intention of earning a degree at WSU. If students are in this category, they must: (1) file an Undergraduate Special Enrollment Form; (2) submit a \$20 non-refundable application fee (if they have never 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 for undergraduate specials are based on the same standards established for students coming directly from high school and transfer students.

Post-Baccalaureate Students

Students are classified as post-baccalaureate students if they have a baccalaureate degree and they are taking additional undergraduate courses to satisfy a second major, minor or certificate. If students are in this category, they must: (1) file a Post-Baccalaureate Application Form in the Admissions Office; (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

The Non-Matriculated Undergraduate Student Program lets adults who are not seeking a degree take undergraduate WSU classes on campus without going through the formal admission procedure. To participate in the program, students 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 Adult, Continuing Education and Extension Department Somsen Hall, Room 109, WSU, 1-507-457-5080 for more information.

Vocational/Technical College Students

Students should contact the Admissions Office if they are interested in transferring credits from vocational-technical colleges.

WSU will accept a 16-credit general elective package of college-level vocational or technical courses offered by institutions with appropriate regional accreditation. A grade of 'C' is required for any vocational-technical course to transfer to WSU.

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

Students are considered transfer students if they are entering WSU from a vocational-technical college. Students must submit an official transcript from the vocational school. A high school transcript and appropriate admission test scores also are required for admission.

Veterans' Assistance

WSU is approved by the State Approving Agency for Veterans Training. Eligibility certificates should be presented to the Veterans Assistance Office, Somsen 106, when students enroll.

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 Form to the Veterans Office (after they have been admitted to the University). Enrollment for full-time students is normally 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 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 Vets Services Officer can help expedite this procedure.
7. Re-enrollment: Students can re-enroll without a new Certificate of Eligibility. Notify the Office of Admissions Veterans Assistance Office.
8. Academic Load: Full-time training requires 9 s.h. of undergraduate credit or 6 s.h. of graduate credit. Three-fourths time training requires 6 s.h. of undergraduate credit or 4-6 s.h. of graduate credit. Half-time training requires 4-6 s.h. undergraduate credit or 4 s.h. of graduate credit. Less than half-time training requires 1-4 s.h. of undergraduate credit or 1-4 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 vets. See the Veterans 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 Admissions Office with an official copy of their DD-214.

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). Credit is granted in history, social sciences, natural sciences, mathematics and the humanities. Many departments also accept credit for successful completion of CLEP subject examinations.

Correspondence Courses

WSU does not offer correspondence courses. The University accepts some correspondence work toward a degree.

Campus Visits

Anyone interested in WSU is welcome to visit the WSU campus at any time. There are student-conducted tours, when school is in session, at 9 a.m. and 1 p.m. Monday through Friday. The tours begin in the Admissions Office, Somsen Hall, Room 106. Tours also are offered at 10 a.m. on selected Saturdays from October through March (except holidays). Summer tours also are available.

For more information, materials and/or inquiries, contact:

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

Or Call: Toll Free: 1-800 DIAL WSU or (507) 457-5100

Or Visit the WSU World Wide Web Site at:

<http://www.winona.msus.edu>

Financial Information

All financial information is subject to change by action of the Minnesota State College and University Board.

A non-refundable fee of \$20 is required with any Application for Admission. Students are not subject to this fee if they have been admitted to WSU and paid the \$20.

Estimated Tuition

Regular Academic Year

	1998-1999 Tuition Per Semester Credit Hour	1999-2000 Tuition Per Semester Credit Hour
<i>Undergraduate — on-campus and extension courses:</i>		
Resident	\$84.35	\$88.60
Non-Resident	\$190.20	\$199.70
<i>Graduate — on campus and extension:</i>		
Resident	\$130.10	\$136.60
Non-Resident	\$206.00	\$216.30
<i>Summer Session:</i>		
	Summer 1999	Summer 2000
<i>Undergraduate:</i>		
Resident	\$84.35	\$88.60
Non-Resident	\$190.20	\$199.70
<i>Graduate:</i>		
Resident	\$130.10	\$136.60
Non-Resident	\$206.00	\$216.30

Estimated Fees

All fees are subject to change.

Activity Fee

Everyone attending classes at the Winona and Rochester campuses is assessed an Activity Fee, determined by a committee composed of student senators and University administrators. The committee also determines how the funds are distributed. Among those areas receiving funds are the Student Health Service, the Student Senate, university clubs and the *Winonan* (the student newspaper). The Activity Fee is \$8.10 per credit hour. The maximum each semester is \$97.20.

Union Facility Fee

Everyone who attends class through the Winona campus is assessed a Union Facility Fee, determined by the University administration and the state board office. Funds are used in financing the construction, maintenance and daily operation of the student union building. The Union Facility Fee is \$5.50 per credit hour. The maximum each semester is \$88.00.

MSUSA Fee

Everyone attending classes for college credit is assessed a MSUSA Fee, determined by the Minnesota State University Student Association and the state board office. Funds are used by the Minnesota State University Student Association. The MSUSA Fee is 26 cents per credit hour.

Academic Computing Fee/Lease

Students attending WSU are leased a laptop computer. Cost of the lease currently is unknown.

Course Fees

Students are assessed course fees if they are attending courses that have additional course fees as indicated in the schedule. Department chairpersons determine course fees, and the deans and Vice President of Academic Affairs must approve them. Departments use course fees to cover expenses not normally incurred in everyday instruction, i.e. the cost of using the bowling alley for a bowling class.

Residential College Fee

Everyone living in the Residential College is assessed the Residential College Fee, determined by the University administration. The funds are used to provide additional programs for those living at the Residential College. The Residential College Fee is \$100 during the first year, \$75 during the second year, \$50 during the third year and \$25 for each year following the third year.

Insurance

Health insurance is available to all full-time students. Students can get more information at the Counseling Center.

Incidental Fees

Students may be assessed several smaller fees that arise from other non-course related matters including the Student Health Service, Credit-by-Exam Fees, ID card replacement fees and library fines.

Program Change Fee

The University also assesses a fee if students change part of their program after classes have started. Students are assessed a \$5 fee each day they use the registration system to make program changes after their initial registration.

Late Payment Fee

Students must pay in full all tuition, fees and residence hall charges before the payment due date indicated in the current Class Schedule. Students are assessed a \$10 late fee on the first day after which the payment is due, and additional fees are levied for each succeeding instructional day on which payment is not made.

Students are expected to pay all accounts to the University when they are due. Due dates are published in the Class Schedule. Students are not released from payment obligations if they do not receive a fee statement.

The University, until all payments are made in full, is authorized to deny registration and withhold issuing any diplomas and/or official transcripts of credits.

Refund Policy

Students should get an Application for Refund from the Registrar's Office in Somsen Hall if they withdraw from the University. They also must inform the Registrar's Office when

they drop a class by using the official drop procedures. Students receive a tuition refund according to the schedule below if they withdraw from the University or drop one or more credits.

First-Term Students:

Students who have received no credit hours in any previous term at a WSU are refunded registration fees according to the following schedule:

<i>Regular Weekly Classes:</i>	<i>Withdrawing</i>	<i>Credit Drops</i>
Up to and including 3rd instructional day	100%	100%
During first week after the 3rd instructional day	85%	None
During 2nd week of term	75%	None
During 3rd week of term	65%	None
During 4th week of term	55%	None
During 5th week of term	45%	None
During 6th week of term	35%	None
After 6th week of term	None	None

<i>Evening and Saturday Classes:</i>	<i>Withdrawing</i>	<i>Credit Drops</i>
1st course but before 2nd course meeting	100%	100%
During first week after the 2nd course meeting	85%	None
During 2nd week of term	75%	None
During 3rd week of term	65%	None
During 4th week of term	55%	None
During 5th week of term	45%	None
During 6th week of term	35%	None
After 6th week of term	None	None

<i>Summer Session:</i>	<i>Withdrawing</i>	<i>Credit Drops</i>
1st instructional day	100%	100%
During first week after the 1st instructional day	75%	None
During 2nd week of term	55%	None
During 3rd week of term	35%	None
After 3rd week of term	None	None

All money kept by WSU includes a 5% administrative charge

(the maximum administrative amount is \$100). The charge is included in the above schedule.

Students Not Attending Their First-Term

Students get a refund if they have received credit hours in any previous term at WSU according to the following schedule:

<i>Regular Weekly Classes:</i>	<i>Withdrawing</i>	<i>Credit Drops</i>
Up to and including 3rd instructional day	100%	100%
4th through 8th instructional day	75%	None
9th through 13th instructional day	50%	None
14th through 18th instructional day	25%	None
After 18th instructional day	None	None

<i>Evening and Saturday Classes:</i>	<i>Withdrawing</i>	<i>Credit Drops</i>
1st course meeting but before 2nd course meeting	100%	100%
2nd course meeting but before 3rd course meeting	75%	None
3rd course meeting but before 4th course meeting	50%	None
4th course meeting but before 5th course meeting	25%	None
After 5th course meeting	None	None

<i>Summer Session:</i>	<i>Withdrawing</i>	<i>Credit Drops</i>
1st instructional day	100%	100%
2nd through 4th instructional day	75%	None
5th through 7th instructional day	50%	None
8th through 10th instructional day	25%	None
After 10th instructional day	None	None

If a student's course schedule is reduced for the University's convenience, the student's tuition is adjusted without a penalty. The student gets a refund on Activity Fees on the same basis as tuition when he or she withdraws or drops credits. Refunds are not given for textbooks and materials. Used books can be sold at the bookstore during the last week of each term.

Estimated Room and Board

Payments for residence hall services and meal services are made each semester. The following cost estimates include meals and a telephone in each room:

Normal occupancy in a double room: \$1,590 to \$1,710
 Guest rate (per night): \$10 to \$15

Estimated Total Minimum Expenses for Undergraduate Students

	<i>1998-1999 Resident Per Semester</i>	<i>1998-1999 Non-Resident Per Semester</i>	<i>1999-2000 Resident Per Semester</i>	<i>1999-2000 Non-Resident Per Semester</i>
Tuition (16 semester hours)	\$1,349.60	\$3,043.20	\$1,417.60	\$3,460.80
Activity, Union Facility, MSUSA,	\$189.36	\$189.36	\$189.36	\$189.36
Computer Fee	\$54.60	\$54.60	\$54.60	\$54.60
Residence Halls - Board and Room	\$1,590.00	\$1,590.00	\$1,670.00	\$1,670.00
Total Average Student	\$3,183.56	\$4,877.16	\$3,331.56	\$5,374.76

Textbooks costs average about \$250 per term.

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.

You can get information about regulations and criteria that determine your residence status in the Admissions Office, Somsen Hall, Room 106.

If you initially are classified as a non-resident but you believe you have achieved residency, you can take action to change your status by filing a State of Residence form with the Admissions Office.

Wisconsin/North Dakota/South Dakota Tuition Reciprocity

Anyone that is an undergraduate or graduate student and lives in Wisconsin, North Dakota and/or South Dakota can submit the Student Application for Resident Fee Status form, which provides you with a tuition rate similar to what your home state charges. All high schools in Wisconsin, North Dakota and South Dakota can provide you with the necessary form or you can get it in the WSU Admissions Office. Approval is granted for one year and is effective as long as you are enrolled each semester (summer sessions are excluded). You must re-apply for reciprocity tuition if you leave WSU for more than the academic year.

Midwest Student Exchange Program Kansas/Michigan/ Missouri/Nebraska

Your tuition rate is 150% of the resident rate if you're enrolled at WSU and you live in Kansas, Michigan, Missouri or Nebraska. The rate represents a typical savings of over \$1,900 per year for undergraduate students.

Student Financial Aid

You can get advice and counsel about your long- and short-term plans for financing your education in the Student Financial Aid Office. If you are entering WSU for the first time or you're transferring, you can contact the Director of Financial Aid for information about loans, scholarships, grants and part-time employment. The director's office is in Somsen Hall, Room 108, (507) 457-5090.

In general, financial aid administered by the University is awarded after you meet eligibility criteria and you have established need. You 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.

Usually awards are made for one academic year and are disbursed at the beginning of each semester.

Application Procedure

You should complete a Free Application for Federal Student Aid (FAFSA), using information from your completed tax return and submit it as soon as possible after Jan. 1. Awards are made as soon as possible after admission to the University. Certain programs have limited funding, while others are entitlement programs and have funds available throughout the year.

You can get a FAFSA from any high school counselor or it is available in the WSU Student Financial Aid Office.

Minimum Standards of Satisfactory Progress for Financial Aid Recipients

Federal regulations require that anyone receiving financial aid be in good academic standing and maintain satisfactory academic progress. The requirement is intended to encourage a recipient to advance steadily toward completing a degree. You must meet the minimum requirements outlined in the Standards of Satisfactory Progress (which you receive when you are awarded financial aid) to continue receiving your aid.

Employment

You can work up to 20 hours each week and earn a portion of your college expenses under the Federal Work-Study Program, a program in which you can participate if you demonstrate financial need. The program pays you minimum wage or more, and you're paid twice a month. Most of the Federal Work-Study Program jobs are located on-campus but you also can work for off-campus, non-profit organizations or agencies.

You can participate in the State Work-Study Program if you're a Minnesota resident. You must demonstrate financial need to be eligible for the program. You are paid minimum wage or more, and like the federal program, you can work on- or off-campus.

WSU Academic Scholarships

The WSU Admissions Office can provide students with information about WSU academic scholarships.

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 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, so stu-

dents are encouraged to apply for admission early. If a student receives the award, the student is required to live on-campus during the student's first two years unless the student is living with a parent or guardian. First-priority awards are made in early December.

WSU Foundation Board Scholarships: The WSU Foundation Board 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. Interview candidates are determined from a review of essays submitted to the WSU Foundation Board. The scholarship is renewable the first 8 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 which the student is accepted for admission into the University, so students are encouraged to apply for admission early. If a student receives the award, the student is required to live on-campus during the student's first two years unless the student is living with a parent or guardian.

President's Honor Scholarships: The President's Honor Scholarships are funded by WSU and the following endowment funds: the Rivet, the Walker, the Garvin, the Class of 1942, Thomas Stark, Neville/Valley Wholesalers, Merchants National Bank, Schwab and Guy Maxwell. The 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 & ACT 28 or SAT 1240
\$1,000	Top 10% of graduating class & ACT 27 or SAT 1210
\$ 750	Top 15% of graduating class & ACT 26 or SAT 1170

The scholarships are available for the first 8 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. If a student receives a President's Honor Scholarship, the student is required to live on-campus during the student's first two years unless the student is living 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 who 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 are eligible. Awards are based upon date of acceptance to the University, therefore, early application to WSU is encouraged.

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 point scale. Application forms are available in the WSU Transfer Office.

Scholarships Awarded by WSU Departments

WSU academic departments select the recipients of the following scholarships of \$100 to \$2,000. These scholarships are all WSU Foundation scholarships. You can apply for these scholarships in any given year at WSU, but you must be in good academic standing and majoring in the areas specified in the list below. You should contact the designated departments for information about application procedures and deadlines if you're interested in any of them. The application process begins early in the spring semester.

WSU Foundation Scholarships

(The name of the scholarship is followed by the name of the department in which it's offered).

Amanda Aarestad — Elementary Education
Accounting Alumni and Friends — Accounting
Erwin F. Bachler — Mathematics
Greg & Linda Ballard — Economics/Finance
Agnes M. Bard — Music
Brach & Brock Confectioners — Business
Bovinet — Marketing
Ray Brooks Award — Mass Communication
James & Margaret Browning — Health/Nursing
Ervin G. Bublitz — Sociology/Criminal Justice
John Bublitz — Criminal Justice/Law Enforcement

Buhler Memorial — Computer Science
 Rosalie Burton — Nursing
 John Cady — Economics/Finance
 Glenn A. Carlson — Elementary Education
 Casini — Biology
 Cichanowski-Logelin — Computer Science
 Class of 43/Mehus — Education
 Computer Science Department — Computer Science
 Larry Connell Memorial — Sociology/Social Work
 Paul Corrigan Award — Mass Communication
 Richard C. Coughlin — Liberal Arts
 Coulee Rock Club — Geology
 Bud Dahlen Memorial — Counselor Education
 Kathryn Dunlay — Elementary Education
 Charles & Emma Durr and Florence Schroth — Education
 Edstrom/Hal Leonard — Music
 Phyllis Ehmke — Nursing
 Gordon Elliott — Liberal Arts
 EMD Engineering — Engineering
 EMD Statistics — Statistics
 Farmers Insurance Group — Alternates between
 College of Business and College of Liberal Arts
 Mary June Fischer-Elder — HPER
 Ruth Severud Fish — Art Education
 Glenn Fishbaugher — Education
 Frankard Family — Airway Science
 Edith V. Fraser — Education
 John & Edna Fuller — Elementary Education
 Leslie Gage — Elementary Education
 Geology Alumni — Geology
 Goodson Manufacturing Company — Nursing
 William H. Gresham Memorial — Nursing
 Warren Haesly — Pre-Med
 George E. Hajicek — Social Work
 Fred & Mary Heyer Memorial — Music
 Tom Hirsch Award — Mass Communication (Photojournalism)
 Home Federal Savings Bank — Nursing
 Ray Houtz — Chemistry
 Fiberite — Engineering
 Harry R. Jackson Memorial — Football
 Kappa Delta Pi/Ehlinger — Education
 Alice & Howard Keller — Science Dean
 Tammy Kempf — Nursing
 Kendell Corporation — English/Liberal Arts
 E.L. King — Art Education
 Neva King — Elementary Education
 Pauline & Harland Knight — Foundation Scholarship Committee
 Kujak Transport — Management/Marketing
 Martin & Joyce Laakso — Biology
 Langston Nursing — Nursing
 Long Distance/USA-Sprint — Liberal Arts
 Warren & Dorothy Marley — BEOSA/Business Administration
 Thomas Mauszycki — Art
 Luther McCown — HPER
 McGladrey & Pullen — Accounting
 Midtown Foods IGA — Baseball
 Randolph W. Miller — Exercise Science
 Miller Brothers Engineering — Engineering
 Lenore Coborn Minne — Elementary Education
 Madeo & Rosemary Molinari — Football
 Paul Molinari — Football
 Marjorie Moravec — Women's basketball
 MVTL Chemistry — Chemistry
 Fern Nelson — Education
 Mary Lucille Nelson — Nursing
 Richard & Janet Northup — Education
 Norwest Bank, Winona — Business
 Nursing Alumni — Nursing
 Fred & Sandra Olson — Mathematics/Statistics
 James Opsahl — Biology
 Marvin & Muriel Palecek — History
 Paralegal Alumni — Paralegal
 Laurel Pennock — Elementary Education
 Dorothy Purtzer Memorial — Nursing
 Reidelberger — Theatre and Dance

Verlie Sather — Education
 James R. & Nancy M. Reynolds — Sociology (B.A.)
 Jerry Seeman — Football
 Alma Smith — BEOSA/English
 Ralph Spencer — HPER
 Jean Talbot — HPER
 William P. Theurer — Business Administration
 Frank Tolmie — Education
 Walter F. Wadewitz — Science/Math Education
 Watkins Inc. — Liberal Arts
 Watlow Winona Inc. — Engineering
 Dorothy & Maynard Weber — Art
 Max Weber — Art
 Windsor Financial Group — Sociology
 Winona Clinic Ltd. — Nursing
 Winona Daily News — Mass Communication
 Zumbro Valley Medical Society Alliance — Nursing

Other WSU Foundation Scholarships

The WSU Foundation annually awards the Karen Sweetland Scholarship and the Kaiser Scholarship, each for \$500, to a WSU junior or senior with a minimum cumulative GPA of 3.75. You must send a letter of application to the WSU Foundation. A WSU Faculty/Support Staff Scholarship also is awarded each year as a general scholarship. WinCraft Inc. offers a \$500 scholarship, giving priority to WinCraft employees or their relatives. Contact the University Relations and Development Office, 210 Somsen, for more information.

Treasures Galore Scholarships are awarded each year to non-traditional students who enroll at WSU. You apply at Treasures Galore in Winona.

A Norwest Bank/Red Wing Scholarship is available to a student from Red Wing Independent School District 256 who enrolls at WSU. You apply through your high school counseling center.

Other Scholarships

Sylvia Bremer Award — CTA/English
 Forensics Scholarship (New Students) — Forensics
 Glen Galligan Scholarship — HPER
 Blanche Hunter Scholarship — Nursing
 Helen L. Klein Scholarship — Education
 Raymond Thielan Scholarship — History

Scholarships Awarded By the WSU

Financial Aid Office

The Financial Aid Office selects recipients for the scholarships listed below. Awards are based on demonstrated financial need and academic standing. The only application required or accepted for these scholarships is the Application for Student Financial Aid. Anyone submitting the FAFSA is considered for the scholarships based on your test scores and/or your cumulative GPA, along with your financial need. Scholarship amounts vary from \$100 to \$1,500. You should file a financial aid application as soon as possible after Jan. 1.

Charles & Ellora Alliss Foundation
 L. L. Brown
 Centennial
 Harriet R. Choate
 Elfie Christiansen
 Josephine Flagg
 Theda Gildemeister
 Etta Hudson Howell
 Ethel Gage Jessen
 Jestus Nursing
 Phillip Loughrey
 LaCrosse Lutheran Hospital Auxiliary Health Career
 William Markle
 Beulah Norton
 Arthur & Viola (Zeller) Mattson
 W. W. Norton
 Rotary Club
 70th Year
 Stephen H. Somsen

Louise Sutherland
Ella Tucker
Winona County Bicentennial
World War Memorial
Winona Senior Citizens Center

Additional Scholarships

Alumni Society Merit Scholarships

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

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 \$3,200 annual award and is renewable the first 8 semesters if you maintain a cumulative GPA of 3.00 while attending WSU continuously as a full-time student and complete at least 12 credits per semester.

You automatically are awarded an RTS when the University accepts you if you rank in the top 15% of your graduating class or have an ACT of 25, an SAT total of 1100 or PSAT selection index of 150. Early application to WSU is encouraged.

Talent Scholarships (Fine Arts and Athletics)

You can apply for fine art scholarships if you're talented in art, music, speech or theater by contacting the chairperson of the appropriate WSU department. Early application is encouraged.

You also should contact the appropriate head coach to be considered for athletic scholarships if you're interested in intercollegiate sports.

Cultural Diversity Scholarships Program

The Cultural Diversity Office coordinates minority scholarships, incentive grants, internships and summer opportunity employment programs. The following scholarships are available:
Minority Incentive Grants (\$100-\$500)

This grant is awarded to you if you meet the following criteria:

1. You are currently enrolled at WSU;
2. You have a minimum cumulative GPA of 2.50;
3. You earn 12 credits each semester; and
4. You participate in at least one cultural diversity or multi-cultural event each semester.

Talented Minority Scholarship (\$2,000)

WSU awards this scholarship for the recruitment of academically talented minority students. You must meet the following criteria to be eligible for the scholarship:

1. You are high school senior admitted to WSU with an ACT composite score of 25 or better;
2. You are enrolled full-time (earn at least 12 credits each semester) for renewal;
3. You have earned a minimum cumulative GPA of 3.00 at the end of each academic year for renewal;
4. You participate in at least one cultural diversity or multi-cultural event each semester.

Minority Incentive Scholarship (\$350-\$1,000)

This scholarship is allocated to WSU for the recruitment and retention of minority students. You must meet the following criteria to be eligible for the scholarship:

1. You are a regular admit at WSU and have a composite ACT score of 21 or better (for incoming first-year students) or a minimum cumulative GPA of 2.50 (for incoming transfer students);
2. You are in good academic standing (earn at least 12 credits each semester and maintain a minimum cumulative GPA of 2.50 (for returning students);
3. You participate in at least one cultural diversity or multi-cultural event each semester.

Additional Financial Assistance

Other financial assistance is available in the form of internships and corporate scholarships. Following are specific examples:

3M MECA program in St. Paul, Minnesota

- \$2,000 scholarship
- \$450 per week for a 13-week summer internship
- Must have minimum cumulative GPA of 2.50

Mayo Medical Center Summer Internship in Rochester, Minnesota

- \$3,000 stipend
- \$600 scholarship (disbursement of \$200 per semester)
- Must have minimum cumulative GPA of 2.80
- Major must be related to careers or positions available within Mayo Medical Center

Nellie Stone Johnson Scholarship

- \$1,000
- Union affiliation of a relative
- A written statement regarding personal goals
- Two letters of recommendation

Resident Tuition Scholarships

- Pay in-state tuition
- Must be in top 25% of your high school graduating class OR have an ACT composite score of 25+ or SAT score of 1100
- Scholarship is renewable based on a minimum cumulative GPA of 3.00 and participation in at least one cultural diversity or multi-cultural event each semester

Other Programs

Among the other programs available at WSU are:

- Cultural Diversity Employment
- Nursing/Social Work Scholarship Program
- Most Improved Awards
- Achievement Awards
- Winona Daily News Internship

Contact the Cultural Diversity Office at (507) 457-5595 if you have any questions or concerns.

Scholarships and grants of \$100-\$2,000 also are available to qualified minority students new to WSU. The awards are renewable each year if you maintain a minimum cumulative GPA of 2.50 and complete a minimum of 12 credits per semester. March 1 is the priority application deadline. You can get applications from the Cultural Diversity Office, 121 Kryzsko Commons, (507) 457-5595.

Other Sources of Scholarships

In addition to receiving the scholarships described here, each year WSU students also receive thousands of dollars in scholarships from outside sources such as government agencies, professional organizations, civic groups, corporations, sororities and fraternities, foundations, religious groups, educational associations and military/veterans organizations. You can find directories for these scholarship sources in public libraries, high school counselor offices and financial aid offices.

Grants

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

Non-AFDC Public Post Secondary Education Child Care Fund: The State of Minnesota provides funding for child care to you if you meet certain income guidelines and you're not receiving AFDC. Contact the WSU Financial Aid Office for more information.

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

Federal Pell Grant: A federal grant program providing gift assistance to undergraduate students based on financial need to attend college.

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

Rehabilitation Services: Students with a disability may qualify for Rehabilitation Benefits that would help defray college costs. You should contact your high school counselor or local Division of Rehabilitation Services for detailed information.

Loans

Federal Perkins Loan: A need-based loan at 5% interest. Repayment and interest doesn't begin until after you leave school, and the loan may be partially canceled if you obtain employment in certain areas according to the terms in the promissory note.

Subsidized Federal Stafford Loan: This need-based loan provides up to \$2,625 for the first year of study, \$3,500 for the second year, \$5,500 for other undergraduates, and \$8,500 for graduate and professional students. The federal government pays the interest while you are 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: Same terms and conditions as Federal Stafford Loans, except that the borrower is responsible for interest that accrues while attending school. This loan program is available if you don't qualify for a full subsidized Stafford loan. Independent students may be eligible for higher loan limits.

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%.

Student Educational Loan Fund (SELF): The Minnesota Higher Education Coordinating Board provides loans for undergraduates and graduate students. Currently, first- and second-year students can borrow up to \$4,500 per year, third- and fourth-year students can borrow up to \$6,000, and graduate students can borrow up to \$7,000. You are eligible for SELF loans regardless of family income, but you 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.

Emergency Loans: Short-term loans are available to students for emergency expenses. You can get applications and information about emergency loans in the WSU Financial Aid Office.

Assistantships

Several departments offer graduate assistantships to qualified graduate students. You should submit your request for an assistantship to the appropriate department chairperson or the appropriate dean. You are granted resident tuition status for the period of your appointment if you are appointed to a graduate assistantship before the first day of classes.

General Student Information

Academics are essential in the pursuit of becoming an educated person. It is important to have positive, nurturing relationships during your college experience to realize your full potential. At WSU, you have a position of responsibility in planning and governing co-curricular aspects of student life. In the University residence halls, there is a unique opportunity to develop and sustain self-government. In campus-wide organizations, you participate with the administration in discussing and resolving current issues.

Student Activities

The center of student activities is within Kryzsko Commons. The complex has dining facilities such as a snack bar, patio, private dining rooms, alumni lounge and main dining room. Conference rooms are available to students for informal gatherings. The Student Union is located on the main level, and it hosts a six-lane bowling alley, pocket billiards, a ping-pong area, student lounges and a television viewing center. Also on the main level is the WSU Bookstore. 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.

Student Organizations

Approximately 100 student clubs represent a wide variety of interests. Joining any one of these organizations enhances the college experience. These clubs encompass academic, social, athletic, religious, cultural and political interests. Each organization provides service activities that benefit its members, the campus and the community. The Alliance of Student Organizations Committee (ASO) provides a central organization to which all University clubs belong.

Student publications include the *Winonan* (the student newspaper), *Bravura* (a laboratory publication of the Mass Communication Department with a circulation of 17,000) and *Satori* (a campus literary magazine). The student staffed and directed University radio station (KQAL-FM 89.5) provides a variety of music for WSU and the local community.

Residential Services

Six traditional residence halls offer unique opportunities to enhance academic experiences. Living on campus provides the chance to live near other students with similar interests and expectations. The goals of WSU's residence life staff exist to foster a positive learning and enjoyable living environment:

1. Complement classroom learning with a variety of experiences that enhance the academic component, encourage leadership and citizenship.
2. Provide a safe living and learning environment in which students can interact, study, socialize and rest comfortably.
3. Understand diversity.
4. Encourage participation in campus organizations and co-curricular activities.
5. Provide a network of support, referral and information.
6. Provide residents with opportunities for intellectual, physical,

emotional, spiritual and occupational growth.

7. Provide a well-trained and responsive peer staff that is able to support and implement the above goals.

Residential Facilities

The six residence halls house 1,800 students. Lifestyle options vary within each hall. The residential living brochure includes a description of each building and the different options.

A well-trained and professionally supervised student staff encourages community development within the halls.

Lourdes Hall is home to the Residential College, one of our exciting academic lifestyle options. The special 'living/learning' environment provides you with the opportunity to attend some of your classes in the same building in which you live.

More information about campus residential services is available in the residential living materials.

Campus Dining

Residents have the option of eating in two of our on-campus dining areas: The Jack Kane Dining Center, located on the main campus, and the Lourdes Dining Center at Lourdes Hall. The Smaug (a grill and snack bar located on campus) or the Lourdes Snack Bar are optional dining choices. Students living in residence halls are required to participate in the dining service unless the Director of Housing provides a written exemption.

Off-Campus Housing

The Housing Office provides an Off-Campus Referral Service, located in 130 Kryzsko Commons. Listings of apartments and sleeping rooms are available for you to pick up in the office — they are not sent to you. The listings consist of information provided by individual landlords to the Housing Office. The referral service is open 8 a.m. to 4 p.m. during business days.

The University makes no representation as to the kind, quality or quantity of facilities available from the landlords' information nor does the University have any control over changes in the information. The cost and availability of space are subject to change at the landlords' discretion.

WSU does not assume any liability arising from the relationship between you and the landlords as a result of these listings. All questions about accommodations should be addressed directly 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.

Reserving a Room

Space in the residence halls and the Residential College is in high demand. To secure a place in the halls or the Residential College, the Housing Office staff encourages early application. After being accepted to WSU, send in a Residential Living Application along with a \$20 processing fee. Once the application and processing fee is received, a Housing Contract/Lease Agreement is mailed to you around March 1. You have 30 days

in which to return the document along with a \$150 advance payment to bind the contract.

Security Services

WSU Campus Security is a student-staffed security program. Security officers are easily identified by their yellow shirts and/or blue jackets. Campus Security works to ensure the safety of students, staff, faculty and University property. Campus Security works 24 hours a day and is responsible for keeping alert for possible theft, vandalism, health and safety hazards; enforcing parking rules and regulations; and monitoring adherence to residence hall and University rules and regulations. The Security Director is a licensed law enforcement officer. Contact Security in Sheehan Residence Hall at (507) 457-5555 for more information.

Parking Services

Parking permits are needed to park in all University parking lots with the exception of metered spaces within "C" Kryzsko lot and metered spaces on Johnson Street. Information about obtaining a visitor permit is available in the Parking Office. Applications for parking permits are accepted May 1 of each year for the next academic year. If applications exceed the parking spaces available, spring and fall drawings are held. If spaces become available after the drawing, permits are sold on a first-come, first-serve basis. If there are no permits available, your name is put on a waiting list. For more information and cost of parking permits on the WSU campus, contact Parking in the Sheehan Residence Hall; or call (507) 457-5062; or e-mail to: pk@vax2.winona.msus.edu; or visit the web site at <http://www.winona.msus.edu/sa/pk/index.html>.

Affirmative Action Office

The Affirmative Action Office (AAO) is located in 202 B Somsen Hall. The Affirmative Action Officer 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 aids students and employees who experience sexual harassment at WSU. These confidential services are available by appointment or on a walk-in basis. Call 457-5008 or 457-5013 for more information or to make an appointment.

Counseling Center

Counseling is available without charge at the Counseling Center, 132 Gildemeister Hall. Counselors help you explore your interests and abilities and help you adjust to university life. You can confer with a counselor about any problem: personal, academic or vocational.

All counseling staff members are professional counselors with experience in counseling college students. A testing service is available with emphasis on vocational-interest testing. All information exchanged during counseling sessions is confidential and used exclusively for your benefit. The only exceptions are in the unlikely event that there is clear and imminent danger to an individual or the information is subpoenaed in court. No counseling records are kept in your general file.

Academic Skills Center

The Academic Skills Center, which includes a study skills lab, is located in 126 Phelps Hall. Any student can use the facilities and get help with study skills, reading efficiency, basic mathematics and English skills. You also can get help in managing your time, preparing for tests and increasing your skills in listening, note-taking and using references. You can make an appointment to work individually or you can enroll in Education 115, "Improving Reading and Study Skills." The Academic Skills Center also arranges tutoring.

Student Health Service

Facilities

The Health Service is located in the west wing of Maxwell Library. The facility is staffed by a physician, nurse practitioners, registered nurses, a medical technologist, a dietitian/nutritionist and a medical records clerk. Services include:

- Medical examinations and consultations for illness, injury and other medical concerns;
- Laboratory services;
- Mantoux tests and some immunizations;
- Nutrition counseling;
- Allergy injections (you must supply your own serum);
- Contraceptive counseling and prescriptions;
- Health education materials including pamphlets, videos and consultation which enables you to develop a lifestyle that will reduce your risk of disease and injury.

The Student Health Fee pays for most of the services provided during regular office hours. There are charges for medications, laboratory tests, some medical procedures and supplies. Emergency care is available evenings and weekends at Community Memorial Hospital, 855 Mankato Ave.

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. PLEASE NOTE: If you are planning to participate in athletics, a physical exam is MANDATORY and must be completed AFTER JULY 1!

TRANSFER STUDENTS: Your health records are not sent automatically with transcripts from other colleges, but you must specifically request the records. You still must complete the Report of Medical History for the WSU Student Health Service.

Immunization Record

Minnesota Law (M.S. 135A.14) requires that everyone born after 1956 and 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 you, if you want to remain enrolled, to submit your immunization information to the Student Health Service within 45 days of the beginning of the term. Forms are available in the Student Health Service and in the Class Schedules.

Career Planning & Placement Service

Seniors, graduate students and alumni seeking full-time employment can receive assistance from Career Planning & Placement, 110 Gildemeister Hall. Juniors and seniors seeking internships also are eligible for service.

Equipment is available for your use in preparing your interactive, multi-media electronic portfolio known as "WINGS." We also have computer terminals available for your use in registering on our website or updating your information on the website.

Opportunities are available for you to interact with employers through Career Fairs, Job Fairs and on-campus interviews. Career Planning & Placement also provides a referral service of your electronic resume to employers in addition to allowing employers to access your resume directly through our website. Small group and individual advising is available from the Director.

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. You also can access job openings or update your resume via the internet 24 hours a day, seven days a week from the comfort of your computer. Employment information and graduate follow-up results are available in the office as well as on our website:

<http://csos1.winona.msus.edu/webpage/index.htm>

Register early in your senior year to take full advantage of the services offered through Career Planning & Placement.

Student Support Services

This is a federally funded program, and you are eligible for its services if you have a low income, you are a first-generation college student or you have a physical disability. Services include tutoring, academic advising, counseling and help in deciding a major. You can get more information about the program by contacting the program director in Phelps-Howell 133 or call (507) 457-5465. Services are free.

International Student Office

The International Student Office, located in 128 Kryzsko Commons, provides assistance to all international students attending WSU. Information and advice is available regarding admission to the University, scholarships, immigration concerns, orientation programs, employment regulations for F-1 visa holders and other information related to the well-being of international students.

The Cultural Outreach Program also is housed in the International Student Office. The program provides learning opportunities for the campus and the wider community regarding the cultures of the 52 countries represented at the University.

A limited number of English language courses are available for non-native speakers. These courses are available based on scores obtained on the WSU English Test for Non-Native Speakers. This test is given after acceptance to the University and before enrollment.

Cultural Diversity

WSU offers a Cultural Diversity Program that represents and advances minority student opportunities in academics and student life. The program's objectives include: significantly attracting and retaining minority students at WSU; ensuring the academic success of African American, Hispanic American, Asian American and Native American students; providing coordination, organization and consultation for academic and support programs; interacting with administration, faculty, students and community members to create more awareness and respect for a wide range of culturally diverse groups; and providing academic advising and career counseling in conjunction with faculty, the Academic Skills Center and the Counseling Center.

Child Care Center

The Child Care Center provides services for children, six weeks of age to 6 years. The center is open from 7:15 a.m. to 5:30 p.m., Monday through Friday. Children can be enrolled on a part-time or full-time basis.

The program enables parents of pre-school children to attend classes and study during the day while providing their children with quality care in an enriching, stimulating environment. The Child Care Center also is a laboratory for students majoring in early childhood. Contact the director at (507) 453-2560 for more information.

Nursery School

WSU's Nursery School is developmentally appropriate and provides an integrated setting for children, ages 3 to 5. There is a Monday-Wednesday-Friday group and a Tuesday-Thursday group. Each session is 9 a.m. to 11 a.m.

The program provides quality pre-school experiences for children, allows parents of pre-schoolers to attend morning classes, and provides students with a laboratory in which they observe children and participate in a structured program.

2 + 2 Program

WSU's special partnership with Rochester Community Technical College, the 2 + 2 relationship, has been particularly important to the growth of the University's programs as well as being a unique attribute of RCTC. The relationship has been able to offer complete Bachelor's degrees by focusing on junior- and senior-level classes, with the transfer of RCTC degree work. The 2 + 2 programs available in Rochester are: Accounting, Business Administration, Administrative Information Systems Management, Computer Information Systems, Computer Science, Elementary Education, Finance, Professional Studies, Management Information Systems, Marketing, Nursing, Psychology, Social Work and Sociology.

Student Conduct

University regulations, which express expectations of behavior and provide for the protection of the rights of students, are published in the *Student Handbook* along with grievance and other procedures. Students will be provided copies of the handbook and are responsible for informing themselves of the regulations and complying with them. Behavior that is threatening to the safety or welfare of one's self 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 you need additional information, contact the Student Affairs Office, 130 Kryzsko Commons, or visit the Student Affairs website at:

<http://www.winona.msus.edu/sa/index.htm/html>

If you need assistance with a complaint, contact the University Judicial Officer, 130 Kryzsko Commons.

Student Right to Know Act

The rates at which full-time students complete bachelor's degrees from the University, within a specified period of time, are available on request from the Institutional Research Office, Somsen 201B as required by the federal Student Right to Know Act.

Crime Awareness and Campus Security Act

An annual Security Report is made available to the public as required by federal Crime Awareness and Campus Security Act. Updated annually and distributed campus wide, it contains specified crime statistics and other information related to campus safety issues. Copies of this report are available through the Dean of Student Affairs, 130 Kryzsko Commons.

Nondiscrimination on the Basis of Disability Policy/Procedure

Students may request educational accommodations from the 504 Coordinator, Nancy Dumke, 457-5600, and facility accommodations from Tess Arrick-Kruger, Affirmative Action Officer, 457-5013.

Academic Information

Policy Changes

Administrative and committee actions change policies throughout the year that affect you as a student. It is your responsibility to comply with changes as they are reported in either the student newspaper (the *Winonan*), the quarterly class schedules or in a posted announcement on the Registrar's Office bulletin board, Somsen Hall, Room 114.

Credits and Limitations

Effective fall semester 1998, the unit of work in the University is measured and expressed in semester hour credits. Each credit requires 50 minutes in class per week for 15 weeks. The majority of courses are credited with 3 or 4 semester hours. You must earn an average 16 semester credit hours each semester to complete requirements for a degree in four years (8 semesters).

Limitations

The University may restrict the number of credits in which you can enroll where previous low scholarship, out-of-school obligations or similar factors might interfere with satisfactory performance of your obligations. The University also may restrict you from registering if you fail to follow proper registration procedures.

Dean's List

If you are an undergraduate student, you are included on the Dean's List if you 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.

Declaration and Changes in Major/Minor/Certification Program

You must declare or change a major, minor or certification program by completing the appropriate form available in the Registrar's Office, Somsen Hall, Room 114. Upon declaring or changing a declared major/minor/certification program, you then must conform to requirements effective on the date indicated in the declaration or change form.

This catalog may not include the latest program requirements but you can get the most recent program implementation dates in the Registrar's Office and detailed program requirements are available in the office of the appropriate department chairperson.

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 you sign a guarantee and comply with its terms and conditions, you are assured graduation after completing four years of full-time study. If you sign a guarantee and comply with the conditions but you do not receive a diploma, WSU promises you can complete any remaining required courses tuition-free. Contact the appropriate department or college dean for more information.

For information on whether the major you intend to declare participates in the Four-year Graduation Guarantee Program, contact the Admissions Office at (507) 457-5100.

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 E credit - 0 honor points. The grade point average 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 grade point averages do not include 'additional requirements' (i.e. general education courses outside the major department which are required courses in certain majors).

Only those courses and credits taken at WSU count in the computation of grade point averages for probation and suspension decisions after enrolling at WSU.

Although courses taken on a pass/no credit basis grant credit toward graduation, the credit does not affect the cumulative grade point average.

Incomplete Grades

An 'Incomplete' is reserved for special cases in which you, for reasons beyond your control, are unable to finish an important assignment or other required coursework by the end of the semester, though you are passing in all other aspects. The Registrar must receive a grade for the Incomplete by mid-term day of the next semester in which you are enrolled. If an Incomplete is not replaced with a grade within the specified time, the grade automatically becomes an E.

Scholastic Standards

Grading System

Your work in any course is evaluated in accordance with the following system of letter grades: A means excellent; B means very good; C means average; D means below average; E means failing; NC means no credit; I means incomplete; P means pass. Other designations are W for official withdrawal; V for audit; IP for in progress; and H for Honors.

Time Limitation

Program requirements must be completed within seven years after declaring or changing a major/minor/certification. If the seven-year limit has expired, you then are required to complete the program requirements effective on the day after the seven-year limit has expired.

Undergraduate Student Classifications

First-year Student: 0-32 semester hours of credit
 Sophomore: 33-64 semester hours of credit
 Junior: 65-96 semester hours of credit
 Senior: 97+ semester hours of credit

Academic Advising

Each of you is assigned a faculty advisor after your initial enrollment at WSU. Your major department assigns you an advisor if you have declared a major; the Advising and Retention Center assigns advisors to undeclared students. You are required to contact your advisor during the advising period before pre-registration each semester. The class schedule includes dates of each advising period.

Academic Integrity Policy

Information about WSU's Academic Integrity Policy can be obtained in the office of the Vice President of Academic Affairs, Somsen Hall, Room 211, or visit the academic affairs website at: <http://www.winona.msus.edu/AcadAf/acadhome.htm>

Suspension Policy

Academic Standing

You must have a minimum WSU cumulative grade point average of 1.50 for the first 8 degree credits attempted; 1.75 for the first 23 degree credits attempted; and 2.00 thereafter to remain in good academic standing. Total credits attempted includes credits transferred into WSU.

Academic Warning and Suspension

You must be in good academic standing at the end of each academic year to remain enrolled in the University. A Notice of Academic Warning is sent to you if you are not in good academic standing at the end of the fall semester of each academic year. You will be suspended at the end of the spring semester by the Vice President for Academic Affairs if you have a cumulative grade point average below the minimum required for good academic standing. You are not subject to suspension until the following spring if you are newly admitted to the University in the spring semester. If you are suspended, you can submit a written appeal for readmission. If your written appeal is denied, you can appeal in person to the Academic Review Committee. You are eligible to return during the next academic year if your appeal is granted. Instructions for submitting an appeal are included in the Notice of Suspension.

Re-admission After Suspension

If you do not appeal a suspension or your appeal is denied, you must comply with the suspension policy regarding University enrollment. You cannot enroll for one semester after receiving your first Notice of Suspension; you cannot enroll in the University for a full academic year if you receive a second Notice of Suspension; you cannot enroll in the University for two full academic years if you've been suspended three or more times.

You may enroll in courses at WSU during the summer sessions if you've been suspended. If you've returned to the University after complying with the suspension policy, you are subject to suspension again at the end of the academic year in which you re-enroll.

Questions regarding the suspension policy or procedures can be answered in the Advising and Retention Center.

Teaching Degree Requirements for B.A. Graduates

If you have a Bachelor's degree — other than teacher education — either from this University or another accredited institution, you may qualify for teacher licensure by completing the Professional Education Sequence (including student teaching in the major field) and one of the B.S. teaching majors with a GPA of 2.50-2.75 in the major as required by the major department. A cumulative GPA of 2.75 is required. (All previous college and university credit will be included in computing the cumulative GPA.) You also must have a 'C' average in your minor if you

request additional certification in your minor. You must have a minimum of a 'C' grade in each course in the Professional Education Sequence before you are allowed to student teach. To receive a second bachelor's degree, you must earn at least 30 semester credits after you complete your first degree.

Anyone applying for a Minnesota teacher's license must have a course which covers the effects of drugs and alcohol and an approved course in human relations. Also Minnesota and Wisconsin both require verification of scores which meet the State Department of Children, Families and Learning's minimum levels in the reading, writing and mathematics components of the Pre-Professional Skills Tests. Wisconsin and other states have specific requirements for certification, in addition to the completion of WSU's Professional Education Sequence.

See the Registrar, Somsen Hall, Room 114, for more information on teacher certification.

You must check with individual departments for any additional GPA requirements.

Types of Courses and Credit

Arranged Classes

You must complete an Arranged Class Application Form if you want to enroll in a course which is listed in the WSU Catalog, but not offered during a specified semester. A course may be offered on an arranged basis at the discretion of the appropriate faculty member, department chairperson and dean. You must be fully matriculated with an established GPA at WSU of 2.00 or higher. Applications must be completed according to announced deadlines. You must register for the course at the designated registration time for the particular semester in which you want to take the course.

Audited Courses

You may audit courses if you want. The auditing procedure permits you to attend classes but you don't receive credit. Courses pursued on an audit basis must be declared and processed before completing your registration. Regular tuition charges apply. You cannot use audited courses to satisfy graduation, certification or licensure requirements.

Credit by Examination

If you can satisfy the requirements of a course by a written or oral examination, you may be able to get credit by departmental examination without formally enrolling in a course. This policy's intent is to make it possible, without enrolling in the course, for you to establish credit if you have completed equivalent study at a non-accredited school or you can present evidence of independent study and related work experience. You 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 taken. You cannot use this process to improve a grade.

Independent Study

Projects beyond the scope or range of any courses offered at WSU can be pursued on an independent study basis at the discretion of the appropriate faculty member, department chairperson and dean. You must be fully matriculated with an established cumulative GPA at WSU of 2.00 or higher. Applications must be completed according to announced deadlines. You must register for the course at the designated registration time for the particular semester in which you want to take the course.

Internships

All departments offer internships by arrangement with the department chairperson. Many departments offer internship experiences with credit and, in some instances, with pay. You must be fully matriculated with an established cumulative GPA at WSU of 2.00 or higher. Applications must be completed

according to announced deadlines. You must register for the internship at the designated registration time for the particular semester in which you want the internship. See internship reference under departmental course descriptions for specific limitations.

It is important to check with the department for specific GPA requirements.

Non-Degree Credit Courses

Certain required courses are offered for non-degree credit only. The credits can be counted for financial aid and athletic eligibility requirements. However, they can't be counted in the minimum total credits required for graduation. The following courses are offered only for non-degree credit: English 099 and Mathematics 050.

Pass/No Credit Courses

The University's pass/no credit (P/NC) grading classification enables you to enroll in unfamiliar or difficult academic subjects without fear of jeopardizing your GPA. It is intended to introduce you to life-long learning, learning that does not have to 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. A P (pass) or NC (no credit) is entered on your permanent record after completing such a course. However, P is interpreted as equivalent to A, B, C or D.

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 departmental chairperson may approve an exception. The department may permit the course to count if you select a major or minor after taking a course in the department on a P/NC basis.

You cannot take more than four (4) P/NC credits per semester exclusive of any teaching and internships. The four 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 P credits. Optional P/NC courses, mandatory P/NC courses, student teaching and/or internships all are counted in the 32 credit limitation. You must decide by the last day of the drop/add period whether or not you're going to take a given course which is offered on an optional P/NC basis.

You can repeat a course if you received a grade of NC, but you must repeat it for a regular grade and it is included in your GPA.

Repeated Courses

When you repeat a course, only the last grade received and credits earned are included in the GPA computation. If you withdraw (W) while repeating a course, the original grade is included in the GPA computation. When you repeat a course, you must take it the second time on a regular graded basis.

It is your responsibility to notify the Registrar's Office of a 'repeat' class by completing the necessary forms. The Registrar's Office does not accept responsibility for credit totals or incorrect GPAs because you failed to submit the necessary form as notification that you are repeating a course. If you have been awarded a baccalaureate degree, you cannot repeat undergraduate coursework to improve your GPA.

Summer School and Evening Courses

Two five-week sessions are offered each summer. You can complete a full semester of coursework by attending both sessions. Also offered during the summer are special workshops carrying credit.

Evening classes are scheduled on campus during the academic year. These classes are open to full-time and part-time students, and are part of the regular campus program.

Drop/Add Policy

You should consult the class schedule for instructions or con-

tact the Registrar's Office, Somsen Hall, Room 114, for the appropriate form and instructions on how to drop and/or add if you must change your schedule after registration has been completed.

Course and University Withdrawal

You are required to report to the Registrar's Office to complete the appropriate forms if you withdraw either from a class or from the University. The deadline for reporting withdrawals occurs during the ninth week of fall and spring semesters. The date is published in the academic calendar. You receive a mark of official withdrawal (W) on your transcript if you process the withdrawal by the deadline.

If you withdraw from a class you're repeating, the original grade is included in the GPA computation.

You are given a grade of E if you drop a course or withdraw from the University without giving official notification to the Registrar's Office.

If you withdraw from the University during any semester, you must discharge all business obligations and notify the Registrar's Office.

Credit Transfers and Transcripts

Universities and other colleges accept academic courses, undergraduate and graduate completed at WSU, when they are applicable to a curriculum you may choose and meet prescribed scholastic standards.

Transcripts are issued by the Registrar's Office only upon your written request, since student records are confidential in nature. Partial transcripts are not issued. Each transcript must include your complete academic record. The University cannot certify credit earned at other institutions; therefore, copies of such transcripts are not issued. All WSU transcript requests must be submitted in writing and are issued free of charge.

Transcript orders usually are filled with official transcripts. Official transcripts which bear the University's seal are sent directly from the Registrar's Office to the person representing a business, institution or organization. When a transcript is given to you, it is stamped 'Issued to Student' and is not considered to be official.

All official transcripts bear the embossed seal of the University and a copy of the Registrar's signature. Transcripts that are relayed via FAX are not considered official because they are copies only and the embossed seal cannot be copied.

Application for Graduation

Application for graduation must be made no later than two semesters before the expected graduation semester. A four-week minimum must be allowed for application processing and notification. Forms are available in the Registrar's Office, Somsen Hall 114. Applications are processed in the order in which they are returned to the Registrar's Office.

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.

Graduation Requirements

Graduation requirements for a Bachelor of Arts or Bachelor of Science teaching or non-teaching degree are:

- 128 semester hours of credit
- Overall 'C' average*
- 30 semester hours in residence during the junior and senior years combined (residence credit is defined as any credit offered by WSU and credit earned by any WSU student under the Minnesota State University Common Market Program)
- Enrollment at WSU during the semester of graduation
- General education requirements completed (see the section on General Education Program)
- Completion with a C average*, of either (1) a broad major of 47 semester credits or more; or (2) a major of less than 47 semester credits, and a minor. (In the latter case, 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 that is prohibited by the department.) A department with a broad major may not require a minor.

* Certain departments require you to earn a 'C' or better in each course within their major/minor or earn a 'C' or better in specific courses in their major/minor. You must check with individual departments for any additional GPA requirements.

You cannot get a major, minor, option or concentration that is wholly contained within a major or option that you've completed.

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 general education requirements unless it is an "additional requirement." Those courses are noted under the Major Requirements with an asterisk *. (Credit earned in the course counts only once toward the minimum 128 semester credits required for graduation.)

NOTE: A department may prohibit the declaration of more than one major or option within that department.

The major grade point average does include additional requirements.

No degree is awarded until all grades are finalized. I or IP grades cannot remain on the permanent record.

Bachelor of Science candidates, teaching only, must complete the Professional Education Sequence, including student teaching, and must be eligible for teacher certification in Minnesota. If you change from one curriculum to another within the University, you must meet requirements of the newly chosen curriculum even though the total number of credits earned exceeds the total minimum for graduation.

Special graduation requirements for a Bachelor of Science in Engineering degree are listed in the catalog's Engineering section.

If you complete two majors which fall under different degrees (for example: Bachelor of Arts and Bachelor of Science), only one degree is posted to your academic record unless you complete 30 semester hour credits at WSU after the first degree is posted. You may choose which degree is posted, but if you complete a Bachelor of Science (teaching) major and wish to get a teaching licensure, you will be encouraged to have that degree posted.

If you return after graduation from WSU to earn an additional (different) bachelor degree at WSU, you must complete a minimum of 30 additional credits for the second degree. If you complete another major but do not complete the additional 30 credits, the major is recorded on your permanent record but the additional degree is not recorded, and you do not receive another diploma. You receive only one diploma for each degree earned.

You have the final responsibility for selecting and registering in courses meeting curriculum requirements.

Three weeks before graduation, a list of candidates is posted on the Registrar's Office's bulletin board on the first floor of Somsen Hall. You should review the list to ensure that you have been approved for graduation; you must notify the Registrar immediately if you are a candidate for graduation and your name does not appear on the list. You are expected to attend commencement. If you are unable to participate in commencement for some unavoidable reason, you are expected to notify the Registrar's Office.

Graduation With Honors

You are graduated Cum Laude if you're graduating with an overall grade point average between 3.250 and 3.499. You are graduated Magna Cum Laude if you're graduating with an overall GPA average between 3.500 and 3.749. You are graduated Summa Cum Laude if you're graduating with an overall GPA average between 3.750 and 4.000. All courses from all institutions

are used in computing honors. To be considered for honors, however, your WSU GPA must be 3.250 or higher.

You must have completed 30 semester hours in residence during your junior and senior years to be eligible for graduation with honors.

Honor awards apply to you only if you're earning your first four-year degree. You are NOT eligible for honors if you have previously earned a bachelor's degree.

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

Study Programs

Minnesota State University Common Market Program

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, you may take advantage of curriculum and program specialties and the different intellectual and social climates. The home university considers credits earned under the program as 'resident credit.'

When you apply, you list the courses you want to take and usually include several alternate choices. The Common Market Director at the receiving institution notifies you whether or not your request can be met. You indicate your choice of housing on your application form, and the request is referred to the Housing Office at the receiving university. Assistance also is given in transferring financial aid.

You are eligible to participate in the Common Market Program if you have attended your home institution for at least two consecutive semesters and have earned at least a 2.00 GPA at WSU. Catalogs, class schedules and application forms are available in the Registrar's Office, Somsen Hall, Room 114.

WSU/SMU Cooperative Program

The cooperative program between WSU and Saint Mary's University allows full-time, undergraduate WSU students to take classes at SMU and pay tuition for the credits at WSU. You are required to take a minimum of 9 credits at WSU the semester in which you enroll in the cooperative program unless the department chairperson or the appropriate college dean has approved an exception.

If you are interested in participating in the program, contact the Registrar's Office, Somsen Hall, Room 114.

If you decide to take a course at SMU, you must get a permit which requires the approval of your advisor and the Registrar's Office. You then present the permit to the registrar at SMU for processing and return the approved permit to the WSU Registrar's Office.

Adult, Continuing Education and Extension Department (ACEED) Continuing Education

Continuing Education provides non-credit courses as well as courses offering continuing education units. The courses frequently fulfill specialized learning needs identified by professionals, organizations and communities. 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 your transcript and can serve as verification for continuing education activities.

Instruction for CEU courses and activities may be provided by WSU faculty, community resource persons or visiting experts.

Contact the Adult, Continuing Education and Extension Office for more detailed information about CEU offerings or if you want to discuss how WSU may be able to provide learning

resources for your organization. The office is in Somsen Hall, Room 109, WSU, Winona, MN 55987, (507) 457-5080 or 1-800-242-8978.

Extension Program

WSU, in addition to its regular program, 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 major workshops and/or conferences scheduled by outside agencies.

You are not required to have gained admission to WSU for undergraduate credit before enrolling in an extension class. You must complete an application form if you are a graduate student.

All extension courses can apply toward appropriate degree programs.

Contact the Adult, Continuing Education & Extension Office, Somsen Hall, Room 109, WSU, Winona, MN 55987, (507) 457-5080 or 1-800-242-8978 for more information.

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 a baccalaureate or an Associate of Arts 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, and they apply toward your degree program.

You should contact the Adult, Continuing Education & Extension Office, Somsen Hall, Room 109, WSU, Winona, MN 55987, (507) 457-5080 or 1-800-242-8978 if you're interested.

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.

You are considered a senior citizen if you have reached the age of 62 before the beginning of any semester in which you're going to take a course. You can register for courses on a no-credit basis at no cost or you can register for credit on a fee basis, which requires a service charge of \$15 per credit hour (amount subject to change). Enrollment is on a space-available basis.

WSU offers Elderhostel, a week-long residential learning experience, for anyone 55 years or older. The program provides academic and social stimulation.

WSU ACEED also sponsors the Learning Club, a local, non-profit organization dedicated to the continuing education of people who have retired. 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. Topics are taught by people who love their subject to people whose motivation is simply a love of learning and a desire to stay fresh and vibrant throughout retirement. The Learning Club also is a great way to meet people.

Classes are scheduled during the day at convenient locations throughout the city.

Please contact the Adult, Continuing Education & Extension Office, Somsen Hall, Room 109, WSU, Winona, MN 55787 for registration details or call (507) 457-5080 or 1-800-242-8978.

Student Orientation Program

To assist your transition into the University, WSU offers orientation courses for incoming first-year students. These courses introduce you to services, activities, expectations and opportunities at WSU and provide you with the means to network with other students, faculty and staff. See Course Descriptions for more details. The Advising and Retention Office or the Residential College notifies incoming first-year students as to the dates, times and locations of these orientation courses.

Study Abroad

A variety of Study Abroad options are available for you if you are interested in broadening your university experience and enhancing your resume by including a living and learning experience in a foreign country. In addition to programs sponsored by WSU, you may select programs through other universities. Programs vary in location, length, cost, admission requirements, application deadlines, focus, etc., so it is important to receive the most recent and detailed information. The International Studies Office provides this information and guidance in selecting and applying for Study Abroad. Early and careful planning for Study Abroad is important; you will want 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/tours carry fewer credits).

To make an appointment to explore options and receive information about Study Abroad, you should contact the Director of International Studies in Minne 128.

Study at MSU-Akita, Japan

WSU-Akita is a MnSCU campus in Japan that brings together Japanese and American students in a cross-cultural living and learning environment. You can enroll in one or more semesters (full-time) to study Japanese language (no previous language study required), Japan Area Studies (upper- and lower-division courses) and general education courses. American students live on-campus with Japanese students and have opportunities for home-stays with Japanese families, and field trips to points of historical and cultural interest.

Oslo Exchange Program

The Oslo Exchange Program, in operation since 1961-62, provides an opportunity for WSU students to spend one or two semesters in Norway at Hogskolen I Oslo (Oslo College) while a Norwegian counterpart studies at WSU. Students study Norwegian language (no previous language study required) and Scandinavian Studies, with an emphasis on education. Students from all majors are eligible to apply and are selected by the Oslo Exchange Committee. The selected WSU student also is eligible to receive the Amanda Aarstad Scholarship.

Swedish Exchange Program

The WSU exchange program with the University College of Boras in Sweden allows WSU students to study for one semester in Sweden. This program is designed for junior and senior students in computer science or business. Students enroll in courses in Swedish language (no previous language study required) and Swedish cultural studies (taught in English). In addition, students enroll in upper-division courses in their major (taught in English).

Australia/New Zealand Program

The WSU Australia/New Zealand program is a one-semester program that allows students to study and travel in Australia and New Zealand. This program combines outdoor activities such as trekking, rafting, mountain biking, snorkeling, diving, etc., with academic courses. Students enroll in a combination of general education courses and upper-division courses such as Recreational Leadership and Eco-Tourism.

WSU-Sponsored Programs

Short-Term Study-Tours

WSU sponsors a number of short-term programs that are offered during the summer or other breaks. Some of the programs are offered regularly and others are offered on a one-time basis or as interest arises. Students interested in such opportunities should consult the International Studies Director.

The Social Work Program offers opportunities to take social work and other courses through short-term programs abroad. The programs are available to anyone interested in the human services professions (social work, political science, nursing, education, criminal justice, women's studies, sociology, psychology and paralegal). Programs are offered in England, Canada and Bangladesh.

Students also may enroll in WSU-sanctioned programs through other universities. Through special agreements with other state universities and the University of Minnesota system, students have a wide range of programs from which to choose. Again, it is important to coordinate the application process, so students are encouraged to work closely with the International Studies Director to get information and process their applications. Programs are available in the following areas (length of study varies): England; Europe (France, Germany, Spain, Scandinavia, Czech Republic); Eurospring Program (intensive study in England and then study-tour of various European sites); Latin America (Costa Rica, Venezuela); and Mexico.

General Education Requirements

The General Education Program is designed to widen a student's intellectual horizons. General education courses develop basic skills, introduce key societal values, introduce a student to new subject areas, expand a student's knowledge of familiar subjects and help a student explore new disciplines in which he/she may have special interests and aptitudes.

The following general education requirements are applicable to all undergraduate degree programs except engineering. Transfer students should check the transfer policy statement under the Admissions Information section in this catalog entitled "General Education Transfer Policy" for detailed information concerning general education.

I. BASIC SKILLS (12 S.H.)

A. Written Communications (4 S.H.)

English 111

B. Oral Communications (0-3 S.H.)

CMST 191 or satisfactory completion of a special examination offered once a semester by prior arrangement.

C. Mathematics (0-3 S.H.)

Mathematics 100

Successful completion of any Mathematics or Mathematics Statistics course except MATH 050, STAT 115 or STAT 255 waives Basic Skills Mathematics requirement. MATH 050 is an additional requirement for students with a low mathematics placement score.

D. Physical Education Activities (2 S.H.)

PER 101, 102, 103, 104, 112, 120, 122, 123, 128, 134, 135, 136, 137, 139, 140, 141, 142, 199.

II. Humanities (6 S.H. minimum — 2 departments)

Courses must be selected from an approved list of courses for Group II which deal with the understanding of the great ideas and works of civilization through philosophy, literature (including non-English literature), history, theatre, art or music. Courses from at least two departments must be included.

III. Natural Sciences (6 S.H. minimum; one lab course required — 2 departments)

Courses must be selected from an approved list of courses for Group III which stress basic knowledge of natural science (including mathematics) and the scientific method. At least one laboratory course and courses from at least two departments must be included.

IV. Social Sciences (6 S.H. minimum - 2 departments)

Social science addresses the study of a person as an individual and as a member of a group and includes approved courses for Group IV in geography, economics, political science, psychology, sociology and other subject areas. Courses from at least two departments must be included.

V. Different Culture (6 S.H. minimum - 2 departments)

Courses must be selected from an approved list of courses for Group V which constitute studies concerning the way of life, political system, philosophy, social structure, economic system or language of a group whose race is not Caucasian or whose native language is not English. The Different Culture requirement may

be waived for students presenting evidence of extensive exposure to a culture other than their own. A Different Culture waiver request form may be obtained in the Registrar's Office.

VI. Allied Studies (3 S.H. minimum)

Courses must be selected from an approved list for Group VI, which deal primarily with requirements of modern living including an understanding of basic technology, recreational opportunities, health maintenance principles, business, etc.

To fulfill the minimum credits for categories II-V, students must take courses from two separate departments. Additional credits required to reach the 45 credit requirement are at the student's discretion, provided the student takes no more than two courses per gen ed category from a single department.

Approved Courses

The courses listed below by area and department are designated as appropriate for general education credit. You are expected to check all course descriptions carefully to determine prerequisites.

The following policies concern using general education courses to meet graduation requirements:

A. Students may use a general education course toward meeting the requirements in any minors or concentrations requiring the course.

B. Students may use a general education course to meet both major/option requirements and a general education requirement only if the course is an "additional requirement." An additional requirement is a general education course which is required in the major/option and is outside the major/option department. Additional requirements are noted in major/option with an asterisk*. Additional requirements are NOT calculated into a student's major GPA.

C. Most departments prohibit the use of additional requirements for general education; in such departments, a general education course which is required in a major or option counts toward meeting the major/option requirement, and the student must take a different general education course to meet general education requirements.

D. If a general education course is listed under a student's major department but is not required in a major/option of that department, a student may not use the course to meet a general education requirement. This provision does not apply to basic skills courses.

E. No course may be used by a student to satisfy more than one general education requirement. Note: *Indicates course may be used in one of two categories.

II. HUMANITIES (6 credits-2 departments)

ART

109 Introduction to Art

114 2-D Design

115 3-D Design

118 Drawing I

221 Art History I

222 Art History II

224 American Art

COMMUNICATION STUDIES

196 Fundamentals of Interviewing

- 261 Public Speaking
- 280 Nonverbal Communication
- 282 Introduction to Communication Studies
- 283 Introduction to Rhetorical Studies
- 287 Communication and Conflict
- 289 Gender Communication

ENGLISH

- 120 Introduction to Literature
- 121 Major British & American Fiction
- 125 Masterpieces of Short Fiction
- 131 Masterpieces of American Literature

FOREIGN LANGUAGES

- * 101 Elementary French I
- * 102 Elementary French II
- * 201 Intermediate French I
- * 202 Intermediate French II
- * 101 Elementary German I
- * 102 Elementary German II
- * 201 Intermediate German I
- * 202 Intermediate German II
- * 101 Elementary Spanish I
- * 102 Elementary Spanish II
- * 201 Intermediate Spanish I
- * 202 Intermediate Spanish II

HISTORY

- 120 Western Civilization to 1500
- 121 Western Civilization 1500-1815
- 122 Western Civilization 1815-Present
- * 123 East Asia Civilization
- 150 United States History to 1865
- 151 United States History Since 1865
- * 165 Latin American History
- 210 American Military History
- * 233 History of Mexico
- * 235 History of the American Indian
- 240 History of Christianity

HONORS

- 201 Thought & Culture
- 251 Special Seminar

MUSIC

- 109 Introduction to Music
- 110 Introduction to Jazz
- 114 World Music
- 120 Introduction to Music Theory

PHILOSOPHY

- 110 Critical Thinking
- 120 Introductory Philosophy
- 130 Moral Problems
- * 201 Classical Philosophy
- * 202 Aristotle to Medieval Philosophy
- * 210 Inductive Reasoning
- 230 Moral Theory
- * 240 Philosophy of Science
- 250 Symbolic Logic
- 260 Problems in Philosophy

THEATRE AND DANCE

- 100 Theatre Activities (maximum of 3 s.h.)
- 111 Introduction to Theatre
- 115 Dance Appreciation
- 119 Play Reading
- 131 Performance I For Everyone
- 141 Oral Interpretation I
- 310 Dramatic History and Literature II

III. NATURAL SCIENCE

(6 credits-one lab required-2 departments)

BIOLOGY

- 104 Conservation of Environment
- 117 Human Biology
- 118 General Biology (Lab)
- 201 Human Anatomy (Lab)
- 203 Natural History (Lab)
- 204 Elements of Anatomy & Physiology (Lab)
- 211 Anatomy & Physiology I (Lab)
- 212 Anatomy & Physiology II (Lab)

- 241 Principles of Biology I (Lab)
- 242 Principles of Biology II (Lab)
- 269 Human Reproduction
- 303 Survey of Plants (Lab)

CHEMISTRY

- 100 Chemistry Appreciation
- 108 Introduction to General Chemistry (Lab)
- 204 Unified Science
- 208 General Organic & Biochemistry I (Lab)
- 209 General Organic & Biochemistry II (Lab)
- 212 Principles of Chemistry I (Lab)
- 213 Principles of Chemistry II (Lab)

COMPUTER SCIENCE

- 115 Personal Computer Usage
- 130 Introduction to Basic Programming
- 150 Overview of Computer Science (this IS NOT A LAB)
- 210 Computers in Society

GEOSCIENCE

- 105 Astronomy (Lab - 4 cr.; No Lab - 3 cr.)
- 110 Oceanography (Lab - 4 cr.; No Lab - 3 cr.)
- 115 Meteorology (Lab)
- 120 The Dynamic Earth (Lab)
- 130 Earth and Life Through Time (Lab)

HONORS

- 203 Great Ideas in the History of Science and Mathematics
- 253 Special Seminar

MATHEMATICS/STATISTICS

- **110 Finite Mathematics
- **120 Precalculus
- **140 Applied Calculus
- **150 Math for the Earth & Life Sciences I
- **155 Math for the Earth & Life Sciences II
- **160 Calculus I
- **165 Calculus II

Statistics

- **110 Fundamentals of Statistics
- **210 Statistics
- **Higher level courses waive Basic Skills Math

PHILOSOPHY

- * 210 Inductive Reasoning

PHYSICS

- 115 Physical Concepts of Man's Environment
- 200 Fundamentals of Aviation
- 201 General Physics I (Lab)
- 221 University Physics I (Lab)

IV. SOCIAL SCIENCES (6 credits-2 departments)

ECONOMICS

- 201 Principles of Microeconomics
- 202 Principles of Macroeconomics
- 203 Principles of Economics III

GEOGRAPHY

- 110 World Regional Geography
- 212 Physical Geography
- 213 Cultural Geography

HONORS

- 202 Classics in Social Thought
- 252 Special Seminar

PHILOSOPHY

- * 240 Philosophy of Science

POLITICAL SCIENCE

- 103 Introduction to Politics
- 120 Introduction to American Politics
- 130 Introduction to International Relations
- 135 Introduction to Comparative Politics
- 205 The United Nations in World Affairs
- * 224 Politics and Society in Latin America
- * 225 Ethnic Conflict and Nationalism
- * 226 Politics and Society in Africa
- * 270 Politics and Society in the Middle East

PSYCHOLOGY

- 210 General Psychology
- 275 Psychology of Women
- 298 Health and Psychology

SOCIOLOGY

- 150 Human Society
- 205 Social Interaction
- 212 The Family
- 216 Social Problems

V. DIFFERENT CULTURE (6 credits - 2 departments)**COMMUNICATION STUDIES**

- 193 Chinese Communication Theory and Kinetics
- 281 Cross-Cultural Communication
- 285 Native American Oratory
- 286 African American Rhetoric

ENGLISH

- 105 ESL: Listening to Academic Speech
- 106 ESL: Academic Reading and Writing I
- 107 ESL: Academic Reading and Writing II
(The above are applicable to international students only)
- 223 Classical Mythology
- 224 The Bible as Literature
- 251 Indian Literature

FOREIGN LANGUAGE

- * 101 Elementary French I
- * 102 Elementary French II
- * 201 Intermediate French I
- * 202 Intermediate French II
- * 101 Elementary German I
- * 102 Elementary German II
- * 201 Intermediate German I
- * 202 Intermediate German II
- * 101 Elementary Spanish I
- * 102 Elementary Spanish II
- * 201 Intermediate Spanish I
- * 202 Intermediate Spanish II

GEOGRAPHY

- 223 Geography of the Orient
- 224 Geography of Africa
- 225 Geography of Latin America
- 233 Geography of the Middle East

HISTORY

- * 123 East Asian Civilization
- * 165 Latin American History
- 170 African Civilization
- 205 Classical History
- * 233 History of Mexico
- * 235 History of the American Indian

INTERNATIONAL STUDIES

- 200 Introduction to International Studies

MUSIC

- 115 Music of East and Southeast Asia
- 116 Music of the Native American

PHILOSOPHY

- * 201 Classical Philosophy
- * 202 Aristotle to Medieval Philosophy

POLITICAL SCIENCE

- * 225 Ethnic Conflict and Nationalism
- * 224 Politics and Society in Latin America
- * 226 Politics and Society in Africa
- * 270 Politics and Society in the Middle East

SOCIOLOGY

- 201 Scandinavian Culture I

VI. ALLIED STUDIES (3 credits)**ACCOUNTING**

- 211 Financial Principles of Accounting
- 212 Managerial Accounting

ADMINISTRATIVE INFORMATION SYSTEMS

- 201 Keyboarding
- 202 Introduction to Word/Information Processing
- 215 Personal Finance
- 218 Job Search Strategies

BUSINESS ADMINISTRATION

- 101 Introduction to Law & the Legal Process
- 106 Introduction to Business

COUNSELOR EDUCATION

- 200 Career/Decision Making

EDUCATION

- 120 Parenting

FINANCE

- 201 Introduction to Finance

HEALTH AND HUMAN PERFORMANCE

- 204 Personal & Community Health
- 205 Nutrition for Lifetime Wellness
- 345 Emergency Responses for the Professional Rescuer

MARKETING

- 100 Marketing and Society

MASS COMMUNICATION

- 100 Mass Media & Society
- 120 Electronic Media

NURSING

- 260 Women's Health Issues

PHYSICAL EDUCATION/RECREATION

- 214 Standard First Aid & CPR
- 239 Outdoor Pursuits

WOMEN'S STUDIES

- 148 Introduction to Women's Studies

All degree and non-degree undergraduate programs are listed by departments arranged alphabetically. Included are undergraduate majors, minors, program options, licensure programs and professional sequences.

Interdisciplinary Programs. Undergraduate programs sponsored by more than one department also are listed alphabetically (i.e. Public Administration and Social Science).

Special Academic Programs. Various non-baccalaureate or special degree programs, such as pre-professional programs, are listed alphabetically.

Academic Programs

All degree and non-degree undergraduate programs are listed by departments arranged alphabetically in the Academic Programs section. Included are undergraduate majors, minors, program options, licensure programs, professional sequences and pre-professional sequences.

Preceding the Academic Programs section, information is provided about each of the five colleges within the University:

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

Interdisciplinary Programs. Undergraduate programs sponsored by more than one department are listed alphabetically.

Special Academic Programs. Various non-baccalaureate or special degree programs, such as pre-professional programs, are listed alphabetically.

Course Descriptions

Immediately following each department's program descriptions are course descriptions of all courses offered in the department. Please note the following information for each course:

1. Course Number. A 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 less 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.

2. 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.

3. Frequency of Offering. Descriptions of courses show how often that course is offered.

4. Pass/No Credit Status. If a course is offered only on a pass/no credit basis, its pass/no credit status is noted in the description. A department's general pass/no credit policy is included in its listing of program requirements. Students must check the policy before enrolling in a course on a pass/no credit basis.

5. Content Description. A brief description of subject matter gives students an idea of what to expect in the course.

Note: For information on graduate academic programs, see the GRADUATE BULLETIN available from the Office of Graduate Studies, located in the Registrar's Office, Somsen Hall, Room 114.

Orientation Program

To assist student transition into the University, WSU offers orientation courses for entering first-year students. These courses introduce students to the services, activities, expectations, and opportunities at the institution and provide means of networking with other students, faculty, and staff.

- 100 Introduction to Higher Education (1)
- 101 First-Year Experience Seminar (1)

College of Business

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

Degrees offered by the College

	<i>Major</i>	<i>Minor</i>	<i>Teaching Major</i>
Bachelor of Arts			
<i>Economics</i>	X	X	
Bachelor of Science			
<i>Accounting</i>	X	X	
<i>Administrative Information Systems Management</i>	X		
<i>Business Administration</i>		X	
<i>General Option</i>	X		
<i>Public Administration Option</i>	X		
<i>Business (Teaching)</i>			X
<i>Business Law</i>		X	
<i>Finance</i>			
<i>Option A: Investments</i>	X		
<i>Option B: Banking</i>	X		
<i>Health Care Management</i>	X		
<i>Human Resources Management</i>	X		
<i>International Business</i>		X	
<i>Management Information Systems</i>	X	X	
<i>Marketing</i>	X		
<i>Production and Operations Management</i>	X	X	
<i>Training and Development</i>		X	

Master of Business Administration

Master of Science

Training and Development

NOTE: See GRADUATE BULLETIN for information on graduate programs.

Departments

Accounting, Administrative Information Systems, Business Administration, Economics and Finance, Marketing

Mission

The mission of WSU's College of Business is to provide quality business programs designed to prepare students to live, lead, work, and grow professionally and personally in the 21st Century.

With its primary emphasis on undergraduate education, 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 while attracting students from other areas of Minnesota and the upper Midwest.

Our programs are designed to help students to:

- Secure a basic education in the social sciences, natural sciences and humanities.
- Acquire the broad knowledge essential to understand the global, diverse environment within 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 will use quality indicators and assessment techniques to ensure educational excellence, conduct periodic program reviews as required by MnSCU and solicit input from stakeholders, the students, alumni and businesses.

In addition, the faculty will exemplify professional standards that respect the dignity of the University community and the public.

Admission and Graduation Standards

See appropriate department for details.

College of Education

Carol Anderson, Dean
Gildemeister Hall, Room 135; (507) 457-5570

Degrees offered by the College

Bachelor of Science	Major	Teaching Major	Teaching Minor
<i>Early Childhood Education</i>			X
<i>Elementary Education</i>		X	
<i>Physical Education</i>		X	
<i>Recreation</i>			
<i>Recreation and Leisure Studies Option</i>	X		
<i>Therapeutic Recreation Option</i>	X		
<i>Special Education</i>		X	

NOTE: For specific majors and minors in secondary education, see appropriate departmental listing

Education Licensures

Developmental Adapted Physical Education
Early Childhood /Family Educator
Early Childhood /Parent Educator
Middle School Licensure
Prekindergarten Licensure

Special Education Licensures

Learning Disabilities
Mental Impairment

Elementary Teaching Minors (Not for Licensure)

General Science
Language Arts

Mathematics
Multicultural Global Studies
Social Studies

Master of Science

Counselor Education:

Professional Development Program
Community Counseling Program
Elementary School Counseling Program
Secondary School Counseling Program

Educational Leadership:

Elementary School Leadership
Secondary School Leadership

Education:

Education (Elementary or Secondary)
Early Childhood Concentration

Special Education:

Learning Disabilities Concentration
Mental Impairment Concentration

Specialist

Educational Leadership:

Elementary School Leadership
Secondary School Leadership
General School Leadership

IMPORTANT: These program requirements are subject to change. All students should consult with the department for current requirements regarding licenses and licensure requirements.

NOTE: See GRADUATE BULLETIN for information on graduate programs.

Departments

Counselor Education, Education, Educational Leadership, Physical Education and Recreation, Special Education

to foster innovation in professional preparation.

The College of Education at WSU is accredited by the National Council for Accreditation of Teacher Education (NCATE). The accreditation includes the basic and advanced levels of professional education programs offered at the University. All teacher education and school counselor programs are approved for licensure by the Minnesota Board of Teaching. Administration programs are approved by the Minnesota Board of Education.

Mission

The WSU College of Education's basic mission is to provide continuing leadership and excellence in preparing classroom teachers, counselors, administrators and other educational professionals. The College delivers educational services to public and private schools. It accomplishes its mission by offering baccalaureate, licensure and selected graduate programs to prepare professionals for public and private schools in the region.

The College's specific 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

Research and Regional Service

The College has an educational alliance with public and private schools within the WSU service region. The alliance is a collaborative effort to meet school needs for research, in-service for teachers and educational services, and supports the publication of the Southeastern Minnesota Alliance Journal.

Field Experiences

All programs within the College provide professional field experiences and internships for students in schools, businesses or other organizations.

College of Liberal Arts

Peter Henderson, Dean
Minne Hall, Room 206; (507) 457-5017

Degrees offered by the College

Associate of Arts (two-year degree): General

Bachelor of Arts	<i>Major</i>	<i>Minor</i>	<i>Teaching Major</i>	<i>Teaching Minor</i>	<i>Non-teaching Minor</i>
<i>Art</i>	X	X			
<i>Communication Studies Option</i>	X	X			
<i>Organizational Communication Option</i>	X				
<i>Cross-Cultural Communication</i>		X			
<i>Dance</i>		X			
<i>English</i>		X			
<i>First Combining Option</i>	X				
<i>Second Combining Option</i>	X				
<i>Writing Option</i>	X	X			
<i>Creative Writing Option</i>		X			
<i>French</i>	X	X			
<i>Geography</i>		X			
<i>German</i>	X	X			
<i>Global Studies</i>		X			
<i>History</i>	X	X			
<i>Mass Communication</i>		X			
<i>Advertising Option</i>	X				
<i>Broadcast Option</i>	X				
<i>Journalism Option</i>	X				
<i>Photojournalism Option</i>	X				
<i>Public Relations Option</i>	X				
<i>Music</i>		X			
<i>Liberal Arts Option</i>	X				
<i>Performance Option</i>	X				
<i>Philosophy</i>		X			
<i>Political Science</i>		X			
<i>Option A: General</i>	X				
<i>Option B: International Studies</i>	X				
<i>Professional Studies</i>					
<i>General Option</i>	X				
<i>Aviation Maintenance Management Option</i>	X				
<i>Psychology</i>		X			
<i>Option A</i>	X				
<i>Option B</i>	X				
<i>Public Administration</i>	X	X			
<i>Sociology</i>	X	X			
<i>Sociology: Gerontology Option</i>		X			
<i>Spanish</i>	X	X			
<i>Theatre Arts</i>	X	X			
<i>Women's Studies</i>		X			

Bachelor of Science	Major	Minor	Teaching Major	Teaching Minor	Non-teaching Minor
Art			X		
English			X	X	
<i>Writing Option</i>				X	
French			X	X	
German			X	X	
Music			X		X
Music / Business Emphasis	X				
Paralegal					
<i>Business Administration Option</i>	X				
<i>Multi-Legal Option</i>	X				
<i>Sociology Option</i>	X				
Social Science/History			X		
Social Work	X				
Sociology: Criminal Justice					
<i>Corrections Option</i>	X				
<i>Law Enforcement Option</i>	X				
Spanish			X	X	
Speech / Theatre Arts			X	X	

Master of Arts

English

Master of Science

English

NOTE: See GRADUATE BULLETIN for information on graduate programs.

Departments

Art, Communication Studies, English, Foreign Language, History and Paralegal, Mass Communication, Music, Philosophy, Political Science, Psychology, Sociology and Social Work, Theatre and Dance, Special Programs: Honors Program

Mission

The basic 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 basic mission translate into the two major responsibilities for faculty members:

- 1) Providing a broad array of quality programs in the liberal arts and related professional fields.
- 2) Providing the majority of the general education 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 life-long 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.

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.

Many departments 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 which 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.

Faculty

Over 60 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.

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 and the Foreign Language Department is in Somsen Hall. The Mass Communication Department has additional facilities in Phelps Hall.

College of Nursing and Health Sciences

Tim Gaspar, Dean

Stark Hall, Room 301A; (507) 457-5122

Degrees offered by the College

	<i>Major</i>	<i>Teaching Major</i>
Bachelor of Science		
<i>Health and Human Performance:</i>		
<i>School and Community Health Education</i>	X	X
<i>School and Community Health/Public Administration Option</i>	X	
<i>Exercise Science:</i>		
<i>Cardiac Rehabilitation Option</i>	X	
<i>Athletic Training Option</i>	X	
<i>Work Site Health Promotion Option</i>	X	
<i>Nursing:</i>		
<i>Nursing - Generic Option</i>	X	
<i>Nursing - RN Option</i>	X	

Master of Science

The College of Nursing and Health Sciences offers a Master of Science degree in Advanced Practical Nursing. There are four focus areas from which students can choose:

Nursing Administrator

Nursing Educator

Clinical Nurse Specialist

Adult or Family Nurse Practitioner

Departments

Nursing, Health and Human Performance

Mission

The College 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 life-long wellness in the individual, the University, the community and global society.

College of Science and Engineering

Robert J. Herickhoff, Dean
Stark Hall, Room 201A; (507) 457-5585

Degrees offered by the College

Bachelor of Arts	<i>Major</i>	<i>Minor</i>	<i>Teaching Major</i>	<i>Teaching Minor</i>
<i>Biology</i>		X		
<i>Mathematics</i>	X	X		
Bachelor of Science				
<i>Airway Science/Aviation</i>		X		
<i>Biology</i>		X		
<i>Biology, Allied Health Option</i>	X			
<i>Biology, Cell and Molecular Option</i>	X			
<i>Biology, Ecology Option</i>	X			
<i>Biochemistry</i>		X		
<i>Chemistry, Option A</i>	X	X		
<i>Chemistry, Option B</i>	X	X		
<i>Chemistry</i>				X
<i>Composite Materials Engineering</i>				
<i>Chemical Option</i>	X			
<i>Mechanical Option</i>	X			
<i>Computer Science</i>		X		
<i>Option A</i>	X			
<i>Option B - Computer Information Systems</i>	X			
<i>Cytotechnology</i>	X			
<i>Earth Science</i>			X	
<i>Electronics</i>		X		
<i>Geoscience</i>		X		
<i>Option A: Geology</i>	X			
<i>Option B - Applied Hydrogeology</i>	X			
<i>Option C - Water Resources Management</i>	X			
<i>Life Science</i>			X	
<i>Mathematics: Elementary Teaching</i>				X
<i>Mathematics: Secondary Teaching</i>			X	
<i>Mathematics: Statistics Option</i>	X	X		
<i>Medical Technology</i>	X			
<i>Middle School Science</i>			X	
<i>Physical Science</i>			X	
<i>Physics</i>	X			
<i>Applied Nuclear Science Option</i>	X			
<i>Electronics Option</i>	X			

NOTE: See GRADUATE BULLETIN for information on graduate programs.

Departments

Biology, Chemistry, Computer Science, Engineering, Geoscience, Mathematics and Statistics, Physics

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, Bachelor of Science or Bachelor of Engineering 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.

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.

Larger 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 WSU 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 WSU 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 during students' academic careers.

ACCOUNTING

Somsen Hall, Room 323A, (507) 457-5860
Bergin, Briggs, Hurley, Ihrke, Lee, Milacek, Sallee, Schneider.

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; March, 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 -
Thomas Lee, Professor; B.A., M.B.A., Mankato State University; Certified Public Accountant; 1968-74; 1977 -
Emil Milacek, Professor; B.A., M.B.A., University of Maryland; Ph.D., University of North Texas; 1989 -
Larry Sallee, Professor; B.S., University of Wisconsin-Superior; M.B.A., University of Wisconsin-LaCrosse; 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 -

The basic purpose of the Accounting Program is to prepare students for careers in business and government, with emphasis on preparation for professional certification (e.g., CPA, CMA).

Pass/No Credit Courses

Any course not required for a major, minor, option or any of the concentrations may be taken by undergraduates on a P/NC basis. Please check with the instructor prior to enrolling in the course.

Graduation Requirements

- Complete all coursework and satisfy all other WSU requirements for a B.S. in Accounting.
- Complete a minimum of 15 credit hours of 300/400-level ACCT courses at WSU.
- Achieve a grade of "C" or better in all courses counted toward the major.
- At either the beginning or end of the last semester of undergraduate work, have both a 2.50 GPA and a 2.50 in ACCT courses.

B.S. MAJOR - ACCOUNTING

79 - 80 s.h. (No Minor Required)

REQUIRED COURSES (70 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 Systems 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 315 Principles of Management (3)
- DIS 362 Management Informational Systems (3)
- MGMT 495 Strategic Management (3)
- POM 334 Production and Operations Management (3)

Marketing (3 s.h.)

- 315 Principles of Marketing (3)

Math (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 311 Intermediate Accounting I (4)
- ACCT 312 Intermediate Accounting II (3)
- ACCT 421 Introduction to Taxation (3)
- BUSA 301 Business Law I (3)

ELECTIVES (3 s.h.)

Any Accounting course

Accounting Course Descriptions

Accounting majors must earn a "C" or better in accounting proficiency courses in order to take the next course. All courses offered each semester unless otherwise noted.

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

211 - Financial Accounting Principles—3 S.H.

Quarter Course: 201, part of 202.

Study of topics in financial accounting including financial statement preparation and bookkeeping basics. Topic areas include the accounting cycle, forms of business organizations, assets, liabilities and owner's equity. Examples are drawn from service, merchandising and manufacturing organizations. Prerequisite: WSU math proficiency.

212 - Managerial Accounting Principles—3 S.H.

Quarter Course: Part of 202, 203.

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.

Quarter Course: New course.

"Hands-on" experience with "real world" accounting applications software, including significant work with a general ledger package. Prerequisite: ACCT 211.

311 - Intermediate Accounting 1—4 S.H.

Quarter Course: 301, part of 302.

Major emphasis on financial accounting. Review of basic financial statements. Development of accounting principles and procedures related to assets (cash, receivable, investments, inventories, plant and equipment, intangibles, and the time value of money). Prerequisite: ACCT 212. Not open to students in their first year of college study.

312 - Intermediate Accounting 2—3 S.H.

Quarter Course: Part of 302, 303.

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.

Quarter Course: 350.

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.

Quarter Course: 345.

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.

Quarter Course: 440.

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—1-3 S.H.

Quarter Course: 327.

An analysis of current topics and issues relevant to the milieu of accounting. The subject matter to be offered is announced in advance by the department. May be repeated as topics change. Prerequisite: instructor's permission. Not offered every year.

398 - Internship—1-6 S.H.

Quarter Course: 398.

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.

Quarter Course: 399.

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 be counted as general elective credits.

413 - Advanced Financial Accounting—3 S.H.

Quarter Course: 442.

The course includes the study of business combinations resulting from acquisitions of assets or stock, foreign currency transactions and partnership accounting. Prerequisite: ACCT 312.

414 - Advanced Financial Accounting Topics—3 S.H.

Quarter Course: 443.

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.

Quarter Course: 446.

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. Offered yearly.

421 - Introduction to Taxation—3 S.H.

Quarter Course: 407.

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 micro computer is also a significant component of the course. Prerequisite: ACCT 212 and ECON 202. Grade only.

422 - Advanced Taxation—3 S.H.

Quarter Course: 409.

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.

Quarter Course: 425.

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.

Quarter Course: 429.

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.

Quarter Course: 441.

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 1—3 S.H.

Quarter Course: 411.

The public accounting profession and its requirements, internal control, verification of accounts, auditors' reports. A review of the auditing process and an analysis of the generally accepted auditing standards. Prerequisite: ACCT 220, ACCT 312 and DIS 220.

472 - Auditing 2—3 S.H.

Quarter Course: 413.

Practical application of auditing procedures to the use of comprehensive practice set worked by students. In-depth analysis of auditing procedures as applied in specific areas. Prerequisite: ACCT 471. Offered yearly.

490 - Independent Studies in Accounting—1-3 S.H.

Quarter Course: 480.

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

Somsen Hall, Room 319, (507) 457-5165

B. Murphy (Chairperson), S. Eiken, J. Karjala, B. Smith

FACULTY

Shirley Eiken, Professor; B.A., Luther College; M.S., Winona State University; Ed.D., University of Northern Colorado; 1966-
Jeanette Karjala, Professor; B.A., M.A., Western Washington University, Bellingham; Ph.D., University of North Dakota
(ND); 1992 -

J. William Murphy, Professor; B.S.Ed., M.S.Ed., Arkansas State University; Ed.D., Memphis State University; 1989 -
Bonnie Smith, Professor; B.S., University of Illinois; M.S.T., Ed.D., Portland State University; 1982 -

The Department prepares business teachers, training and development personnel and administrative personnel such as administrative associates, information analysts, information processing specialists, technical support specialists, software specialists, technical information specialists, information policy manager and information resource manager.

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 (Teaching)

Bachelor of Science: Administrative Information Systems

Management

Bachelor of Science: Training and Development Minor

Master of Science: Training and Development (See GRADUATE CATALOG)

Graduation Requirements

- Completion of all course work required for the major.
- A grade of "C" or better in all courses counted toward the major.
- A minimum overall GPA of 2.0

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 the section in this catalog about transfer of vocational credits.) This transfer policy applies only to students majoring in business (teaching) and/or administrative information systems management.

Teaching Majors

The AIS Department recommends for student teaching only those students who have a minimum 2.75 overall GPA; 2.5 GPA in the major; and a "C" or better in all major courses.

Pass/No Credit Courses

No courses in the Department are open to declared majors and minors on a P/NC basis except internships.

B.S. MAJOR

OPTION A - ADMINISTRATIVE INFORMATION SYSTEMS MANAGEMENT

64 s.h. (No Minor Required)

REQUIRED COURSES (54 s.h.)

Administrative Information Systems (36 s.h.)

- 203 Document Production (3)
- 218 Job Search Strategies (2)
- 320 Business Information Processing (3)
- 330 Integrated Information Systems Applications (3)
- 333 Business Communication (3)
- 335 Information Resource Management (3)
- 340 Publication Design (3)
- 360 Interpersonal Business Relations (3)
- 397 Information Services Internship (3)
- 412 Team Building (3)
- 435 Information Systems/Personnel Management (3)
- 440 Training and Employee Development (3)
- 490 Capstone Seminar (1)

Accounting (6 s.h.)

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Economics and Finance (6 s.h.)

- * 201 Principles of Microeconomics (3)
- * 202 Principles of Macroeconomics (3)

Business Administration (3 s.h.)

- 291 Legal Environment of Business (3)

Marketing (3 s.h.)

- 315 Principles of Marketing (3)

ELECTIVES (10 s.h.)

Administrative Information Systems

- 215 Personal Finance (3)
- 336 Information Services Seminars (1)
- 350 Quality of Work Life (3)
- 399 General Internship (1-6)
- 410 Administrative Communication (3)
- 441 Training Techniques and Media (3)

Additional electives may be chosen from other departments with advisor approval.

* These courses may be used to satisfy certain general education requirements.

OPTION B BUSINESS (Teaching)

64 s.h. (No Minor Required)

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 see the Education section of this catalog.

REQUIRED COURSES (60 s.h.)

Administrative Information Systems (39 s.h.)

- 203 Document Production (3)
- 215 Personal Finance (3)
- 218 Job Search Strategies (2)
- 320 Business Information Processing (3)
- 330 Integrated Information Systems Applications (3)
- 333 Business Communication (3)
- 335 Information Resource Management (3)
- 340 Publication Design (3)
- 360 Interpersonal Business Relations (3)
- 402 Basic Business Teaching Methods (1)
- 403 Keyboarding Teaching Methods (1)
- 404 Administrative Information Teaching Methods (1)
- 405 Accounting Teaching Methods (1)
- 406 General Methods (2)
- 412 Team Building (3)
- 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.)

- 315 Principles of Marketing (3)

ELECTIVES (4 s.h.)

Electives to be chosen with advisor approval.

* These courses may be used to satisfy certain general education 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)

**See catalog for prerequisites.

**Business (teaching) and AISM majors meet prerequisites with AISM 335 and 435.

FOUNDATION REQUIREMENTS (12 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)

Administrative Information Systems Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

201 - Keyboarding—2 S.H.

Quarter Course: 201.

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.

Quarter Courses: 107, 202.

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—3 S.H.

Quarter Course: 203.

Advanced production problems with speed and technique development using word processing software. Prerequisite: AIS 202 or equivalent. Offered yearly.

215 - Personal Finance—3 S.H.

Quarter Course: 215.

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 yearly.

218 - Job Search Strategies—1-2 S.H.

Quarter Course: 218.

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 - Business Information Processing—3 S.H.

Quarter Course: 320.

The fundamental concepts of databases, spreadsheets and presentation software. Provides a vocabulary and understanding of computers in business, including business applications software. Offered yearly.

330 - Integrated Information Systems Applications—3 S.H.

Quarter Course: 330.

Information management systems concepts for the user and/or designer of information systems; systems analysis design system outputs, inputs, data files, methods and procedures, systems and procedures analysis, and personnel supervision. Includes software applications. Prerequisite: AIS 202 or equivalent. Offered yearly.

332 - Business Report Writing—1-2 S.H.

Quarter course: 332.

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. Offered each semester.

333 - Business Communication—3 S.H.

Quarter Course: 333.

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 each semester.

335 - Information Resource Management—3 S.H.

Quarter Course: 334, 335.

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.

Quarter Course: 336.

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 - Publication Design—3 S.H.

Quarter Course: 340.

Use of personal computers for concepts and proficiencies for developing publications using desktop publishing software. Internet research is used for resources for the publications. Offered yearly.

350 - Quality of Work Life—3 S.H.

Quarter Course: 350.

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.

Quarter Course: 360.

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.

Quarter Course: 397.

Practical administrative management work experience in a supervised workplace setting. Contact AIS Department chairperson for requirements. Applies to administrative information systems major requirements. Offered each semester. P/NC only.

398 - Training & Development Internship—3 S.H.

Quarter Course: 398.

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.

Quarter Course: 399.

On-the-job supervised work experience in administrative information systems. Credit applies to general electives, not to administrative information systems major credits/requirements. Contact AIS Department chairperson for requirements. Offered each semester. P/NC only.

402 - Basic Business Teaching Methods—1 S.H.

Quarter Course: 402.

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 301 and EDUC 302. Offered alternate years. Grade only.

403 - Keyboarding Teaching Methods—1 S.H.

Quarter Course: 403.

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: EDUC 301 and EDUC 302. Offered alternate years. Grade only.

404 - Administrative Information Teaching Methods—1 S.H.

Quarter Course: 404.

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 301 and EDUC 302. Offered alternate years. Grade only.

405 - Accounting Teaching Methods—1 S.H.

Quarter Course: 405.

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 301 and EDUC 302. Offered alternate years. Grade only.

406 - 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 301 and EDUC 302. Offered alternate years. Grade only.

410 - Administrative Communication—3 S.H.

Quarter Course: 410G.

Leadership communication for personnel at all organizational levels. A balanced emphasis between written and spoken communication includes such topics as persuasive proposals, routing managerial communications, case analysis and writing, meeting management, reporting, the visual briefing, multi-media and communication technology, and communication management. Prerequisites: ENEG 115, CMST 191 or instructor's permission. Offered yearly.

412 - Team Building—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.

Quarter Course: 434.

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.

Quarter Courses: 433, 435.

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.

Quarter Course: 440G.

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.

Quarter Course: 441G.

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.
Quarter Course: 470G.

Specific subject matter is arranged by the Department. May be repeated when offered with different subject matter content and title. Enrollment to be approved by the Department staff. Offered yearly.

480 - Independent Studies in Training and Education for Business—1-3 S.H.

Quarter Course: 480.

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
Plummer (Chairperson), Park, Ricciotti, Schmidlapp

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 -

The Department of Art offers two degree programs: the Bachelor of Arts degree is primarily studio-oriented; the Bachelor of Science degree in Art Teaching leads to eligibility for teacher certification in the State of Minnesota for grades K-12.

Courses are numbered sequentially and should be taken accordingly, within areas of study. All art courses beyond the 100-level have prerequisites that must be fulfilled before subsequent classes may be taken (see Course Descriptions). During their first two years, students complete the required series of foundation courses that introduce them to basic visual problems. These courses allow art majors to begin identifying their individual potentials for continued study, and they prepare students 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.

Advising

Each student major meets regularly with an art faculty advisor (students may select or change advisors), who assists in preparing the student's program of study. Majors are obliged 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 office.

New and transfer students are encouraged to attend the advising and 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 16 s.h. in art in residence at WSU at the upper division (300/400-level classes).

Minimum Grade Point Averages

There is no minimum GPA to enter Art Programs. In order to graduate with a major in art, 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

Art majors in both degree programs during their third year of study submit for review a group of works completed thus far. This provides the art faculty with a means of assessing the overall quality of student performance and to make recommendations for the student's final year of study. Majors neglecting to comply with the review shall not graduate with an art degree. For more specific information about this requirement, majors should attend the advising/orientation meeting in the fall of each year and consult with their advisors.

Senior Exhibitions

Art majors enroll in Senior Seminar (ART 444) as they prepare work for the department's capstone exhibitions featuring the accomplishments of graduating seniors in both degree programs. These exhibitions are held in Watkins Gallery each spring. One show includes work by all seniors. Students compete to participate in the select senior

show(s). For these show(s), the art faculty chooses a small number of students based on superior achievement. Each of these students exhibit a larger number of works than possible in the all-senior exhibition.

Pass/No Credit Courses

The P/NC option for art courses is not available to Art majors and minors. Other students may elect this option for all art classes. However, all prerequisites must be met before a student enrolls in a particular course.

B.A. MAJOR - ART

48 s.h. (No Minor Required)

REQUIRED COURSES (33 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 Art Since 1945 (3)
 - 444 Senior Seminar (3)
- (Senior Seminar must be repeated for a total of 6 s.h.)

ELECTIVES (15 s.h.)

Majors must elect two two-course sequences from among the following studio areas of concentration (12 s.h.):

- 312 Graphic Design I (3) and 412 Graphic Design II (3)
- 317 Painting II (3) and 417 Advanced Painting (3)
- 318 Advanced Drawing I (3) and 418 Advanced Drawing II (3)
- 320 Ceramics I (3) and 420 Ceramics II (3)
- 328 Sculpture II (3) and 428 Advanced Sculpture (3)
- 330 Printmaking I (3) and 430 Printmaking II (3)

Note: Instead of two sequences, majors may -- in consultation with their advisors -- choose an extended sequence in a single medium, except in Graphic Design, by repeating twice the 400-level course in the chosen medium for a second full year of study. The extended sequence also may include Independent Study (433) in the same medium.

In addition to the studio sequences, majors must take one 400-level Art History course (3 s.h.) beyond the required 439, either:

- 435 Italian Renaissance (3) OR
- 438 Modern European Art (3)

B.S. MAJOR - ART (Teaching)

51 s.h. (No Minor Required)

The teaching major prepares graduates for Minnesota certification in art (K-12) and is offered in conjunction with the College of Education.

NOTE: Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area. Refer to three requirements in the Effective Educator Handbook or the Education Department section in this catalog.

REQUIRED COURSES (45 s.h.)

- 114 2-D Design (3)
- 115 3-D Design (3)
- 118 Drawing I (3)
- 120 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 Art Since 1945 (3)

- 444 Senior Seminar (3)

ELECTIVES (6 s.h.)

Majors elect a two-course sequence in one of the following media:

- 312 Graphic Design I (3) and 412 Graphic Design II (3)
- 317 Painting II (3) and 417 Advanced Painting (3)
- 318 Advanced Drawing I (3) and 418 Advanced Drawing II (3)
- 320 Ceramics I (3) and 420 Ceramics II (3)
- 328 Sculpture II (3) and 428 Advanced Sculpture (3)
- 330 Printmaking I (3) and 430 Printmaking II (3)

B.A. MINOR - ART

21 s.h.

REQUIRED COURSES (15 s.h.)

- 114 2-D Design (3)
- 115 3-D Design (3)
- 118 Drawing I (3)
- 221 Art History I (3)
- 222 Art History II (3)

ELECTIVES (6 s.h.)

Any art or art history course with the exception of ART 109 may be chosen to complete the six semester hours, providing prerequisites are met.

Art Course Descriptions

All courses in the major, minor, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

109 - Introduction to Art—3 S.H.

Quarter Course: 109.

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.

114 - 2-D Design—3 S.H.

Quarter Course: 114.

Introduction to fundamental design concepts in the art process. Experiments and problems in abstract compositions.

115 - 3-D Design—3 S.H.

Quarter Course: 115.

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. Grade only for majors.

118 - Drawing I—3 S.H.

Quarter Course: 118 and 218.

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.

120 - Introduction to Ceramics—3 S.H.

Quarter Course: 220.

An introduction to basic ceramic techniques.

128 - Introduction to Sculpture—3 S.H.

New Course.

An introduction to basic sculpture techniques.

135 - Introduction to Watercolor—3 S.H.

Quarter Course: 212.

Painting with watercolor and other water-soluble materials,

used alone or in combination. Prerequisites: ART 114 and ART 118 or instructor's permission.

217 - Painting I—3 S.H.

Quarter Course: 217 and 317.

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.

Quarter Course: 218 and 318.

Continued experience in drawing in a variety of media with emphasis upon thematic problems and on the human figure. Grade only.

221 - Art History I—3 S.H.

Quarter Course: 221 and 222.

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.

Quarter Course: 223 and 222.

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.

Quarter Course: 224.

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.

Quarter Course: 228.

Introduction to sculpture. Modeling, carving and fabrication 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.

Quarter Course: 252.

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.

Quarter Course: 300.

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.

Quarter Course: 311 and 312.

Introduction to current concepts and practices in graphic design. Extensive use of Macintosh computers and graphics software. Techniques, layout and the elements of advertising design (i.e. type, color, art) are examined. Fundamentals, skills and creative thinking are emphasized in a series of exercises and problems. Prerequisites: ART 114 and ART 118. Grade only.

317 - Painting II—3 S.H.

Quarter Course: 317 and 417.

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.

Quarter Course: 318.

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.

Quarter Course: 220 and 320.

Introduction to ceramics with an emphasis on clay materials and on handbuilding and wheelthrowing 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.

Quarter Course: 328 and 428.

Mold-making and metal casting techniques are introduced. Students also 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.

Quarter Course: 230 and 330.

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.

Quarter Course: 399.

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.

Quarter Course: 402.

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.

Quarter Course: 410.

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.

Quarter Course: 413.

Advanced problems in graphic design requiring portfolio preparation. Skills in conceptualization, computer application, illustration and layout/production are emphasized. High level of individual development expected. Prerequisite: ART 311. Grade only.

412 - Multi-Media Crafts for the Classroom—3 S.H.

Quarter Course: 412.

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.

Quarter Course: 417.

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. May be repeated to a maximum of 9 credits. Grade only.

418 - Advanced Drawing II—3 S.H.

Quarter Course: 318.

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.

Quarter Course: 420 and 320.

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. May be repeated to a maximum of 9 credits. Grade only.

428 - Advanced Sculpture—3 S.H.

Quarter Course: 428.

Personal direction and expression are developed using any appropriate sculptural medium. Hot metal casting techniques are explored further. Slides, critiques and readings in contemporary criticism contribute to the production of a cohesive body of work. Prerequisite: ART 328. May be repeated to a maximum of 9 credits. Grade only.

430 - Printmaking II—3 S.H.

Quarter Course: 430 and 330.

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.

Quarter Course: 436.

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.

Quarter Course: 437.

The painting, sculpture, and architecture 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.

438 - Modern European Art—3 S.H.

Quarter Course: 438.

A detailed treatment of the rise of European modernism in painting and sculpture, beginning in the 1880s and 1890s in Paris. Continues with the climactic period across Europe around World War I and the stylistic reactions of the 1920s and 1930s, and concludes with the final works of the major figures of the School of Paris. A research paper is required. Prerequisite: ART 222. Grade only.

439 - Art Since 1945—3 S.H.

Quarter Course: 439.

Emphasis on the historic period of 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.

Quarter Course: 444.

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. Must be taken twice during two consecutive semesters for a total of 6 credits.

BIOLOGY

Pasteur Hall, Room 215, (507) 457-5270

Web Address: <http://bio.winona.msus.edu>

Reuter (Chairperson), Bates, Berg, Brako, Dapkus, Delong, Essar, Evenson, Jefferson, Mundahl, Ragsdale (Director of Medical Technology), Richardson, 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.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, Associate 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, Assistant 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, Assistant 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 -

Pre-Professional Sequences:

Pre-professional Sequences are not degree programs (e.g. major or minor) at WSU. They are programs which are preparatory for a degree at another college or university. The Pre-Professional Sequences offered through the Biology Department include:

- 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

SEE the Pre-Professional Sequences section for more information about any of these Pre-Professional Sequences.

A person who wishes to study biology at WSU may select one of three options (Allied Health, Cell and Molecular, or Ecology) in the Biology Major. 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 which primarily is intended for students who are preparing themselves for teaching at the secondary level. 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 in this catalog). Students interested in the Medical Technology and Cytotechnology majors should contact Dr. Ragsdale, Director of Medical Technology, or Dr. Thompson, Director of Cytotechnology, as soon as possible after arriving on campus.

In addition, the Biology Department sponsors a Biology Minor and eight pre-professional programs including Pre-Dental Hygiene, Pre-Dentistry, Pre-Medicine, Pre-Physical Therapy, Pre-Physician Assistant, Pre-Veterinary Medicine, Pre-Mortuary Science, Pre-Optometry, and Pre-Podiatry. (See Pre-Professional Programs section in this catalog).

First-year students in all the various biology majors start with two semesters of Principles of Biology, a year-long course covering 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 course work which is specific for their chosen options or majors. All the upper division elective courses in the Department require, as prerequisites, the five courses of the first-year/sophomore core. There is also a common core of chemistry, physics and mathematics in all the options and majors which facilitates change of major or option within the Biology Department.

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 the graduate M.S. degree 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 prestigious Beta Beta Beta Biological Honor Society. See the Biology web site at <http://bio.winona.msus.edu> for more information.

Pass/No Credit Courses

Biology 117, 118 and 400 must be taken for grade only. All biology majors and minors must take all required and elective courses for grade only. Biology courses other than 117, 118 or 400 can be taken by students in other majors on a P/NC basis.

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 which 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 receive a number of benefits which enhances their academic careers and improves 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 greatly improve the student's chances of acceptance into various graduate, medical, dental, physical therapy or other training programs. The letters also improve the student's chances of gaining employment after his or her 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 4 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 possibly receive a modest stipend from the University.

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 (Principles of Biology I and II, Ecology, Cell Biology and Genetics)
- 3) have a 3.0 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) give a short (20-minute) seminar describing the research to fellow Honors students and faculty
- 6) present his or her research at a regional undergraduate research symposium

Completion:

Students who are admitted into the program and who successfully complete the process will, upon graduation:

- 1) have their official transcripts stamped with the words, "Graduated with Honors in Biology"
- 2) have their transcripts show the title of their honors thesis
- 3) have their graduation status (Honors in Biology) indicated on the graduation program and mentioned during the graduation ceremonies.

B.S. MAJOR BIOLOGY - ALLIED HEALTH OPTION

73 s.h. (No Minor Required)

BIOLOGY CORE COURSES (18 s.h.)

- 241 Principles of Biology I (4)
- 242 Principles of Biology II (4)
- 312 General Ecology (3)
- 308 Cell Biology (3)
- 310 Genetics (3)
- 307 Cell/Genetics Laboratory (1)

NOTE: The core courses should be taken in the specific sequence (241, 242, 312, 307, 308, 310) beginning fall semester of the first year. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in preceding courses to be admitted into the subsequent courses.

ALLIED HEALTH OPTION REQUIREMENTS (9 S.H.)

- 201 Human Anatomy (4)
- 323 General Physiology (5)

ALLIED HEALTH OPTION ELECTIVES (20 S.H.)

Courses totaling 20 semester hours to be chosen from any biology elective listed below. Biology 399 does not count toward any biology major.

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 & II (221, 222) may be substituted for General Physics I and II (201, 202).

*Course may be used to satisfy certain general education requirements.

B.S. MAJOR BIOLOGY - CELL AND MOLECULAR OPTION

71 s.h. (No Minor Required)

BIOLOGY CORE COURSES (18 s.h.)

- 241 Principles of Biology I (4)
- 242 Principles of Biology II (4)
- 312 General Ecology (3)
- 308 Cell Biology (3)
- 310 Genetics (3)
- 307 Cell/Genetics Laboratory (1)

NOTE: The core courses should be taken in the specific sequence (241, 242, 312, 307, 308, 310) beginning fall semester of the first year. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in preceding courses to be admitted into the subsequent courses.

CELL AND MOLECULAR OPTION REQUIREMENTS (14-15 S.H.)

- 401 Chemistry (Biochemistry I) (4)
- 430 Molecular Biology (3)

Two of the five courses listed below (7-8 s.h.):

- 445 Immunology (3)
- 431 Molecular Biology Lab (4)
- 409 General Microbiology (4)
- 309 Developmental Biology (3)
- 393 Eukaryotic Cell Structure (4)

CELL AND MOLECULAR OPTION ELECTIVES (12-13 S.H.)

Courses totaling 12-13 semester hours to be chosen from any biology elective listed below. Biology 399 does not count toward any biology major.

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 & II (221, 222) may be substituted for General Physics I, II (201, 202).

*Course may be used to satisfy certain general education requirements.

B.S. MAJOR BIOLOGY - ECOLOGY OPTION

71 s.h. (No Minor Required)

BIOLOGY CORE COURSES (18 s.h.)

- 241 Principles of Biology I (4)
- 242 Principles of Biology II (4)
- 312 General Ecology (3)
- 313 General Ecology Laboratory (1)
- 308 Cell Biology (3)
- 310 Genetics (3)

NOTE: The core courses should be taken in the specific sequence (241, 242, 312, 313, 308, 310) beginning fall semester of the first year. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in preceding courses to be admitted into the subsequent courses.

ECOLOGY OPTION REQUIREMENTS (8 S.H.)

- 318 Invertebrate Biology (4) OR
- 319 Vertebrate Biology (4)
- 335 Plant Ecology (4) OR
- 350 Plant Taxonomy (4)

ECOLOGY OPTION ELECTIVES (19 S.H.)

Courses totaling 19 semester hours to be chosen from any biology elective listed below. Biology 399 does not count toward any biology major.

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)

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).

*Course may be used to satisfy certain general education requirements.

BIOLOGY ELECTIVES

- 201 Human Anatomy (4)
- 303 Survey of Plants (4)
- STAT 305 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 Biology (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)
- 380 Evolution (3)
- 393 Eukaryotic Cell Structure (4)
- 394 Plant Tissue Culture (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)
- 415 Ecology of Large Rivers (3)
- 420 Limnology (4)
- 423 Ecosystem Analysis (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)
- 460 Parasitology (3)
- 470 Histology (4)
- 495 Seminar in Biology (1)
- 496 Undergraduate Thesis (1)
- 499 Student Research (3)

B.S. MAJOR - LIFE SCIENCE (Teaching)

67 s.h. (No Minor Required)

Plus Professional Education Sequence

NOTE: The Minnesota Board of Teaching (BOT) was in the process of changing the requirements for teaching licensure 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 BOT-approvable program which will be implemented as soon as possible. Students should be aware that the program described below will be changing significantly in the near future, and they need to work closely with their academic advisor to ensure that they can graduate with a BOT-approved degree.

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 see the Education section in this catalog.

Students majoring in Biology Life Science must have both a 2.75 overall GPA and 2.5 GPA or higher in the major.

BIOLOGY CORE COURSES (18 s.h.)

- 241 Principles of Biology I (4)
- 242 Principles of Biology II (4)
- 312 General Ecology (3)
- 308 Cell Biology (3)
- 310 Genetics (3)
- 307 Cell/Genetics Laboratory (1) OR
- 313 Ecology Laboratory (1)

NOTE: The core courses should be taken in the specific sequence (241, 242, 308, 310) beginning fall semester of the first year. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in preceding courses to be admitted into the subsequent courses.

LIFE SCIENCE REQUIREMENT (3 S.H.)

- 315 Environmental Biology (3)

LIFE SCIENCE ELECTIVES (12 S.H.)

At least 12 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 by courses from at least three of the four categories listed below:

Anatomy

- 201 Human Anatomy (4)
- 319 Vertebrae Biology (4)

Systematics

- 318 Invertebrate Biology (4)
- 320 Ornithology (4)
- 350 Plant Taxonomy (4)
- 360 Entomology (4)

Microbiology

- 409 General Microbiology (4)

Botany

- 303 Survey of Plants (4)
- 314 Plant Physiology (4)
- 335 Plant Ecology (4)
- 350 Plant Taxonomy (4)

OTHER REQUIRED COURSES (34 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.

Geoscience (4 s.h.)

- 120 Dynamic Earth (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 & II (221, 222) may be substituted for General Physics I, II (201, 202).

*Course may be used to satisfy certain general education requirements.

Students desiring a state license to teach also must take the Professional Education Sequence in the Education Department and should carefully choose electives with the aid of the life science advisor to ensure broad knowledge and skill in biology.

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 Principles of Biology I (4)
- *242 Principles of Biology II (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 three options.

* Course may be used to satisfy certain general education requirements.

Biology Course Descriptions

See web site <http://bio.winona.msus.edu> for the latest course information and a schedule of alternate year courses.

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

104 - Conservation of the Environment—3 S.H.

Quarter Course: 104.

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.

Quarter Course: 117.

An introductory study of the anatomy, physiology, development and heredity of the human for students who are not majoring in biology. Lecture only. Offered each semester.

118 - General Biology—4 S.H.

Quarter Course: 118.

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. Grade only. Offered each semester.

171 - Medical Terminology—1 S.H.

Quarter Course: 171.

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.

Quarter Course: 172.

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.

Quarter Course: 173.

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.

Quarter Course: 201.

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 BIO 241. Lecture and lab. Offered yearly.

203 - Natural History—4 S.H.

Quarter Course: 203.

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.

Quarter Course: New Course.

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.

Quarter Course: 206.

Basic principles of nutrition and the nutritional needs of individuals at different age levels. Prerequisites: CHEM 208, CHEM 209, BIO 211 and BIO 212 or equivalent. Offered yearly.

209 - Microbiology—3 S.H.

Quarter Course: 209.

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.

Quarter Course: 211.

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.

Quarter Course: 212 and 213.

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: a "C" or better in BIO 211. Offered yearly.

241 - Principles of Biology I—4 S.H.

Quarter Course: 241.

First of a two-course sequence intended for biology majors. Introduces the basic life processes at the molecular, cellular, tissue and organismal levels. Lecture and laboratory. Offered in the fall.

242 - Principles of Biology II—4 S.H.

Quarter Course: 242 and 243.

Second of a two-course sequence intended for 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. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in BIO 241 to be admitted into BIO 242. Offered yearly in the spring.

269 - Human Reproduction—3 S.H.

Quarter Course: 269.

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. Offered according to demand.

303 - Survey of Plants—4 S.H.

Quarter Course: 303.

A systematic morphological and evolutionary overview of fungi and plants other than the Angiosperms. Lecture and laboratory. Prerequisites: BIO 308, BIO 310 and BIO 312. Offered alternate years.

307 - Cell Biology Laboratory—1 S.H.

Quarter Course: New Course.

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: BIO 241, BIO 242, BIO 312, BIO 308 (or concurrent registration in BIO 308) and CHEM 340. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in BIO 312 to be admitted into BIO 307. Offered yearly.

308 - Cell Biology—3 S.H.

Quarter Course: 308.

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: BIO 241, BIO 242, BIO 312 and CHEM 340. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in BIO 312 to be admitted into BIO 308. Offered yearly.

309 - Developmental Biology—3 S.H.

Quarter Course: 309.

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: BIO 308, BIO 310 and BIO 312. Offered even years.

310 - Genetics—3 S.H.

Quarter Course: 310.

A survey of the principles of Mendelian, molecular, cytological, population and human genetics. Lecture only. Prerequisites: BIO 241, BIO 242, BIO 308 and BIO 312. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in BIO 308 to be admitted into BIO 310.

Offered yearly.

312 - General Ecology—3 S.H.

Quarter Course: 312.

Relationships between organisms and their environment with an emphasis on fundamental principles. Lecture only. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in BIO 242 to be admitted. Offered yearly.

313 - General Ecology Laboratory—1 S.H.

Quarter Course: New Course.

Laboratory and field studies of fundamental ecological principles. Prerequisites: BIO 241 and BIO 242. Co-requisite: BIO 312. Offered yearly.

314 - Plant Physiology—4 S.H.

Quarter Course: 314.

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: BIO 308, BIO 310 and BIO 312. Offered alternate years.

315 - Environmental Biology—3 S.H.

Quarter Course: 315.

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: BIO 308, BIO 310 and BIO 312. Offered alternate years.

318 - Invertebrate Biology—4 S.H.

Quarter Course: 318.

Survey of invertebrate animals. Emphasis on structure, function, evolution and ecology of the major invertebrate groups. Lecture and laboratory. Prerequisites: BIO 308, BIO 310 and BIO 312. Offered alternate years.

319 - Vertebrate Biology—4 S.H.

Quarter Course: 319.

A study of the structure, function, evolution and taxonomy of all the groups of vertebrates. Lecture and laboratory. Prerequisites: BIO 308, BIO 310 and BIO 312. Offered alternate years.

320 - Ornithology—4 S.H.

Quarter Course: 320.

Structure, classification, behavior, distribution and identification of birds. Lecture, laboratory and field work. Prerequisites: BIO 308, BIO 310, BIO 312 and CHEM 212 or instructor's permission. Offered alternate years.

323 - General Physiology—5 S.H.

Quarter Course: 323 and 324.

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: BIO 241, BIO 242, BIO 201 and CHEM 208, CHEM 209 or CHEM 212 and CHEM 213. Offered yearly.

327 - Developmental Biology Laboratory—1 S.H.

Quarter Course: 327.

An experimental study of the mechanisms of changes that occur during embryonic development. Laboratory. Co-requisites: concurrent or previous enrollment in BIO 309. Offered even years.

333 - Medical Laboratory Techniques—1 S.H.

Quarter Course: 333.

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.

Quarter Course: 335.

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, field work and laboratory. Prerequisites: BIO 308, BIO 310, BIO 312 and BIO 313. Offered alternate years.

340 - Virology—3 S.H.

Quarter Course: 340.

Basic properties of viruses, beginning with bacteriophages and following with animal viruses. Includes viral structure, assays, replication, diseases, genetic properties, mechanisms of interaction with cells, viral oncogenesis, and interference with viral multiplication. Lecture only. Prerequisites: BIO 308, BIO 310 and BIO 312. Offered alternate years.

350 - Plant Taxonomy—4 S.H.

Quarter Course: 350.

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: BIO 308, BIO 310 and BIO 312. Lecture, laboratory and field trips. Offered alternate years.

360 - Entomology—4 S.H.

Quarter Course: 360.

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: BIO 308, BIO 310 and BIO 312. Offered alternate years.

380 - Evolution—3 S.H.

Quarter Course: 380.

Overview of principles and processes of biological evolution with emphasis on selection, variation and macroevolution. Prerequisites: BIO 308, BIO 310 and BIO 312. Offered alternate years.

393 - Eukaryotic Cell Culture—4 S.H.

Quarter Course: 393.

Introduction to basic and specialized techniques of eukaryotic 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: BIO 308, BIO 310 and BIO 312. Offered alternate years.

394 - Plant Tissue Culture, Principles and Application—4 S.H.

Quarter Course: 394.

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. Prerequisites: BIO 308 and BIO 314. Offered alternate years.

399 - Internship—1-12 S.H.

Quarter Course: 399.

Supervised experiences at a government, industrial or research institution. Credits do not replace other required or elective courses in the Biology Bajor, 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—3 S.H.

Quarter Course: 400.

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. Grade only. Offered each semester.

405 - Fishery Biology—3 S.H.

Quarter Course: 405.

Examination of the concepts, methodologies and problems of modern-day fishery management. Lecture and field work. Prerequisites: BIO 308, BIO 310 and BIO 312. Offered alternate years.

409 - General Microbiology—4 S.H.

Quarter Course: 409.

The anatomy, physiology, biochemistry, genetics, taxonomy and ecology of microorganisms, especially bacteria; includes applications to agriculture, medicine and industry. Lecture and laboratory. Prerequisites: BIO 308, BIO 310 and CHEM 340. Offered alternate years.

410 - Membrane Biology—4 S.H.

Quarter Course: 410.

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: BIO 308, BIO 310, BIO 312 and CHEM 340. Offered alternate years.

415 - Ecology of Large Rivers—4 S.H.

Quarter Course: 415.

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: BIO 308, BIO 310 and BIO 312 or instructor's permission. Offered alternate years.

420 - Limnology—4 S.H.

Quarter Course: 420.

Analysis of the geological, physical, chemical and biological aspects of inland waters. Lecture, laboratory and field work. Prerequisites: BIO 308, BIO 310, BIO 312 and CHEM 212 or instructor's permission. Offered alternate years.

423 - Ecosystem Analysis—3 S.H.

Quarter Course: 423.

The structure and function of ecosystems including biochemical cycling, food webs and introduction to modeling. Lecture only. Prerequisites: BIO 308, BIO 310, BIO 312, MATH 150 and MATH 155. Offered alternate years.

424 - Biogeography—3 S.H.

Quarter Course: 424.

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: BIO 308, BIO 310 and BIO 312. Offered alternate years.

425 - Animal Behavior—3 S.H.

Quarter Course: 425.

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: BIO 308, BIO 310 and BIO 312. Offered alternate years.

427 - Advanced Topics in Biology—1-4 S.H.

Quarter Course: 427.

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: BIO 308, BIO 310 and BIO 312. Offered according to demand and staffing availability.

430 - Molecular Biology—3 S.H.

Quarter Course: 430.

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: BIO 308, BIO 310, BIO 312 and CHEM 340. Offered yearly.

431 - Molecular Biology Laboratory—4 S.H.

Quarter Course: 431.

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. Offered alternate years Prerequisite: BIO 430 or concurrent enrollment. Instructor's permission. Offered alternate years.

441 - Comparative Vertebrate Physiology—3 S.H.

Quarter Course: New Course.

Lectures and demonstrations provide an understanding of physiological mechanisms in an evolutionary context. Focus will be on organismal physiology. Topics include: temperature, water and solutes, respiration/circulation, sensory/nervous systems, endocrinology/reproduction. Prerequisites: BIO 241, BIO 242, BIO 312, BIO 308 and CHEM 340 or CHEM 350. Offered alternate years.

443 - Urinalysis—1 S.H.

Quarter Course: 443.

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. Does not satisfy an elective requirement for any biology major or minor. Prerequisites: BIO 308, BIO 310 and CHEM 340. Grade only. Offered yearly.

444 - Hematology—2 S.H.

Quarter Course: 444.

Study of blood and blood-forming tissues for Medical Technology majors. Includes development, cytology, histology and functions of all formed elements and plasma composition. Prerequisites: BIO 241, BIO 242, BIO 308, BIO 310 and CHEM 340 or CHEM 350. Offered yearly.

445 - Immunology—3 S.H.

Quarter Course: 445.

An introduction to the theory and practice of modern immunology. Emphasis on the immune response in humans. BIO 308, BIO 310 and CHEM 340. Offered yearly.

450, 451 - Medical Technology I and II—12 S.H. each

Quarter Courses: 450, 451 and 452.

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

Quarter Courses: 453 and 454.

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.

Quarter Course: 460.

An introduction to the study of parasites of humans and domestic animals, and the etiology of associated pathologic states. Lecture and laboratory Prerequisites: BIO 308, BIO 310 and CHEM 340. P/NC option for non-biology Majors/minors only. Offered yearly.

470 - Histology—4 S.H.

Quarter Course: 470.

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: BIO 308, BIO 310, CHEM 212 and CHEM 213. Offered yearly.

481, 482 - Cytotechnology I and II—12 S.H. each

Quarter Courses: 481, 482 and 483.

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

Quarter Courses: 484 and 485.

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.

495 - Seminar in Biology—1 S.H.

Quarter Course: 495.

Students prepare an in-depth written paper and/or an oral presentation based on original biological literature, and learn to access and use scientific data bases. May be taken twice for credit. Senior standing or instructor's permission required. Offered each semester.

496 - Undergraduate Thesis—1 S.H.

Quarter Course: 496.

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.

Quarter Course: 499.

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: BIO 308, BIO 310, BIO 312 and instructor's permission. Offered each semester.

BUSINESS ADMINISTRATION

Somsen Hall, Room 324, (507) 457-5170

Business Administration: Safarian (Chairperson) Astani, Bjorke, Gernander, Godfrey, Kung, M. Wolfmeyer, Zhang
Management: Barbor, Dewan, Foegen, Gander, McDaniel, Schmid, Sinkiewicz, P. Wolfmeyer

FACULTY

BUSINESS ADMINISTRATION:

Marzie Astani, Professor; B.A., Tehran University; M.S., Ph.D., Iowa State University of Science and Technology; M.B.A., Central Michigan University; 1987 -

Joell W. Bjorke, Professor; B.S., St. Cloud State University; J.D., William Mitchell College of Law; 1981 -

Judy M. Gernander, Professor; B.A., Mankato State University; J.D., University of Minnesota-Twin Cities; 1970 -

Michael R. Godfrey, Assistant Professor; B.S., M.S., Northern Illinois University; Ph.D., University of Nebraska-Lincoln; 1995 -

Shang-Kuang Kung, Assistant Professor; Ph.D., University of Kentucky; 1995 -

Vartan Safarian, Professor; B.S., Pahlavi University; M.S., M.B.A., Indiana University; 1983 -

Marvin Wolfmeyer, Professor; B.S., University of Missouri-Columbia; M.S., Ph.D., University of Wisconsin-Madison; 1969 -

Ruidong Zhang, Assistant Professor; B.S., Beijing University of Posts & Telecommunications; M.A., Peoples University of China; Ph.D., University of Nebraska- Lincoln; 1995 -

MANAGEMENT:

Sara Barbor, Professor; B.A., Earlham College; M.A., Ball State University; M.B.A., Ph.D., University of Kansas; 1988 -

Shashi Dewan, Professor; B.S., Malviya Regional Engineering College; M.B.A., Ph.D., Indian Institute of Technology; 1988 -

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 -

James McDaniel, Professor; B.S., M.S., University of North Texas; Ph.D., Texas Tech University; 1989 -

H. Giles Schmid, Professor; B.A., St. Mary's College of Minnesota; M.B.A., DePaul University; Ph.D., University of Minnesota-Twin Cities; 1979 -

Anthony Sinkiewicz, Professor; B.S., University of New York-Albany; M.A., Webster University, St. Louis; D.B.A., U.S.

International University; 1987 -

Pamela Wolfmeyer, Professor; B.A., Grinnell College; M.A., University of Wisconsin-Madison; 1969 -

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 or public sector. 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 trains students in the integration of information systems' tools and technologies into various business areas. The Health Care Management curriculum prepares administrators to be able to manage and develop various health service organizations and programs. The main focus of the Production and Operations Management Major is on managing the production and operations function of a business organization.

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 can not 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. Meet all WSU graduation requirements.

B.S. MAJOR - BUSINESS ADMINISTRATION

69 s.h. (No Minor Required)

GENERAL EDUCATION REQUIREMENT

Mathematics (3 s.h.)

*110 Finite Mathematics (3) OR

*120 Precalculus (4) OR

*140 Applied Calculus (3)

REQUIRED COURSES (33 s.h.)

Accounting (6 s.h.)

*211 Financial Accounting Principles(3)

*212 Managerial Accounting Principles (3)

Business Administration (15 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) OR

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.)

315 Principles of Marketing (3)

BUSINESS ADMINISTRATION REQUIREMENTS (18 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 435 Managing for Quality (3) OR

MGMT 445 Quality Improvement Methods (3) OR

POM 434 Quality & Productivity Management (3)

MGMT 495 Strategic Management (3)

ELECTIVES (15 s.h.)

Option A - (Must be 300+ level courses)

MIS 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 Department of Business Administration,
Accounting, Economics and Finance or Marketing (3)

Option B

A minor or a second major from the department of Accounting,
Business Administration, Finance and Economics or Marketing —
which includes a minimum of 15 s.h. of non-duplicate courses.

B.S. MAJOR - HEALTH CARE MANAGEMENT

93 s.h. (Minor Required)

GENERAL EDUCATION REQUIREMENT

Mathematics (3 s.h.)

*110 Finite Mathematics (3) OR

*120 Precalculus (4) OR

*140 Applied Calculus (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 315 Principles of Management (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.)

315 Principles of Marketing (3)

REQUIRED COURSES (33 s.h.)

BIO 171 Medical Terminology A (1)

BIO 172 Medical Terminology B (1)

BIO 173 Medical Terminology C (1)

BUSA 441 Health Law (3)

ECON 450 Health Economics (3)

HCM 213 Introduction to Health Care Systems (3)

HCM 313 Health Systems Management (3)

HCM 393 Practicum in Health Care Management (6)

HCM 453 Senior Seminar (3)

PHIL 330 Biomedical Ethics (3)

*SOC 150 Human Society (3)

SOC 434 Medical Sociology (3)

REQUIRED MINOR (18 s.h.)

A minimum of 18 s.h. may be counted from a minor in
Accounting, Management Information Systems, Economics or
Gerontology.

NOTE: Students pursuing state licensure as a Nursing Home
Administrator must take additional gerontology courses to satisfy
eligibility requirements.

B.S. MAJOR - HUMAN RESOURCES MANAGEMENT

66 s.h. (No Minor Required)

GENERAL EDUCATION REQUIREMENT

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.)

315 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)

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

84 s.h. (No Minor Required)

GENERAL EDUCATION REQUIREMENT

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 315 Principles of Management (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.)

- 315 Principles of Marketing (3)

REQUIRED DIS COURSES (18 s.h.)

- 312 Business Computer Programming (3)
- 340 Management Science (3)
- 342 Advanced Business Computer Applications (3)
- 452 Management of Telecommunication Systems (3)
- 462 Decision Support Systems (3)
- 492 Topics in MIS (3)

REQUIRED COMPUTER COURSES (18 s.h.)

SCIENCE COURSES (14 s.h.)

- 234 Algorithms and Problem Solving (4)
- 250 Algorithms and Data Structures (4)
- 385 Applied Database Management Systems (3)
- 410 Software Engineering (3)

MATHEMATICS (4 s.h.)

- 210 Discrete Mathematics and Foundations (4)

ELECTIVES (6 s.h.)

Decision and Information Systems

- DIS 332 Business Programming Tools (3)
- DIS 400 DSS for Global Investment Analysis (3)
- DIS 440 Computer-Aided Modeling (3)
- DIS 460 Project Planning and Control (3)
- DIS 472 Expert Systems (3)
- DIS 482 Management of Information Technology (3)
- BUSA 399 Internship Problems (3)

Computer Science

- 412 Networking and Telecommunications (3)
- 413 Advanced Networking and Telecommunications (3)
- 417 Object-Oriented Programming Languages (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. MAJOR - PRODUCTION AND OPERATIONS MANAGEMENT

78 s.h. (No Minor Required)

GENERAL EDUCATION REQUIREMENT

Mathematics (3 s.h.)

- *110 Finite Mathematics (3) OR
- *120 Precalculus (4) OR
- *140 Applied Calculus (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) AND
- DIS 320 Intermediate Business Statistics (3) OR
- STAT 210 Statistics (3) AND
- STAT 310 Intermediate Statistics (3)
- DIS 362 Management Information Systems (3)
- MGMT 315 Principles of Management (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.)

- 315 Principles of Marketing (3)

REQUIRED PRODUCTION AND OPERATIONS MANAGEMENT COURSES (15 s.h.)

- 434 Purchasing (3)
- 414 Production Planning and Control (3)
- 424 Management of Technology (3)
- 434 Quality and Productivity Management (3)
- 444 Operations Strategy (3)

OTHER REQUIRED COURSES (9 s.h.)

- DIS 340 Management Science (3)
- DIS 460 Project Planning and Control (3)
- STAT 320 Statistical Quality Control (3)

ELECTIVES (12 s.h.)

Business Administration

- BUSA 399 Internship Problems (3)
- DIS 312 Business Computer Programming (3)
- DIS 332 Business Programming Tools (3)
- DIS 342 Advanced Business Computer Applications (3)
- DIS 440 Computer-Aided Modeling (3)
- DIS 462 Decision Support Systems (3)
- MGMT 317 Management of Human Resources (3)
- MGMT 325 Organizational Dynamics (3)
- MGMT 437 Labor Relations (3)
- MGMT 445 Quality Improvement Methods (3)
- POM 494 Current Topics in POM (3)

Economics and Finance

- FIN 335 Forecasting Methods (3)

Engineering

- 455 Computer Integrated Manufacturing (3)

Mathematics and Statistics

- 321 Industrial Design of Experiments I (3)
- 350 Design of Samples and Surveys (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)
- 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.)

- 315 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)

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.

- 401 Insurance Law (3)
- 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 (15 s.h.)

- DIS 400 DSS for Global Investment Analysis (3)
- FIN 440 International Finance (3)
- MGMT 455 International Business (3)
- MGMT 475 Seminar in International Management (3)
- MKTG 384 International Marketing (3)

FOREIGN LANGUAGE (9-12 s.h.)

* A minimum of three semesters in a single foreign language.

ELECTIVES (6 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)

NOTE: The foreign language requirement may be applied toward the general education requirements.

* These courses may be used to satisfy certain general education requirements.

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 400 DSS for Global Investment Analysis (3)
- DIS 440 Computer Aided Modeling (3)
- DIS 452 Management of Telecommunication Systems (3)
- DIS 460 Project Planning and Control (3)
- DIS 462 Decision Support Systems (3)
- DIS 472 Expert Systems (3)
- DIS 482 Management of Information Technology (3)
- DIS 492 Topics in MIS (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 444 Operations Strategy (3)

ELECTIVES (9 s.h.)

- BUSA 399 Internship Problems (3)
- DIS 312 Business Computer Programming (3)
- DIS 340 Management Science (3)
- DIS 342 Advanced Business Computer Applications (3)
- POM 344 Purchasing (3)
- DIS 440 Computer-Aided Modeling (3)
- DIS 460 Project Planning and Control (3)
- DIS 462 Decision Support Systems (3)
- MGMT 445 Quality Improvement Methods (3)
- POM 424 Management of Technology (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

HCM: Health Care Management

MGMT: Management

POM: Production and Operations Management

All courses offered on a Grade Only basis except BUSA 101, 106 and 398.

BUSA: Business Administration

101 - Introduction to Law and the Legal Process—3 S.H.

Quarter Course: BUSA 101.

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.

Quarter Course: BUSA 110.

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.

Quarter Course: New Course.

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.

Quarter Course: BUSA 310.

Legal background, contracts, criminal law, bailments, carriers, agency, torts, sales and commercial paper. Grade only.

311 - Business Law II—3 S.H.

Quarter Course: BUSA 311.

Partnerships, corporations, bank-ruptcy, 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.

Quarter Course: BUSA 328.

Using 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.

331 - Computer Law—2 S.H.

Quarter Course: BUSA 329.

Analysis and discussion of the current state of the law with respect to computers and information processing. Grade only.

376 - Topics in Business—1-3 S.H.

Quarter Course: BUSA 327.

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.

Quarter Course: BUSA 398.

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.

Quarter Course: BUSA 399.

Prerequisite: courses that must be completed prior to an internship vary by program. See department for list of requirements. Minimum 2.5 GPA. Grade only.

401 - Insurance Law—3 S.H.

Quarter Course: BUSA 315.

A study of the sources of insurance law. Analysis of the contractual relationships as to the scope of the obligations of the parties, risks covered, performance and termination. Areas of insurance included are casualty liability, life, property, auto and group insurance among others. Prerequisite: BUSA 301. Grade only.

411 - International Business Law—3 S.H.

Quarter Course: BUSA 320.

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.

Quarter Course: BUSA 325.

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.

Quarter Course: BUSA 430.

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.

Quarter Course: BUSA 460.

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.

Quarter Course: BUSA 432.

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.

Quarter Course: BUSA 480G.

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.

Quarter Course: BUSA 491.

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.

Decision and Information Systems**202 - Microcomputers in Business—3 S.H.**

Quarter Course: BUSA 200.

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.

Quarter Course: BUSA 207.

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.

Quarter Course: BUSA 312.

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.

Quarter Course: BUSA 335.

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.

Quarter Course: BUSA 313.

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.

Quarter Course: BUSA 372.

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.

Quarter Course: BUSA 342.

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.

Quarter Course: BUSA 362.

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.

400 - DSS for Global Investment Analysis—3 S.H.

Quarter Course: New Course.

An introduction to financial databases, electronic trading, and computer-based investment software with emphasis on the application of the computer-based investment and securities analysis decision support systems. Insight into the practical aspects of complex domestic and international financial and investment analysis and strategic use of Internet and other on-line database and decision support systems. Extensive use of the the state of the art computerized financial and investment modeling and analysis software. Prerequisites: FIN 360 and DIS 320. Grade only.

440 - Computer-Aided Modeling—3 S.H.

Quarter Course: BUSA 422.

This course provides a set of computer-based modeling and problem-solving techniques applied to topics covered most frequently in Management Science. The theoretical discussions as well as application procedures of various models are presented through the analysis of cases in different aspects of Management Science fields. The major focus of the course is on the application of computer-aided tools to complex business decision problem modeling and analysis process. Prerequisite: DIS 340 or instructor's permission. Grade only.

452 - Management of Telecommunication Systems—3 S.H.

Quarter Course: BUSA 461.

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.

460 - Project Planning and Control—3 S.H.

Quarter Course: New Course.

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.

462 - Decision Support Systems—3 S.H.

Quarter Course: BUSA 462G.

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 are discussed. Prerequisite: DIS 362 and DIS 340 or instructor's permission. Grade only.

472 - Expert Systems—3 S.H.

Quarter Course: BUSA 495.

This course provides a basic understanding of the expert systems field and its application to business. Business expert systems will be developed using expert system shell. Prerequisite: DIS 362. Grade only.

482 - Management of Information Technology—3 S.H.

Quarter Course: BUSA 482.

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. Grade only.

492 - Topics in MIS—3 S.H.

Quarter Course: BUSA 492.

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.

Health Care Management

213 - Introduction to Health Care Systems—3 S.H.

Quarter Course: HADM 320.

The systems for delivery and financing of public and private health services, the types and functions of providers, and characteristics of inter-related industries involved in health care.

Prerequisites: DIS 220, ECON 201 and ECON 202. Grade only.

223 - Health Care Management - Field Experience—1 S.H.

Quarter Course: New Course.

Elective course requiring a minimum of 80 clock hours experience in any licensed and accredited health setting. Grade only.

313 - Health Systems Management—3 S.H.

Quarter Course: HADM 425, HADM 475.

Managerial planning and decision-making in a regulated environment; legal and economic constraints, competitive strategies, organization and coordination of vertically integrated health systems. Includes operations management principles and quality improvement in distinctive health services situations.

Prerequisites: HCM 213 and MGMT 315. Grade only.

393 - Practicum in Health Care Management—6 S.H.

Quarter Course: HADM 490.

Supervised experiences in a health organization planned with the approval of a qualified preceptor and the student's faculty advisor. Requires a minimum of 400 clock hrs in an approved work plan, and should be taken in summer prior to student's senior year. Prerequisites: Business Core Courses and HCM 213 or instructor's permission. Grade only.

403 - Long-Term Care Systems Management—3 S.H.

Quarter Course: HADM 405.

Elective course primarily for majors intending to enter this field of health care. Covers programs and services designed to meet the needs of the aged and disabled including: Health care and medical needs, facilities and services for long-term residents, legal/regulatory and funding provisions for skilled nursing facilities and other LTC services and facilities. Prerequisites: HCM 213 and SOC 450. Grade only.

453 - Senior Seminar—3 S.H.

Quarter Course: HADM 495, HADM 475.

Advanced course focusing on strategically important issues and trends, and most recent advances and social/political developments in U.S. health care. Required for all majors and includes significant independent research with original applied studies in health organizations. Prerequisites: All other core requirements and instructor's permission. Grade only.

Management

315 - Principles of Management—3 S.H.

Quarter Course: MGMT 370.

Analysis of the classic functions performed by managers of all organizations, and how current managerial problems relate to them. 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.

Quarter Course: MGMT 375.

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.

Quarter Course: MGMT 490.

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, MGMT 315 and MGMT 317 or instructor's permission. Grade only.

335 - Management of Work-Teams—3 S.H.

Quarter Course: MGMT 315.

Quality and productivity are achieved in the work group under the direction of the supervisor. This course examines the fundamental skills required of a supervisor. An elective course for beginning supervisors or managers. Prerequisite: ACCT 212 and ECON 201 or instructor's permission. Grade only.

365 - Independent Readings in Management—1-3 S.H.

Quarter Course: MGMT 481.

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.

Quarter Course: MGMT 482.

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.

Quarter Course: MGMT 483.

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.

Quarter Course: MGMT 470.

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.

Quarter Course: MGMT 461.

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.

Quarter Course: MGMT 427.

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.

Quarter Course: MGMT 463G.

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.

Quarter Course: MGMT 495.

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.

Quarter Course: New Course.

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.

445 - Quality Improvement Methods—3 S.H.

Quarter Course: MGMT 496.

This course is an adaptation of Deming's Plan-Do-Study-Act cycle. It reviews Deming's basic quality principles and uses 20 quality tools in a project which is completed as a team. It is a team based hands-on, skill-oriented course. Prerequisite: DIS 220 and MGMT 315 or instructor's permission. Grade only.

447 - International Labor Relations—3 S.H.

Quarter Course: MGMT 380.

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.

Quarter Course: MGMT 471.

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.

Quarter Course: MGMT 475.

Controversial, practical situations involving people at work are examined with an eye to giving greater insight into the complexities of working effectively with human resources. Prerequisite: ACCT 211, ECON 201, MGMT 315 and MGMT 317 or instructor's permission. Grade only.

467 - Staffing and Evaluation—3 S.H.

Quarter Course: MGMT 467G

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.

475 - Seminar in International Management—3 S.H.

Quarter Course: New Course.

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.

495 - Strategic Management—3 S.H.

Quarter Course: BUSA 498.

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 or Senior standing. Grade only.

Production and Operations Management

334 - Production and Operations Management—3 S.H.

Quarter Course: POM 330.

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.

Quarter Course: MGMT 323.

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.

Quarter Course: POM 431.

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.

Quarter Course: POM 432.

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.

Quarter Course: POM 433.

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. Pre-requisite: POM 334. Grade only.

444 - Operations Strategy—3 S.H.

Quarter Course: POM 440 Cases in POM.

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.

494 - Current Topics in POM—3 S.H.

Quarter Course: POM 439.

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

Ng (Chairperson), Engen, Foss, Fossum, Miertschin, Nalli, Pfaff (Director of S.E. MN Analytical Service), Rislove, Svingen, Witt.

FACULTY

Frederick W. Foss, Jr., Professor; B.S., University of Michigan; M.S., University of Minnesota-Twin Cities; Ph.D., University of the Pacific; 1957-

Mark A. Engen, Assistant Professor; B.S., Bemidji State University; Ph.D., Montana State University; 1997 -

Eric A. Fossum, Assistant Professor; B.S., University of Wisconsin-Stevens Point; Ph.D., Carnegie Mellon University, Pittsburgh (PA); 1996 -

Charla S. Miertschin, Associate Professor; B.S. Abilene Christian University; Ph.D. Texas A & M University, 1993 -

Thomas W. Nalli, Assistant Professor; B.S., Union College, Schenectady (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 -

Jeanne L. Pfaff, Assistant Professor; B.A., Augustana College; Ph.D., University of Minnesota-Twin Cities; 1996 -

David J. Rislove, Professor, Chemistry; B.A., Winona State University; Ph.D., North Dakota State University; 1968 -

Bruce A. Svingen, Professor; B.A., St. Olaf College; Ph.D., Michigan State University; 1987 -

Jerry A. Witt, Professor, Chemistry; B.S., University of Wisconsin-Madison; 1962 -

Pre-Professional Sequences:

Pre-professional Sequences are not degree programs (e.g. major or minor) at WSU. They are programs which are preparatory for a degree at another college or university. The Pre-Professional Sequences offered through the Chemistry Department include:

Pre-Medicine (Allopathic and Osteopathic)

Pre-Pharmacy

SEE the Pre-Professional Sequences section for more information about any of these Pre-Professional Sequences.

The Department offers two bachelor of science majors to prepare students to enter business, industry, professional schools and graduate schools in chemistry. 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 and study of pyrroles, porphyrins and metalloporphyrins, 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 applications in chemistry, and synthesis, characterization, and applications of polymers. The Department is home to the Southeast Minnesota Analytical Service (SEMAS), which provides educational opportunities through part-time employment.

In addition, the B.S. Physical Science Major is offered for students wishing to teach chemistry (or chemistry and physics or physical science). The major meets Minnesota requirements. Wisconsin certification requires minor modifications. Students preparing for certification in other states should consult with the department chairperson to learn of any necessary modifications.

The Department also offers four minors in chemistry, including one in biochemistry.

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.

Pass/No Credit Courses

Undergraduate students may elect any chemistry course on a pass/no credit basis. Students majoring or minoring in chemistry may not count P/NC courses toward the Chemistry major or minor.

B.S. MAJOR - PHYSICAL SCIENCE (Teaching)

62 s.h. (No Minor Required)

NOTE: The Minnesota Board of Teaching (BOT) was in the process of changing the requirements for teaching licensure at the time that this catalog went to print. The Chemistry department, in cooperation with other science departments and the College of Education, is currently developing a new BOT approvable program which will be implemented as soon as possible. Students should be aware that the program described below will be changing significantly in the near future and they will need to work closely with their academic advisor to ensure that they will be able to graduate with a BOT approved degree.

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.

A 2.50 GPA or higher in the courses of this major is a requirement for successful completion.

REQUIRED COURSES (52 s.h.)

Chemistry (22 s.h.,)

212 Principles of Chemistry I (4)
213 Principles of Chemistry II (4)
350 Principles of Organic Chemistry I (4)
PLUS 10 s.h. of electives from the chemistry electives below
OR

212 Principles of Chemistry I (4)
213 Principles of Chemistry II (4)
340 Organic Chemistry (4) PLUS
360, 361 Chemical Information I, II (2) OR
427 Topics in Instrumental Chemistry (2) OR
431 Guided Studies in Teaching Chemistry (2)
PLUS 8 s.h. of electives from the chemistry electives below.

Mathematics (8 s.h.)

*160, *165, Calculus I,II (8)

NOTE: Students not prepared to take Math 160 should take Math 120.

Physics (22 s.h.)

201 General Physics I (4)
202 General Physics II (4)
311 Science Teaching Methods (4)
223 University Physics III (4)
PLUS 6 s.h. electives from the physics electives below
OR
221 University Physics I (4)
222 University Physics II (4)
223 University Physics III (4)
311 Science Teaching Methods (4)
PLUS 6 s.h. of electives from the physics electives below.

ELECTIVES (10 s.h.)

Choose electives in chemistry or physics:

Chemistry

320, 351, 360, 361, 400, 410, 411, 412, 414, 417, 425, 427, 431, 450, 465 or others as approved by the Chemistry Department.

Physics

302, 328, 329, 330, 332, 333, 345, 350, 370, 400, 420, 425, 430, 431, 451

Engineering

205, 225, 316, 345, 350, 360

* These courses may be used to satisfy certain general education requirements.

WISCONSIN CERTIFICATION REQUIREMENTS FOR CHEMICAL CONCENTRATION

(22 s.h.)

Select credits under "Required Courses" and "Electives" to give a concentration of 22 s.h. of chemistry. Other requirements for Wisconsin certification are:

104 Biology (3)
Biological Science Elective (3)
Geoscience Elective (3)

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, 361 Chemical Information I, II (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, Functions and Graphs (4)
* 160, *165, Calculus I, II (8)

NOTE: Precalculus, Functions and Graphs 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)

* These courses may be used to satisfy certain general education requirements.

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, 361 Chemical Information I, II (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, Functions and Graphs (4)
- * 160, *165, Calculus I, II (8)

NOTE: Precalculus, Functions and Graphs 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)

* These courses may be used to satisfy certain general education requirements.

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, 438, 439, 447, 470, 472

NOTE: Other suggested electives: computer programming, biology, geology, German, and keyboarding.

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, Functions and Graphs (4)
- * 160 Calculus (4)

NOTE: Precalculus, Functions and Graphs 120 (4) may be omitted if a student has otherwise met the prerequisite for 160.

* These courses may be used to satisfy certain general education requirements.

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, Functions and Graphs (4) OR

* 160 Calculus I (4)

* These courses may be used to satisfy certain general education requirements.

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, Functions and Graphs (4)
- * 160 Calculus I (4)

NOTE: Precalculus, Functions and Graphs 120 (4) may be omitted if a student has otherwise met the prerequisite for 160.

* These courses may be used to satisfy certain general education requirements.

B.S. MINOR CHEMISTRY (Teaching)

28 s.h.

REQUIRED COURSES (18 s.h.)

Chemistry (14 s.h.)

- 212, 213 Principles of Chemistry I, II (8)
- 340 Organic Chemistry (4) OR
- 350 Principles of Organic Chemistry (4)
- 431 Guided Study in Teaching Chemistry (2)

Physics (4 s.h.)

- 311 Science Teaching Methods (4)

ELECTIVES (10 s.h.)

- 320, 351, 352, 360, 361, 400, 401, 425, 426, 412, 413, 414, 415, 427, 438, 450, 451, 465, 470 or other

Chemistry electives as approved by the Chemistry Department.

Chemistry Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicum. The P/NC option is available to non-majors unless otherwise noted.

100 - Chemistry Appreciation—3 S.H.

Quarter Course: 100.

Chemical concepts presented as lecture-demonstrations for students who wish to gain an appreciation of the chemical world. Meets general education 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.

Quarter Course: 108.

Intended to introduce the students to chemistry. Two lecture and one two-hour laboratory/discussion period per week. For both general education 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 complet-

ing 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.

Quarter Course: 204.

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.

Quarter Course: 208.

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 lecture 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.

Quarter Course: 209.

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 lecture and two laboratory/discussion hours per week. Recommended 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.

Quarter Course: 212, 213, 214.

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 Chemical Analysis—4 S.H.

Quarter Course: 320.

Introduction to the principles and practice of environmental chemical analysis. Intended for those whose field requires greater knowledge and experience in chemical analysis than is provided in general chemistry. Lecture and Laboratory. Prerequisite: one year of chemistry. Offered yearly.

340 - Organic Chemistry Survey—4 S.H.

Quarter Course: 340.

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.

Quarter Course: New Course.

A study of the chemistry of the basic classes of organic compounds and polymers. Bonding and isomerism, hydrocarbons, aromatics, organohalogen compounds, oxygen and nitrogen containing functional groups and stereochemistry. Selected topics on monomers and polymers will be presented as the respective units in organic chemistry are covered. 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

Quarter Course: 350, 351, 352.

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.

Quarter Course: New Course.

A lecture-only course designed to follow CHEM 350 emphasizing 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.

Quarter Course: 354.

Laboratory methods of identification of organic compounds, including the separation of mixtures. Instrumental methods and functional group reactions are employed. Prerequisite: CHEM 351. Offered irregularly.

360, 361 Chemical Information I, II—Each 1 S.H.

Quarter Course: 360, 361, 362.

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. CHEM 361 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: for 360, credit or concurrent enrollment in CHEM 340 or CHEM 350; for 361, CHEM 360. Offered yearly.

399 - Chemistry Internship—1-6 S.H.

Quarter Course: 399.

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

Quarter Course: 400, 401, 402.

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.

Quarter Course: 402.

Experiments accompanying CHEM 401. Laboratory work should be taken concurrently with CHEM 401 but can be taken following successful completion of the course. Prerequisite: CHEM 400. Offered yearly.

410 - Polymer Chemistry—2 S.H.

Quarter Course: 410.

Chemistry of synthetic polymerization process, and of monomers employed for addition and condensation polymers. Principal industrial applications of thermoplastic and thermosetting resins. Structure-property relationships of natural and synthetic polymers. Prerequisites: CHEM 340 or CHEM 351 and CHEM 412 or ENG 345. Offered each semester.

- 411 - Synthesis and Characterization of Polymers—2 S.H.**
Quarter Course: 411.
Fundamental, "hands-on" methods of polymer synthesis including bulk, solution, emulsion and suspension polymerization. Synthesized materials will be purified and characterized utilizing wet chemical and instrumental techniques. Instrumental methods will include thermal and mechanical analysis, infrared and chromatographic analysis, viscometry, and microscopy. Prerequisite: CHEM 410. Offered yearly.
- 412 - Physical Chemistry I—3 S.H.**
Quarter Course: 412, 413.
States of Matter and Equation of States. Thermodynamics of one component and multi-component systems. Equilibria. Computer applications. 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.**
Quarter Course: 414.
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.**
Quarter Course: 413, 415.
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.**
Quarter Course: 416.
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.**
Quarter Course: 417.
This course consists of a series of short courses chosen from areas of contemporary polymer chemistry. Topics include such areas as Dendrimers and hyperbranched macromolecules, "living" radical polymerization, living cationic polymerization, inorganic and organometallic polymers and liquid crystalline polymers. Prerequisite: CHEM 410. Grade only. Offered yearly.
- 420 - Topics in Industrial Chemistry—2 S.H.**
Quarter Course: 420.
Applications of chemistry in industry. The chemistry and technology of selected industrial processes with emphasis on industrial organic chemistry. Prerequisite: CHEM 340 or CHEM 350. Offered every two years.
- 425, 426 - Analytical Chemistry I & II—Each 4 S.H.**
Quarter Course: 425, 426.
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.**
Quarter Course: 427.
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 years.
- 428 - Chemical Separations—3 S.H.**
Quarter Course: 428.
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 every three years.
- 430 - Individual Problems in Chemistry—1-3 S.H.**
Quarter Course: 430.
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.**
Quarter Course: 431.
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.
- 438 - Medicinal Chemistry—2 S.H.**
Quarter Course: 438.
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.**
Quarter Course: 439.
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.**
Quarter Course: 447.
A study of organic reaction mechanisms. The correlated acidity, basicity and general reactivity of organic compounds. Application of chemical kinetics, thermodynamics, stereochemical concepts and the use of isotopes. Lecture course. Prerequisites: CHEM 351 and CHEM 412. Offered every two or three years.
- 450 - Advanced Inorganic Chemistry I—4 S.H.**
Quarter Course: 450.
Descriptive and theoretical approaches to inorganic reactions and structures with emphasis on structural concepts. Laboratory work includes the preparation of various inorganic compounds and use of modern instruments in characterizing these compounds. Prerequisite: CHEM 412. Offered yearly.
- 451 - Advanced Inorganic Chemistry II—2 S.H.**
Quarter Course: 451.
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.**
Quarter Course: 465.
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 every three years.
- 470 - Isotope, Nuclear and Radiochemistry—2 S.H.**
Quarter Course: 470.
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.

Quarter Course: 472.

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.

Quarter Course: 475.

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

Hatfield (Chairperson), Stephen Collie, Susan Collie, Dorries, Glueck, Herold, Kelley, Lintin, Wilkinson.

FACULTY

Stephen Collie, Assistant Professor; B.S., M.S., Illinois State University; 1989 -

Susan Collie, Assistant Professor; B.S., M.S., Illinois State University; 1989 -

Bruce Dorries, Assistant Professor; B.A., Baylor University; M.A., Corpus Christi State University; Ph.D., University of Missouri-Columbia; 1996 -

Lisa Glueck, Assistant Professor; B.A., M.A., Washington State University, Pullman; 1993 -

Susan Hatfield, Professor; B.S., M.A., Miami University (Ohio); Ph.D., University of Minnesota-Twin Cities; 1981 -

Kelly Herold, Assistant Professor; B.C.S., Dickinson State University (ND); M.A., University of Northern Colorado,

Greely; 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, Assistant Professor; B.A., Buena Vista University, Storm Lake (Iowa); M.A., University of Minnesota-Twin Cities; 1994 -

Brice J. Wilkinson, Professor; B.A., M.A., University of Colorado; Ph.D., University of Oregon; 1971 -

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 Cross-Cultural Communication. CMST also offers a teaching major and minor with the Theatre/Dance 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 individual events and debate. Scholarships are available to new students in these activities.

Communication Studies majors and minors are encouraged to join the Communications Club, a co-curricular group of students and faculty who meet regularly for academic discussions and social activities.

The department offers a Departmental Honors Program. Students with an overall GPA of 3.2 and a major GPA of 3.6 are encouraged to see the department chair for details.

Pass/No Credit Courses

All courses except 191 and 499 can be taken on a P/NC basis. All courses taken to count toward a CMST major or minor (except CMST 399) must be taken for a grade.

Requirements for Declaring a Communication Studies Major

To declare a major in Communication Studies a student must:

- Have completed 15 academic credit hours at WSU, including CMST 191.
- Have an overall GPA of 2.5.
- Have an initial conference with a CMST advisor.

Students declaring a major or minor in CMST should anticipate a minimum of five academic semesters (not including summer sessions) to complete the CMST course requirements in the required sequence.

Additional Graduation Requirements

A GPA of 2.5 must be earned in courses taken for a CMST major and 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.

An overall GPA of 2.5 is required for internship registration.

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, History, Mass Communication, Political Science, Psychology, and Sociology though students from all majors will find the course sequence for the minor beneficial. Students minoring in Communication Studies are required to meet with their academic advisors every semester. Students majoring in Communication Studies may not minor in the department.

Recommended General Education courses for majors:

- 106 BUSA Introduction to Business (3)
- 201 ECON Principles of Microeconomics (3)
- 110 PHIL Critical Thinking (3)
- 210 PSY General Psychology (3)
- 150 SOC Human Society (3)

NOTE: These General Education courses may serve as prerequisites to electives in the major.

B.A. MAJOR - ORGANIZATIONAL COMMUNICATION OPTION

69 s.h. (No Minor Required)

REQUIRED COURSES (69 s.h.)

Foundations (9 s.h.)

- 281 Cross-Cultural 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:

- 210 ENG Advanced Expository Writing (3)
- 130 MCOM 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)
- 210 STAT Statistics (3)

Capstone (3 s.h.)

- 485 Senior Seminar in Communication (3)

Applications (9 s.h.)

- 399 Internship (6)

One of the following:

- 280 Nonverbal Communication (3)
- 287 Communication and Conflict (3)
- 289 Gender 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/Philosophy (6 s.h., two different areas)

- 331 PHIL Business Ethics (3)
- 325 PSY Social Psychology (3)
- 365 PSY Consumer Psychology (3)
- 425 PSY Organizational Psychology (3)

- 340 SOC Social/Cultural Anthropology (3)

- 437 SOC 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)

Recommended pre-entry or co-entry General Education course:
STAT 210 Statistics (3)

REQUIRED COURSES (39 s.h.)

Foundations (9 s.h.)

- 281 Cross-Cultural Communication (3)

- 282 Introduction to Communication Studies (3)

- 283 Introduction to Rhetorical Studies (3)

Skills (9 s.h.)

- 261 Public Speaking (3)

- ENG 210 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 (3 s.h.)

- 480 Communication Research Methods (3)

Capstone (3 s.h.)

- 485 Senior Seminar in Communication (3)

Applications (3 s.h.)

- 280 Nonverbal Communication (3)

- 287 Communication and Conflict (3)

- 289 Gender Communication (3)

- 356 Communication Technology (3)

- 385 Health Communication (3)

- 399 Internship (3)

- 461 Political Communication (3)

ELECTIVES (3 s.h.)

Any additional CMST course.

B.A. MINOR - COMMUNICATION STUDIES

21 s.h.

RECOMMENDED GENERAL EDUCATION COURSES:

- PHIL 110 Critical Thinking (3)
- PSY 210 General Psychology (3)
- SOC 150 Human Society (3)
- STAT 210 Statistics (3)

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 - CROSS-CULTURAL COMMUNICATION

21 s.h.

REQUIRED COURSES (18 s.h.)

- 281 Cross-Cultural Communication (3)
- 282 Intro to Communication Studies (3) OR
- 283 Intro to Rhetorical Studies (3)
- 285 Native American Oratory (3)
- 286 African American Oratory (3)
- 381 Advanced Cross-Cultural Communication (3)
- 499 Independent Study (3) OR
- GS 400 Global Studies Seminar (3)

ELECTIVES (3 s.h.)

3 s.h. from a list of departmentally approved electives.

B.S. MAJOR - SPEECH/THEATRE ARTS (Teaching)

50 s.h. (No Minor Required)

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.

Teaching majors failing to maintain an overall 2.5 GPA and a 2.75 GPA in the major or receiving a grade below a C in any major course are not approved for student teaching or graduation.

PREREQUISITES

CMST 191 with a grade of "C" or better is prerequisite for courses in this program; completion of ENG 111 is recommended before enrolling in major courses above the 100-level and required before enrolling in major courses above the 200-level; EDUC 150 or EDUC 205 is prerequisite for CMST 491 and CMST 492.

REQUIRED COURSES (47 s.h.)

Communication Studies (26 s.h.)

- 151 Forensics Activities (2)
- 161 Debate Practicum (2)

- 261 Public Speaking (3)
- 282 Intro to Communication Studies (3)
- 283 Intro to Rhetorical Studies (3)
- 371 Discussion & Small Group Dynamics (3)
- 375 Argumentation & Advocacy (3)
- 387 Interpersonal Communication (3)
- 491 Speech/Theatre Teaching Methods (2)
- 492 Coaching Forensics & Theatre (2)
- Theatre and Dance (21 s.h.)**
- 090 THAD Showcase (0; 2 enrollments with a grade of P required)
- 107 Introduction to Tech Theatre (2)
- 119 Play Reading (3)
- 131 Performance I for Everyone (3)
- 201 Play Production (3)
- 207 Design Communication (3)
- 210 Theatre History and Dramatic Literature I (3) OR
- 310 Dramatic History and Literature II (3)
- 291 Rehearsal & Performance (1)
- 321 Play Directing (3)
- Mass Communication**
- 100 Mass Media and Society (3)

B.S. MINOR - SPEECH/THEATRE (Teaching)

37 s.h.

NOTE: Teaching minors 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.

Teaching minors failing to maintain an overall 2.5 GPA and a 2.75 GPA in the major or receiving a grade below a C in any major course are not approved for student teaching or graduation.

PREREQUISITES

CMST 191 with a grade of C or better is prerequisite for courses in this program; completion of ENG 111 is recommended before enrolling in major courses above the 100-level and required before enrolling in major courses above the 200-level; EDUC 150 or EDUC 205 is prerequisite for CMST 491 and CMST 492.

REQUIRED COURSES (37 s.h.)

Communication Studies (23 s.h.)

- 151 Forensics Activities (2)
- 161 Debate Practicum (2)
- 261 Public Speaking (3)
- 282 Intro to Communication Studies (3)
- 283 Intro to Rhetorical Studies (3)
- 371 Discussion & Small Group Dynamics (3)
- 375 Argumentation & Advocacy (3)
- 491 Speech/Theatre Teaching Methods (2)
- 492 Coaching Forensics & Theatre (2)

Theatre and Dance (14 s.h.)

- 090 THAD Showcase (0; 2 enrollments with a grade of P required)
- 107 Introduction to Tech Theatre (2)
- 119 Play Reading (3)
- 201 Play Production (3)
- 210 Theatre History and Dramatic Literature I (3) OR
- 310 Dramatic History and Literature II (3)
- 321 Play Directing (3)

Communication Studies Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

151 - Forensics Activities—1-2 S.H.

Quarter Course: 051.

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. Prerequisite: CMST191. Offered yearly.

161, 162, 163, 164 - Debate Practicum I, II, III, IV—Each 2 S.H.

Quarter Course: 061, 062, 063, 064 .

Extensive practice in debating, in-depth research of national debate topics and travel to weekend intercollegiate debate tournaments. Offered every spring semester. May be repeated up to a total of 8 credits, no more than 4 which may be counted for electives in CMST major or minor. Prerequisite: instructor's permission. Course requires student to participate in regular debate meetings during fall semester AND intercollegiate debate during spring semester.

190 - Speech Activities—1-2 S.H.

Quarter Course: 090.

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.

Quarter Course: 191.

Students develop interpersonal, small group and public speaking skills as well as an understanding of basic communication principles. Offered every semester. Grade only.

193 - Chinese Communication Theory and Kinetics—3 S.H.

Quarter Course: 193.

Comparison of verbal and nonverbal Chinese communication theory and practice. Interrelations of meaning in Chinese culture examined through readings, relaxation exercises and the movement of Tai Chi. Offered yearly.

196 - Fundamentals of Interviewing—3 S.H.

Quarter Course: 196.

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.

Quarter Course: 261.

Selection and organization of materials and delivery of common types of speeches; listening skills. Prerequisite: CMST 191. Offered every semester.

266 - Professional Communication Skills—3 S.H.

Quarter Course: 366 (formerly Professional Speech Communication).

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. Offered alternate years.

280 - Nonverbal Communication—3 S.H.

Quarter Course: 280.

Theory and application. Emphasis on developmental perspectives of nonverbal communication and the various classes of nonverbal messages. Prerequisite: CMST 191. Offered yearly.

281 - Cross-Cultural Communication—3 S.H.

Quarter Course: 281.

Investigates cultural differences influencing communication. Principles of communication theory and practice applied to cross-

cultural communication situations including subcultures within the U.S. as well as other cultures of the world. Prerequisite: CMST 191. Offered yearly.

282 - Introduction to Communication Studies—3 S.H.

Quarter Course: 282.

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. Prerequisite: CMST 191. Offered yearly.

283 - Introduction to Rhetorical Studies—3 S.H.

Quarter Course: 283.

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. Offered yearly.

285 - Native American Oratory—3 S.H.

Quarter Course: 285.

Examines, in chronological order, American Indian oratory. Included are speeches by Indians from first contact with whites to contemporary rhetoric. The statesmanship and oratorical ability of these Indian leaders and the problems they faced from 1750-1910 is emphasized. Prerequisite: CMST 191. Offered alternate years.

286 - African American Rhetoric—3 S.H.

Quarter Course: 286.

A study of the history of African American rhetoric from Negro oratory in the anti-slavery societies through post-civil war, black power and contemporary orations. Prerequisite: CMST 191. Offered alternate years.

287 - Conflict and Communication—3 S.H.

Quarter Course: New Course.

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, inter-cultural and international relationships. Offered yearly.

288 - Intrapersonal Speech Communication—3 S.H.

Quarter Course: 288.

Exploration and examination of mental communication, listening, future language evolution, memory, language of the mind, experiments in thought transmission and other internal language processes of the conscious and subconscious mind. Prerequisite: CMST 191. Offered alternate years.

289 - Gender and Communication—3 S.H.

Quarter Course: New Course.

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 yearly.

356 - Communication Technology—3 S.H.

Quarter Course: New Course.

An investigation into how various communication technologies affect interpersonal, group, public and organizational communication. Topics include how technology impacts 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.

Quarter Course: 371.

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 and CMST 283 or instructor's permission for non-majors. Offered yearly.

375 - Argumentation and Advocacy—3 S.H.

Quarter Course: 375.

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 282 and CMST 283 or instructor's permission for non-majors. Offered alternate years.

381 - Advanced Cross-Cultural and International Communication—3 S.H.

Quarter Course: 381

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.

Quarter Course: New Course.

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.

Quarter Course: 387.

Designed to promote effective interpersonal communication through the study of theories of self-perception, relationship development and relationship deterioration. Topics include conflict management, gender issues in communication, individual communication styles and maintaining relationships. Prerequisites: CMST 191, CMST 282 and CMST 283 or instructor's permission for non-majors. Offered yearly.

389 - Persuasive Communication—3 S.H.

Quarter Course: 389.

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 yearly.

391 - Topics in Communication Studies—3 S.H.

Quarter Course: 391.

An in-depth specific course. Topics vary and are announced spring semester. Prerequisite: CMST 282 or instructor's permission for non-majors. May be repeated with different topics. Offered alternate years.

392 - Topics in Rhetorical Studies—3 S.H.

Quarter Course: 392.

An in-depth study of topics of concern in rhetoric and public address. Topics vary and are announced spring semester. 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.

Quarter Course: 399.

Supervised work experience designed by advisor, student and employer. P/NC only. Prerequisite: instructor's consent and an overall minimum GPA of 2.5. Offered on demand.

461 - Political Communication—3 S.H.

Quarter Course: 461G.

History and analysis of great American speeches. Prerequisites: CMST 261, CMST 282 and CMST 283 or instructor's permission for non-majors. Offered alternate years.

466 - Organizational Communication—3 S.H.

Quarter Course: 486.

Designed particularly for communications 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: CMST191, CMST 282, CMST 283, CMST 371, CMST 387 and CMST 389 or instructor's permission for non-majors. Offered yearly.

480 - Communication Research Methods—3 S.H.

Quarter Course: New Course.

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 282, CMST 283 and at least two of the following: CMST 371, CMST 387, CMST 389, CMST 466. Offered yearly.

485 - Senior Seminar in Communication Theory—3 S.H.

Quarter Course: 485.

Study of human communications theory; verbal and nonverbal signals, codes and networks in the context of interpersonal, small group, and mass media communication. Prerequisites: Completion of 200- and 300-level courses in major and minor sequences, CMST 466 and CMST 480. Offered yearly.

491 - Speech/Theatre Teaching Methods—2 S.H.

Quarter Course: 491.

Assists prospective teachers in exploring techniques common to classroom instruction in the areas of speech and theatre. Emphasis on enhancing students' skills and knowledge, and assessing students' work. Prerequisites: EDUC150 or EDUC 205; CMST 282, CMST 261 and THAD 321. Offered on demand during fall semester.

492 - Coaching Forensics and Theatre—2 S.H.

Quarter Course: 492.

Intensive involvement in coaching co-curricular speech and theatre activities, including organization and management of festivals and tournaments. Offered on demand during fall semester.

499 - Independent Studies in CMST—1-6 S.H.

Quarter Course: 499G.

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

Iyengar (Chairperson), Bunce, Cichanowski, Debnath, Gegg-Harrison, Lundak, Lin, Ouellette, Schumacher, Stroebel, Wobig

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 -

Timothy Gegg-Harrison, Associate Professor; B.A., University of Missouri, Columbia; M.S., Ohio State University; Ph.D., Duke University (NC); 1992 -

Sudharsan Iyengar, Professor; B.E., Burdwan University; M.S., Ph.D., Louisiana State University and A & M College; 1989 -

Eugene Lundak, Associate Professor; B.S., M.S., Winona State University; M.S., University of Evansville (Indiana); 1985 -

Chi-Cheng Lin, Assistant Professor; B.S., National Chiao-Tung University; M.S., University of Minnesota-Duluth; Ph.D., University of Pittsburg; 1997 -

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. University of Minnesota; M.S. University of Minnesota; Ph.D. University of Minnesota, 1993 -

Louise Wobig, Assistant Professor; B.A., M.A., Winona State University; 1985 -

The Computer Science Department offers courses in computer science and computer science education, which are designed to give the student an understanding of and appreciation for both theoretical and applied computer science, and education. Students will be prepared for careers in industry, education or further study at the graduate level.

Scheduling Recommendations

Incoming first-year and transfer students should consult a Computer Science advisor before registering.

Entrance Requirements

All students applying for entrance to a Computer Science major shall have completed the following courses with a "C" grade or better in each and shall have a minimum GPA of 2.25 for the following three courses:

CS 234 Algorithms and Problem Solving

CS 250 Algorithms and Data Structures

MATH 210 Discrete Mathematics and Foundations

Applicants must have a minimum overall GPA of 2.5. In addition to these requirements, the student must meet with a Department advisor and complete a Department major application form.

Before acceptance into a Computer Science major, all students will have provisional status and will be 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.

Graduation Requirements

1. Students must have an overall GPA of at least 2.5. The cumulative GPA for all Computer Science Major and Minor requirements and electives must be at least 2.5, and each course must be completed with a grade of "C" or better (except CS 491).

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.

Course Repetition Policy

Students are allowed to attempt a particular computer science course at most three times. It is considered an attempt each time the name of a student appears on a course's final grade roster.

Graduation with Honors

For graduation with Honors in Computer Science, a student must:

A. Have completed one of the following majors:

Computer Science

Computer Information Systems

B. Have an overall GPA of 3.0

C. Have a WSU Computer Science GPA of 3.25

D. Have completed 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 may only oversee a maximum of 3 honors students at a time. With the advisor, the student will prepare and submit a proposal to the department's Honors Committee. Once the project is approved, the student will complete the project/thesis and present it to the advisor and the second reader. A copy of the project/thesis must be submitted to the Department library.

Prerequisites

The prerequisites for computer science courses must be met with a "C" grade or better. Students who have not met the prerequisites with a grade of "C" or better before the course begins will be dropped from that class.

Pass/No Credit Courses

All required courses and electives courses for a major/minor must be taken for a letter grade, except CS 491.

Rochester Center

All of the Department's majors and the minor are available through the 2+2 Program at the Rochester Center.

Swedish Exchange Program

WSU computer science students have available to them an exchange program with the University College of Borås in Sweden. WSU students spend the fall semester (late August until Christmas) of their junior or senior year in Sweden. Swedish students spend the spring semester at WSU. While in Sweden, WSU students take the following courses (all taught in English):

- I. Sweden - The Land and the People; Language, Society and Culture
- II. Consequences of Computer-based Systems on Man and Society
- III. Information systems in Swedish companies.
- IV. Prototyping and CASE Tools

Successful completion of the exchange program satisfies a student's Different Culture General Education Requirement.

B.S. MAJOR - COMPUTER SCIENCE

CORE (21 S.H.) - Option A & B

Computer Science

- 150 An Overview of Computer Science (3)
- 234 Algorithms and Problem Solving (4)
- 250 Algorithms and 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 (26 S.H.)

Computer Science

- 341 Advanced Data Structures (4)
- 376 Operating Systems (3)
- 415 Principles of Programming Languages (3)
- 417 Object Oriented Design and Development (3)
- 435 Theory of Computation (3)

Mathematics

- * 160 Calculus I (4)
- * 165 Calculus II (4)

Physics

- 332 Computer Organization (2)
- * Course may be used to satisfy certain general education requirements.

OPTION A ELECTIVES (21 S.H.)

Computer Science

- 301 Discrete Structures for Computer Science (3)
- 312 Microcomputer Organization (3)
- 385 Applied Database Management Systems (3)
- 412 Networking and Telecommunications (3)
- 413 Advanced Networking (3)
- 420 Computer Architecture (3)
- 425 Numerical Analysis (4)
- 430 Computer Graphics (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 (35 S.H.)

Computer Science

- 240 COBOL Programming and File Processing (4) OR
- 241 RPG Programming and File Processing (4)
- 341 Advanced Data Structures (4)
- 385 Applied Database Management Systems (3)
- 470 System Design with CASE Tools (3)

Mathematics

- * 140 Applied Calculus (3)

Statistics

- * 110 Fundamentals of Statistics (3) OR
- 207 Statistics for Business (3)

Accounting

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Economics

- * 201 Principles of Microeconomics (3)

Management

- 370 Business, Organization and Management (3)

Marketing

- 315 Principles of Marketing (3)
- * Course may be used to satisfy certain general education requirements.

OPTION B ELECTIVES (12 S.H.)

Computer Sciences

- 301 Discrete Structures for Computer Science (3)
- 312 Microcomputer Organization (3)
- 376 Operating Systems (3)
- 412 Networking and Telecommunications (3)
- 413 Advanced Networking (3)
- 415 Principles of Programming Languages (3)
- 435 Theory of Computation (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 (4)
- 250 Algorithms and Data Structures (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 Computer Science Major requirements or electives.

Computer Science Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

115 - Using Personal Computer - 3 S.H.

Quarter Course: 115.

This course is designed to provide students with a broad overview of uses of personal computers. Included are hands-on experiences; selection of hardware; and use of software packages such as spreadsheets, data files, data base management, statistics, personal management, education, and entertainment and Internet tools.

130 - Introduction to BASIC Programming—3 S.H.

Quarter Course: 130.

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.

Quarter Course: 150.

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: MATH 120 or equivalent.

155 - Introduction to CS Tools—1 S.H.

Quarter Course: 155.

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.

210 - Computers in Society—3 S.H.

Quarter Course: 210.

An introductory non-technical survey of computer systems and a study of the social impact of computers. Course does not count for major or minor elective credit.

231 - FORTRAN for Engineering and Science—3 S.H.

Quarter Course: 231.

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—4 S.H.

Quarter Course: 234 and 250.

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. Students are introduced to abstract data types, elementary data structures, recursive problem-solving, numeric and non-numeric computation, searching, sorting and file manipulation. Various practical applications of problem-solving are demonstrated. Includes formal labs. The object-oriented programming language C++ currently is used. Prerequisite: MATH 120 or equivalent. Co-requisite: CS 150.

240 - COBOL Programming and File Processing—4 S.H.

Quarter Course: 233 and 240.

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—4 S.H.

Quarter Course: 297.

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 Data Structures—4 S.H.

Quarter Course: 250 and 340.

A continuation of CS 234. The focus in this class is on basic concepts of data storage and memory utilization. Elementary data structures, including linear data structures (e.g., lists, stacks, queues) and hierarchical data structures (e.g., trees) are introduced. Emphasis is on data abstraction and complexity analysis of algorithms. More advanced C++ programming concepts are covered. Prerequisites: CS 234 and MATH 210 or instructor's permission.

298 - UNIX & C Programming—3 S.H.

Quarter Course: 298.

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. May not be used to meet major/minor electives. Include topics on IPC and RPC and sockets. Prerequisite: instructor's permission. Offered according to demand.

299 - Special Topics—1-3 S.H.

Quarter Course: 299.

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.

Quarter Course: 301.

Provides students with an introduction to applications of discrete mathematical structures to computer science. Topics included are functions on general sets, integer valued functions, finite state machines, finite state automata, recurrence relations, recursive definitions, grammars, complexity of algorithms, relations. Prerequisites: CS 234 or CS 231 and MATH 210.

312 - Microcomputer Organization—3 S.H.

Quarter Course: 312.

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. Prerequisite: CS 234.

341 - Advanced Data Structures—4 S.H.

Quarter Course: 341 and 475.

A detailed study of more advanced data structures and algo-

rithms, 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.

351 - Introduction to Assembler and Architecture—3 S.H.
Quarter Course: 351.

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. Include and introduction to basic logic circuits and their use in computer architecture. Prerequisite: CS 250.

376 - Operating Systems—3 S.H.
Quarter Course: 376.

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 250 and CS 351.

385 - Applied Database Management Systems—3 S.H.
Quarter Course: 385.

A study of basic Database Management Systems (DBMS) concepts. Topics include DBMS Models — Relational and object-oriented; study of query languages; study of exiting DBMS; and data integrity, recovery, and concurrency control. Prerequisite: CS 250.

399 - Special Topics—3 S.H.
Quarter Course: 399.

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.

410 - Software Engineering—3 S.H.
Quarter Course: 375.

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.

412 - Networking and Telecommunications—3 S.H.
Quarter Course: 412.

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. Prerequisites: CS 250 and one 300-level CS course.

413 - Advanced Networking and Communications—3 S.H.
Quarter Course: 413.

Advanced topics in computer networking and telecommunications are studied. Emphasis is on the Transport and Application levels of the OSI Model. Course emphasizes a networking lab. Students gain experience with a protocol stack such as TCP/IP or OSI. Prerequisite: CS 412. Offered yearly.

415 - Principles of Programming Languages—3 S.H.
Quarter Course: 415.

A study of the principles of 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 also are covered. Students are introduced to the theoretical foundations of these paradigms and also are given an opportunity to write programs in each of the paradigms. Prerequisite: CS 250.

417 - Object Oriented Design and Development—3 S.H.
Quarter Course: 417.

An in-depth study of the Object Oriented Analysis and Design. Advanced OO topics are included. The course includes a Capstone Project design and development. Prerequisite: CS 410.

420 - Computer Architecture—3 S.H.
Quarter Course: 420.

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.
Quarter Course: 425G.

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.
Quarter Course: 430.

A study of computer graphics techniques. Includes display devices, transformation, graphics package design and picture structure. Prerequisite: CS 250.

435 - Theory of Computation—3 S.H.
Quarter Course: 435.

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 Junior or Senior standing.

445 - Artificial Intelligence—3 S.H.
Quarter Course: 445.

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 and expert systems, and neural networks. Prerequisite: CS 415.

450 - Compilers—3 S.H.
Quarter Course: 450.

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.
Quarter Course: 465.

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.
Quarter Course: 466.

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. O/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.
Quarter Course: 467.

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.

Quarter Course: 470.

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 240 or CS 241 and CS 410. Offered yearly.

476 - Distributed Systems: Concepts and Design—3 S.H.

Quarter Course: 476.

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 376. Offered yearly.

481 - Computer Applications—1-3 S.H.

Quarter Course: 481.

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.

Quarter Course: 485.

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—3 S.H.

Quarter Course: 490.

An opportunity to continue the study of selected topics. Prerequisite: instructor's permission. Offered according to demand.

491 - Practicum in Computer Science—3 S.H.

Quarter Course: 491.

Provides students with practical experience and training. Students work a minimum of 200 hours in a computer installation under the supervision of a computer science professional. Students planning to take this course must register with the practicum coordinator at least 1 semester before the semester in which they intend to start the practicum. Prerequisites: (1) Declared CS or CIS major; (2) Junior or Senior standing; (3) CS or CIS majors must have completed the core and option requirements for their major; (4) Four hours or less equivalency credit for previous work; (5) Coordinator's written permission. 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.

Quarter Course: 321.

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.

Quarter Course: 452G.

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. Prerequisites: EDUC 300, EDUC 301 and EDUC 302. Offered according to demand.

480 - Computer Workshop—3 S.H.

Quarter Course: 480G.

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.

Quarter Course: 481.

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.

Quarter Course: 489G.

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
T. Hatfield (Chairperson), Borrer, Hage, Maher, Ruiz, Speltz

FACULTY

Gaylia Borrer, Associate Professor; B.S., Davis & Elkins College; M.S., West Virginia University; Ph.D., University of Iowa; 1989 -

Sally Hage, Assistant Professor; B.A., College of St. Thomas; M. Divs., University of Notre Dame; Ph.D., University of Minnesota; 1997 -

Tim Hatfield, Professor; B.A., Harvard University; M.Ed., Harvard Graduate School of Education; Ph.D. University of Minnesota; 1980 -

Marie Maher, Professor; B.A., University of Wisconsin-La Crosse; M.A., University of Wisconsin-Madison; M.S., Winona State University; Ph.D., University of Iowa; 1988 -

Nick Ruiz, Associate Professor; B.A., Ph.D., University of Minnesota; 1989 -

Charlotte Speltz, Associate Professor; B.A., Duke University; M.Ed., Ed.D., North Carolina State University; 1992 -

The Department's major purpose is to provide students in the helping professions and in education with a strong background in counseling, developmental and career guidance, evaluation and assessment, program management, and personal growth and development.

The Department offers elective courses for undergraduates, but departmental concentrations lead only to the Master of Science degree. (See the Graduate Catalog for program 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 Course Descriptions. Courses with an asterisk (*) 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, contact the Counselor Education Department.

Counselor Education Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

200 - Career/Life Decision Making—2 S.H.

Quarter Course: 200.

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. Fulfills a portion of the Allied Studies General Education Requirement. P/NC only.

220 - Emotions and Behavior—3 S.H.

Quarter Course: 220.

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—2 S.H.

Quarter Course: 420.

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.

Quarter Course: 436G.

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 atti-

tudes, 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.

Quarter Course: 491G.

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.

Quarter Course: 432G.

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.

Quarter Course: 434G.

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.

Quarter Course: 435G.

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.

Quarter Course: 495G.

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.
Quarter Course: 431G.

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.
Quarter Course: 497G.

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.
Quarter Course: 498G.

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.

CYTOTECHNOLOGY

Pasteur 215E, (507) 457-5271

Thompson (Director of the Cytotechnology Program). Adjunct faculty from affiliated medical centers: Mayo Clinic, Rochester, Minn; Marshfield Clinic, Marshfield, Wis.

DIRECTOR

Edward Thompson, Associate Professor, Biology; B.A., Macalester College, St. Paul; Ph.D., Medical College of Wisconsin, Milwaukee; 1992 -

ADJUNCT FACULTY

Mayo School of Health-Related Science, Rochester, Minn.

John Goellner, M.D., Medical Director

Jill Caudill, M.Ed., CT, (ASCP), Education Coordinator

Marshfield Medical Center, Marshfield, Wis.

George Rupp, M.D., Medical Director, Laboratory Education Programs

Virginia R. Narlock, Ph.D., C.L.S. (ASCP) Program Director, Laboratory Education programs

Donald Schnitzler, Education Coordinator, Cytotechnology

The Cytotechnology Program at WSU 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 General Education Requirements of the University. The fourth year is spent in a clinical setting at one of the Cytotechnology programs affiliated with WSU, where the student gets intensive training in the subdisciplines and techniques of Cytotechnology. Completion of three years (96 semester hours) at the University with a minimum grade point average of 3.00 are required for application to the year of clinical training. During this clinical year, each student registers for the appropriate number of credits at the University and his or her progress is evaluated each semester. Upon successful completion of the clinical program, the student receives a certificate in cytology 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.

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.

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.)

Biology

- 241 Principles of Biology I (4)
- 242 Principles of Biology II (4)
- 308 Cell Biology (3)
- 310 Genetics (3)
- 307 Cell/Genetics Lab (1)
- 201 Human Anatomy (4)
- 323 General Physiology (5)

409 General Microbiology (4)

470 Histology (4)

(NOTE: BIO 241, BIO 242, BIO 308, BIO 310 and BIO 307 should be taken in sequence beginning in the Fall Semester of the first year. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in preceding courses to be admitted to subsequent courses.

ADDITIONAL REQUIREMENTS (43 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 to be completed at any approved clinical training site. WSU credit will be given under

BIO 481 - Cytotechnology I (12)

BIO 482 - Cytotechnology II (12)

BIO 483 - Cytotechnology III (4)

BIO 484 - Cytotechnology IV (4)

- * Course may be used to satisfy certain general education requirements.

MAJOR ELECTIVES (6 s.h.)

At least 6 s.h. chosen from the following courses:

Biology

309 Developmental Biology (3)

445 Immunology (3)

460 Parasitology (3)

Chemistry

340 Organic Survey (4)

ECONOMICS AND FINANCE

Somsen Hall, Room 309, (507) 457-5014

Manrique (Chairperson)

Economics: Gallegos, Geiske, Hyle, Kauffman, Pevas, Rieder, Salyards.

Finance: Kesler, Murray, Wrolstad.

FACULTY

ECONOMICS

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 -

Gabriel Manrique, Professor; B.A., Ateneo De Manila University; M.A., Ohio University; Ph.D., University of Notre Dame; 1989 -

Mary Ann Pevas, Associate Professor; B.A., Dominican College; M.A., Manhattan College; Ph.D., University of Notre Dame; 1990 -

Mary E. Rieder, Professor; B.A., Aquinas College; Ph.D., Iowa State University of Science and Technology; 1971 -

Donald M. Salyards, Professor; B.A., Graceland College; M.A., Ph.D., Kansas State University; 1975 -

FINANCE

David W. Kesler, Professor; B.S., Pacific Lutheran University; M.A., M.B.A., University of Kansas; 1984 -

Michael J. Murray, Professor; B.A., University of South Florida; M.A., Ph.D., University of Notre Dame; 1986 -

Mark Wrolstad, Professor; B.A., Luther College; M.B.A., University of Florida; Ph.D., University of Colorado; 1989 -

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

Any courses not required for a major, minor, option or any of the concentrations may be taken by undergraduates on a pass-no credit basis.

GRADUATION REQUIREMENTS

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 hours of credit 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
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B.A. MAJOR - ECONOMICS

45-46 s.h. (Minor Required)

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.)

- MATH *140 Applied Calculus (3)
- OR MATH *160 Calculus I (4)
- 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.

- * These courses may be used to satisfy certain general education requirements.

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)
- 303 Intermediate Macroeconomics (3)
- 304 Money and Banking (3)

ELECTIVES (9 s.h.)

Additional credits at the 300 or 400 level in economics.

B.S. MAJOR - FINANCE

69 s.h. (No Minor Required)

REQUIRED COURSES (63 s.h.)

BUSINESS CORE REQUIREMENTS (36 S.H.)

Mathematics (3 s.h.)

- * 140 Applied Calculus (3)

Accounting (6 s.h.)

- * 211 Financial Accounting Principles (3)
- * 212 Managerial Accounting Principles (3)

Business Administration (15 s.h.)

- DIS 220 Business Statistics (3)
- BUSA 301 Business Law I (3)
- POM 334 Production and Operations Management (3)
- DIS 342 Advanced Business Computer Applications (3)
- MGMT 315 Principles of 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.)

- 315 Principles of Marketing (3)

FINANCE MAJOR REQUIREMENTS (27 S.H.)

Quantitative Tools (6 s.h.)

- DIS 312 Business Computer Programming (3)
- DIS 340 Management Science (3)

FINANCE CORE (12 S.H.)

- ECON 303 Intermediate Macroeconomics (3)
- FIN 335 Forecasting Methods (3)
- FIN 377 Investments (3)
- FIN 463 Cases in Financial Management (3)

FINANCE OPTION (9 s.h.)

Choose one option

OPTION A - INVESTMENTS

- FIN 421 Institutional Investment and Financial Markets (3)
- FIN 422 Portfolio Theory and Security Valuation (3)
- FIN 473 Real Estate Investment (3)

OPTION B - BANKING

- FIN 404 Commercial Bank Management (3)
- ECON 405 Monetary Theory and Policy (3)
- FIN 471 Real Estate Finance (3)

FINANCE MAJOR ELECTIVES (6 s.h.)

Additional credits at the 300 or 400 level in economics or finance, with a minimum of 3 s.h. in finance.

- * This course may be used to satisfy certain general education requirements.

Economics Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicum. The P/NC option is available to non-majors unless otherwise noted.

ECONOMICS

201 - Principles of Microeconomics—3 S.H.

Quarter Course: 201.

The private enterprise system, demand-and-supply and market interaction; business costs and prices, forms of competition, resource markets; the mixed economy. Includes a unit on cooperatives. General Education math requirement recommended as a prerequisite.

202 - Principles of Macroeconomics—3 S.H.

Quarter Course: 202.

National income analysis; aggregate demand-and-supply; money and banking; business cycles, monetary and fiscal policy. No prerequisite. General Education math requirement recommended as a prerequisite.

203 - Principles of Economics III—3 S.H.

Quarter Course: 203.

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.

Quarter Course: 302.

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.

Quarter Course: 303.

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.

Quarter Course: 304.

History and theory of banking and currency; source of bank

funds and their utilization, and problems of the bank's loaning power and reserve; monetary policy. Prerequisites: DIS 220 or STAT 210 and ECON 202.

315 - Environmental and Natural Resource Economics—3 S.H.
Quarter Course: 315.

An introduction to the economics of natural resource management and environmental quality. Theory and policy with regard to the use of nonrenewable and renewable resources, and in pollution. Current issues in those areas are featured. Prerequisite: ECON 201 or instructor's permission.

320 - Business-Government Relations—3 S.H.
Quarter Course: 320.

Government regulation of business including anti-trust legislation, consumer and investor protection, and public enterprise. Prerequisite: ECON 201.

398 - Internship—1-6 S.H.
Quarter Course: 398.

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.
Quarter Course: 399.

Prerequisite: Junior status in Economics Major, 2.5 GPA and instructor's permission. Grade only.

400 - Public Finance: Taxation—3 S.H.
Quarter Course: 400.

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.
Quarter Course: 404.

A practical and theoretical approach to international trade. Principles of trade and theory of monetary flows; tariffs and quotas, gold flows, and contemporary international marketing agreements, exchange rate determination, and balance of payments adjustments. Prerequisites: ECON 201 and ECON 202.

405 - Monetary Theory and Policy—3 S.H.
Quarter Course: 405.

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.
Quarter Course: 415.

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. Grade only.

420 - Labor Economics—3 S.H.
Quarter Course: 420.

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.
Quarter Course: 425.

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.
Quarter Course: 440.

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. Grade only.

444 - Public Finance: Expenditures and the Deficit—3 S.H.
Quarter Course: 444.

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.
Quarter Course: 450.

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, ECON 202, and DIS 220 or STAT 210.

480 - Independent Studies in Economics—1-3 S.H.
Quarter Course: 480.

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.
Quarter Course: 499.

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.
Quarter Course: 201.

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.
Quarter Course: 335.

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.
Quarter Course: 340.

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.
Quarter Course: 360.

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.
Quarter Course: 377.

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.
Quarter Course: 398.

Credits are not counted in Finance Major, but as general elec-

tive credit. Prerequisite: Concurrent enrollment in FIN 399. P/NC only.

399 - Internship Problem—3 S.H.

Quarter Course: 399.

Prerequisite: completion of Business Core, 2.5 GPA and instructor's permission. Grade only.

404 - Commercial Bank Management—3 S.H.

Quarter Course: 404.

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.

Quarter Course: 421.

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.

Quarter Course: 422.

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.

440 - International Finance—3 S.H.

Quarter Course: 440.

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 transac-

tions. 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.

Quarter Course: 463.

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.

Quarter Course: 471.

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.

Quarter Course: 473.

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.

Quarter Course: 480.

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.

EDUCATIONAL LEADERSHIP

(see the GRADUATE CATALOG)

EDUCATION

Gildemeister Hall, Room 152, (507) 457-5350

Clay (Chairperson), Billman, Bowman, Helble, Hermann, Joyce, Leicester, Matthews, Reineke, S. Rislove, J. Shermann, T. Shermann, Tolmie, Williams.

FACULTY

Jean Billman, Professor; B.A., Wittenberg University; Ed.M., Ed.D., Temple University; 1976 -

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 -

Donna Helble, Professor; B.A., Simpson College, Iowa; M.S., Winona State University; Ed.D., University of Northern Colorado; 1984 -

Robert Hermann, Assistant Professor; M.A. University of South Dakota; Ed.D. University of South Dakota, 1993 -

Mary Joyce, Assistant Professor; B.A., College of St. Catherine; M.S., Winona State University; 1980 -

Jean Leicester, Associate Professor; M.A., San Francisco State University; Ph.D., University of Colorado, Boulder; 1991 -

Celeste Matthews, Assistant Professor; B.A., University of Maryland; Ph.D., Penn State University; 1997 -

James Reineke, Assistant Professor; B.A., University of Minnesota-Twin Cities; B.S., University of Minnesota-Twin Cities; Ph.D., Michigan State University; 1996 -

Susan Rislove, Assistant Professor; B.S., Moorhead State University; M.S., Winona State University; November, 1981 -

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; B.S., State University of New York-Buffalo; M.Ed., Colorado State University; Ed.D., University of North Dakota; Ed.D., University of Colorado; 1989 -

Patricia Tolmie, Professor; B.S., M.S., Winona State University; Ph.D., University of Wisconsin-Madison; 1980 -

Maudie Williams, Professor; B.S., Fort Valley State College; M.S., Tuskegee Institute; Ed.D., University of Florida; 1989 -

The Department aims to integrate into pre-service teacher education the knowledge, skills and dispositions necessary to be an effective educator. This includes a philosophy of education, knowledge of the individual learner, understanding of the opportunities, objectives and responsibilities of a school in a democratic society; practice toward teaching effectively and the professionalism to work with others in promoting continual improvement of schools.

PROFESSIONAL EDUCATION SEQUENCE

31 s.h.

Prerequisites: EDUC 205 and EDUC 301

- 205 Exploring Teaching (3)
- 301 Human Development & Learning (4)
- 302 Classroom Management Clinical (2)
- 306 Instructional Planning & Assessment (3)
- 308 Human Relations & Student Diversity (3)
- 429 Secondary Reading & Teaching Strategies (Secondary Majors only) (3)
- 459 The Professional Educator (3)
- 460 Student Teaching - Elementary (10) OR
- 464 Student Teaching - Middle School (10) OR
- 465 Student Teaching - Senior High (10)

NOTE: These programs may be changed due to proposed changes in Board of Teaching licensure requirements. Check with you major department for current program/licensure requirements.

B.S. MAJOR - ELEMENTARY EDUCATION (Teaching)

30 s.h.

REQUIRED COURSES (30 s.h.)

- 328 Teaching Reading & Language Arts I (3)
- 329 Teaching Reading & Language Arts II (3)
- 333 Teaching Social Studies in Elementary School (3)
- 334 Teaching Mathematics in Elementary School (3)
- 335 Teaching of Science & Environmental Studies in Elementary School (3)

Art Education

- 300 Elementary Art Education (3)

Mathematics Education

- 125 Math for Elementary Teachers (4)

Music

- 320 Music Education for Elementary Teachers (3)

PER

- 309 Physical Education for Elementary School Teachers (2)
- 320 Health Education in Elementary School (3)

B.S. MINOR - EARLY CHILDHOOD EDUCATION (Teaching)

30 s.h.

Students with a major in Elementary Education may earn an Early Childhood Minor which leads to kindergarten endorsement and pre-kindergarten licensure. Early Childhood Minors must be accompanied with one academic concentration identified for Elementary Education Majors.

REQUIRED COURSES (30 s.h.)

- 410 Foundations of Early Childhood Education (2)
- 413 Development in Infancy (3)
- 414 The Developing Child in the Social World (4)
- 416 Early Childhood Education I (4)
- 417 Early Childhood Education II (3)
- 423 Young Children with Special Needs (3)
- 424 Organization & Administration of Early Childhood Education Programs (3)
- 461 Student Teaching - Kindergarten (5)
- 467 Student Teaching - Pre-Kindergarten Programs (3)

KINDERGARTEN ENDORSEMENT (with Elementary Major)

12 s.h.

Students with an Elementary Education Major may take the following courses for kindergarten endorsement:

REQUIRED COURSES (12 s.h.)

- 416 Early Childhood Education I (4)
- 417 Early Childhood Education II (3)
- 461 Student Teaching - Kindergarten (5)

B.S. LICENSURE - FAMILY EDUCATION/PARENT EDUCATION

20 s.h.

REQUIRED COURSES (20 s.h.)

- 413 Development in Infancy (3)
- 414 The Developing Child in the Social World (4)
- 439 Introduction to Early Childhood Family Education (1)
- 440 Practicum in Early Childhood/Family Educator - Parent Educator (3)
- 441 Parent Education: Curriculum & Methods (3)
- 442 The Adult Learner (3)
- 443 Facilitating Parent Education Groups (3)

B.S. LICENSURE - FAMILY EDUCATION/EARLY CHILDHOOD FAMILY EDUCATION

24 s.h.

REQUIRED COURSES (24 s.h.)

- 413 Development in Infancy (3)
- 414 The Developing Child in the Social World (4)
- 416 Early Childhood Education I (4)
- 423 Young Children with Special Needs (3)
- 439 Introduction to Early Childhood Family Education (1)
- 441 Parent Education Curriculum & Methods (3)
- 442 The Adult Learner (3)
- 443 Facilitating Parent Education Groups (3)

MIDDLE SCHOOL ENDORSEMENT

11-14 s.h.

- 11 s.h. for Elementary Majors (plus approved academic area)
- 14 s.h. for Secondary Majors

Students with a major in Elementary or Secondary Education may earn a middle school endorsement by completing the following courses:

REQUIRED COURSES (14 s.h.)

- SPED 400 Education of Exceptional Children/Youth (3)
- EDUC 427 Development & Remediation of Reading (3)
- EDUC 469 Middle School Philosophy, Organization & Interdisciplinary Planning (3)
- EDUC 470 Advanced Practicum in Middle School (5) OR
- EDUC 570 Advanced Practicum in Middle School (5)

Middle School Practicum follows coursework and Student Teaching. Note: Licenses based upon completion of these approved programs:

1. Secondary school teachers who complete approved Middle School Licensure programs shall be issued licenses valid for middle school teaching in all subjects or fields in which they are eligible for current secondary school teaching licenses.
2. Elementary school teachers shall be issued licenses valid for middle school teaching in the licensure fields for which they complete appropriate academic preparation. Following is a list of fields in which middle school licensure may be granted to elementary school teachers:

- English/Language Arts
- Mathematics
- Multi-Cultural Education
- Science (Life or Earth or Physical)
- Social Studies
- Speech and Theatre Arts
- French

German
Spanish

No other teaching fields will be authorized as valid for middle school licensure for elementary school teachers.

B.S. MINORS/CONCENTRATIONS FOR ELEMENTARY MAJORS

Students admitted into teacher education will fulfill the Board of Teaching academic component for Elementary Major requirement in one of three ways:

- By completing one of five minors approved for Elementary Education Majors
- By completing two areas of concentration of 13-17 credits each. Concentrations will be drawn from designated minors for elementary majors
- By completing an ECE minor or a Special Education Major plus one of the approved areas of concentration
- By completing a broad concentration. A broad concentration is a 13 credit (or more) concentration drawn from one of the five approved areas and approximately 15 additional credits from any combination of the other four approved areas

B.S. MINOR OR CONCENTRATION —ELEMENTARY EDUCATION: GENERAL SCIENCE (Teaching)

29-30 s.h.

Minor is approved for Minnesota Middle School Licensure Program. Minor suggested for Elementary Education majors. WSU minor not for licensure.

REQUIRED COURSES (29-30 s.h.)

Biology (11 s.h.)

- 104 Conservation of the Environment (3)
- 241 Principles of Biology I (4)
- 242 Principles of Biology II (4)

Chemistry (3 s.h.)

- 100 Chemistry Appreciation (3)

Geoscience (8 s.h.)

- 120 The Dynamic Earth (4)
- 130 Earth & Life through Time (4) OR
- 115 Meteorology (4)

Physics (4 s.h.)

- 115 Conceptual Physics (4)

Geoscience Electives (3-4 s.h.)

- 110 Oceanography (3-4) OR
- 105 Astronomy (3-4)

CONCENTRATION—ELEMENTARY EDUCATION: GENERAL SCIENCE

(14 s.h.)

Biology (3 s.h.)

- 104 Conservation of the Environment (3)

Chemistry (3 s.h.)

- 100 Chemistry Appreciation (3)

Geoscience (4 s.h.)

- 120 The Dynamic Earth (4) OR
- 130 Earth & Life through Time (4)

Physics (4 s.h.)

- 115 Conceptual Physics (4)

B.S. MINOR OR CONCENTRATION —ELEMENTARY EDUCATION: LANGUAGE ARTS (Teaching)

29 s.h.

Minor is currently approved for Minnesota Middle School Licensure Program. Minor suggested for Elementary Education majors. WSU minor not for licensure.

REQUIRED COURSES (29 s.h.)

Communication Studies (6 s.h.)

- 261 Public Speaking (3)
- 282 Introduction to Communication (3)

Education (6 s.h.)

- 427 Developmental & Remediation in Reading (3)
- 429 Secondary Reading & Teaching Strategies (3)

English (15 s.h.)

- 210 Advanced Composition (3)
- 223 Classical Mythology (3) OR
- 224 Bible as Literature (3)
- 310 Story Writing (3) OR
- 312 Poetry Writing (3)
- 418 Stylistics Writing (3) OR
- 420 Introduction to Language Study (3)

Select three credits from:

- 151 American Indian Literature (3) OR
- 201 Introduction to Literary Studies (3) OR
- 351 American Literature I (3) OR
- 352 American Literature II (3)

Theatre/Dance (2 s.h.)

- 290 Creativity Across the Curriculum (2)

CONCENTRATION—ELEMENTARY EDUCATION: LANGUAGE ARTS

(14 s.h.)

Education (3 s.h.)

- 429 Secondary Reading & Teaching Strategies (3)

Theatre/Dance (2 s.h.)

- 290 Creativity Across the Curriculum (2)

English (9 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Composition (3)
- 420 Introduction to Language Study (3)

B.S. MINOR OR CONCENTRATION— ELEMENTARY EDUCATION: MATHEMATICS (Teaching)

26 s.h.

Minor is approved for Minnesota Middle School Licensure Program. Minor suggested for Elementary Education majors. WSU minor not for licensure.

REQUIRED COURSES (23 s.h.)

Education (3 s.h.)

- 434 Remedial Mathematics Methods (3)

Mathematics (11 s.h.)

- * 120 Precalculus (4)
- 130 Matrix Algebra (3)
- 210 Discrete Mathematics & Foundations (4)

Mathematics Education (5 s.h.)

- 201 Technology-based Geometry & Other Mathematics for Elementary Teachers (4) 421 Middle School Methods in Mathematics (1)

Statistics (4 s.h.)

- 110 Fundamentals of Statistics (3)
- 115 Laboratory in Statistics (1)

* Indicates courses that may be taken as part of the general education requirements. Possible electives include MATH 140, MATH 160, MATH 165 and STAT 310.

ELECTIVES (3 s.h.)

Electives must be selected in consultation with an advisor in the Mathematics and Statistics Department.

CONCENTRATION—ELEMENTARY EDUCATION: MATHEMATICS

12 s.h.

Education (3 s.h.)

- 434 Remedial Mathematics Methods (3)

Mathematics (4 s.h.)

- * 120 Precalculus (4)

Mathematics Education (5 s.h.)

- 201 Technology-based Geometry & Other Mathematics for Elementary Teachers (4)
- 421 Middle School Methods in Mathematics (1)

* Indicates courses that may be taken as part of the general education requirements. Minor is approved for Minnesota Middle School Licensure Program.

B.S. MINOR OR CONCENTRATION— ELEMENTARY EDUCATION: MULTICULTURAL GLOBAL STUDIES (Teaching)

28-30 s.h.

Minor is approved for Minnesota Middle School Licensure Program. Minor suggested for Elementary Education majors. WSU minor not for licensure.

REQUIRED COURSES (19-21 s.h.)

Education (7 s.h.)

- 150 Introductory Field Experience (1)
- 450 Comparative Education (3)
- 483 Curriculum, Methods & Resources in Multicultural Global Education (3)

Communication Studies (3 s.h.)

- 281 Cross-Cultural Communication (3)

Special Education (3 s.h.)

- 400 Exceptional Children and Youth (3)

Foreign Language (6-8 s.h.)

Choose from one language.

ELECTIVES (9 s.h.)

Choose from at least two departments.

Communication Studies

- 193 Chinese Communication Theory/Kinetics (3)
- 280 Nonverbal Communication (3)
- 285 Native American Oratory (3)
- 286 African American Rhetoric (3)
- 381 Advanced Cross-Cultural Communication (3)

English

- 224 Bible as Literature (3)
- 251 American Indian Literature (3)

Geography

- 213 Cultural Geography (3)
- 224 Geography of Africa (3)
- 323 Geography of the Orient (3)

History

- 123 Eastern Asian Civilization (3)
- 165 Latin American History (3)
- 170 African Civilization (3)
- 233 History of Mexico (3)
- 235 History of the American Indians (3)
- 315 Women in U.S. History (4)

Music

- 110 History of American Jazz (3)
- 114 World Music (3)
- 115 Music of the East (3)
- 116 Culture & Music of Native Americans (3)
- 420 Multicultural Music in the Elementary School (2)

Political Science

- 270 Politics and Society in the Middle East (3)
- 225 Ethnic Conflict and Nationalism (3)
- 337 Asian Political Systems (3)

Psychology

- 275 Psychology of Women (3-4)
- 325 Social Psychology (3)

Sociology

- 201 Scandinavian Culture I (3)
- 205 Social Interaction (3)
- 212 The Family (3)
- 216 Social Problems (3)
- 340 Social/Cultural Anthropology (3)
- 411 Sociology of Religion (3)
- 421 Urban Sociology (3)
- 423 Race Relations & Minority Groups (3)
- 435 Family Roles & Relationships (3)
- 450 Sociology of Aging (3)

CONCENTRATION—ELEMENTARY EDUCATION: MULTICULTURAL/ GLOBAL STUDIES

16-17 s.h.

Education (7 s.h.)

- 150 Introductory Field Experience (1)
- 450 Comparative Education (3)
- 483 Curriculum, Methods & Resources in Multicultural Global Education (3)

Communication Studies (3 s.h.)

- 291 Cross-Cultural Communication (3)

Special Education (3 s.h.)

- 400 Exceptional Children and Youth (3)

Foreign Language (3-4)

Choose from one language.

B.S. MINOR OR CONCENTRATION— ELEMENTARY EDUCATION: SOCIAL STUDIES (Teaching)

27 s.h.

Minor is approved for Minnesota Middle School Licensure Program. Minor suggested for Elementary Education majors. WSU minor not for licensure.

REQUIRED COURSES (21-24 s.h.)

Economics (3 s.h.)

Select one of the following:

- 201 Principles of Microeconomics (3) OR
- 202 Principles of Macroeconomics (3)

Geography (4 s.h.)

- 110 World Regional Geography (4)

Psychology (3 s.h.)

- 210 General Psychology (3)

Sociology (3 s.h.)

- 150 Human Society (3)

History (6-9 s.h.)

Select one of the following sequences:

- 120 Western Civilization to 1500 (3) AND
- 121 Western Civilization to 1850 (3) AND
- 122 Western Civilization to Present (3) OR
- 150 U.S. History to 1865 (3) AND
- 151 U.S. History since 1865 (3)

Political Science (3 s.h.)

- 120 American Government & Politics (3)

ELECTIVES (3-6 s.h.)

Choose from economics, geography, political science, psychology, or biology courses.

CONCENTRATION—ELEMENTARY EDUCATION: SOCIAL STUDIES

15 s.h.

Geography (3 s.h.)

110 World Regional Geography (3)

History (6 s.h.)

150 U.S. History to 1865 (3)

151 U.S. History since 1865 (3)

Chose two courses from the following:

Psychology

210 General Psychology (3)

Sociology

150 Human Society (3)

Political Science

120 American Government & Politics (3)

ADMISSION TO A TEACHER EDUCATION PROGRAM

(Effective July 1, 1995)

To be admitted to the Effective Educator Program, the student must:

1. have completed 30 semester hours of credit
2. have earned a 2.75 GPA in all college coursework OR

Alternate GPA Determination:

Those students not achieving a 2.75 GPA overall will have their GPA calculated based upon the last 34 credits attempted. Only entire semester coursework will be used in calculating this alternate GPA.

3. meeting writing competence

Alternative ways of meeting writing competence include any two of the following:

1. Pass Department writing clearance
2. "B" grades in ENG 111 or ENG 115
3. PPST Writing Section passed
4. complete the Pre-Professional Skills Test
5. have a record of good citizenship

Students who have applied previously and not been admitted may request consideration under the alternate admissions standard by reapplying for admission through the Education Department.

The University reserves the right to consider as part of the Education Department's admission and retention policy those personal qualities, general health and scholastic achievement or such other standards as may be appropriate. Students should make themselves aware of the Student Citizenship Standards found in the General Student Information section of this catalog.

RETENTION AND STUDENT TEACHING REQUIREMENTS

After a student has been accepted into a teacher education program, the student must first meet prerequisite requirements (a grade of "C" or better in EDUC 205 and EDUC 301) and then maintain the following scholastic personal records to be eligible for student teaching:

Elementary Education Majors: 1) a grade of "C" or better in each course in the Professional Education Sequence; 2) a grade of "C" or better in each course in the Elementary Education Major; 3) a cumulative GPA of 2.75 or better as well as a 2.75 GPA in the major is required. Previous college and university credits will be used to calculate GPA for program admission; 4) the maintenance of a record of good citizenship; 5) the completion of all courses in the Professional Education Sequence and the Elementary Education Major prior to student teaching.

Secondary Education Majors: 1) a grade of "C" or better in each course in the Professional Education Sequence; 2) a GPA of 2.50-2.75 in the major as required by the major department; 3) Maintaining a cumulative GPA of 2.75 or better is required. Previous college and university credits will be used to calculate GPA for program admission; 4) the maintenance of a record of good citizenship; 5) the teaching requirements identified by the major department as well as a completion of the Education

Department's Professional Education Sequence courses prior to student teaching.

No Professional Education Sequence course or Elementary Education Major course may be repeated more than once. An exception for one additional repetition may be appealed to the College of Education Admission, Retention and Appeals committee. Students having to repeat more than two courses may be dropped from the program.

STUDENT TEACHING APPLICATION

Application for student teaching is made to the Director of Student Teaching by December for all semesters of the succeeding year (see calendar). If students are not enrolled during the spring semester to make application for student teaching for the subsequent year, they must submit their application before the end of the second week of the semester preceding the semester they plan to student teach. Students apply for a semester when they will not have other commitments, i.e., coaching, music tours, etc. Applications are available in the Department of Education Office.

STUDENT TEACHING REQUIREMENTS

Student teaching is requirement for completing any one of the teacher education curriculums and is usually done during the senior year. One full semester of full-day teaching is required in an area public school contracted by the University or elsewhere in Minnesota through the Common Market Program. All Elementary Education Majors will complete a full semester, full days at a grade level. The period of student teaching will equal the number of weeks in the University semester during which students will receive credit. However, student teachers follow the calendars of their respective school districts. As such, fall semester assignments begin with the workshop and opening of schools in systems where students are assigned.

Planning for student teaching begins during the sophomore year in order that all requirements may be fulfilled. Students should not plan to enroll for additional courses during the fall semester of student teaching.

Student teaching on the secondary level is required in all major fields. If a second major or a teaching minor is completed, the Director of Student Teaching will indicate the WSU student teaching requirements necessary to meet licensure.

LICENSURE

Minnesota Licensure: A license to teach in the public schools of Minnesota may be issued to an applicant holding a bachelor's degree in teacher education programs from a Minnesota state university.

Persons applying for initial licensures must have met the prescribed scores on the Pre-Professional Skills Test in reading, writing and mathematics as set by the Minnesota Board of Teaching.

Licenses are issued by the Board of Teaching/State Department of Education. 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. See the "Teaching Degree Requirements for B.A. Graduates" in the Academic Information section of this catalog.

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.

Wisconsin Licensure: Adequate preparation in conservation of natural resources is required for licensure to teach early childhood and elementary education and for secondary education licenses in science and social studies. Further, secondary teachers in all majors must have a discrete course in secondary reading. Secondary majors in social studies also must have a course in consumers cooperative/marketing. Courses offered at WSU that meet the requirements are:

BIO 104 Conservation of the Environment
ECON 201 Principles of Microeconomics
ECON 202 Principles of Macroeconomics
SPED 400 Education of Exceptional Children/Youth

For K-12 licensure in special fields (art, music and physical education), persons must complete methods courses and must student teach at both the elementary and secondary levels.

Illinois Licensure: All prospective Illinois teachers must log 100 hours of pre-student teaching classroom experience at appropriate elementary or secondary content area. Effective July 1, 1988, teachers applying for licensure in Illinois must pass an Illinois basic skills test and a test in subject matter. Out-of-state persons possessing valid licensure in another state will be issued a two-year provisional license until they meet Illinois requirements.

See the Education Department regarding any changes in licensure requirements for particular states.

OTHER TEACHING MAJORS/MINORS OFFERED AT WSU:

- B.S. Major - Art (Teaching):** See the Art Department section.
- B.S. Major - Business Education (Teaching):** See the Administrative Information Systems Department section.
- B.S. Major - English (Teaching):** See the English Department section.
- B.S. Major - English: Writing (Teaching):** See the English Department section.
- B.S. Minor - English (Teaching):** See the English Department section.
- B.S. Major - French (Teaching):** See the Foreign Language Department section.
- B.S. Minor - French (Teaching):** See the Foreign Language Department section.
- B.S. Major - German (Teaching):** See the Foreign Language Department section.
- B.S. Minor - German (Teaching):** See the Foreign Language Department section.
- B.S. Major - Spanish (Teaching):** See the Foreign Language Department section.
- B.S. Minor - Spanish (Teaching):** See the Foreign Language Department section.
- B.S. Major - Earth Science (Teaching):** See the Geoscience Department section.
- B.S. Major - Life Science (Teaching):** See the Biology Department section.
- B.S. Major - School and Community Health Education (Teaching):** See the Health and Human Performance Department section.
- B.S. Major - Mathematics: Secondary Teaching:** See the Mathematics and Statistics Department section.
- B.S. Minor - Mathematics: Secondary Teaching:** See the Mathematics and Statistics Department section.
- B.S. Minor - Mathematics: Elementary Teaching:** See the Mathematics and Statistics Department section.
- B.S. Major - Middle School Science (Teaching):** See the Physics Department section.
- B.S. Major - Music (Teaching):** See the Music Department section.
- B. S. Major - Physical Education (Teaching):** See the Physical Education and Recreation Department section.
- B.S. Major - Physical Science (Teaching):** See the Physics Department section.
- B. S. Major - Social Science/History (Teaching):** See the Interdisciplinary Programs section.
- B. S. Major - Speech/Theatre (Teaching):** See the Theatre and Dance Department section.
- B.S. Minor - Speech/Theatre (Teaching):** See the Theatre and Dance Department section.

Education Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

115 - Improving Reading and Study Skills—1 S.H.

Quarter Course: 115.

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.

Quarter Course: 120.

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.

Quarter Course: 150.

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. P/NC Only. NOTE: Persons enrolling in EDUC 150 must arrange their schedule with the Field Experience Director in the Education Department prior to pre-registration.

205 - Exploring Teaching—3 S.H.

Quarter Course: New Course.

A course for those seriously considering teaching as a career. Students explore emergent professional teaching roles and responsibilities as they participate in 20 hours of early field experience. The course introduces the three major strands of the teacher education program: diversity, educational technologies and developmentally appropriate practice. Offered each semester.

301 - Human Development and Learning-4 S.H.

Quarter Course: 301.

An introductory study of human growth and development, the psychology of learning, effective teaching, and the guidance function of the classroom teacher in multicultural settings. Offered each semester. Prerequisite: EDUC 205.

302 - Classroom Management Clinical—2 S.H.

Quarter Course: 302.

A required period of actual classroom participation as a teaching assistant. Includes an on-going seminar on developing positive, productive learning environments. Offered each semester. P/NC only. NOTE: Students enrolling in EDUC 302 must arrange their schedule with the Field Experience Director in the Education Department prior to pre-registration.

Taken concurrently with EDUC 301. Prerequisite: EDUC 205.

306 - Instructional Planning and Assessment—3 S.H.

Quarter Course: 306.

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. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

308 - Human Relations and Student Diversity—3 S.H.

Quarter Course: 308.

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 and ethnic groups. Offered each semester. P/NC option for non-education majors.

328 - Teaching Reading and Language Arts I (Primary)—3 S.H.

Quarter Course: 328.

Emphasis is on reading and other communication skills, readiness and the integration of decoding and encoding concepts, skills and instructional techniques into a single curriculum for grades 1-

3. (Junior or Senior standing required). Offered each semester. Includes field component. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

329 - Teaching Reading and Language Arts II—3 S.H.

Quarter Course: 329.

Emphasis is on study skills, vocabulary development skills, comprehension, diagnosis, evaluation and reporting. Attention is given to grade placement of skills in the total curriculum (grades 1-6) and their application in content areas, (Junior or Senior standing required.) Offered each semester. Prerequisite: EDUC 328.

331 - Teaching of Social Studies in Secondary Schools—3 S.H.

Quarter Course: 331.

Materials and methods of teaching geography, history and civics, including the newest textbooks, maps, pictures and other visuals. Prerequisites: EDUC 301 and EDUC 302. Offered yearly.

333 - Teaching Social Studies in Elementary School—3 S.H.

Quarter Course: 333.

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 classroom. Offered each semester. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

334 - Teaching Mathematics in the Elementary School—3 S.H.

Quarter Course: 334.

Teaching competencies such as guiding student inquiry, demonstrating mathematics 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 205, EDUC 301 and EDUC 302.

335 - Teaching of Science and Environmental Studies in Elementary School—3 S.H.

Quarter Course: 335.

Study and guided application of current materials and methods designed for science and environmental education. Theoretical background and practical skills necessary for both process and content curricula are developed through simulated experiences involving individual and group work. Prerequisites: EDUC 205, EDUC 301 and EDUC 302. Offered each semester.

352 - Integrating Microcomputers into the Classroom—3 S.H.

Quarter Course: 352.

Designed for teacher education students to meet technology outcomes and to use instructional media effectively. Prerequisites: EDUC 205, EDUC 301 and EDUC 302. Offered on demand.

410 - Foundations of Early Childhood Education—2 S.H.

Quarter Course: 410G.

History, theory, and trends and contemporary issues in early childhood education. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

413 - Development in Infancy—3 S.H.

Quarter Course: 413G.

Genetics, prenatal development, birth, and physical, social, emotional and cognitive development in the first three years. Methods for working with infants and toddlers and observations. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

414 - The Developing Child in the Social World—4 S.H.

Quarter Course: 414G.

Explores the physical, cognitive and social development of young children from 2 to 8 years old. Parent-child, home-school, family-community relationships are examined. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

416 - Early Childhood Education I—4 S.H.

Quarter Course: 416G.

Planning the curriculum and developing strategies for teaching young children in early childhood settings. Includes a practicum experience. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

417 - Early Childhood Education II—3 S.H.

Quarter Course: 417G.

Introduction to philosophies, goals, teaching strategies and content of programs for young children with emphasis on the

kindergarten and primary years. Includes observations in school settings. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

418 - Pre-Kindergarten Practicum—1 S.H.

Quarter Course: 418.

Supervised observation and participation in classroom activities related to pre-kindergarten programs. P/NC only for undergraduates.

422 - Socialization of the Young Child—2 S.H.

Quarter Course: 422.

Examines the child in the family, parent-child relations, home-school relations and the social issues that impact on the family. Offered yearly. Grade only.

423 - Young Children with Special Needs—3 S.H.

Quarter Course: 423G.

Prepares early childhood teachers to meet the special needs of young children with disabilities and/or developmental lags. Includes a practicum and case study. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

424 - Organization and Administration of Early Childhood Education Programs—3 S.H.

Quarter Course: 424G.

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. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

427 - Development and Remediation of Reading—3 S.H.

Quarter Course: 427G.

Development of reading comprehension, diagnosis and remediation of reading difficulties focused on middle school learners. Prerequisites: EDUC 205, EDUC 301, EDUC 302 and EDUC 306. Note: This course meets a middle school licensure requirement for Secondary Education majors.

429 - Secondary Reading and Teaching Strategies—3 S.H.

Quarter Course: 429G.

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 205, EDUC 301 and EDUC 302. Offered each semester.

433 - Materials and Methods in Environmental Education—2 S.H.

Quarter Course: 433G.

Curriculum materials relating to the broad topic of human impact upon the environment; group work, field trips, consultants and practica. Prerequisites: EDUC 301 and 302 for undergraduate or graduate standing. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

434 - Remedial Mathematics Methods—3 S.H.

Quarter Course: 434G.

Diagnostic and remediation techniques to facilitate acquisition of basic mathematics skills. Prerequisite: EDUC 334 or instructor's permission. Offered yearly.

439 - Introduction to Early Childhood Family Education—1 S.H.

Quarter Course: 439G.

This course introduces a study of major components considered essential to the development of effective educators of parents and their families. Includes observation of parent and family support groups. Offered yearly. Grade only.

440 - Practicum in Early Childhood/Family Educator-Parent Educator—3 S.H.

Quarter Course: 440G.

A supervised experience in adult education with parents of young children. Students develop curriculum, identify resources and practice skills with designated parent education groups. Offered each semester. P/NC. Prerequisite: completion of all licensure coursework.

441 - Parent Education: Curriculum and Methods—3 S.H.

Quarter Course: 441G.

This course prepares teachers to obtain the skills and basic understanding needed to become an effective parent educator. Students select materials, plan and develop creative curriculum, and utilize appropriate strategies in facilitating parent groups.

Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

442 - The Adult Learner—3 S.H.

Quarter Course: 442G.

This course focuses on the characteristics and development of adult learners. Offered yearly. Grade only.

443 - Facilitating Parent Education Groups—3 S.H.

Quarter Course: 443G.

This course is designed to give group facilitation skills to parent educators. Prerequisites: non-education majors: PER 204, EDUC 301 and EDUC 308. Education majors: EDUC 301. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301 and EDUC 302.

444 - Practicum in Early Childhood/Family Education-Family Educator—3 S.H.

Quarter Course: 444G.

A supervised practicum in family education with both parents and their prekindergarten children. Offered each semester. P/NC. Prerequisite: completion of all licensure coursework.

450 - Comparative Education—3 S.H.

Quarter Course: 450G.

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.

Quarter Course: 459G.

Designed to familiarize teacher education majors with school organization patterns, legal responsibilities, philosophies of education, professional organizations, and related topics prior to student teaching. Offered each semester. Prerequisites: EDUC 205, EDUC 301, EDUC 302 and Junior or Senior standing.

460 - Student Teaching- Elementary School—10 S.H.

Quarter Course: 460.

Teaching in the senior year by students in the elementary curriculum. Ten weeks of student teaching on a full-day basis in an elementary school. Offered each semester. P/NC only.

461 - Student Teaching -Kindergarten—5 S.H.

Quarter Course: 461.

Responsibilities for planning and conducting kindergarten activities under supervision. Offered each semester. P/NC only.

464 - Student Teaching-Middle School—10 S.H.

Quarter Course: 464.

Teaching in the junior or senior year by students in the secondary curriculum. Ten weeks of student teaching on a full-day basis in a senior high school. Offered each Semester. P/NC only.

465 - Student Teaching-Senior High School—10 S.H.

Quarter Course: 465.

Teaching in the senior year by students in the secondary curriculum. Ten weeks of student teaching on a full-day basis in a senior high school. Offered each semester. P/NC only.

467 - Student Teaching-Pre-Kindergarten Programs—3 S.H.

Quarter Course: 467.

Supervised teaching in a pre-kindergarten program. Offered each semester. P/NC only.

469 - Middle School Philosophy, Organization and Interdisciplinary Planning—3 S.H.

Quarter Course: 469.

The major focus of this course is the middle school concept including its philosophy, organization, and methods of interdisciplinary planning. The major objective of this course is to give future middle school teachers a background in the components of the middle school movement and instructional strategies appropriate for middle level learners. This course is designed for people who seek middle school licensure. Offered yearly. Grade only. Prerequisites: EDUC 205, EDUC 301, EDUC 302 and EDUC 306.

470 - Advanced Practicum in Middle School—5 S.H.

Quarter Course: 470.

A supervised practicum in middle level education at a middle school site. Prerequisites: See Education Department regarding prerequisites. Offered yearly.

477 - Education of the Gifted—2 S.H.

Quarter Course: 477G.

Study of the gifted learner and methods and strategies that the classroom teacher can employ. Offered on demand.

483 - Curriculum, Methods, and Resources in Multicultural Global Education—3 S.H.

Quarter Course: 483.

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, socio-economic levels, religion, age, ethics and exceptionality. The social reconstructionist approach is infused to provide demonstrations of transforming teaching for equity and justice.

486 - Practicum in Gifted Education—3 S.H.

Quarter Course: 486.

Practical experience in applying concepts and strategies in teaching gifted elementary pupils. Prerequisite: EDUC 447-577. Offered on demand.

490 - Individual Problem in Education—1-3 S.H.

Quarter Course: 490G.

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. P/NC only for undergraduates. Prerequisites: major advisor's permission; completion of the Common Professional Sequence, and for Elementary majors, completion of the Professional Education Sequence. May be repeated to a total of 4 credits.

499 - Workshops and Seminar—1-3 S.H.

Quarter Course: 499G.

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.

ENGINEERING

Stark Hall, Room 203, (507) 457-5685
Parsi (Chairperson), Abdel-Magid, Dennehy, Grami, Snesrud

FACULTY

Beckry Abdel-Magid, Associate Professor; B.S., University of Khartoum; M.S., Ph.D., University of Wisconsin-Madison; 1990 -

Keith Dennehy, Professor; B.S., Rensselaer Polytechnic Institute; M.S., Youngstown State University; Ph.D. Rensselaer Polytechnic Institute; 1990 -

Maryam Eslamloo-Grami, Associate Professor; B.S. Shiraz University, Iran; M.S. Shiraz University, Iran; Ph.D. University of California-Davis, 1993 -

Fariborz Parsi, Associate Professor; B.S., M.S., Ph.D., University of South Carolina, Columbia; 1991 -

Myron Snesrud, Associate Professor; B.S.M.E., Iowa State University of Science and Technology; M.S.M.E., University of Minnesota-Twin Cities; 1987 -

The Department of Engineering, located within the Miller Brothers School of Engineering, offers the Bachelor of Science degree in Composite Materials Engineering. Composites represent a new group of manufactured materials. These lightweight materials with 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 demand will be great for people educated in the engineering of composite materials.

The Composite Materials Engineering Program at WSU 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 enter the composites industry directly into 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 Composites Material Engineering 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.

High School Preparation

Recommended high school preparation includes 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 a student will complete the degree requirements in four years.

Admission to the Program

Admission to the Composite Materials Engineering Major will be considered after completing 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. Admission to the Composite Materials Engineering Major is selective and is determined by the Engineering Admissions Committee. To be considered for admission, the applicant 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. These courses can be taken at WSU or transferred from other institutions. Courses with grades below "C" or courses with P/NC will not be accepted in transfer. Students will not be allowed to enroll in upper division 300- or 400-level engineering courses until either admitted into the major or by obtaining special permission from the Department of Engineering major advisor.

Probation Policy

Students who have been admitted into the major will be placed on probation if their GPA in the preceding semester 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 were 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.

General Education Requirements

The general education component of the Bachelor of Science in Composite Materials Engineering degree requires both breadth and depth in the course selection. Breadth is achieved by requiring two courses (7 semester hours) in Basic Skills and 15 s.h. (at least 5 courses) from the areas of Humanities, Social Sciences and Different Culture. Depth is achieved by requiring that two courses be taken from the same department in two of the three areas. In the third area, students may take any general education course approved for that area (see General Education Requirements).

I. BASIC SKILLS (7 s.h.)

- ENG 111 College Reading & Writing (4)
- CMST 191 Fundamentals of Speech Communication (3)

II. HUMANITIES (3-6 s.h.)

The courses can be taken from the departments listed in the HUMANITIES section under the General Education Requirements. However, the following courses will not be considered:

- THAD 001 Theatre Activities
- CMST 196 Fundamentals of Interviewing
- LANG 200 Exploratory Foreign Language

III. SOCIAL SCIENCES (3-6 s.h.)

The courses can be taken from the departments listed in the SOCIAL SCIENCES section under the General Education Requirements.

IV. DIFFERENT CULTURE (3-6 s.h.)

The courses can be taken from the departments listed in the DIFFERENT CULTURE section under the General Education Requirements. However, the following courses will not be considered:

English

- 105 Non-Native Speakers/Listening
- 106 Non-Native Speakers/Reading & Writing I
- 107 Non-Native Speakers/Reading & Writing II

IMPORTANT NOTE:

Upon enrollment at WSU, all courses taken for credit toward the Bachelor of Science degree in Composite Materials Engineering must be taken for a letter grade. The one exception is the Foreign Language courses where a grade of "P" (passing) has been obtained either through an exam or successful completion of upper-level foreign language courses.

Students receiving a waiver from certain general education courses must take an equal number of credit hours of elective 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.)

- 231 Fortran for Engineering & Science (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 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)
- 370 Heat & Mass Transfer (3)
- 380 Composite Characterization Techniques (3)
- 390 Composites Manufacturing (3)

- 451 Transport Phenomena Laboratory (1)
- 452 Mechanical Characterization Laboratory (2)
- 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 & Characteristics 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)
 General Education (3)
Spring (17 s.h.)
 CHEM 213 Principles of Chemistry II (4)
 ENGR 182 Engineering Graphics & 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 231 Fortran for Engineering & Science (3)
Spring (15-16* s.h.)**
 ** CHEM 352 Principles of Organic Chemistry II (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 Engineering Statistics (3)
 General Education (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)
 General Education (3)

SENIOR YEAR —

- Fall (14**-15* s.h.)**
 ENGR 380 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)
 General Education (3)
Spring (13 s.h.)
 ENGR 480 Design Project II (3)
 ENGR 491B Engineering Seminar (1)
 Technical Elective (3)
 Technical Elective (3)
 General Education (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.

Quarter Course: New Course.

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.

182 - Engineering Graphics—2 S.H.

Quarter Course: 205.

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.

Quarter Course: 225.

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.

Quarter Course: 360.

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.

Quarter Course: 350.

Kinematics: translation, rotational, plane motion and relative motion of particles and rigidbodies. 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.

Quarter Course: 316.

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.

Quarter Course: New Course.

A lecture-laboratory course. Determination of various mechanical, microscopic and physical properties of metallic and composite materials. Construction of a binary phase diagram. Heat treatment and recrystallization. Corrosion and electrochemical properties of materials. Prerequisites: credit or concurrent registration in ENGR 284. Grade only.

300 - Thermodynamics—3 S.H.

Quarter Course: 345 and 346.

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 223. Grade only.

350 - Fluid Mechanics—3 S.H.

Quarter Course: 375.

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.

Quarter Course: 392.

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.

Quarter Course: 376.

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.

380 - Composite Characterization Techniques—3 S.H.

Quarter Course: 484.

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.

382 - Topics in Composite Materials Engineering M—2 S.H.

Quarter Course: New Course.

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.

Quarter Course: 415 and 416.

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.

Quarter Course: New Course.

Varying topics in composite materials engineering for chemical option students. Includes micromechanics 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.

Quarter Course: 465.

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.

Quarter Course: 391.

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.

Quarter Course: 445.

Open systems concepts. Manufacturing systems as open systems. Manufacturing system design including information flow and computer networks, product design and manufacturing, and manufacturing equipment and automation. Computer software is used to simulate system/environment interaction. Prerequisite: ENGR 390. Grade only. Offered a minimum of once every two years.

430 - Rheology—3 S.H.

Quarter Course: 475.

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.

Quarter Course: 482.

Micromechanics 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.

Quarter Course: 377.

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.

Quarter Course: 483.

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.

Quarter Course: 460.

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, isoparametric 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 231. Grade only. Offered a minimum of once every two years.

475/480 - Design Project I/II—3 S.H. (each)

Quarter Course: 447/448.

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.

Quarter Course: 485.

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.

491 A/B Engineering Seminar—1 S.H.

Quarter Course: 499 A/B.

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.

Quarter Course: 495.

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

Robinson (Chairperson), Bennett, Carducci, Cowgill, DeGrazia, Dornier, Eddy, Forsythe, Gadow, Galbus, Grawe, G. Johnson, P. Johnson, Lund, Meeker, A. Nichols, J. Nichols, Shi

FACULTY

Sandra Bennett, Professor; B.A., Brigham-Young University; M.A., Ph.D., University of Utah; 1976-

Jane Shook Carducci, Professor; B.A., Colorado College, Colorado Springs; M.A., Ph.D., University of Nevada; 1992 -

Bruce Kent Cowgill, Professor; B.S., Midland College; M.A., Ph.D., University of Nebraska; 1970 -

Emilio DeGrazia, Professor; B.A., Albion College; M.A., Ph.D., Ohio State University; 1969 -

Marjorie Dornier, Professor; B.A., St. Norbert College; M.A., Marquette University; Ph.D., Purdue University; 1971 -

Gary Eddy, Associate Professor; B.A., University of Texas-El Paso; M.F.A., University of Arizona; Ph.D., State

University of New York-Binghamton; 1988 -

Ruth Forsythe, Associate Professor and Director of International Studies; B.A., St. Olaf College; M.A., Ph.D.,

University of Minnesota-Twin Cities; 1977 -

Donald Gadow, Assistant Professor; B.S., Mankato State University; M.S., St. Cloud State University; 1986 -

Carol Galbus, Assistant Professor; B.S., Edgewood College, (Wisconsin); M.A.T., St. Mary's College of Minnesota; 1986 -

Paul H. Grawe, Professor; B.A., Carleton College; M.A., Ph.D., Northwestern University; 1968 -

Goldie Johnson, Assistant Professor; B.S., M.S., University of Wisconsin-Superior; 1988 -

J. Paul Johnson, Assistant Professor; B.S., Valley City State University; M.A., University of North Dakota; 1987 -

Orval A. Lund, Jr., Professor; B.A., Moorhead State University; M.A., University of Arizona; M.F.A., Vermont College; 1968 -

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.S., Ph.D., University of Washington; 1981 -

James W. Nichols, Professor; B.A., University of Missouri-Columbia; M.A., University of Birmingham (United Kingdom); Ph.D., University of Washington; 1968 -

David E. Robinson, Professor; B.A., Hamilton College; M.A., Ph.D., Duke University; 1971 -

Huifen Shi, Assistant Professor; B.A., Shanghai International Studies University; M.A., Ph.D., Indiana University of Pennsylvania; 1995 -

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.

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 201 is a prerequisite to all English courses numbered 200 or above except for ENG 210, ENG 223, ENG 224 and ENG 251.

Honors Program

The English Department offers an English Honors Program. For details about the program, see the departmental secretary in Minne 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 201, ENG 210 and ENG 402.

Prerequisites

Prerequisites to all major and minor programs in English: ENG 111 and ENG 201.

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 121, ENG 125, ENG 131, ENG 223, ENG 224, ENG 251 and H140.

B.A. MAJOR - ENGLISH

49 s.h. (No Minor Required)

REQUIRED COURSES (34 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3) OR
- 310 Story Writing (3) OR
- 312 Poetry Writing (3) OR
- 314 Non-fiction Prose Writing (3)
- 223 Classical Mythology (3) OR
- 224 Bible as Literature (3)
- 405 Chaucer (3)
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 418 Stylistics (3) OR
- 420 Introduction to Language Study (3)
- 406 Studies in 16th-Century Literature (3) OR
- 407 Studies in 17th-Century Literature (3) OR
- 408 Studies in 18th-Century Literature (3)
- 435 Literature of the Romantic Era (3) OR
- 437 Literature of the Victorian Era (3)
- 447 Modern Literary Criticism (3)
- 351 American Literature I (3) OR
- 352 American Literature II (3) OR
- 353 American Literature III (3)
- 424 Modern Drama (3) OR
- 425 Modern British & American Prose (3) OR
- 432 European & Non-Western Literature (3) OR
- 450 Modern British & American Poetry (3)
- 490 Portfolio (1)

ELECTIVES (15 s.h.)

Electives must be English courses at the 200 level or above including at least 9 s.h. in courses numbered 300 or above.

B.A. MAJOR - ENGLISH: WRITING OPTION

49 s.h. (No Minor Required)

REQUIRED COURSES (34 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3)
- 224 Bible as Literature (3)
- 310 Story Writing (3)
- 312 Poetry Writing (3)
- 314 Non-fiction Prose Writing (3)
- 418 Stylistics (3)
- 439 Technical Writing (3)
- 449 Scientific Writing (3) OR
- 410 Advanced Creative Writing: Prose (3) OR
- 412 Advanced Creative Writing: Poetry (3)
- 405 Chaucer (3) OR
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 425 Modern British & American Prose (3) OR
- 450 Modern British & American Poetry (3)
- 490 Portfolio (1)

ELECTIVES (15 s.h.)

Electives must be English courses at the 200 level or above including at least 9 s.h. in 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 (19 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3) OR
- 310 Story Writing (3) OR
- 312 Poetry Writing (3) OR
- 314 Non-fiction Prose Writing (3)
- 223 Classical Mythology (3) OR
- 224 Bible as Literature (3)
- 405 Chaucer (3) OR
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 418 Stylistics (3) OR
- 420 Introduction to Language Study (3)
- 447 Literary Criticism (3)
- 490 Portfolio

ELECTIVES (18 s.h.)

Electives must be English courses at the 200 level or above including at least 9 s.h. in courses numbered 300 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 (28 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3)
- 224 Bible as Literature (3)
- 310 Story Writing (3) OR
- 312 Poetry Writing (3) OR
- 314 Non-fiction Prose Writing (3)
- 418 Stylistics (3)
- 439 Technical Writing (3)
- 449 Scientific Writing (3) OR
- 410 Advanced Creative Writing: Prose (3) OR
- 412 Advanced Creative Writing: Poetry (3)
- 405 Chaucer (3) OR
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 425 Modern British & American Prose (3) OR
- 450 Modern British & American Poetry (3)
- 490 Portfolio (1)

ELECTIVES (9 s.h.)

Electives must be English courses at the 200 level or above including at least 9 s.h. in courses numbered 300 or above.

B.S. MAJOR - ENGLISH (Teaching)

48 s.h. (No Minor Required)

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.

REQUIRED COURSES (45 s.h.)

English (40 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3)
- 402 Teaching Secondary English (3)
- 405 Chaucer (3)
- 418 Stylistics (3)
- 420 Introduction to Language Study (3)
- 432 European and Non-Western Literature (3) OR
- 447 Modern Literary Criticism (3)
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 406 Studies in 16th-Century Literature (3) OR
- 407 Studies in 17th-Century Literature (3) OR
- 408 Studies in 18th-Century Literature (3)
- 435 Literature of the Romantic Era (3) OR
- 437 Literature of the Victorian Era (3)
- 351 American Literature I (3) OR
- 352 American Literature II (3) OR
- 353 American Literature III (3)
- 424 Modern Drama (3) OR
- 425 Modern British & American Prose (3) OR
- 450 Modern British & American Poetry (3)
- 490 Portfolio (1)

Communication and Theatre Arts (5 s.h.)

- THAD 141 Oral Interpretation (2)
- CMST 161 Public Speaking (3)

ELECTIVES (3 s.h.)

Electives must be English courses at the 200 level or above.

B.S. MAJOR - ENGLISH: WRITING OPTION(Teaching)

48 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.

REQUIRED COURSES (42 s.h.)

English (37 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3)
- 310 Story Writing (3) OR
- 312 Poetry Writing (3) OR
- 314 Non-fiction Prose Writing (3)
- 418 Stylistics (3)
- 410 Advanced Creative Writing: Prose (3) OR
- 412 Advanced Creative Writing: Poetry (3) OR
- 439 Technical Writing (3) OR
- 449 Scientific Writing (3)
- 351 American Literature I (3) OR
- 352 American Literature II (3) OR
- 353 American Literature III (3)
- 402 Teaching Secondary English (3)
- 405 Chaucer (3)
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 420 Introduction to Language Study (3)
- 424 Modern Drama (3) OR
- 425 Modern British & American Prose (3) OR
- 450 Modern British & American Poetry (3)
- 432 European & Non-Western Literature (3)
- 490 Portfolio (1)

Communication & Theatre Arts (5 s.h.)

- THAD 141 Oral Interpretation (2)
- CMST 161 Public Speaking (3)

ELECTIVES (6 s.h.)

Electives must be English courses at the 200 level or above.

B.A. MINOR - ENGLISH

24 s.h.

REQUIRED COURSES (18 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3)
- 310 Story Writing (3) OR
- 312 Poetry Writing (3) OR
- 314 Non-fiction Prose Writing (3)
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 435 Literature of the Romantic Era (3) OR
- 437 Literature of the Victorian Era (3)
- 351 American Literature I (3) OR
- 352 American Literature II (3) OR
- 353 American Literature III (3)

ELECTIVES (6 s.h.)

Electives must be chosen from ENG 223, ENG 224 or any English course numbered 300 or above.

B.S. MINOR - ENGLISH (Teaching)

24 s.h.

REQUIRED COURSES (24 s.h.)

- 201 Writing about Literature (3)
- 210 Advanced Expository Writing (3)
- 402 Teaching Secondary English (3)
- 418 Stylistics (3)
- 420 Introduction to Language Studies (3)
- 432 European and Non-Western Literature (3)
- 414 Shakespeare: Comedies & Histories (3) OR
- 417 Shakespeare: Tragedies (3)
- 425 Modern British & American Prose (3) OR
- 450 Modern British & American Poetry (3) OR
- 353 American Literature III (3)

B.A. MINOR - ENGLISH: CREATIVE WRITING

24 s.h.

REQUIRED COURSES (18 s.h.)

- 201 Writing about Literature (3)
- 310 Story Writing (3)
- 312 Poetry Writing (3)
- 314 Non-Fiction Prose Writing (3)
- 410 Advanced Creative Writing: Prose (3) OR
- 412 Advanced Creative Writing: Poetry (3)
- 447 Modern Literary Criticism (3)

ELECTIVES (6 s.h.)

Select two courses from among the following:

- 210 Advanced Expository Writing (3)
- 418 Stylistics (3)
- 425 Modern British & American Prose (3) OR
- 450 Modern British & American Poetry (3) OR
- 399 Internship (3)

B.A. MINOR - ENGLISH: WRITING

24 s.h.

REQUIRED COURSES (18 s.h.)

- 201 Writing about Literature (3)
 210 Advanced Expository Writing (3)
 314 Non-Fiction Prose Writing (3)
 418 Stylistics (3)
 439 Technical Writing (3)
 310 Story Writing (3) OR
 312 Poetry Writing (3) OR
 449 Scientific Writing (3)

ELECTIVES (6 s.h.)

Electives must be chosen from any English course numbered 300 or above.

English Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

099 - Introduction to College Writing—3 S.H.

Quarter Course: 108.

Intensive writing practice with special focus on the fundamentals of sentence and paragraph structure. Offered each semester. (Credit does not count toward graduation.)

105 - ESL: Listening to Academic Speech—3 S.H.

Quarter Course: 105.

Intensive practice in understanding lectures. Individualized pronunciation practice and grammar review. Designed to help students function successfully in university classrooms. Offered yearly.

106 - ESL: Academic Reading and Writing I—3 S.H.

Quarter Course: 106.

Intensive advanced drill in reading and writing English. Designed to prepare the non-native speaker for more English courses. Offered yearly.

107 - ESL: Academic Reading and Writing II—3 S.H.

Quarter Course: 107. A continuation of ENG 106 for students needing more extensive writing practice before advancing to ENG 111. Offered yearly.

111 - College Reading and Writing—4 S.H.

Quarter Course: 110 and 115 or 112.

Writing based on reading, interpreting, analyzing, critiquing and synthesizing texts; writing as a means of expression, learning and critical inquiry. Offered every semester.

120 - Introduction to Literature—3 S.H.

Quarter Course: 120.

Intensive reading in selected major forms and themes of literature. Offered every semester.

121 - Major British and American Fiction—3 S.H.

Quarter Course: 121.

An introduction to British and American fiction. Offered yearly.

125 - Masterpieces of Short Fiction—3 S.H.

Quarter Course: 125.

An introduction to the short story and the basic elements of fiction. Offered yearly.

131 - Masterpieces of American Literature—3 S.H.

Quarter Course: 131. An introduction to significant works by important American writers including various forms, and both the pre-20th century and modern periods. Offered yearly.

201 - Writing about Literature—3 S.H.

Quarter Course: 201.

A first course in literary criticism, introducing literary analysis, focusing upon the major genres: fiction, drama and poetry. Offered yearly. Prerequisite: ENG 111.

210 - Advanced Expository Writing—3 S.H.

Quarter Course: 210.

An advanced course in writing essays, stressing the development of a mature writing style and evaluative abilities. Offered every semester. Prerequisite: ENG 111.

223 - Classical Mythology—3 S.H.

Quarter Course: 223.

The great myths of Greece and Rome as they appear in classical literature. Offered yearly. Prerequisite: ENG 111.

224 - The Bible as Literature—3 S.H.

Quarter Course: 224.

The literary structure and genres of the Hebrew and Christian scriptures with special attention to the cultures that created them and major translations. Offered yearly. Prerequisite: ENG 111.

251 - Indian Literature—3 S.H.

Quarter Course: 151.

A study of the prose, poetry, ritual, artifacts and personal narratives of American Indians in a historical and literary context, and of the relationship of the literature to cultural forces. Offered yearly. Prerequisite: ENG 111.

310 - Story Writing—3 S.H.

Quarter Course: 310.

Study and practice in the techniques and forms of fiction writing. Offered yearly. Prerequisites: ENG 111 and ENG 201.

312 - Poetry Writing—3 S.H.

Quarter Course: 312.

Study and practice in the techniques and forms of poetry writing with emphasis on contemporary approaches. Offered yearly. Prerequisites: ENG 111 and ENG 201.

314 - Non-fiction Prose Writing—3 S.H.

Quarter Course: New Course.

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 201.

351 - American Literature I—3 S.H.

Quarter Course: 351.

American literature from its beginnings to 1900. Offered every two years. Prerequisites: ENG 111 and ENG 201.

352 - American Literature II—3 S.H.

Quarter Course: 352.

American literature from 1900 to 1945. Realism, Naturalism, Modernism. Offered every two years. Prerequisites: ENG 111 and ENG 201.

353 - American Literature III—3 S.H.

Quarter Course: New Course.

American literature from 1945 to the present. Specific attention to women and minority writers, focusing on multi-culturalism as a dominant force in late 20th-century literature. Offered every two years. Prerequisites: ENG 111 and ENG 201.

399 - Internship—1-12 S.H.

Quarter Course: 399.

Supervised, practical experience in a wide variety of fields. Must be arranged well in advance of the registration period. P/NC only.

402 - Teaching Secondary English—3 S.H.

Quarter Course: 402.

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 201.

405 - Chaucer—3 S.H.

Quarter Course: 405.

The Canterbury Tales. Offered yearly. Prerequisites: ENG 111 and ENG 201.

406 - Studies in 16th-Century Literature—3 S.H.

Quarter Course: 406.

Non-dramatic literature of the Tudor period. Offered every two years. Prerequisites: ENG 111 and ENG 201.

407 - Studies in 17th-Century Literature—3 S.H.

Quarter Course: 407.

Non-dramatic literature of the 17th century. Offered every two years. Prerequisites: ENG 111 and ENG 201.

408 - Studies in 18th-Century Literature—3 S.H.

Quarter Course: 445.

Drama, poetry and other prose of the 18th century. Offered every two years. Prerequisites: ENG 111 and ENG 201.

410 - Advanced Creative Writing: Prose—3 S.H.

Quarter Course: 410.

Opportunity to produce a significant body of new fiction or

creative nonfiction, 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 201 and ENG 310 or instructor's permission.

412 - Advanced Creative Writing: Poetry—3 S.H.

Quarter Course: 412.

Advanced study of selected poets and poetics; advanced practice in poetry writing. Offered every two years. Prerequisites: ENG 111, ENG 201 and ENG 312 or instructor's permission.

414 - Shakespeare: Comedies and Histories—3 S.H.

Quarter Course: 414.

Study of Shakespeare's major comedies and history plays. Offered yearly. Prerequisites: ENG 111 and ENG 201.

417 - Shakespeare: Tragedies—3 S.H.

Quarter Course: 417.

Study of Shakespeare's major tragedies. Offered yearly. Prerequisites: ENG 111 and ENG 201.

418 - Stylistics—3 S.H.

Quarter Course: 418.

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 201.

420 - Introduction to Language Study—3 S.H.

Quarter Course: 420.

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 201.

424 - Modern Drama—3 S.H.

Quarter Course: 424.

An examination of Western drama from Ibsen to the present with special attention to female and minority dramatists. Offered every two years. Prerequisites: ENG 111 and ENG 201.

425 - Modern British and American Prose—3 S.H.

Quarter Course: 425.

Selected works of fiction and nonfiction prose with special attention to characteristics of the period and genre. Offered every two years. Prerequisites: ENG 111 and ENG 201.

432 - European and Non-Western Literature—3 S.H.

Quarter Course: 432.

An introduction to representative masterpieces of European and non-Western literature. Offered yearly. Prerequisites: ENG 111 and ENG 201.

435 - Literature of the Romantic Era—3 S.H.

Quarter Course: 435.

The forms and themes of "Romantic" literary culture with an introduction to the cultural and historical backgrounds of the Romantic era; emphasis on British Romantic writers, but some

attention to Romanticism as a European, American and continuing cultural force. Offered every two years. Prerequisite: ENG 111 and ENG 201.

437 - Literature of the Victorian Era—3 S.H.

Quarter Course: 437.

An examination of the major writers of the Victorian era, including some novelists, with special emphasis on Victorian poetry. Offered every two years. Prerequisites: ENG 111 and ENG 201.

439 - Technical Writing—3 S.H.

Quarter Course: 439.

A course in the theory and practice of technical writing. Offered yearly. Prerequisites: ENG 111 (and ENG 201 for English majors and minors).

447 - Literary Criticism: Theory and Practice—3 S.H.

Quarter Course: 447.

A study of modern critical theories and their application in original critical evaluations. Offered yearly. Prerequisites: ENG 111 and ENG 201.

449 - Scientific Writing—3 S.H.

Quarter Course: 449.

A study of the issues raised by scientists in their writing, as well as the various forms of scientific prose; field/lab writing project. Offered every two years. Prerequisites: ENG 111 (and ENG 201 for English majors and minors).

450 - Modern British and American Poetry—3 S.H.

Quarter Course: 450.

Development of British and American poetry from the late 19th century to about 1950; close analytical reading of selected representative poems with some attention given to women and minority poets. Offered every two years. Prerequisites: ENG 111 and ENG 201.

461 - Independent Studies—1-3 S.H.

Quarter Course: 461.

Independent studies determined by the needs of the individual student. Offered by previous arrangement only. Offered every semester. Prerequisites: ENG 111 and ENG 201.

490 - Portfolio—1 S.H.

Quarter Course: New Course.

Students, in consultation with their advisor, compile (on department computer) the 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.

H140 - Approaches to Film—3 S.H.

Quarter Course: H140.

A general introduction to the arts of the film with focus on the non-technical aspects of the art. Offered every semester.

FOREIGN LANGUAGES

Somsen Hall, Room 319, (507) 457-5165

Tenenbaum (Chairperson), French-Spanish; Frisk, French-Spanish; Juan-Saura, Spanish-French; Mazur, German-French-Spanish; Ramos, German-Spanish.

FACULTY

Timothy Frisk, Assistant Professor; B.A., M.A., Ph.D., University of Minnesota-Twin Cities; 1990 -

Mercedes Juan-Saura, Assistant Professor; B.A., M.A., University of Montreal; Ph.D., University of Quebec; 1995 -

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 -

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 Teaching Degrees

The Foreign Language Department is authorized to recommend graduates for licensure in French, German and Spanish (major and minor). All coursework for the three degrees is available on campus. A course in the Methods of Teaching Modern Foreign Languages is offered at WSU every other year. 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 to begin with at WSU. Consult the Department chairperson for details.

Credit for Previous Language Study

By earning a grade of "A" or "B" in LANG 102, LANG 201, LANG 202, students may obtain credits retroactively for LANG 101 and/or sequel courses that were skipped (\$5 fee per credit). The grade will be a "P" or pass.

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 Global Studies Office in Minne 128 or consult the Study Abroad section in the catalog.

Pass/No Credit Courses

Elementary and intermediate courses (LANG 101, LANG 102, LANG 201 and LANG 202) may be taken for Pass/No Credit basis.

Grade Point Average Requirements

1. Students must have a cumulative GPA of 2.0 to graduate with a foreign language major or minor.
2. In addition, students must have a 2.0 average in the courses taken for the major or minor.
3. Students must have a cumulative GPA of 2.75 to be admitted to teacher education.

The B.A. and B.S. major in French and German and the B.A. major in Spanish require a minor because they consist of less than 47 semester hours. No minor is required for the Spanish B.S.

B.A. MAJOR - FRENCH

40 s.h. (Minor Required)

LANGUAGE SKILLS FOR MAJORS AND MINORS (16 s.h.)

- 101 Elementary French I (4)
- 102 Elementary French II (4)
- 201 Intermediate French I (4)
- 202 Intermediate French II (4)

NOTE: You may obtain credit for 101, 102, 201 or 202 by (1) enrolling in the highest level you qualify for and taking the course for a letter grade. If you receive a final grade of "A" or "B," you may apply for retroactive credit for the lower-level classes you did not enroll in. You will receive a "pass" after completing the appropriate forms and paying the fee; (2) testing out of any of these four courses after completing the appropriate forms, paying the fee and taking the final examination for the course for a letter grade or P/NC basis.

SPECIALIZED STUDY (24 s.h.)

- 204 Special Topics in French Literature (2)
- 205 Special Topics in French Culture (2)
- 301 French Composition (4)
- 303 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)

44 s.h. (Minor Required)

LANGUAGE SKILLS (16 s.h.)

(101, 102, 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.

SPECIALIZED STUDY (28 s.h.)

- 204 Special Topics in French Literature (2)
- 205 Special Topics in French Culture (2)
- 301 French Composition (4)
- 303 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

32 s.h.

LANGUAGE SKILLS (16 s.h.)

(101, 102, 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)
- 303 French Civilization and Culture (4)
- 402 French Literature I (3) OR
- 403 French Literature II (3)
- 404 French Literature III (3)

B.S. MINOR - FRENCH (Teaching)

36 s.h.

LANGUAGE SKILLS (16 s.h.)

(101, 102, 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.

SPECIALIZED STUDY (20 s.h.)

- 204 Special Topics in French Literature (2) OR
- 205 Special Topics in French Culture (2)
- 301 French Composition (4)
- 303 French Civilization and Culture (4)
- 402 French Literature I (3) OR
- 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. MAJOR - GERMAN

40 s.h. (Minor Required)

LANGUAGE SKILLS (16 s.h.)

- 101 Elementary German I (4)
- 102 Elementary German II (4)
- 201 Intermediate German I (4)
- 202 Intermediate German II (4)

NOTE: You may obtain credit for 101, 102, 201 or 202 by (1) enrolling in the highest level you qualify for and taking the course for a letter grade. If you receive a final grade of "A" or "B," you may apply for retroactive credit for the lower-level classes you did not enroll in. You will receive a "pass" after completing the appropriate forms and paying the fee; (2) testing out of any of these four courses after completing the appropriate forms, paying the fee and taking the final examination for the course for a letter or P/NC.

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 Composition and Conversation (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)

44 s.h. (Minor Required)

LANGUAGE SKILLS (16 s.h.)

(101, 102, 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.

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 Composition and Conversation (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

32 s.h.

LANGUAGE SKILLS (16 s.h.)

(101, 102, 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 Composition and Conversation (4)
- 303 German Culture and Civilization (4)
- 401 Early Medieval to Baroque Literature (3) OR
- 402 Eighteenth and Nineteenth Century Literature (3) OR
- 403 Twentieth Century Literature (3)

B.S. MINOR - GERMAN (Teaching)

36 s.h.

LANGUAGE SKILLS (16 s.h.)

(101, 102, 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.

SPECIALIZED STUDY (20 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 Composition and Conversation (4)
- 303 German Culture and Civilization (4)
- 401 Early Medieval to Baroque Literature (3) OR
- 402 Eighteenth and Nineteenth Century Literature (3) OR
- 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. MAJOR - SPANISH

43 s.h. (Minor Required)

LANGUAGE SKILLS (16 s.h.)

- 101 Elementary Spanish I (4)
- 102 Elementary Spanish II (4)
- 201 Intermediate Spanish I (4)
- 202 Intermediate Spanish II (4)

NOTE: You may obtain credit for 101, 102, 201 or 202 by (1) enrolling in the highest level you qualify for and taking the course for a letter grade. If you receive a final grade of "A" or "B," you may apply for retroactive credit for the lower-level classes you did not enroll in. You will receive a "pass" after completing the appropriate forms and paying the fee; (2) testing out of any of these four courses after completing the appropriate forms, paying the fee and taking the final examination for the course for a letter grade or P/NC.

SPECIALIZED STUDY (27 s.h.)

- 204 Special Topics in Hispanic Literature (2)
- 205 Special Topics in Hispanic Culture (2)
- 300 Spanish Linguistics (3)
- 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)

47 s.h. (No Minor Required)

LANGUAGE SKILLS (16 s.h.)

(101, 102, 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.

SPECIALIZED STUDY (31 s.h.)

- 204 Special Topics in Hispanic Literature (2)
- 205 Special Topics in Hispanic Culture (2)
- 300 Spanish Linguistics (3)
- 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

33 s.h.

LANGUAGE SKILLS (16 s.h.)

(101, 102, 201 and 202)

SPECIALIZED STUDY (17 s.h.)

- 204 Special Topics in Hispanic Literature (2) AND*
- 205 Special Topics in Hispanic Culture (2) OR
- 403 Latin American Literature (4)
- 300 Spanish Linguistics (3)
- 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)

* Choice of enrolling in 204 and 205 or enrolling in 403.

B.S. MINOR - SPANISH (Teaching)

37 s.h.

LANGUAGE SKILLS (16 s.h.)

(101, 102, 201 and 202) - 16 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 section of this catalog.

CORE REQUIREMENTS (21 s.h.)

- 204 Special Topics in Hispanic Literature (2) AND*
- 205 Special Topics in Hispanic Culture (2) OR
- 403 Latin American Literature (4)
- 300 Spanish Linguistics (3)
- 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)
- 405 Methods of Teaching a Modern Foreign Language (4)

* Choice of enrolling in 204 and 205 or enrolling in 403.

See Education Department listings for Education Sequence and Student Teaching.

Foreign Languages Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicum. The P/NC option is available to non-majors unless otherwise noted.

GENERAL

405 - Methods of Teaching a Modern Foreign Language—4 S.H.
Quarter Course: 430.

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: LANG 202 or equivalent. Offered every two years.

FRENCH

101 - Elementary French I—4 S.H.

Quarter Course: 110 and 111.

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.

Quarter Course: 111 and 112.

Continuation of 101. Prerequisites: 101 or 1-2 years of high school French or equivalent. Offered yearly.

201 - Intermediate French I—4 S.H.

Quarter Course: 213 and 214.

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.

Quarter Course: 214 and 215.

Continuation of LANG 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.

Quarter Course: 324.

Directed readings of French contemporary writers in translation. Focusing particularly on African writers and French writers outside of France (Canada and Antilles). Prerequisite: 202 or equivalent when offered in French for majors and minors. No prerequisite when the course and text are taught in English translation. Please consult instructor. Offered every two years.

205 - Special Topics in French Culture—2 S.H.

Quarter Course: 303.

Study of contemporary issues in the French media, particularly cinema. This course is taught in English. Offered every two years.

301 - French Composition—4 S.H.

Quarter Course: 332 and 333.

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.

Quarter Course: 322.

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.

Quarter Course: 420.

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.

Quarter Course: 425.

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 Pleiade are studied. Prerequisite: 202 or equivalent. Offered every two years.

403 - French Literature II—3 S.H.

Quarter Course: 426.

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.

Quarter Course: 427 and 428.

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

101 - Elementary German I—4 S.H.

Quarter Course: 110 and 111.

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.

Quarter Course: 111 and 112.

Continuation of 101. Prerequisite: 101 or 2 years of high school German or equivalent. Offered yearly.

201 - Intermediate German I—4 S.H.

Quarter Course: 213.

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.

Quarter Course: 214.

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.

Quarter Course: 450.

The course focuses on an individual author, a literary period/movement or a special literary category/genre. Prerequisite: 202 or equivalent when offered in German for majors and minors. No prerequisite when the course and texts are taught in English translation. Please consult instructor. Offered every two years.

205 - Special Topics: German Culture and Language—2 S.H.

Quarter Course: 335.

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.

Quarter Course: 320.

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 Composition and Conversation—4 S.H.

Quarter Course: 332 and 333.

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.

Quarter Course: 322 and 335.

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.

Quarter Course: 410 and 370.

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.

Quarter Course: 411.

A survey of representative works by major authors in various genres from the Enlightenment through Symbolism and Naturalism (late 19th 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.

403 - 20th- Century Literature—3 S.H.

Quarter Course: 325.

A survey of representative works by major authors in various genres from the turn of the 20th century to the present. 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.

SPANISH

101 - Elementary Spanish I—4 S.H.

Quarter Course: 110 and 111.

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.

Quarter Course: 111 and 112.

Continuation of 101. Prerequisite: 101 or equivalent. Offered yearly.

201 - Intermediate Spanish I—4 S.H.

Quarter Course: 213 and 214.

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.

Quarter Course: 214 and 215.

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.

Quarter Course: 435.

Directed readings in Hispanic literature. Prerequisite: 202 or equivalent when the course is taught in Spanish for majors and minors. No prerequisite when the course and texts are taught in English translation. Offered every two years.

205 - Special Topics in Hispanic Culture—2 S.H.

Quarter Course: 351.

Current events in the Hispanic media, the press, the cinema and television. Prerequisite: none. The course is taught in English. Offered every two years.

300 - Spanish Linguistics and Phonetics—3 S.H.

Quarter Course: 320.

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.

Quarter Course: 332 and 333.

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.

Quarter Course: 350.

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.

Quarter Course: 351.

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.

Quarter Course: 360 and 425.

The course is taught in Spanish. 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.

Quarter Course: 425 and 426.

The course is taught in Spanish. It covers Peninsular literature of the Age of Enlightenment, Romantic period, generation of 98, generation of 27, the literature of the Civil War and the post-Civil War as well as the contemporary literary production. Prerequisite: 202 or equivalent. Offered every two years.

403 - Latin American Literature—4 S.H.

Quarter Courses: 436. A panorama of Latin American literature from pre-colonial to contemporary literature. This course covers Pre-Hispanic writings: Nahuatl, maya, quechua, the early travel accounts from de New World (Los Cronistas), Colonial Literature, Neoclassicism, Romanticism, and the transition of the guagho Epic form the nineteenth to the twentieth century. Modernism: Poetry: Ruben Dario and Jose Marti. Criollismo. Post-Modernism Poetry. "Magic Realism." The "Boom" of Latin America narration: Gabriel Garcia Marquez, Carlos Fuentes, Cortazar, Vargas Llosaa, etc. The Theater. Essay writers. Prerequisite: 202 or equivalent. Offered every two years.

GEOGRAPHY

Minne Hall, Room 228, (507) 457-5429
Gerlach

FACULTY

Jerry Gerlach, Professor; B.A., M.A., University of Nebraska; Ph.D., University of Oklahoma; 1988 -

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, etc.

B.A. MINOR - GEOGRAPHY

24 s.h.

REQUIRED COURSES (12 s.h.)

- 11 Economic Geography (3)
- 212 Physical Geography (3)
- 213 Cultural Geography (3)
- 450 Cartography (3)

ELECTIVES (12 s.h.)

6 credits must be from courses 300-level or above. GEOG 110 does not apply to the minor.

NOTE: 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.

Geography Course Descriptions

All courses are offered on a Grade Only basis.

110 - World Regional Geography—3 S.H.

Quarter Course: 110.

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.

Quarter Course: 211.

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.

Quarter Course: 212.

An introduction to the significance and areal 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.

Quarter Course: 213.

An introduction to the significance and areal 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.

Quarter Course: 223.

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.

Quarter Course: 224. 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.

Quarter Course: 225.

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.

Quarter Course: 233.

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.

Quarter Course: 270.

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.

Quarter Course: 320.

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.

Quarter Course: 326.

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.

Quarter Course: 332.

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.

Quarter Course: 349.

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.

Quarter Course: 370.

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.

Quarter Course: 450.

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.

Quarter Course: 455G.

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's permission. Grade only. Offered every other year.

490 - Independent Reading in Geography—1-3 S.H.

Quarter Course: 490G.

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
Jannik (Chairperson), Donovan, Meyers, Summa

Visit the Geoscience Department's website at:
<http://www.winona.msus.edu/AcademicDeptsFolder/Geology/Default.html>

FACULTY

John F. Donovan, Professor; B.Sc., St. Francis Xavier University; M.S., University of Iowa; Ph.D., Cornell University; 1968 -

Nancy O. Jannik, Professor; 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 -

Catherine L. Summa, Assistant Professor; B.A., Wellesley College; Ph.D., Massachusetts Institute of Technology; 1996 -

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 humankind 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 students.

Professions in the geological sciences are ideal for those who combine curiosity about natural processes, scientific talent and a love of the outdoors. The Department of Geoscience at WSU 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 and physics. 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 M.S. 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 preparations for such a career, and interested students should plan to attain a Ph.D. degree. Earth Science teachers are needed in most regions of the U.S. according to national teacher-employment surveys. 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 programs, and most have received financial support. Currently, the competition for master's students is fierce, but support monies are available for qualified students. **If you are considering graduate studies, you must supplement your curriculum to include a full year of chemistry, physics and calculus.**

Degree Options

Option A: Geology. Prepares students for graduate study or employment in classic geologic subdisciplines including economic geology, petroleum exploration, structural geology, stratigraphy and sedimentology.

Option B: Applied Hydrogeology. Unique to undergraduate programs in this region, this 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.

Option C: Water Resources Management. A new option that 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 Teaching-Earth Science. The Department offers an Earth Science major designed for students who desire a secondary-school teaching career. The program will conform to Board of Teaching standards.

Pass/No Credit Courses

All courses in Geoscience that fulfill the General Education Requirements, and those used to fulfill requirements of majors and minors, must be taken for grade only.

B.S. MAJOR - GEOSCIENCE - OPTION A

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 GEO 480 or an upper-division elective.

REQUIRED COURSES (35-36 s.h.)

Geosciences (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.)

- * 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.)

- ENGR 205 Engineering Graphics (2) OR
- CS 130 Visual Basic (3)

English (3 s.h.)

- 439 Technical Writing (3) OR
- 449 Scientific Writing (3)

* Course may be used to satisfy certain General Education Requirements.

GEOSCIENCE ELECTIVES (9-12)

Select from the elective pool listing, except for Geosciences courses listed as requirements for major.

B.S. MAJOR - GEOSCIENCE - OPTION B: APPLIED HYDROGEOLOGY

67-70 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 GEO 480 or an upper-division elective.

REQUIRED COURSES (39 - 40 s.h.)

Geoscience (16 s.h.)

- 225 Environmental Geoscience (3)
- 240 Hydrogeology (4)

- 315 Surficial Processes and Soils (4)
- 420 Applied Hydrogeology (4)
- 480 Field & Analytical Methods II (1)

Chemistry (4 s.h.)

- * 212 Principles of Chemistry I (4)

Physics (4 s.h.)

- * 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)

- ENGR 205 Engineering Graphics (2) OR
- CS 130 Visual Basic (3)

English (3 s.h.)

- 439 Technical Writing (3) OR
- 449 Scientific Writing (3)

* Course may be used to satisfy General Education Requirements.

GEOSCIENCE ELECTIVES (5-7 s.h.)

Select from the elective pool listing, except for Geoscience courses listed as requirements for major.

**B.S. MAJOR - GEOSCIENCE -
OPTION C: WATER
RESOURCES MANAGEMENT**

59-60 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 GEO 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 & Life Sciences I (3)

English/Administrative Information Systems (3 s.h.)

- ENG 439 Technical Writing (3) OR
- ENG 449 Scientific Writing (3) OR
- AIS 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.)

- * 240 Philosophy of Science (3)

Economics (3 s.h.)

- 315 Environmental & Natural Resource Economics (3)

GEOSCIENCE ELECTIVES (2-3 s.h.)

Select from the elective pool listing, except for Geoscience courses listed as requirements for major.

**B.S. MAJOR - EARTH SCIENCE
(Teaching)**

69 s.h. (No Minor Required)

The Minnesota Board of Teaching (BOT) was in the process of changing the requirements for teaching licensure at the time that this catalog went to print. The Geoscience Department, in cooperation with other science departments and the College of Education, is developing a new BOT approvable program which will be implemented as soon as possible. Students should be aware that the program described below will be changing significantly in the near future, and they will need to work closely with their academic advisor to ensure that they will be able to graduate with a BOT-approved degree.

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.

REQUIRED COURSES (64 s.h.)

Geoscience (27 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)
- 230 Paleontology (3)

Mathematics (6 s.h.)

- 150, 155 Math for the Earth & Life Sciences I, II (3, 3)

Chemistry (8 s.h.)

- * 212, *213 Principles of Chemistry I, II (4, 4)

Physics (12 s.h.)

- * 201, 202 General Physics I, II (4, 4)
- 311 Science Teaching Methods (4)

Biology (8 s.h.)

- 241, 242 Principles of Biology I, II (4, 4)

Computer Skills (3)

- CS 130 Visual Basic (3)

* Course may be used to satisfy General Education Requirements.

GEOSCIENCE ELECTIVES (5 s.h.)

May be chosen from any departmental course offerings 200 level and above.

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 GEO 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

All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis.

100 - Minnesota's Rocks and Waters—3 S.H.

Quarter Course: 100.

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.

Quarter Course: 103.

An investigative exploration of significant geohazards impacting the earth with emphasis on volcanoes, earthquakes, landslides and other hillslope 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.

105 - Astronomy—3 or 4 S.H.

Quarter Course: 220.

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.

110 - Oceanography—3 or 4 S.H.

Quarter Course: 200.

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 yearly.

115 - Meteorology—4 S.H.

Quarter Course: 230.

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 yearly.

120 - Dynamic Earth—4 S.H.

Quarter Course: 101.

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.

Quarter Course: 102.

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: GEO 120 or equivalent. Offered yearly.

220 - Minerals and Rocks—4 S.H.

Quarter Course: 250 and 320.

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: GEO 120 or instructor's permission. Offered yearly.

225 - Environmental Geoscience—3 S.H.

Quarter Course: 325.

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: GEO 120 or instructor's permission. Offered alternate years.

230 - Paleontology—3 S.H.

Quarter Course: 350.

Evolution, classification, and geologic significance of major invertebrate and vertebrate groups. Lecture and laboratory. Required field trips. Prerequisite: GEO 130 or instructor's permission. Offered alternate years.

240 - Hydrogeology—4 S.H.

Quarter Course: 420.

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: GEO 130. Offered yearly.

280 - Field and Analytical Methods I—2 S.H.

Quarter Course: 480.

Basic geologic field techniques including sampling methods, rock identification, field descriptions and use of Brunton compass. Measurement and description of stratigraphic sections. Prerequisite: GEO 220. Offered yearly. Field trips required.

310 - Non-Renewable Natural Resources—3 S.H.

Quarter Course: 410.

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: GEO 220. Offered on demand.

315 - Surficial Processes and Soils—4 S.H.

Quarter Course: 315 and 330.

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: GEO 130. Offered alternate years.

320 - Optical Mineralogy and Petrology—4 S.H.

Quarter Course: 251, 320 and 321.

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: GEO 220. Offered alternate years.

330 - Structural Geology—4 S.H.

Quarter Course: 380.

Study of faulting, folding, mechanics of rock deformation and structural techniques. Principles of plate tectonics and mountain building. Lecture and laboratory. Prerequisite: GEO 220. Offered yearly.

340 - Sedimentology and Stratigraphy—4 S.H.

Quarter Course: 414 and 415.

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: GEO 220. Offered yearly.

370 - GIS and Imaging Techniques—3 S.H.

Quarter Course: 370.

Techniques of using aerial photographs, remote sensing, and GIS for geological applications. Prerequisite: GEO 220 and instructor's permission. Offered alternate years.

385 - Geology of North America—3 S.H.

Quarter Course: 385.

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: GEO 220. Offered on demand.

399 - Internship—1-3 S.H.

Quarter Course: 399.

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.

Quarter Course: 400.

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.

Quarter Course: 404.

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.

Quarter Course: 421 and 425.

Application of hydrologic principles to ground-water flow problems, aqueous geochemistry, and contaminant studies. Techniques of water-well development, aquifer tests, determina-

tion of ground-water chemistry. Use of computer models and other analytical tools. Lecture and laboratory. Prerequisite: GEO 240 and MATH 155. Offered alternate years.

430 - Chemistry and Physics of the Earth—3 S.H.

Quarter Course: 425 and 430.

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, GEO 330 and GEO 340. Offered alternate years.

440 - Basin Analysis and Tectonics—4 S.H.

Quarter Course: 321, 414 and 415.

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: GEO 340. Offered alternate years.

475 - Geoscience Seminar—1 S.H.

Quarter Course: 475. 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.

480 - Field and Analytical Methods II—1 S.H.

Quarter Course: 480.

Advanced geologic field techniques including mapping, correlation, and problem solving. Includes some laboratory sample preparation and analysis. Prerequisite: GEO 280 and instructor's permission. Offered alternate years.

GLOBAL STUDIES

Minne Hall, Room 128, (507) 457-5429

Forsythe (Director)

DIRECTOR

Ruth Forsythe, Professor, English; B.A., St. Olaf College; M.A., Ph.D., University of Minnesota-Twin Cities; 1977 -

The Global Studies Program is designed to address students' needs to prepare themselves for a world that is increasingly inter-related 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 international/cultural issues.

Functions of the Program

The Global Studies Program 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. Consult the Global Studies 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 Study 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 section of the catalog or make an appointment in the GSP Office.

Global Studies Office:

Students interested in any of these opportunities are encouraged to make an appointment with the GSP Director or stop by the GSP office for information. The GSP office is located in Minne 128.

Global Studies Minor:

The Global Studies Minor is offered by the Global Studies Program and provides students with a broad spectrum of courses that are inter-disciplinary and cross-cultural. Combining a Global Studies Minor with a major field of study allows students to leave WSU with solid preparation in a specific field, along with the knowledge and awareness of other cultures and global issues, that is increasingly needed in nearly all fields and careers.

B.A. MINOR - GLOBAL STUDIES

29-32 s.h.

Maximum credits required in either comparative or elective category. 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:

- CMST 381 Advanced Cross-Cultural Communication (3)
- SOC 340 Social Cultural Anthropology (3) OR
- SOC 411 Sociology of Religion (3)
- GEOG 110 World Regional Geography (3) OR
- GEOG 213 Cultural Geography (3)
- POLS 130 Introduction to International Relations (3) OR
- POLS 135 Comparative Political Systems (3)
- FIN 440 International Finance (3) OR
- ECON 404 International Economics (3) OR
- ECON 415 International Economic Development (3)
- MUS 114 World Music (3)
- EDUC 450 Comparative Education (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 proficiency evaluation—consult the Foreign Language Department. Languages currently offered at WSU are French, German and Spanish.

ELECTIVES (6-9 s.h.)

Students select from approved courses from a variety of departments (the list, which is available in the GSP Office, includes courses that take a global or area studies approach). Electives should be selected to complement the student's major or to focus on a global issue or an area studies specialization.

Global Studies Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

200 - Introduction to Global Studies—3 S.H.

Quarter Course: 200.

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, peacekeeping, etc.

350 - Cross-Cultural Field Experience—1-9 S.H.

Quarter Course: 350.

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 general education credit. Prerequisite: permission of the instructor and the GSP Director.

400 - Global Studies Seminar—3 S.H.

Quarter Course: 400.

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.

Quarter Course: 460.

Directed independent work on specific topics of interest to the student. The course topic, 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

Miller (Chairperson), Anderson, Fisher, Grimm, Kastello, Nelson, J. Wothke

FACULTY

Dawn Anderson, Associate Professor; B.A., University of Minnesota-Morris; M.S., Iowa State University; Ph.D., Ball State University, Muncie (IN); 1992 -

Amy Fisher, Instructor; B.A., Luther College; 1995 -

Gail Grimm, Associate 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.S., 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 -

Judith Wothke, Assistant Professor; B.S., M.S., Winona State University; 1992 -

Pre-Professional Sequences:

Pre-Professional Sequences are not degree programs (e.g. major or minor) at WSU. They are programs which are preparatory for a degree at another college or university. The Pre-Professional Sequence offered through the Health and Human Performance Department is the Pre-Physical Therapy Sequence.

SEE the Pre-Professional Sequences section for more information about the Pre-Physical Therapy Sequence. The programs in health provide students with discipline-specific knowledge, skill, practice and professional experiences via classroom instruction, laboratory experimentation, field experiences and student teaching or internship capstone experiences necessary for professional careers or advanced graduate studies.

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.

With the School and Community Health Education degree, there are three options: Non-Teaching, Teaching and Public Health Administration. Each degree has specific course requirements.

B.S. MAJOR - SCHOOL AND COMMUNITY HEALTH EDUCATION (Non-Teaching)

53 s.h. (No Minor Required)

NOTE: Students majoring in School & Community Health (Non-Teaching) must meet all requirements for graduation specified in the Academic Information section of this catalog.

REQUIRED COURSES 38 s.h.

HHP (30 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 for the Adult Learner (2)
- 410 Program Planning in Health Promotion (3)
- 430 Public Health (4)
- 433 Senior Health Seminar (1)
- 499 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, 403, 431, 490
- Marketing**
315, 330
- 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
- Statistics**
110

B.S. MAJOR - SCHOOL AND COMMUNITY HEALTH EDUCATION (Teaching)

44 s.h. (Minor Required)

NOTE: Teaching majors must take all courses in the Professional Education Sequence in addition to courses in the content area.

Students majoring in School & Community Health Education (Teaching) must have both a 2.75 overall GPA and a 2.5 GPA in the major to be admitted into the Professional Education Sequence for degree issuance.

Training and Development Minor is strongly recommended.

REQUIRED COURSES (30 s.h.)

HHP (22 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 for the Adult Learner (2)
- 410 Program Planning in Health Promotion (3)
- 430 Public Health (4)

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

Nursing

- 260

Physical Education & Recreation

- 214, 422

Political Science

- 340

Psychology

- 250, 298, 365

Sociology

- 212, 216, 350, 412, 434, 440, 450

Special Education

- 405

Statistics

- 110

PROFESSIONAL EDUCATION SEQUENCE

- 205 Exploring Teaching (3)
- 301 Development and Learning (4)
- 302 Classroom Management Clinical (2)
- 306 Instructional Planning & Assessment (3)
- 308 Human Relations & Student Diversity (3)
- 429 Secondary Reading & Teaching Strategies (3)
- 459 The Professional Educator (3)
- 460 - 464 - 465 Student Teaching (10)

B.S. MAJOR - SCHOOL AND COMMUNITY HEALTH/PUBLIC ADMINISTRATION OPTION

70 s.h. (No Minor Required)

REQUIRED COURSES 38 s.h.

HHP (30 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 for the Adult Learner (2)
- 410 Program Planning in Health Promotion (3)
- 430 Public Health (4)
- 433 Senior Health Seminar (1)
- 499 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, 403, 431, 490

Marketing

- 315, 330

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

Statistics

- 110

OPTION 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

70-74 s.h. (No Minor Required)

A student choosing to study Exercise Science may choose one of three options (Worksite Health Promotion, Cardiac Rehabilitation, and Athletic Training) within the Exercise Science Major. Each of these options leads to a Bachelor of Science degree. All three of the options within the Exercise Science Major allow for many career opportunities. One opportunity is to use the B.S. degree to gain admittance to similar graduate disciplines. (The addition of chemistry courses to the transcript is highly desirable). Another opportunity is to use the B.S. degree to gain placement in the rapidly expanding allied health workforce. The academic advisor of each option will provide you with more information pertaining to career opportunities.

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.

Practicums and Internships: These courses are designed to allow students to practice their major at an actual worksite. Practicum and internship worksites require liability insurance and current certification in CPR and first aid.

Pass/No Credit Courses

All Exercise Science majors must take all required courses for grade only.

Four-Year Guarantee

The Exercise Science Program offers a Four-Year Guarantee. You must declare your major as an entering first-year student, maintain a semester load of 16 credits each semester and not repeat any courses. This does not include internships. Other requirements are included in the Four-Year Guarantee. Please see the Department chairperson for more information.

Application Procedure

Students must complete an application to enter the Exercise Science Program. It is strongly recommended that the application process be completed during a student's sophomore year. Students who have completed BIO 211, BIO 212, STAT 110 or STAT 210, and ENG 110 with a 2.5 GPA may apply for admission to the Exercise Science Program.

Students in Cardiac Rehabilitation and/or Worksite Health Promotion must maintain a 2.5 GPA in the major. Athletic Training has a special application process and additional retention requirements.

REQUIRED COURSES (55 s.h.)

HHP (38 s.h.)

- 235 Professional Issues in Exercise Science (3)
- 280 Techniques of Fitness Programming (2)
- 291 Prevention & Care of Athletic Injuries (2)
- 340 Physiology of Exercise (4)
- 360 Nutrition for the Physically Active (3)
- 362 Practicum (3)
- 370 Kinesiology & Biomechanics (4)
- 380 Laboratory Methods in Exercise Science (3)
- 403-503 Epidemiology (3)
- 445 Medical Aspects of Exercise (3)
- 499 Internship (8)

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)
- 366 Pathophysiology (3)

Statistics(3 s.h.)

- * 110 Fundamentals of Statistics (3) OR
- 210 Statistics (3)

SUGGESTED ELECTIVES

- BIO 171 Medical Terminology A (1)
- BIO 172 Medical Terminology B (1)

CARDIAC REHABILITATION OPTION

15 s.h.

HHP (9 s.h.)

- 344 Electrocardiography (3)
- 385 Senior Seminar: Cardiopulmonary Rehabilitation (3)
- 420 Clinical Exercise Testing and Prescription (3)

Nursing (3 s.h.)

- 392 Cardiac Risk Prevention (3)

Counselor Education (3 s.h.)

- 432 Stress Management (3)

SUGGESTED ELECTIVES

- PSY 390 Abnormal Psychology
- SOC 434 Medical Sociology
- PSY 421 Cognitive Behavior Theory
- CHEM 209 General, Organic & Biochemistry II
- PHYS 201 General Physics I

ATHLETIC TRAINING OPTION

19 s.h.

A special application process is required to enter this program. You must contact the Athletic Training Program Director before acceptance into the clinical aspect and option courses is possible. In addition to coursework requirements, a minimum 1500 hours of experience in athletic training (as assigned by the Athletic Training Program Director) is required. Following completion of the clinical and academic requirements of the major, a student will be eligible for national certification from the National Athletic Trainers' Association (N.A.T.A.).

HHP (16 s.h.)

- 191 Introduction to Athletic Training (1)
- 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)

PER (3 s.h.)

- 345 Emergency Response for the Professional Rescuer (3)

WORKSITE HEALTH PROMOTION OPTION

17 s.h.

HHP (14 s.h.)

- 288 Health Perspectives (3)
- 354 Principles of Safety (2)
- 410 Program Planning (3)
- 420 Clinical Exercise Testing and Prescription (3)
- 493 Worksite Health Promotion (3)

Counselor Education (3 s.h.)

- 432 Stress Management (3)

Minor in Training and Development recommended.

HHP Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

HEALTH EDUCATION

204 - Personal & Community Health—3 S.H.

Quarter Course: 204.

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 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.

Quarter Course: 127.

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.

Quarter Course: 411 and 425.

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.

Quarter Course: 320.

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 Standards and the Minnesota state Graduation standards. Prerequisite: HHP 204. Offered each semester. Grade only.

326 - Educational Topics/Issues—2 S.H.

Quarter Course: 488.

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, and HHP 288. Offered yearly. Grade only.

328 - Behavioral Intervention for the Adult Learner—2 S.H.

Quarter Course: 428 and 425.

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, HHP 288 and instructor's permission. Offered yearly. Grade only.

354 - Principles of Safety Education—2 S.H.

Quarter Course: 354.

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, HHP 288 and PER 214. Offered on demand. Grade only.

403 - Epidemiology—3 S.H.

Quarter Course: New Course.

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: HHP 204, HHP 288, HHP 311, BIO 211 and BIO 212. Recommended prerequisite: STAT 110. For non-health majors: Instructor's permission required. Offered each semester. Grade only.

410 - Program Planning in Health Promotion—3 S.H.

Quarter Course: 325.

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 HHP 288. Offered each semester. Grade only.

430 - Public Health—4 S.H.

Quarter Course: 429 and 425.

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, HHP 288 and HHP 410. Recommended prerequisite: HHP 403 and STAT 110. Offered yearly. Grade only.

431 - Health Problems Workshop—1-3 S.H.

Quarter Course: 431.

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.

Quarter Course: 432.

In-depth study and research (senior paper) on a select health topic. Review of responsibilities and competencies for entry-level health educators, for Certified Health Education Specialist (CHES) credentialing 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, HHP 288, HHP 311, HHP 410, BIO 211 and BIO 212. Recommended prerequisites: HHP 403 and STAT 110. Senior standing. Offered yearly. Grade only.

490 - Independent Study in Health—1-3 S.H.

Quarter Course: 490.

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.

499 - Health Internship—10 S.H.

Quarter Course: 399.

Full-time supervised experience in a health agency or organization. Contact HHP Internship Supervisor for specific requirements. Prerequisites: Senior standing, all major coursework must be completed and approved by the Health faculty. Offered each semester. P/NC only.

EXERCISE SCIENCE**191 - Introduction to Athletic Training—1 S.H.**

Quarter Course: 191.

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.

Quarter Course: 205.

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.

Quarter Course: New Course.

Introductory course for professional socialization and role development, including communication and assessment skills. Ethical issues and professionalism also are discussed. Offered yearly. Grade only.

280 - Techniques of Fitness Programming —2 S.H.

Quarter Course: 349.

Practical experiences in the assessment of fitness components and performance variables, and the knowledge to design training programs for improvement of these factors. Prerequisite: HHP 340 or PER 251 for non-exercise science majors. Offered each semester.

291 - Prevention and Care of Athletic Injuries—2 S.H.

Quarter Course: 291.

Prevention, evaluation, treatment and taping of athletic injuries. Lectures, demonstrations and laboratory experience. Prerequisites: BIO 211 or PER 251 (for non-Physical Education/Exercise Science majors) and first aid certification for non-Physical Education/Exercise Science majors. Grade only.

340 - Physiology of Exercise—4 S.H.

Quarter Course: 340.

Major physiological systems of the human body and their response to acute and chronic exercise. Energy systems of exercise, physiological support systems, exercise prescription, and

methods of physical training are addressed. Prerequisites: BIO 212. Offered each semester. Grade only.

344 - Electrocardiography—3 S.H.

Quarter Course: 456.

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.

Quarter Course: New Course.

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 340. Offered each semester. Grade only.

362 - Practicum in Exercise Science—3 S.H.

Quarter Course: 362 and 459.

Service as an exercise leader/wellness educator in the University/community wellness program or as an exercise specialist in the Phase II and Phase III cardiac rehabilitation programs or as an athletic trainer in the WSU training room or approved affiliated sites. Responsibilities will include assessment, prescription, programming, supervision and risk intervention techniques. Prerequisites: HHP 380 and current certification in first aid and CPR or instructor's permission. Offered each semester. Grade only.

370 - Kinesiology and Biomechanics—4 S.H.

Quarter Course: 314 and 470.

Anatomical, physiological and mechanical fundamentals will be used systematically to analyze human motion to enhance performance, increase exercise adherence and limit injury.

Prerequisite: BIO 212. Offered each semester. Grade only.

380 - Laboratory Methods in Exercise Science—3 S.H.

Quarter Course: 458.

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 340 and STAT 110 or STAT 210. Offered each semester. Grade only.

385 - Senior Seminar: Cardiopulmonary Rehabilitation—3 S.H.

Quarter Course: New Course.

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.

391 - Injury Recognition of the Upper Body—3 S.H.

Quarter Course: 391.

Advanced course in the evaluation and recognition of athletic injuries from the lumbar spine upward. Lecture and lab.

Prerequisites: HHP 191, HHP 291 and HHP 370. Offered yearly. Grade only.

392 - Injury Recognition of the Lower Body—3 S.H.

Quarter Course: 392.

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.

Quarter Course: 393.

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: BIO 211 and BIO 212. Offered yearly.

420 - Clinical Exercise Testing and Prescription—3 S.H.

Quarter Course: 457.

Methods, procedures and techniques of functional and diagnostic exercise stress testing will be emphasized. 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 380. Grade only.

445 - Medical Aspects of Exercise—3 S.H.

Quarter Course: 451.

Selected topics regarding the science and medicine of sports and exercise participation. Areas to be covered include pharmacologic aspects, overtraining and overreaching, the effect of exercise on reproductive function, and exercise for special populations.

Offered each semester. Prerequisite: HHP 340. Grade only.

490 - Independent Study in Exercise Science—1-4 S.H.

Quarter Course: 490.

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.

Quarter Course: 394.

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.

Quarter Course: 492.

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 491. Offered yearly. Grade only.

493 - Worksite Health Promotion—3 S.H.

Quarter Course: New Course.

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.

499 - Internship on Worksite Health Promotion, Cardiac Rehabilitation or Athletic Training—8 S.H.

Quarter Course: 399.

The application of skill, knowledge and concepts necessary for planning, organizing and conducting corporate wellness, cardiac rehabilitation or athletic training programs through supervised on-site experience. Prerequisites: Senior standing, liability insurance, current certification in CPR and first aid, and instructor's permission. Offered each semester. P/NC only.

HISTORY

Minne Hall, Room 212, (507) 457-5400

Yard (Chairperson), S. Byman, M. Byman, Campbell, Hyman, Mishark, Paino, Schmidt, Sobiesk.

Chairperson's email: ayard@vax2.winona.msus.edu Department's email: histdept@vax2.winona.msus.edu

FACULTY

Marianna Byman, Assistant Professor; B.A., Baylor University; M.S., Winona State University; 1988 -

Seymour Byman, Professor; B.A., University of Illinois; M.A., Roosevelt University; Ph.D., Northwestern University, 1970 -

John Campbell, Assistant Professor; B.A., Wesleyan University; M.A., Ph.D., University of Minnesota-Twin Cities; 1996 -

Colette Hyman, Associate Professor; B.A., Brown University; M.A., Ph.D., University of Minnesota-Twin Cities; 1990 -
John W. Mishark, Jr., Professor; B.A., Wayne State University; M.A., University of California-Berkeley; Ph.D., University of Michigan; 1967 -

Tony Paino, Assistant 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-

Alexander Yard, Associate 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 in history 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.

The 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 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 production of 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.

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 **Paralegal Program** in this catalog.

Program Assessment

The History Department now requires all students enrolling in the History major program to participate in a program assessment initiative. Designed to measure the history major's effectiveness, the assessment plan uses student work to judge whether or not the history major is promoting the Department's educational goals. The assessment initiative, in other words, provides the Department the means to measure and improve the program's educational effectiveness; it is not another way to grade individual student performance. Students are expected to complete several brief written exercises when they declare History as their major, maintain a portfolio or file of examples of their coursework, and complete several exit exercises just before graduation. A Department committee assesses the program's effectiveness by examining how the quality of students' work changes over their time as a History Major. For more information concerning the assessment initiative, contact the History Department Office.

In the assessment plan, the Department declares its conviction that the major program should produce the following educational goals results or learning outcomes, divided into three broad categories:

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 on-going 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 judgements.
- Develop students' commitment to a life-long search for learning and truth.
- Promote among students a collaborative work and learning ethic.

Additional Requirements

Coursework below a grade of "C" in 300- and 400-level courses do 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 B.A. Major History, transfer students must complete at least 18 semester hours of WSU history course work 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. Minor History must complete at least 12 semester hours in WSU History coursework.

B.A. MAJOR - HISTORY

48 s.h. (No Minor Required)

REQUIRED COURSES (28 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)

Different Culture History Sequence (6 s.h.)

Any two of the following:

- 123 East Asian Civilization (3)
- 165 Latin American History (3)
- 170 African Civilization (3)
- 233 History of Mexico (3)

English (3 s.h.)

- 210 Advanced Expository Writing (3)

Other Required History Courses (7 s.h.)

- 298 Historical Research Methods and Historiography (3)
- 495 Senior Seminar (4)

ELECTIVES (20 s.h.)

History majors must take 20 s.h. in History electives at the 300 and 400 levels. Electives are subject to an advisor's approval. Students must take at least 3 s.h. in each of the three sequence areas — namely European, United States and Different Culture areas. The courses, 397 Topics in History and 499 Independent Readings in History, are counted in the sequence area the Department deems appropriate. 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) as electives in the History major program.

NOTE: Students interested in teaching history at the secondary level should refer to the program for secondary social studies teachers called B.S. Social Science/History (Teaching), which is described in the catalog section for interdisciplinary programs, and the Education Department's program for prospective secondary teachers.

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)

Different Culture History (3 s.h.)

Any one of the following:

- 123 East Asian Civilization (3)
- 165 Latin American History (3)
- 170 African Civilization (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. 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) as electives in the History minor program.

History Course Descriptions

All courses must be taken on a Grade Only basis.

120 - Western Civilization to 1500—3 S.H.

Quarter Course: 120.

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.

Quarter Course: 121.

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.

Quarter Course: 122.

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.

Quarter Course: 123.

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.

Quarter Course: 125.

The history of Greece from Homeric time of Plato to the Roman Republic. Grade only.

150 - United States History to 1865—3 S.H.

Quarter Courses: 230 and 231.

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 1865—3 S.H.

Quarter Courses: 232 and 231.

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 receives attention, as do the Cold War and post-Cold War developments. Grade only.

165 - Latin American History—3 S.H.

Quarter Course: 165.

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.

Quarter Course: 170.

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.

210 - American Military History—3 S.H.

Quarter Course: 135.

A survey of the military's role and American wars from the colonial period through the Vietnam and post-Vietnam eras. Grade only.

215 - Minnesota History—3 S.H.

Quarter Course: 215.

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.

233 - History of Mexico—3 S.H.

Quarter Course: 233.

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.

Quarter Course: 235.

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.

Quarter Course: 240.

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.

298 - Historical Research Methods and Historiography—3 S.H.

Quarter Course: 298.

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 historiographic traditions. Prerequisites: History Major or Minor standing or Social Science/History Major standing and ENG 111. Limited to 20 students. Grade only.

397 - Topics in History—1-3 S. H.

Quarter Course: 397.

In-depth study of current topics and concern in American society and the historical profession. Offered on demand. With different topics, can be repeated. Grade only.

495 - Senior Seminar—4 S.H.

Quarter Course: 490-491.

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 preregistration 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 standing and Senior standing or instructor's permission. Grade only.

**ADVANCED SEQUENCE IN
DIFFERENT CULTURE HISTORY****320 - North American Indian Civilization—3 S.H.**

Quarter Course: 320.

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. Offered alternate years.

341 - Modern Japan—3 S.H.

Quarter Course: 341.

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. Offered every other year.

461 - Latin American Social Revolution—3 S.H.

Quarter Course: 461G.

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.

Quarter Course: 469G.

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.

Quarter Courses: 316 and 317.

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. Offered yearly.

325 - American Diplomatic History—3 S.H.

Quarter Course: 325.

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.

365 - American Legal History—3 S.H.

Quarter Course: 365.

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. Offered yearly.

447 - The Vietnam War—3 S.H.

Quarter Course: 447.

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. Offered every other year.

476 - The American Revolution—3 S.H.

Quarter Course: 476.

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. Offered every other year.

477 - The Age of Jackson—3 S.H.

Quarter Course: 478.

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. Offered as needed.

479 - The Civil War and Reconstruction—3 S.H.

Quarter Course: 479G.

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. Offered as needed.

480 - Gilded Age America (1877-1900)—3 S.H.

Quarter Course: 480.

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. Offered every other year.

481 - American Westward Expansion—3 S.H.

Quarter Course: 481G.

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. Offered as needed.

483 - The Progressive Era and the "New Era" Twenties (1901-1929)—3 S.H.

Quarter Course: 483G.

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. Offered every other year.

484 - Depression, New Deal and War (1929-1945)—3 S.H.

Quarter Course: 484G.

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. Offered every other year. Prerequisite: HIST 151 or instructor's permission. Grade only.

485 - Contemporary America 1945-Present—3 S.H.

Quarter Course: 485G.

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. Offered every other year.

486 - American Intellectual and Cultural History—3 S.H.

Quarter Course: 486G.

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. Offered yearly.

488 - American Constitutional History—3 S.H.

Quarter Course: 488G.

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. Offered yearly.

ADVANCED SEQUENCE IN EUROPEAN HISTORY

330 - Psycho-history—3 S.H.

Quarter Course: 330.

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. Offered as needed.

350 - The History of Attitudes Toward Death—3 S.H.

Quarter Course: 350.

A look at the attitudes toward death of various societies.

Prerequisites: ENG 111 or instructor's permission. Grade only.

401 - Ancient Rome—3 S.H.

Quarter Course: 401G.

The rise of Rome from a small republic to empire, the decline and fall of the empire. The Roman contribution to western civi-

lization. Prerequisite: HIST 120 or instructor's permission. Grade only.

403 - Middle Ages—3 S.H.

Quarter Course: 403G.

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. Offered as needed.

408 - Renaissance—3 S.H.

Quarter Course: 408G.

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. Offered as needed.

409 - Reformation—3 S.H.

Quarter Course: 409G.

A study of the religious background of 16th-century Europe. The rise of Lutherism, Calvinism, Anabaptism and Anglicanism. The Catholic Counter-Reformation. Prerequisite: HIST 120 and HIST 121 or instructor's permission. Grade only. Offered as needed.

412 - French Revolution and Napoleon—3 S.H.

Quarter Course: 406G.

Intellectual, cultural, economic and political origins of the French Revolution, a decade of revolution, the Napoleonic Era and the legacy of the revolution. Prerequisite: HIST 121 or instructor's permission. Grade only. Offered as needed.

415 - 20th-Century Europe—3 S.H.

Quarter Course: 415G.

The peace settlements, the League of Nations, the rise of totalitarianism, World War II. This course also emphasizes the Cold War, decolonization, collapse of Soviet Communism, and the re-emergence of nationalism and ethnic conflict, with special emphasis on Yugoslavia. Prerequisites: HIST 122 and HIST 151 or instructor's permission. Grade only. Offered as needed.

417 - Hitler and Nazi Germany—3 S.H.

Quarter Course: 417G.

Emphasis will be given to the factors which led to Nazism, the personality of Hitler, his drive for world domination and failure, and the Nuremberg trials. Prerequisite: HIST 122 or instructor's permission. Grade only. Offered as needed.

421 - Tudor and Stuart England—3 S.H.

Quarter Course: 421G.

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. Offered as needed.

423 - 20th-Century England—3 S.H.

Quarter Course: 423G.

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. Offered as needed.

434 - Soviet Russia (1905-Present)—3 S.H.

Quarter Course: 434G.

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. Offered as needed.

440 - World War II—3 S.H.

Quarter Course: 440G.

An effort to examine the relations between political leadership and military strategy. Brief description of main events. Prerequisites: HIST 122 and HIST 151 or instructor's permission. Grade only. Offered as needed.

PARALEGAL SEQUENCE

370 - Legal Research and Writing I—2 S.H.

Quarter Course: 370.

The student will become acquainted with commonly used ter-

minology, 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.

Quarter Course: 371.

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. Prerequisite: HIST 370. Grade only. Offered yearly.

372 - Legal Research and Writing II-2 S.H.

Quarter Course: 372.

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 371. Grade only. Offered yearly.

373 - Adversary System: Civil Procedure—2 S.H.

Quarter Course: 373.

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 372. Grade only. Offered yearly.

374 - Evidentiary Rules—2 S.H.

Quarter Course: 374.

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 373. Grade only. Offered yearly.

375 - Substantive Law and Ethics II—3 S.H.

Quarter Course: 375.

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 374. Grade only. Offered yearly.

376 - Adversary System: Criminal Procedure—2 S.H.

Quarter Course: 376.

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 374. Grade only. Offered yearly.

377 - Practical Legal Investigation Techniques—3 S.H.

Quarter Course: 377.

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, HIST 365, HIST 370 and HIST 371. Grade only. Offered yearly.

380 - Paralegal Internship—12 S.H.

Quarter Course: 380.

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.

383 - Paralegal Institute—1-3 S.H.

Quarter Course: 380.

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.

Honors Program

See Special Academic Programs for more information.

Interdisciplinary Program: Professional Studies

Somsen Hall, Room 109, (507) 457-5080
Christensen (Chairperson); Lietzau

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 -
Robert Lietzau; Adult, Continuing Education & Extension; B.S., M.S., Winona State University; 1967 -

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 faculty. When declaring the major, students must submit a statement of their goals and objectives for the major which will be reviewed by the ACEED advisor and retained in the student's file.

B.A. MAJOR PROFESSIONAL STUDIES: GENERAL OPTION

48 upper division (300 and 400 level) s.h.

It is expected that all course prerequisites will be completed. Students may declare one minor within the requirements of this major. A maximum of 9 credits applying to the major may be taken on a P/NC basis. All other WSU policies apply.

REQUIREMENTS:

Students will complete the standard WSU General Education Program, 48 upper-division credits, electives to reach a minimum of 128 credits, and will have on file a statement of goals and objectives for the major.

PROFESSIONAL STUDIES: AVIATION MAINTENANCE MANAGEMENT OPTION

128 - 139 s.h. (No Minor Required)

Pasteur Hall, Room 114D, (507) 457-5260
Dr. George Bolon, Advisor

The 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 commercial aviation.

This option is OPEN ONLY TO STUDENTS who have completed the aviation maintenance program at the Red Wing/Winona Technical College. Forty (40) credits will transfer from the technical college applicable toward this option.

There are 5 aspects to this degree program: (1) general education; (2) the management core; (3) the advanced aviation courses; (4) computer understanding and application; and (5) the upper-division electives. Airway Science Certification pending FAA approval.

1. GENERAL EDUCATION (48 S.H.)

Basic Skills (9 s.h.)

Humanities (6 s.h.)

Natural Sciences (7 s.h.)

MATH 140 Applied Calculus (3)

PHYS 201 General Physics I (4)

Social Science (6 s.h.)

PSY 210 General Psychology (3)

ECON 201 Principles of Microeconomics (3)

Different Culture (6 s.h.)

Allied Studies (3 s.h.)

Additional requirements for certification (11 s.h.)

STAT 110 Fundamentals of Statistics (3) OR

DIS 220 Business Statistics (3)

PHYS 202 General Physics II (4)

CHEM 212 Principles of Chemistry I (4)

2. MANAGEMENT (18 S.H.)

BUSA 301 Business Law (3)

DIS 320 Intermediate Business Statistics (3)

DIS 362 Management Information Systems (3)

MGMT 315 Principles of Management (3) OR

MGMT 317 Management of Human Resources (3)

POM 334 Production/Operations Management (3)

Marketing (3 s.h.)

315 Principles of Marketing (3)

3. AVIATION (12 S.H.)

PHYS 200 Fundamentals of Aviation (3)
 PHYS 383 Air Traffic Control (3)
 PHYS 387 Flight Safety (3)
 PHYS 388 Legislative and Legal Aspects (2)

4. COMPUTER APPLICATION (6 S.H.)

CS 130 Introduction to BASIC Programming (3) OR
 BUSA 312
 Any Computer Science elective and/or
 DIS 202 Microcomputers in Business (3)

5. UPPER-DIVISION ELECTIVES (15 S.H.)

These electives must be approved by AWS faculty advisor.

6. TECHNICAL COLLEGE TRANSFER (40 S.H.)

Interdisciplinary Program: Social Science/History

Minne Hall, Room 212, (507) 457-5400
 Alexander Yard, Program Director
 Director email: ayard@vax2.winona.msus.edu

DIRECTOR

Alexander Yard, Associate Professor, History; M.A., University of Missouri-St. Louis; A.B., A.M., Ph.D., Washington University (St. Louis, Missouri); 1986 -

The Social Science/History Interdisciplinary 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. In addition to this program, students must complete the Professional Education Sequence to earn a teaching license. The education sequence is described in the Effective Educator Handbook, available in the Education Department Office, and in this catalog under the Department of Education listings.

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.

B.S. MAJOR - Social Science/History

(Secondary Social Studies Teaching)
 81-83 s.h. (No Minor Required)

NOTE: Teaching majors must take all the courses required in the Professional Education Sequence in addition to completing this program in the content - or speciality - area. Refer to the Education Department listings in this catalog or the Effective Educator Handbook available in the Education Department Office.

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.)

103 Introduction to Politics (3)

120 Introduction to American Politics (3)
 130 Introduction to International Relations (3)

Psychology (3 s.h.)

210 General Psychology (3)

Sociology (6 s.h.)

150 Human Society (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 280: Political Research I - Secondary (3) OR
 SOC 376: Introduction to Social Research (3) OR
 PSY 308: Experimental Psychology (5)

Different Culture (6 s.h.)

Note: Students in the program must take a Different Culture History course and a Social or Political Science course focused on the same region. Students may use these courses to fulfill both program and General Education/Different Culture Requirements. Complete two courses in one of the following areas:

Asia

HIST 123: East Asian Civilization (3)
 GEOG 223: Geography of the Orient (3) OR

Latin America

HIST 165: Latin American History (3)

And ONE of the following:

- GEOG 225: Geography of Latin America (3) OR
- POLS 224: Politics and Society in Latin America (3)

Africa

- HIST 170: African Civilization (3)
- And ONE of the following:
- GEOG 224: Geography of Africa (3) OR
- POLS 126 (or 226): Politics and Society in Africa (3)

ELECTIVES (3 s.h.)

- 331 Teaching Social Studies in Secondary Schools (3)

ELECTIVES (15 s.h.)

Students complete a concentrator of 15 s.h. at the 300 or 400 levels 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.

MARKETING

Somsen Hall, Room 101D, (507) 457-5672

Bovinet (Chairperson), English, Newberry, Smith, Young.

FACULTY

James W. Bovinet, Professor; B.S. Drake University; M.B.A., D.B.A., Southern Illinois University-Carbondale; 1990 -
Donald English, Associate Professor; B.S., Bucknell University; M.B.A., Indiana University; 1977 -
Robert Newberry, Assistant Professor; B.S., M.B.A., University of Wisconsin-La Crosse; Ph.D., University of Wisconsin-Milwaukee; 1992 -
Russell K. Smith, Jr., Assistant 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 -

The Marketing Department is committed to fostering excellence in marketing education. Students who pursue 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.

Graduation Requirements:

1. Completion of all coursework required for the major
2. A grade of "C" or better in all courses counted toward the major
3. A minimum of 50% of the Marketing Major requirements must be completed at WSU
4. Meet all WSU graduation requirements

B.S. MAJOR - MARKETING

60 s.h. (No Minor Required)

REQUIRED COURSES (45 s.h.)

Math Requirements (3 s.h.)

- 140 Applied Calculus (3) OR
- 160 Calculus I (3)

Accounting (6 s.h.)

- 211 Financial Accounting Principles (3)
- 212 Managerial Accounting Principles (3)

Business Administration (12 s.h.)

- BUSA 291 Legal Environment of Business (3)
- DIS 220 Business Statistics (3) OR
- STAT 110 Fundamentals of Statistics (3) OR
- STAT 210 Statistics (3)
- MGMT 315 Principles of 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 Core (12 s.h.)

- 315 Principles of Marketing (3)
- 330 Consumer Behavior (3)
- 332 Market Analysis (3)
- 334 Marketing Research (3)

Integrative Capstone (3)

- 428 Marketing Management (3)

ELECTIVES (15 s.h.)

- 350 Management of Promotion (3)
- 352 Professional Selling (3)
- 354 Sales Management (3)
- 360 Systems and Channels (3)
- 362 Business to Business Marketing (3)
- 364 Marketing and Entrepreneurship (3)
- 384 International Marketing (3)
- 390 Topics in Marketing (3)
- 399 Internship Problem (3)
- 480 Independent Study (1-3)

B.S. MINOR - MARKETING

24 s.h.

REQUIRED COURSES (18 s.h.)

Accounting (3 s.h.)

- 211 Financial Accounting Principles (3)

Economics (3 s.h.)

- 201 Principles of Microeconomics (3)

Business Administration/Statistics (3)

- DIS 220 Business Statistics (3) OR
- STAT 110 Fundamentals of Statistics (3) OR

STAT 210 Statistics (3)

Marketing (9 s.h.)

315 Principles of Marketing (3)

330 Consumer Behavior (3)

334 Marketing Research (3)

ELECTIVES (6 s.h.)

Any two Marketing electives (See Marketing Major) (3 s.h.)

Marketing Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicum. The P/NC option is available to non-majors unless otherwise noted.

100 - Marketing and Society—3 S.H.

Quarter Course: 115.

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.

315 - Principles of Marketing—3 S.H.

Quarter Course: 315.

A beginning course in marketing which stresses the marketing function's contribution to the business firm. Topics include buyer behavior, products, channels of distribution, promotion, pricing and social issues in marketing. Standard business and non-traditional aspects of marketing are explored. The potential employment scenario is reviewed. Prerequisites: ECON 201 and ACCT 211.

330 - Consumer Behavior—3 S.H.

Quarter Course: 330.

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: MKTG 315.

332 - Market Analysis—3 S.H.

Quarter Course: 332.

Market analysis defines relevant markets, analyzes primary and selective demand for the market, segments the market, and identifies potential target markets. This course focuses on analyzing customers, competitors, and the company to provide a basis for developing marketing strategy. Marketing information literacy will be emphasized through the utilization of numerous information sources and computer software applications. Prerequisites: MKTG 315, Mathematics and Statistics requirements.

334 - Marketing Research—3 S.H.

Quarter Course: 334.

This course analyzes the roles, the functions and the processes that surround marketing research. The basic approach of the course is to consider marketing research as an aid in providing information that facilitates decision-making. Emphasis is placed on practical issues related to the successful application of marketing research. Prerequisites: MKTG 315, Mathematics and Statistics requirements.

350 - Management of Promotion—3 S.H.

Quarter Course: 350.

The nature, scope and contributions of advertising, personal selling, public relations and sales promotion in serving as a communication link between the business firm and its target market. Prerequisites: completion of Marketing core requirements.

352 - Professional Selling—3 S.H.

Quarter Course: 352.

Learning professional selling concepts and the communications skills to apply them. Topics include interpersonal communications in business, relationship building, prospecting and qualifying, determining consumer wants and needs, sales presentation and negotiation and post-sale communications. Employment opportu-

nities in sales are examined. Prerequisites: completion of Marketing core requirements.

354 - Sales Management—3 S.H.

Quarter Course: 354.

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. Prerequisites: completion of Marketing core requirements.

360 - Systems and Channels—3 S.H.

Quarter Course: 360.

The political, social and economic relationships among the various institutions that comprise marketing channels with a focus on managing in the distribution of goods and services. Prerequisite: completion of Marketing core requirements.

362 - Business to Business Marketing—3 S.H.

Quarter Course: 362.

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.

Prerequisites: completion of Marketing core requirements.

364 - Marketing and Entrepreneurship—3 S.H.

Quarter Course: 364.

An examination of the procedures and managerial practices of small business retailing. Specific emphasis is given to entrepreneurial subjects such as the legal organization of the firm, financing, franchising, site selection, employee management, buying and customer support functions. Prerequisites: completion of Marketing core requirements.

384 - International Marketing—3 S.H.

Quarter Course: 384.

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. Prerequisites: completion of Marketing core requirements.

387 - Marketing of New Products—3 S.H.

Quarter Course: 387.

Essential components of product management are examined in depth, including practical methods of analysis, strategy formulation and implementation. Various concepts, models and eclectic approaches generate creative strategies and courses of action. Prerequisites: completion of Marketing core requirements.

390 Topics in Marketing—3 S.H.

Quarter Course: 390.

Various courses offered in conjunction with curriculum needs and the availability of faculty with relevant expertise.

Prerequisites: completion of Marketing core requirements.

398 - Internship—1-9 S.H.

Quarter Course: 398.

Credits will not be counted in Marketing Major, but as general education elective credits. Prerequisites: completion of Marketing core requirements and instructor's permission. P/NC only.

399 - Internship Problem—3 S.H.

Quarter Course: 399.

See Department chairperson for a list of requirements. Credits count as a Marketing elective. Grade only. Prerequisites: completion of Marketing core requirements and instructor's permission.

428 - Marketing Management—3 S.H.

Quarter Course: 428.

An advanced applied course in marketing management and decision-making. Simulation and/or cases are used to present marketing problems and situations requiring students to apply the principles and concepts of marketing to real-world problems and simulations. Each student will be required to write and present a marketing plan. Emphasis will be placed on analysis and decision-making. Prerequisites: completion of any two Marketing electives and Senior standing.

480 - Independent Study—1-3 S.H.

Quarter Course: 480.

Offers the advanced student an opportunity to do additional reading and/or research paper in areas of special interest. Prerequisite: instructor's permission.

MASS COMMUNICATION

Phelps Hall, Room 126, (507) 457-5474
Elcombe (Chairperson), Cramer, Daniel, Killion, Pack, Schwarze, Vivian

FACULTY

Donald W. Cramer, Assistant Professor; B.S., Winona State University; M.A., Ball State University; 1970 -
Ajit Daniel, Professor; B.A., St. Stephen's College, Delhi University, India; B.S., Southern Illinois University-
Edwardville; M.S. Southern Illinois University-Carbondale; 1982 -
Ronald Elcombe, Assistant Professor; B.S., University of Minnesota-Twin Cities; M.M., Mankato State University; 1991 -
Cindy Killion, Associate Professor; B.J., University of Missouri-Columbia; M.A., The University of Oklahoma; 1992 -
Dennis H. Pack, Professor; B.S., University of Utah; M.A., Northwestern University; 1978 -
Terry Schwarze, 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 -

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.
- *Bravura*, a laboratory publication with 17,000 circulation.
- Color television production facilities in which students produce programs disseminated to 8,000 Winona-area cable-subscribing households.
- Computerized reporting labs for writing projects as well as access to computer-linked typesetting equipment at the *Winona Daily News*.
- The *Winonan*, the student-operated weekly campus newspaper.
- 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 College Journalists.

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 communication law, ethics and theory; and receive information and experience in an area of special interest.

Pass/No Credit Courses

All courses, with the exception of internships, taken toward the Mass Communication Major requirements or Mass Communication Minor requirements must be taken on a grade only basis.

Mass Communication majors 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. Mass Communication Minors must earn a grade of "C" or better in all Mass Communication courses and all additional courses to satisfy the minor.

Additional Graduation Requirements

All Mass Communication majors must have a cumulative GPA average of 2.5 or higher to graduate.

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 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.

ADVERTISING OPTION -

42 s.h.

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)

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)

Marketing

- 315 Principles of Marketing (3)
- 317 Consumer Behavior (3)

BROADCASTING OPTION

42 s.h.

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)

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)
- 399 Internship (3)
- 425 Senior Seminar in Electronic Media (3)

BROADCASTING ELECTIVES (6 s.h.)

- 320 Television Production Operations (3)
- 321 Topics In Television Production (3)
- 325 Broadcast Journalism (3)
- 326 Mass Communication Multimedia Applications (3)
- 420 Electronic Media Management (3)

JOURNALISM OPTION

42 s.h.

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)

CORE ELECTIVES (3 s.h.)

Choose One:

- 305 Mass Media History (3)
- 400 Mass Communication Theory (3)
- 450 International Broadcasting (3)

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.)

- 100 Mass Media & Society (3)
- 110 Visual Communication (3)
- 130 News Writing (3)
- 300 Mass Media Law (3)
- 405 Mass Media Issues & Ethics (3)

CORE ELECTIVES (3 s.h.)

Choose One:

- 305 Mass Media History (3)
- 400 Mass Communication Theory (3)
- 450 International Broadcasting (3)

PHOTOJOURNALISM REQUIRED COURSES (24 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.)

- 100 Mass Media & Society (3)
- 110 Visual Communication (3)
- 130 News Writing (3)
- 300 Mass Media Law (3)
- 405 Mass Media Issues & Ethics (3)

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 (18 s.h.)

- 175 Mass Communication Computer Applications (3)
- 230 News Gathering (3)
- 240 Public Relations (3)

- 275 Publication Design (3)
- 345 Public Relations Writing (3)
- 440 Public Relations Campaigns (3)

PUBLIC RELATIONS ELECTIVES (6 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)
- 340 Public Relations Cases (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.)

The student must select 12 s.h. of credit from other Mass Communication courses.

Mass Communication Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

- 020 - Electronic Media Activities—1 S.H.**
Quarter Course: New Course.
Active participation in announcing, programming, production and/or control-room operations at Radio KQAL-FM.
- 100 - Mass Media and Society—3 S.H.**
Quarter Course: 100. Sociological examination of the interrelationship of mass media and society in contemporary America.
- 110 - Visual Communication—3 S.H.**
Quarter Course: 110. Basic visual communication theory including basic photographic theory, camera handling and dark-room experience as related to graphic communication and mass dissemination. Weekly critiques. Lab required.
- 120 - Electronic Media—2 S.H.**
Quarter Course: 120.
Characteristics, philosophy and impact of radio, television, cable and the developing electronic mass media.
- 130 - News Writing—3 S.H.**
Quarter Course: 130.
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.**
Quarter Course: 175.
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.**
Quarter Course: 215.
Advanced visual and technical skills for black-and-white photography. Prerequisite: MCOM 110.

- 220 - Broadcast Writing—3 S.H.**
Quarter Course: 220.
Radio and television writing including commercial copy and feature programs. Prerequisite: ENG 111.
- 225 - Radio Production—3 S.H.**
Quarter Course: 225.
Design, technique, production and presentation of radio programs. Prerequisite: MCOM 220.
- 226 - Video/Multimedia Planning and Design—3 S.H.**
Quarter Course: 226.
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.**
Quarter Course: 230.
Interviewing, observation and research as information-gathering methodologies; with reporting assignments for publication and broadcast. Prerequisite: MCOM 130.
- 240 - Public Relations—3 S.H.**
Quarter Course: 240.
Nature and role of public relations in a democratic society. Case problems and projects.
- 260 - Advertising—3 S.H.**
Quarter Course: 260.
Survey of advertising theory and structure, and its function and purpose in modern society.
- 275 - Publication Design—3 S.H.**
Quarter Course: 335.
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.**
Quarter Course: 300.
Major issues and survey of the media's current legal status. Prerequisite: MCOM 100.
- 305 - Mass Media History—3 S.H.**
Quarter Course: 305.
Development of the mass media including historiography, examination of movements and current research problems.
- 310 - Photojournalism—3 S.H.**
Quarter Course: 310.
The photograph as a means of visual reporting. Lab required. Weekly critique. Prerequisite: MCOM 215.
- 317 - Photojournalism Practicum—3 S.H.**
Quarter Course: 317.
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.**
Quarter Course: 319.
Large-format camera photography with emphasis on studio techniques. Prerequisite: MCOM 215.
- 320 - TV Production Operations—3 S.H.**
Quarter Course: 320.
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.**
Quarter Course: 321.
Advanced theory and practical experience in producing television programs using single- or multiple-camera systems. Prerequisite: MCOM 320.
- 325 - Broadcast Journalism—3 S.H.**
Quarter Course: 325.
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 - Mass Communication Multimedia Applications—3 S.H.
 Quarter Course: 326.

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 225.

330 - Feature Writing—3 S.H.

Quarter Course: 330.

Developing, writing and marketing feature stories to a variety of media. Prerequisite: MCOM 230.

331 - News Editing—3 S.H.

Quarter Course: 331.

Operation of the newsroom including copy editing, gatekeeper decisions, headline writing, layout. Prerequisite: MCOM 230.

340 - Public Relations Cases—3 S.H.

Quarter Course: 340.

Public relations problems in 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.

Quarter Course: 345.

Preparing news releases, speeches, profiles, scripts, employee publications, newsletters, brochures, plus other promotional and PR techniques. Prerequisite: MCOM 230.

347 - Public Relations Practicum—3 S.H.

Quarter Course: 347.

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.

Quarter Course: 360.

Effective advertising messages for newspapers, radio, television and other mass media. Emphasis on copy writing, with coordination of visual and verbal concepts to achieve objectives. Prerequisites: MCOM 260 and ENG 111.

361 - Advertising Media Selection—3 S.H.

Quarter Course: 361.

Theories, problems and practices related to advertising media evaluation and selection. Prerequisite: MCOM 260.

362 - Advertising Design—3 S.H.

Quarter Course: 362.

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—3-12 S.H.

Quarter Course: 399.

Departmentally approved, supervised practical experience in mass communication.

400 - Mass Communication Theory—3 S.H.

Quarter Course: 400.

Theories of mass influence on society and culture. Prerequisite: MCOM 100.

405 - Mass Media Issues and Ethics—3 S.H.

Quarter Course: 405.

Introduction to perspectives on ethics, applied to case studies and issues in journalism, advertising and public relations. Prerequisite: MCOM 100.

408 - Research in Mass Media—3 S.H.

Quarter Course: 408.

Investigation and interpretation of mass media research; introduction to procedures for studying media control, content, audience and effects; problems in applying theoretical concepts.

Prerequisites: Junior standing, MCOM 130 and two of following: MCOM 317, MCOM 340, MCOM 345, MCOM 360, MCOM 361, MCOM 437 or one Mass Communication 300-level course and instructor's permission.

409 - Independent Study—3 S.H.

Quarter Course: 409.

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.

Quarter Course: 419.

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.

Quarter Course: 420.

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.

Quarter Course: 425.

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.

Quarter Course: 430.

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.

Quarter Course: 437.

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.

Quarter Course: 440.

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.

Quarter Course: 450.

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.

Quarter Course: 460.

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.

Quarter Course: 461.

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.

MATHEMATICS AND STATISTICS

Gildemeister Hall, Room 322 (507) 457-5370

Suman (Chairperson), Anderson, Arteaga, Blumberg, Bunce, Debnath, Deppa, Draskoci-Johnson, Gardiner, Gross, Jarvinen, Leonhardi, Pascual, Peratt, Quella, Quinn-Nelson, Sloan, Smith, Urion.

FACULTY

Jeffrey Anderson, Associate Professor; B.A., University of Minnesota, Twin Cities; Ph.D., Iowa State University; 1992 -
Carmen Arteaga, Associate Professor; M.S., Colorado State University, Fort Collins; Ph.D., University of Iowa; 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, Associate Professor; B.S., M.S., University of Minnesota, Duluth; 1992 -

Jeffrey Draskoci-Johnson, Assistant Professor; B.A., Ohio Wesleyan University; M.S., Ph.D., Ohio State University-
Columbus; 1996 -

Ormsin Gardiner, Assistant Professor; B.S., Chulalongkorn University, Thailand; M.S., Manchester University
(United Kingdom); 1983 -

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, Assistant Professor; B.S., Concordia College, Moorhead (MN); M.S., Ph.D., University of Wisconsin-
Madison; 1996 -

Felino G. Pascual, Assistant Professor; B.A., Ateneo de Manila, Philippines; M.Sc., Ph.D., University of Minnesota-
Twin Cities; 1992 -

Barry Peratt, Assistant Professor; B.S., Marian College; M.S., Ph.D., University of Delaware; 1996 -

Joyce Quella, Assistant Professor; B.S., University of Wisconsin-Madison; A.M., University of Illinois; 1987 -

Cheryl Quinn Nelson, Associate Professor; B.S., Luther College; M.S., Winona State University; 1986 -

Sally Sloan, Associate Professor; B.S., M.A., University of Minnesota-Twin Cities; Ph.D. University of Minnesota,
1990 -

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 -

The Department of Mathematics and Statistics offers major programs in mathematics, mathematics education and statistics. Minor programs are offered in mathematics, statistics and mathematics education (elementary and secondary teaching). A useful feature of Departmental programs is the commonality of a required DEPARTMENTAL CORE of courses allowing 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 Departmental 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 future 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 secondary mathematics. Other important options for students in the mathematics education program are to obtain middle school licensure, to complete an additional major or minor program which grants licensure in that subject also, and/or to complete an athletic coaching concentration program. All these options have important advantages regarding future employability.

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 the biological and earth sciences, business, economics, sociology, psychology, etc.

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 secondary 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. Elementary Education Majors who complete a Mathematics Minor also will find themselves in greater demand due to increased emphasis on mathematics skills in elementary and middle schools.

The job market for Statistics Majors is very solid with some projections indicating that the demand for statisticians will double over the next decade. 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.

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.

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

MATH 050 must be taken for a grade. 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.

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 (22-23 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 (one of the following courses)

MATH 130 Matrix Algebra (3) OR

MATH 270 Differential Equations & Linear Algebra (4)

Introduction to Theoretical and Discrete Mathematics (4 s.h.)

MATH 210 Discrete Mathematics & Foundations (4)

Statistics (3 s.h.)

STAT 210 Statistics (3)

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 a variety of electives which are designed to complement another major or minor and prepares for future graduate work or provides coursework that is specific to the needs of industry.

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 (22-23 s.h.)

MATHEMATICS (8 s.h.)

330 Advanced Calculus I (4)

440 Abstract Algebra (4)

ELECTIVES (8 s.h.)

Eight 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)

Mathematics Teaching Majors

The Mathematics Teaching Major prepares students for teaching secondary school mathematics. Certification currently covers grades 7 to 12. This program is administered through the Department of Mathematics and Statistics and the College of Education. As such, 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 its Professional Education Sequence. 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. have completed at least 26 credits in the declared major
2. have a grade of "C" or better in each of the courses comprising the 26 credits
3. have achieved 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 and completion of MTED 420 is highly recommended prior to student teaching.

Additional Graduation Requirements

A grade of "C" or better must be earned in each course taken in the Mathematics Teaching Major and a 2.75 must be earned in all courses taken in the Mathematics Teaching Major.

Professional Education Sequence

Students in the Mathematics Teaching Majors are required to complete the following Professional Education Sequence offered through the College of Education:

Education (31 S.H.)

- 205 Exploring Teaching (3)
- 301 Development & Learning (4)
- 302 Classroom Management Clinical (2)
- 306 Instructional Planning & Assessment (3)
- 308 Human Resources & Student Diversity (3)
- 429 Secondary Reading & Teaching Strategies (3)
- 459 The Professional Educator (3)
- 465 Student Teaching - Senior High (10)

PER (3 S.H.)

- 204 Personal and Community Health (3)

DEPARTMENTAL CORE (22-23 s.h.)

REQUIRED COURSES (29 s.h.)

Mathematics (14 s.h.)

- 310 Number Theory (3)
- 330 Advanced Calculus I (3)
- 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 (4 s.h.)

- 115 Laboratory in Statistics (1)
- 330 Probability (3)

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.

NOTE: Because this is a joint program with the College of Education and because this is also a time of transition into the semester model, some deviations from the listed program requirements may be necessary.

B.S. MAJOR - MATHEMATICS: STATISTICS OPTION

54-55 s.h. (No Minor Required)

Statistics Option

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.

DEPARTMENTAL CORE (22-23 s.h.)

REQUIRED COURSES (18 s.h.)

Statistics

- 115 Laboratory in Statistics (1)
- 360 Regression Analysis (3)
- 450, 460 Introduction to Mathematical Statistics I (4), II (4)

Two of the following seven 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 Statistical Computing (3)
- STAT 455 Stochastic Processes (3)
- FIN 335 Forecasting Methods (3)

ELECTIVES (14 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. These courses must be approved by the Department of Mathematics and Statistics. Students may also count one of CS 231 or CS 234 as an elective.

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 recommended to include the following as part of their coursework.

General Education Courses

- ECON 201 Microeconomics
- ECON 202 Macroeconomics
- ACCT 201 Principles of Accounting I

Other Suggested Courses

- BUSA 200 or a course which covers microcomputer use with emphasis on spreadsheets
- FIN 351 Risk Management and Insurance

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). Several examinations can be successfully completed while the student is still in college. In fact, some companies only hire candidates that have successfully completed the first two actuarial examinations. Below is a list of courses needed for each of the examinations.

Exam 100 Calculus and Linear Algebra

- MATH 130, MATH 160, MATH 165 and MATH 260

Exam 110 Probability and Statistics

- STAT 210 (or equivalent), STAT 450 and STAT 460

Exam 120 Applied Statistical Methods

- STAT 360 and FIN 335

Exam 130 Operations Research

- MATH 430 and MATH 435

Exam 135 Numerical Methods

- MATH 420

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. Courses in the Department of Mathematics and Statistics that will help students prepare for these examinations are:

Certified Mechanical Inspector

STAT 110 or 210 or 303, STAT 320

Certified Quality Engineer

STAT 110 or 210 or 303, STAT 320-322

Certified Quality Technician

STAT 110 or 210 or STAT 303, STAT 320

Certified Reliability Engineer

MATH 140 or MATH 160, STAT 110 or 210 or 303, STAT 320-322, STAT 330

B.A. MINOR - MATHEMATICS

22-23 s.h.

The DEPARTMENTAL CORE is the B.A. Minor in Mathematics.

B.S. MINOR - MATHEMATICS: SECONDARY TEACHING

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)

B.S. MINOR - MATHEMATICS: ELEMENTARY TEACHING

26 s.h.

REQUIRED COURSES (23 s.h.)

Education (3 s.h.)

434 Remedial Mathematics Methods (3)

Mathematics (11 s.h.)

120 Precalculus (4)
130 Matrix Algebra (3)
210 Discrete Mathematics & Foundations (4)

Mathematics Education (5 s.h.)

201 Technology Based Geometry & Other Math for Elementary Teachers (4)
421 Middle School Methods in Mathematics (1)

Statistics (4 s.h.)

110 Fundamentals of Statistics (3)
115 Laboratory in Statistics (1)

ELECTIVES (3 s.h.)

Electives must be selected in consultation with an advisor in the Department of Mathematics and Statistics. Possible electives include MATH 140, MATH 160, MATH 165 and STAT 310.

CONCENTRATION (ELEMENTARY TEACHING)

12 s.h.

MATH 120 Precalculus (4)
MTED 201 Technology Based Geometry and Other Math for Elementary Teachers (4)

MTED 421 Middle School Methods in Mathematics (1)
EDUC 434 Remedial Mathematics Methods (3)

B.S. MINOR - MATHEMATICS: STATISTICS OPTION

21 s.h.

The B.S. Minor in Statistics may be taken by either teaching or non-teaching degree candidates; 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
160 Calculus I (4)

Statistics (9 s.h.)

STAT110 Fundamentals of Statistics (3) OR
STAT 210 Statistics (3) OR
STAT 305 Biometry (3) OR
BUS ADM 207 Business Statistics (3) OR
PSY 231 Statistics (3)

Two of the following eight courses:

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 Statistical Computing (3)
STAT 455 Stochastic Processes (3)
FIN 335 Forecasting Methods (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

STAT 330 Probability (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 Statistical Computing (3)
STAT 450 Mathematical Statistics I (4)
* STAT 455 Stochastic Processes (3)
STAT 460 Mathematical Statistics II (4)
* Can be used as an elective course if not used as a required course

Group II - Application Areas

Biology

310 Genetics (3)
312 General Ecology (3)

Management and Marketing

334 Marketing Research (3)

Political Science

410 Political Research II: Primary (3)

Psychology

308 Experimental Psychology (4)
350 Psychology Testing & Measurement (3)

Sociology

376 Introduction to Social Research (3)
378 Laboratory in Social Research (3)

Statistics (Industry)

320 Statistical Quality Control (3)
321 Industrial Design of Experiments I (3)
322 Industrial Design of Experiments II (3)

(Other)

310 Intermediate Statistics (3)
440 Epidemiology (3)
488 Statistics Project (1-6)

Mathematics and Statistics Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

All courses offered every semester unless indicated differently.

MATHEMATICS

050 - Intermediate Algebra—3 S.H.

Quarter Course: MATH 113.

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. Grade only.

100 - Survey of Mathematics—3 S.H.

Quarter Course: MATH 111.

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.

Quarter Course: MATH 121.

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.

Quarter Course: MATH 115, 116, 120.

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.

Quarter Course: MATH 123, 217.

An introduction to matrix algebra and elementary vector spaces with an emphasis on computation. Prerequisite: MATH 120

140 - Applied Calculus—3 S.H.

Quarter Course: MATH 122.

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.

Quarter Course: New Course.

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.

Quarter Course: MATH 125, 126, 127.

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.

Quarter Course: MATH 125.

A course which 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.

Quarter Course: MATH 126.

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.

Quarter Course: MATH 218, 316.

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.

260 - Multivariable Calculus—4 S.H.

Quarter Course: MATH 329.

A continuation of MATH 165. Partial differentiation and multiple integration are studied. Prerequisite: MATH 165.

270 - Differential Equations and Linear Algebra—4 S.H.

Quarter Course: MATH 217, 330.

Solution techniques for ordinary differential equations including boundary/initial value problems and systems of first-order equations. Topics include linear homogeneous and nonhomogeneous 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.

Quarter Course: MATH 289.

Exposure to lower-division mathematical topics not included in other courses. Prerequisite: determined by topics. Offered on demand.

310 - Number Theory—3 S.H.

Quarter Course: MATH 357.

A study of primes, divisibility, congruences, number-theoretic functions and diophantine equations. Prerequisite: MATH 165 and MATH 210. Offered spring semester.

320 - Theory of Functions of a Complex Variable—3 S.H.

Quarter Course: MATH 432.

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.

Quarter Course: MATH 460, 461, 462.

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.

Quarter Course: MATH 417.

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.

Quarter Course: MATH 408.

General view of the historical development of the elementary branches of mathematics. Prerequisites: MATH 160 and MATH 210. Offered fall semester.

420 - Numerical Analysis—4 S.H.

Quarter Course: MATH 425, 426.

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.

Quarter Course: MATH 440.

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.

Quarter Course: MATH 441.

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.

Quarter Course: MATH 317.

Axiomatic development of groups, rings and fields.

Prerequisite: MATH 210. Offered fall semester.

450 - Introduction to Topology—3 S.H.

Quarter Course: MATH 445.

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 spring semesters.

460 - Real Analysis—3 S.H.

Quarter Course: MATH 470.

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 fall semesters.

470 - Math Projects—1-4 S.H.

Quarter Course: MATH 488

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.

Quarter Course: MATH 489.

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.

Quarter Course: MATH 490.

An opportunity to continue study of selected topics. Prerequisite: instructors permission. Offered on demand.

MATHEMATICS EDUCATION

125 - Mathematics for Elementary Teachers—4 S.H.

Quarter Course: MATH EDUC 110.

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.

Quarter Course: MATH EDUC 120, 201.

Quarter Course: 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.

Quarter Course: MATH EDUC 289.

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.

Quarter Course: MATH EDUC 290.

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.

Quarter Course: MATH EDUC 320.

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.

Quarter Course: MATH EDUC 322, 489.

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.

Quarter Course: MATH EDUC 420.

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.

Quarter Course: MTED 489.

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.

Quarter Course: MATH EDUC 489.

Exposure to mathematics education topics not included in other courses. Prerequisite: determined by topics.

490 - Independent Problems in Mathematics Education—1-4 S.H.

Quarter Course: MATH EDUC 490.

An opportunity to continue study of selected topics in mathematics education. Prerequisite: instructor's permission.

STATISTICS

110 - Fundamentals of Statistics—3 S.H.

Quarter Course: STAT 208.

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.

Quarter Course: STAT 219.

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 or concurrent enrollment in any introductory statistics course.

210 - Statistics—3 S.H.

Quarter Course: STAT 279.

First course in statistics for students with a strong mathematics background. Prerequisites: MATH 140 or MATH 160.

255 - Introduction to Statistical Software Packages—1 S.H.

Quarter Course: STAT 255.

An introduction to statistical packages used in business and industry. The statistical programs examined will vary but students will be exposed to such packages as SAS, S-Plus, XLISP-STAT, SYSTAT, SPSS, MINITAB, and others. The emphasis of the course will be on basic use, however subsequent courses in statistics, such as STAT 360, STAT 365 and STAT 425, will build upon this knowledge. Offered spring semester.

289 - Special Topics—1-3 S.H.

Quarter Course: STAT 289.

Exposure to lower-division statistical topics not included in other courses. Prerequisite: determined by topics. Offered on demand.

303 - Introduction to Engineering Statistics—3 S.H.

Quarter Course: STAT 303.

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.

Quarter Course: STAT 305.

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.

Quarter Course: STAT 309.

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 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.

Quarter Course: STAT 310.

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.

Quarter Course: STAT 311.

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.

Quarter Course: New Course.

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 alternate fall semesters.

330 - Probability—3 S.H.

Quarter Course: STAT 318.

Introduction to basic ideas and fundamental laws of probability and statistics. Prerequisites: MATH 140 and MATH 165.

350 - Design of Samples and Surveys—3 S.H.

Quarter Course: STAT 409.

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.

Quarter Course: STAT 403.

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.

Quarter Course: STAT 411.

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.

Quarter Course: STAT 412.

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.

Quarter Course: STAT 415.

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 - Statistical Computing—3 S.H.

Quarter Course: STAT 479.

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.

Quarter Course: STAT 450.

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 4 S.H.**

Quarter Course: STAT 318, 418, 419.

A mathematical approach to statistics. Prerequisite: MATH 260.

455 - Stochastic Processes—3 S.H.

Quarter Course: STAT 466.

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.

Quarter Course: STAT 488.

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.

Quarter Course: STAT 489.

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.

Quarter Course: STAT 490.

An opportunity for continued study of selected topics. Prerequisite: instructor's permission. Offered on demand.

492 - Practicum in Statistics—3-6 S.H.

Quarter Course: STAT 492.

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 219, (507) 457-5462

Dr. Frances R. Ragsdale, Director

Adjunct faculty from affiliated hospitals: Community Memorial Hospital, Winona, Minnesota; Edward Hines Jr. VA Hospital, Hines, Illinois.; St. Paul-Ramsey Medical Center, St. Paul, Minnesota; Mercy Hospital, Des Moines, Iowa.

DIRECTOR

Frances Ragsdale, Assistant Professor, B.S. Eastern Oregon State; M.S. Southeastern Louisiana University; Ph.D. University of Idaho, 1993 -

ADJUNCT FACULTY

(ASCP: American Society of Clinical Pathologists)

Community Memorial Hospital, Winona, Minnesota

William McNeil, MD, Pathologist

Dennis A. Rollman, B.S., M.T. (ASCP), MBA, Laboratory Director

Edward Hines Jr. VA Hospital, Hines, Illinois

Donna M. Wray, MT(ASCP), Program Director

Myron E. Rubnitz, MD, Medical Director

Mercy Hospital Medical Center, Des Moines, Iowa

Marianne Samorey, MS MT (ASCP), Program Director

Vijaya Dhanavada, MD Medical Director

St. Paul Ramsey Medical Center, St. Paul, Minnesota

Consoline L. Brugler, MT (ASCP) CLS, Program Director

Bruce Ellyson Hyde, MD, Medical Director

The Medical Technology Program is a four-year course of instruction leading to the degree of Bachelor of Science in Medical Technology. 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. Tuition will be assessed on a semester basis by WSU, 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: National Accrediting Agency for Clinical Laboratory Science (NAACLS) 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 (90 - 94 s.h.)

MAJOR AREA COURSES (30-32 s.h.)

Biology (25 s.h.)

- 241 Principles of Biology I (4)
- 242 Principles of Biology II (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)

Major Electives (5-7 s.h.)

- BIO 310 Genetics (3)
- BIO 333 Medical Laboratory Techniques (1)
- BIO 201 Human Anatomy (4)
- BIO 323 General Physiology (5)

NOTE: BIO 241, BIO 242, BIO 308 and BIO 307 should be taken in sequence beginning the fall semester of the first year. Unless a waiver is obtained from the appropriate instructor, students must earn a "C" or better in the preceding course to be admitted to any subsequent course.

ADDITIONAL REQUIREMENTS (28 - 32s.h.)

Chemistry (12 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) OR

Chemistry Electives (4 s.h.)

CHEM 400 Biochemistry (4)

CHEM 425 Analytical Chemistry I (4)

CHEM 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.)

BIO 450 Medical Technology I (12)

BIO 451 Medical Technology II (12)

BIO 452 Medical Technology III (4)

BIO 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 option.

- * Course may be used to satisfy certain General Education Requirements

MUSIC

Performing Arts Center, Room 146, (507) 457-5250
Mechell (Chairperson), Chuang, Draayer, Hoch, MacDonald, Mendyk, Schmidt, Vance.

FACULTY

Gloria Chuang, Assistant Professor; B.M., M.M., Juilliard School; D.M.A., University of Michigan; 1997 -
Suzanne Collier Draayer, Associate Professor; B.M. Furman University; M.S. Vanderbilt University; D.M.A. University
of Maryland College Park, 1993 -
James S. Hoch, Associate Professor; B.M., University of the Pacific, Stockton (CA); M.M., D.M.A., University of
Colorado; 1992 -
R. Richard MacDonald, Assistant Professor; B.M., M.M., University of North Texas; 1997 -
Harry Mechell, Professor; B.Mus., M.M., Temple University; D.M.A., University of Illinois; 1989 -
Lee Mendyk, Professor; B.M.E., Kearney State College; M.A., Ph.D., University of Northern Colorado; 1977 -
Catherine Schmidt, Assistant Professor; B.S., M.S., University of Illinois, Urbana; 1991 -
Paul Vance, Assistant Professor; B.A., Moorhead State University; M.A., University of Wisconsin-Milwaukee; Ph.D.
University of Michigan-Dearborn; 1996 -

The Department of Music offers courses of study leading to a B.S. or a B.A. degree with a major in Music. The program aims to produce graduates who are musically literate and technically competent. For students majoring in other fields, there is a program leading to a minor as well as a variety of courses and activities for the general student. Several active musical organizations are open to all students. Private study of instruments and voice for credit with members of the music faculty is available. WSU is a full member of the National Association of Schools of Music.

Private Instruction

The courses denoted by Private Instruction in program requirements may be repeated at various levels of instruction.

Teaching Majors

Students majoring in Music Education (Teaching) must have both a 2.75 overall GPA and a 2.75 GPA in the major.

Pass/No Credit Courses

All courses in the major or minor must be taken for a grade except for the Internship. The P/NC option is available to non-majors unless otherwise noted.

Concert Attendance 001:

All majors and minors are required to register for this course. Majors - 80% of concerts (8 semesters); Minors - 40% of concerts (4 semesters).

B.A. MAJOR - MUSIC: LIBERAL ARTS

48-49 s.h. (No Minor Required)

CORE REQUIREMENTS (29 s.h.)

- 114 World Music (3)
- 201, 202 Music Theory I, II (8)
- 203, 204 Music Theory III, IV (8)
- 250 Sight Singing I (2)
- 350 Sight Singing II (2)
- 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.)

- 241, 242, 243 Band, Orchestra, Choir (4)
- Applied Lessons (8)
- 475 Instrumental Literature & Styles (3) OR
Choice of:
471, 472, 473 Vocal Literature Class (2)

CAPSTONE PROJECT (2 s.h.)

- 491 Independent Study (2)

ELECTIVES (3 s.h.)

Electives to be taken from areas of theory and/or history literature.

B.A. MAJOR - MUSIC: PERFORMANCE

82 s.h. (No Minor Required)

CORE REQUIREMENTS (29 s.h.)

- 114 World Music (3)
- 201, 202 Music Theory I, II (8)
- 203, 204 Music Theory III, IV (8)
- 250 Sight Singing I (2)
- 350 Sight Singing II (2)
- 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)
- Applied Lessons (28)
- Major Performing Large Ensemble (8): Choose one: 241, 242, 243
- Pedagogy & Literature (6)
- Pedagogy & Literature choices:
Vocal Performance
 - 415 Vocal Pedagogy (2)
 - 471 Italian Vocal Literature (2)
 - 472 German Vocal Literature (2)
 - 473 French Vocal Literature (2)
- Piano Performance
 - 416 Piano Pedagogy (2)
 - 478 Piano Literature II (2)
 - 337 Accompanying (1-2)

Instrumental Performance Methods:

Choose two:

- 311 Woodwind (1)
- 312 String (1)
- 313 Percussion (1)
- 314 Brass (1)
- 252 Jazz Improvisation (2)
- 475 Instrumental Literature (3)

Junior & Senior Recital (3)

Participation in chamber ensemble required.

ELECTIVES (6 s.h.)

Electives to be taken from areas of theory and/or history and literature.

B.S. MAJOR - MUSIC (Teaching)

78 s.h. (No Minor Required)

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.

REQUIRED COURSES - BOTH VOCAL AND INSTRUMENTAL LICENSURES (64 s.h.)

- 201, 202 Music Theory I, II (8)
- 203, 204 Music Theory III, IV (8)
- 252 Jazz Improvisation (2)

Major Performing Large Ensemble (6): Choose one: 241, 242, 243

- 301 Orchestration & Instrumentation (2)
- 306 Conducting (2)
- 406 Conducting II (1)
- 311 Woodwind Methods (1)
- 312 String Methods (1)
- 313 Percussion Methods (1)
- 314 Brass Methods (1)
- 298 Foundations & Principles (2)
- 322 Elementary Music Methods (3)
- 332 Elementary Music Methods (2)
- 323 Secondary Music Methods (3)
- 351 Music of the Middle Ages, Renaissance, Baroque (3)
- 352 Music of the Classical Period, 19th and 20th Centuries (3)

* 114 World Music (3)

Private Instruction in Major Applied Field (12)

Guitar and piano proficiency required
Small ensemble performance required

ADDITIONAL REQUIREMENTS (10 s.h.)

INSTRUMENTAL MAJORS

- 341 Woodwind Methods II (1)
- 342 String Methods II (1)
- 343 Percussion Methods II (1)
- 344 Brass Methods II (1)
- 236 Voice Class (2)
- Private Instruction in Minor Applied Field (4)

VOCAL MAJORS

- 415 Vocal Pedagogy (2)
- 422 Music Seminar on Choral Techniques & Materials (2)
- Private instruction in Minor Applied Field (6)

GENERAL EDUCATION REQUIRED COURSES (4 s.h.)

- THAD 115 Dance Appreciation (3)
- PER 212 Jazz Dance I (1) OR
- PER 215 Modern Dance I (1)

Students must also complete the required Professional Education Sequence from the Education Department.

* Course may be used to satisfy certain General Education requirements.

B.S. MAJOR - MUSIC: BUSINESS EMPHASIS

93 s.h. (No Minor Required)

CORE REQUIREMENTS (56 s.h.)

- 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: 242, 242, 243
- Studio Instruction - Major Instrument or Voice (8)
- 261 Studio 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)

ELECTIVES (4 s.h.)

- 301 Orchestration & Instrumentation (2) OR
- 306 Conducting (2)
- Select two:**
- 311 Woodwind Methods (1)
- 312 String Methods (1)
- 313 Percussion Methods (1)
- 314 Brass Methods (1)

BUSINESS REQUIREMENTS (33 s.h.)

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)

Business Administration (12 s.h.)

- DIS 202 Microcomputers in Business (3)
- 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.)

- 315 Principles of Marketing (3)

Management (3)

- 315 Principles of Management (3)

B.A. MINOR - MUSIC

22 s.h.

Proficiency in piano is expected of music minors. For students who can demonstrate this proficiency, the piano requirement is waived and other studio offerings in the Music Department can be elected.

REQUIRED COURSES (19 s.h.)

- 114 World Music (3)
- 201 Music Theory I (4)
- 202 Music Theory II (4)
- 241, 242, 243 Band, Orchestra, Choir (4) (Substitution of up to 4 credits of 337 permitted)
- 261 Piano (Studio Instruction) (4)

ELECTIVES (3 s.h.)

Electives in Music must total 3 credits.

B.S. MINOR - MUSIC

28 s.h.

Minor suggested for Elementary Education Majors. Music Minor not for licensure. Minor does qualify candidates to teach 33% of load in music.

Proficiency in piano is expected of music minors. For students who can demonstrate this proficiency, the piano requirement is waived and other studio offerings in the Music Department can be elected.

REQUIRED COURSES (28 s.h.)

- 114 World Music (3)
- 201 Music Theory I (4)
- 202 Music Theory II (4)
- 241, 242, 243 Band, Orchestra, Choir (4) (Substitution of up to 2 credits of 337 permitted).
- 261 Piano (Studio instruction) (4)
- 298 Foundations & Principles (2)
- 306 Conducting (2)
- 322 or 323 Elementary or Secondary Music Methods (3)

Music Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

APPLIED CLASSES

- 234 - Piano Class I—2 S.H.**
Quarter Course: 234.
Note reading and fundamentals of piano playing for the beginner. Offered each semester.
- 235 - Piano Class II—2 S.H.**
Quarter Course: 235.
Continuation of MUS 234. Further development of keyboard skills. Short piano pieces. Offered yearly.
- 236 - Voice Class—2 S.H.**
Quarter Course: 236.
Classification of voices, English diction, fundamentals of vocal techniques. Performance of songs in English and Italian. Offered yearly.
- 337 - Accompanying—1-2 S.H.**
Quarter Course: 361.
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.
 - 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.
- 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.

HISTORY AND LITERATURE

- 109 - Introduction to Music—3 S.H.**
Quarter Course: 109.
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. Offered each semester.
- 110 - Introduction to Jazz—3 S.H.**
Quarter Course: 110.
A history of jazz in America; its African influences, its emergence as a recognizable style in the 19th century and its present-day varieties. Offered yearly.
- 114 - World Music—3 S.H.**
Quarter Course: 114.
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.
- 115 - Music of East and Southeast Asia—3 S.H.**
Quarter Course: 115.
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 Native American—3 S.H.**
Quarter Course: 116.
A survey of Native American music cultures found in different regions of the Americas. Emphasis is placed on examining the music and its role in Native American culture. Designed for the general student as well as the Music Major and Minor. Offered alternate years.
- 351 - Music of the Middle Ages, Renaissance and Baroque—3 S.H.**
Quarter Courses: 351, 352.
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 202 or instructor's permission.

352 - Music of the Classical Period, 19th and 20th Centuries—3 S.H.

Quarter Courses: 352, 353.

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 202 or instructor's permission. MUS 351 preferred.

440 - American Music—3 S.H.

Quarter Course: 440G.

Music in America from the time of the Puritans to the present day. Historical, biographical material and record listening. For the general student as well as for Music Majors and Minors. Prerequisite: MUS 109 or equivalent. Offered occasionally.

445 - Music of the 20th Century—3 S.H.

Quarter Course: 445G.

A survey of the contemporary musical scene. The changes that have occurred in music since the beginning of this 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.

Quarter Course: 455G.

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.

Quarter Course: 456.

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.

Quarter Course: 471.

Songs and arias of the 17th and 18th centuries, Baroque performance practice, contemporary Italian songs. Offered alternate years. Prerequisite: MUS 351.

472 - Survey of Vocal Literature II (German)—2 S.H.

Quarter Course: 472.

Lieder of Schubert, Schumann, Franz, Mendelssohn, Brahms, Strauss, Hugo Wolf and others. Offered alternate years.

473 - Survey of Vocal Literature III (French)—2 S.H.

Quarter Course: MUSIC 473.

Representative French songs of Faure, Duparc, Chausson, Debussy, Poulenc and others. Offered alternate years.

475 - Survey of Instrumental Literature and Styles—3 S.H.

Quarter Course: 475.

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 occasionally.

477 - Piano Literature I—2 S.H.

Quarter Course: 477.

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.

Quarter Course: 478.

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.

Quarter Course: 480.

Half recital (1 S.H.) or full recital (2 S.H.) of representative literature. May be repeated for credit. Prerequisite: department's permission. Offered each semester.

491 - Independent Studies in Music—1-6 S.H.

Quarter Course: 491.

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.

METHODS AND EDUCATION

298 - Foundations and Principles of Music Education—2 S.H.

Quarter Course: 298.

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.

Quarter Course: 311.

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—1 S.H.

Quarter Course: 312.

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—1 S.H.

Quarter Course: 313.

Class instruction in percussion instruments. History, literature and teaching methods for the Music Major or Minor. Offered alternate years.

314 - Brass Methods—1 S.H.

Quarter Course: 314.

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.

Quarter Course: 315.

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.

Quarter Course: 320.

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.

Quarter Course: 321.

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.

Quarter Course: 322.

Study of material and methods for music instruction in the elementary grades. Not applicable toward the B.A. degree. Prerequisites: successful completion of guitar and piano proficiencies, and admittance to the Professional Education Sequence. Offered alternate years.

323 - Secondary Music—3 S.H.

Quarter Course: 323.

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.

Quarter Course: 324.

Introduction to music techniques and fundamentals necessary for recreation programs. Offered alternate years.

332 - Elementary Music Methods II—2 S.H.

Quarter Course: 332.

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. Offered alternate years.

341 - Woodwind Methods II—1 S.H.

Quarter Course: 341.

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.

Quarter Course: 344.

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.

Quarter Course: 399.

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.

Quarter Course: 410G.

Problems of supervision and administration in public school music programs. Prerequisite: MUS 298. Not applicable toward the B.A. degree. Offered every three years.

415 - Vocal Pedagogy—2 S.H.

Quarter Course: 415.

Techniques and problems of voice instruction. Current trends in vocal pedagogy. Offered alternate years.

416 - Piano Pedagogy—2 S.H.

Quarter Course: 416.

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 and 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 and MUS 322 or equivalent or instructor's permission. Offered alternate years.

422 - Music Seminar on Choral Techniques and Materials—2 S.H.

Quarter Course: 422G.

Criteria for selection of vocal music, examination of representative music suitable for groups at various levels of development, principals of programming, rehearsal techniques and organizations. Offered alternate years.

423 - High School Solo Vocal Literature—2 S.H.

Quarter Course: 423.

Course designed to help the high school teacher choose vocal

solo literature for all types of voices. Offered alternate years.

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 - Band Administration and Marching Band Techniques—2 S.H.

Quarter Course: 425.

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.

Quarter Course: 435G.

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.

Quarter Course: 490G.

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. Can be repeated for credit.

THEORY

120 - Introduction to Music Theory—3 S.H.

Quarter Course: 120.

An introduction to the structure and notation of music found in past and current composition. Offered yearly.

201 - Theory I—4 S.H.

Quarter Course: 201, 202.

Scales; key signatures; intervals; 2-, 3- and 4-part writing; non-harmonic tones; simple harmonic progression and voice leading; beginning aural skills. Offered yearly.

202 - Theory II—4 S.H.

Quarter Course: 202, 203.

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. Offered yearly.

203 - Theory III—4 S.H.

Quarter Course: 204, 205.

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. Offered yearly.

204 - Theory IV—4 S.H.

Quarter Course: 205, 206.

Chromatic harmony. New harmonic approaches including twelve tone, polytonality, atonality and related 20th-century techniques. Aural skills further developed. Prerequisite: MUS 203.

Offered yearly.

207 - Composition—2 S.H.

Quarter Course: 207.

A study of the creative process.

Original student compositions. Prerequisite: MUS 204 or equivalent. Offered yearly.

250 - Sight Singing—2 S.H.

Quarter Course: 250.

Study in aural perception of interval and rhythmic relationships. Prerequisite: knowledge of musical notation. Offered yearly.

252 - Jazz Improvisation—2 S.H.

Quarter Course: 252.

A study of the basic tools of jazz improvisation including scales, chord terminology, the blues, and basic jazz forms.

Prerequisites: MUS 120 and MUS 201 or instructor's permission. Offered alternate years.

301 - Orchestration and Instrumentation—2 S.H.

Quarter Course: 301. 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.

Quarter Course: 302. Caring for large and small ensembles. Prerequisite: MUS 202 or equivalent. Offered occasionally.

306 - Conducting—2 S.H.

Quarter Course: 306. Techniques of conducting choral and instrumental groups. Offered yearly.

307 - Music Technology—2 S.H.

Quarter Course: 307. 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 yearly.

402 - Form & Analysis—3 S.H.

Quarter Course: 402. 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.

Quarter Course: 403. Strict counterpoint in 16th-century style, study of species. Prerequisite: MUS 202. Offered alternate years.

406 - Conducting II—1 S.H.

Quarter Course: 406. Advanced techniques of conducting choral and instrumental groups. Prerequisite: MUS 306 and instructor's permission. Offered each semester.

NURSING

Stark Hall, Room 303, (507) 457-5120

Stejskal (Chairperson), Ballard, Bautch, Gardner, Hartkopf, Hatlevig, Heath, Hovelson, Johnson, Kilkus, Kitundu, Nicholls, Nosek, Olsen, Orth, Pilon-Kacir, Proksch, Seppanen, Sieger, M. Smith, S. Smith, Thompson, Tucker, Welhaven, Wilke

FACULTY

Susan Ballard, Associate Professor; B.S.N., University of Illinois; M.S.N., University of Minnesota-Twin Cities; 1984 -
Norma Blankenfeld, Associate Professor; B.S.N., M.S., University of Minnesota; 1980 -
Judith Bautch, Associate Professor; B.S., University of Wisconsin-Madison; M.N., University of Washington; Ph.D., University of Wisconsin-Madison; 1997 -
Helen Davis, Assistant Professor; B.S.N., St. Xavier College; M.S.P.H., University of Minnesota-Twin Cities; 1979 -
Karen L. Gardner, Associate Professor; B.S.N., Florida State University; M.S.N., Texas Woman's University; 1985 -
Patricia Hartkopf, Professor; B.S.N., Winona State University; M.S.P.H., University of Minnesota; Ph.D., University of Minnesota; 1990 -
Jacqueline Hatlevig, Associate Professor; B.S.N., Winona State University; M.S.N., University of Wisconsin-Madison; 1987 -
Linda Heath, Assistant Professor; B.S. University of Wisconsin-Madison; M.S.N. University of Wisconsin-Madison, 1993 -
Judy Hovelson, Assistant Professor; B.S.N., University of Vermont; M.S.N., University of Minnesota-Twin Cities; 1984 -
Lola Johnson, Assistant Professor; B.S.N., Mankato State University; M.S.N., Washington University (Missouri); 1989 -
Stephen Kilkus, Associate Professor; B.A., B.S., Michigan State University; M.S., Iowa State University of Science and Technology; M.S.N., University of Wisconsin-Eau Claire; 1987 -
Mary Ellen Kitundu, Assistant Professor; B.S.N., Gustavus Adolphus College, St. Peter (MN); M.A., University of Minnesota-Twin Cities; 1995 -
Daniel Nicholls, Professor; M.S.N., M.Ed., University of Texas-El Paso; Ed.D., Montana State University; 1988 -
Catherine Nosek, Assistant Professor; B.S., University of Wisconsin-Madison; M.S., University of Wisconsin-Madison.
Gayle P. Olsen, Associate Professor; B.S.N., College of Saint Teresa; M.S.N., University of California-San Francisco; 1980 -
Kathy S. Orth, Associate Professor; B.S.N., College of Saint Teresa; M.S.N., University of Minnesota-Twin Cities; 1983 -
Christine E. Pilon-Kacir, Professor; B.S.N., Mercy College of Detroit (MI); M.S.N., University of Michigan; Ph.D. University of Missouri-Columbia, 1994 -
Mary K. Proksch, Assistant Professor; B.S.N., Viterbo College; M.S. Winona State University; 1996 -
Linda Seppanen, Associate Professor; B.S.N. St. Olaf College; M.S.N., The Catholic University of America; Ph.D., University of Alabama; 1990 -
Janice Sieger, Assistant Professor; B.S.N., University of Wisconsin-Milwaukee; M.Ph., University of Minnesota-Twin Cities; 1995 -
Marjorie J. Smith, Professor; B.S., University of Wisconsin-Madison; M.S.N., Ph.D., University of Minnesota-Twin Cities; 1983 -
Susanne Smith, Associate Professor; B.S., Goshen College; M.S.N., University of Maryland-Baltimore; 1978-1980; 1983 -
Joanne Stejskal, Professor; B.S.N., College of Saint Teresa; M.S.N., University of Wisconsin-Madison; Ed.D., University of St. Thomas; 1975 -
Darlene Thompson, Professor; B.A., M.S., Winona State University; M.S.N., University of Wisconsin-Madison; Ph.D., University of Texas-Austin; 1978 -
Sharon Tucker, Associate Professor; B.S.N., College of Saint Teresa; M.S.N., University of Wisconsin-Eau Claire; D.N.S.C., Rush University; 1997 -
Mary Welhaven, Associate Professor; B.S.N., Winona State University; M.S., University of Minnesota-Twin Cities; Ph.D., University of Minnesota-Twin Cities; 1981 -

The Nursing Major offers a liberal education with a concentration of study in Nursing. The curriculum is designed on a broad base of general education. Upper-division liberal arts courses are taken concurrently with Nursing courses for students on either the Winona or Rochester campus.

The Nursing courses combine the theory and the practice of nursing. With guidance from the faculty, this combination provides opportunities for students to meet a variety of nursing needs for persons of all ages and in various settings.

Accreditation and Approval

The Nursing Program is accredited by the National League for Nursing Accrediting Commission (NLNAC), 350 Hudson St., New York, NY 10014 (1-800-669-1656). NLNAC is a resource of information regarding tuition, fees and length of program. The Nursing Program is approved by the Minnesota Board of Nursing. Graduates are eligible to write the professional nurse licensure examination and apply for Public Health Nursing Certification. A student may be eligible to apply for school nursing certification by taking specified electives required by the State Department of Education. Graduates are capable of giving professional nursing care in first-level nursing positions and have a base for graduate study.

Scholarships

A number of scholarships are available for nursing majors. Inquire about scholarships early in the academic year. Apply for scholarships one academic year in advance of the academic year you want to receive the scholarship (i.e., apply during the 1998-99 academic year if you want a scholarship in the 1999-2000 academic year). Scholarships are provided by individual benefactors, affiliating hospitals, and professional and community organizations. A complete listing is available in the Nursing Department Office on either the Rochester or Winona campus. Students are encouraged to contact agencies (hospitals, nursing homes, American Legion, VFW, etc.) in their hometowns regarding possible nursing scholarships. Refer to the current undergraduate catalog for general information on scholarships, grants and financial aid.

Location

The Nursing Major is offered on both the Winona and Rochester campuses. Students are assigned to a campus for their junior and senior years when they are admitted to the Nursing Major, and campus assignment determines location of clinical facilities.

A variety of community facilities are utilized for clinical laboratory experiences for students in the Nursing Major. Students assigned to the Winona campus participate in clinical experiences at Community Memorial Hospital in Winona and the Gundersen-Lutheran medical complex in La Crosse, Wis. Students assigned to the Rochester campus participate in clinical experiences at hospitals affiliated with the Mayo Medical Center. Both campuses also offer a wide variety of other clinical experiences as well: nursing homes, public health agencies and mental health agencies, to name a few.

Costs

Nursing students admitted into the upper-division Nursing Major must assume responsibility for any costs incurred while meeting the following clinical agency requirements: yearly mantoux 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); CPR certification; and professional liability insurance. 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 pin, uniform(s), lab coat and faculty-approved stethoscope, as well as any costs incurred to maintain their health (throat cultures, doctor visits, etc.). A skills lab user fee is charged for each course when the student is enrolled in N300 and N301.

Initial costs for book purchases for junior nursing students can total \$500 (approximate). Most texts are used throughout the program.

Program Options

There are two options for the upper-division nursing major:

1. **Generic Option** - two years of sequenced nursing courses for LPNs and students who are not licensed as registered nurses;
2. **RN Option** - a flexible program for registered nurses pursuing a baccalaureate degree in nursing. RN Option nursing courses may be completed in one year.

Either of these options may be completed on a part-time basis.

Graduation Requirements

Graduation requirements include completion of WSU General Education Program Requirements as well as all Nursing Program course requirements. A total of 128 semester credits is needed to graduate from WSU; at least 65 of these semester credits must be from a four-year college. A formal application for graduation must be made no later than one semester before the expected graduation semester.

After graduation, Generic Option nursing graduates must take and pass the National Council Licensure Examination (NCLEX) in order to obtain a Registered Nurse (RN) license. Generic Option students may apply for licensure and take the NCLEX in the state of their choice.

Graduation With Honors

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. Students have an opportunity to work closely with faculty advisors and pursue personal learning goals. We feel this program stimulates scholarly interest and gives recognition to deserving students for their achievements.

To be eligible, you must:

1. have junior status in the Nursing Major
2. have applied for and be accepted into the Nursing Honors Program by the end of the fall semester of the junior year
3. complete the nursing research course by the end of the junior year and
4. maintain a 3.5 GPA overall and in nursing courses

After meeting eligibility requirements, you proceed as follows:

1. You must find a Nursing faculty member willing to serve as an honors advisor and another Nursing faculty member willing to serve as a second reader for the project. These faculty comprise your Honors Committee. Advisors and readers must be full-time, tenured or tenure-track WSU faculty members unless a waiver is obtained from the Student Committee. Faculty members accept Honors students at their own discretion. It is not guaranteed that you will be able to find a faculty advisor or second reader.
2. You take the nursing research course during your junior year.
3. You (with your advisor) prepare a scholarly proposal for the Honors project by the first day of fall semester of your senior year. A proposed timeline for completing the project also must be developed with the advisor.
4. You submit the Honors proposal to your Honors Committee for approval. The Honors Committee determines if your proposal meets the criteria for a Nursing Honors project.
5. You do the Honors project during the fall semester of your senior year under the direction of the faculty advisor. Specific objectives for the project are developed by you and your faculty advisor. A scholarly paper reporting or describing the results of the Honors project must be completed by the middle of spring semester of your senior year.
6. You may register for up to 6 credits (N490 Independent Study in Nursing) over the two-year period if you so choose to earn credits for working on your Honors project.
7. You are required to present your project in a seminar or meeting organized by the Honors Committee each spring. You submit two copies of your project to be placed in the Honor's Book on each campus.

Students who are admitted to the Nursing Honors Program and who successfully complete the process will, upon graduation, have their official transcripts stamped with the words, "Graduated With Honors In Nursing"; and have their graduation status (Honors in Nursing) indicated on the graduation program and mentioned during graduation ceremonies.

Admission to the Nursing Major

Application to the Nursing Major is a two-step process. The first step is admission to WSU. Contact the WSU Admissions Office for more information.

The second step is application to the Nursing Major. This application process is usually done during a student's sophomore year. The number of students admitted to the upper-division Nursing Major is limited.

Students who have completed 7 of 10 natural and social science prerequisite courses with a "C" or better and have a cumulative GPA of 2.75 or above by the end of WSU's fall semester of the second year may apply for admission to the Nursing Program. The student's GPA is calculated on the last five years of coursework; however, all grades for prerequisite courses must be completed with a "C" or better no matter when they were taken. Students must have a plan for completing all prerequisite courses, including ENG 111. ALL prerequisite courses must be completed with a grade of "C" or better before starting the Nursing Major in the fall.

The completed application must be turned in by the specified deadline. Notification of admission to the Nursing Major is made early in the spring semester. The Nursing Program begins the fall semester of the following academic year. Nursing advisors are available to assist with the application process.

Finish in Four Graduation Guarantee

Students who meet the following requirements of the Finish-In-Four Graduation Guarantee are admitted to the Nursing Program:

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 Nursing Department before beginning their fall semester classes;
2. All eligible students must be qualified to begin college-level science, math and English as required by the Nursing Major;
3. All eligible students must preregister 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.

Minimal Standards

1. A grade of "C" or above must be achieved 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. A level of health is maintained 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. The student follows the ETHICAL RESPONSIBILITIES as outlined in the Handbook for Undergraduate Nursing Students.

Withdrawal

Withdrawal from a nursing course and/or the University must be completed according to WSU guidelines.

Professional Policies

1. No nursing course may be repeated more than once due to withdrawal or grade less than "C." No theory exams can be retaken. Students who fail or withdraw from a course (theory or clinical) will be able to continue part-time in the Nursing Major if they have satisfied progression policies and as space allows.
2. Persons will not be allowed to continue in the Nursing Program 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. Students may be dismissed from a course for breach of ethical responsibilities. See the Handbook for Undergraduate Nursing Students and the Dean of 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. Students who once were admitted to the Nursing Program and completed at least one nursing course and 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 Generic Progression Coordinator or the RN Coordinator (for RN Option students). After one year, the student must reapply for admission to the Nursing Major.
5. All students are assigned to a clinical rotation sequence. If students vary from the assigned plan, space in clinical courses cannot be assured.
6. All part-time students must file a written progression plan that has been approved by the Generic Progression Coordinator or the RN Coordinator (for RN Option students).
7. 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 get the plan approved by the Department chairperson or designated faculty member or the RN Coordinator (for RN Option students). This plan is based on space availability in clinical courses and completion of prerequisites for courses.
8. 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, all course assignments were not finished but the student was passing all other aspects (refer to current undergraduate catalog). For courses that are prerequisite to subsequent nursing courses, the "Incomplete" must be resolved by the second week of the new semester.

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 to some course challenges.

Minnesota Nursing Students' Association

Membership is available at the local, state and national levels. This organization focuses on nursing student issues and problems. First-year and sophomore nursing students are welcome and encouraged to join this pre-professional organization.

Nursing faculty fully support the activities of this organization. The MNSA office is located in Stark Hall, Room 314. Names of current officers are posted on Nursing Department bulletin boards in Winona and Rochester.

B.S. MAJOR - NURSING

96 s.h. (No Minor Required)

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 & Physiology I (4)
- 212 Anatomy & 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 Human Society (3)
- * 212 The Family (3)

OTHER (3 s.h.)

English (4 s.h.)

- * 111 College Reading and Writing (4)

* Courses may be used to satisfy certain General Education Requirements.

Additional Nursing Major Requirements to be completed before Graduation.

NOTE: Either one of the following statistics courses MUST be completed BEFORE enrolling in N375 Nursing Research Theory and Technology.

- * STAT 110 Fundamentals of Statistics (3)
- OR
- PSY 231 Statistics (3)

Note: This course does not fulfill a General Education Requirement.

UPPER-DIVISION ELECTIVES (300- AND 400-LEVEL COURSES) (5 s.h.)

ELECTIVES (5 s.h.)

Five semester hours of upper-division electives (300 and 400 level) are required for the Nursing Major.

Elective credits can be selected from the offerings of the Nursing Department or from other upper-division 300- and 400-level offerings (of these, 3 credits must be from Nursing electives). Electives can be taken as letter grade or Pass/No Credit if the courses are offered on a P/NC basis.

NURSING ELECTIVES

- 260 Women's Health Issues (3)
(May not be used by Nursing Majors for general education credit)
- 327 Intro to Public Health (3)
- 392 Cardiac Risk Prevention (3)
- 410 Nursing Care of the Aged (3)
- 412 Critical Care Nursing (3)
- 432 Principles of OR Nursing (3)
- 480 Holistic Approaches to Healing (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 (1-3)
- 496 Feminist Perspectives in Nursing (2)

OTHER RECOMMENDED ELECTIVES

- PHIL 330 Biomedical Ethics (3)
- PSY 390 Abnormal Psychology (3)

GENERIC OPTION

54 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 Nursing Role Development I (3)
- 331 Nursing 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)
- 456 Adult Health Practicum (3)
- 466 Parent-Child Practicum (3)
- 471 Community Health Care (2)

- 472 Leadership/Management in Nursing (2)
- 486 Leadership/Management Public Health Practicum (3)
- 491 Capstone Experience in Role Synthesis (3)

RN OPTION

54 s.h.

Required courses must be taken for a letter grade.

Twenty-four (24) credits 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 NLN-accredited program. The National League for Nursing Mobility II Exam is used as a challenge for these credits for RN graduates of diploma schools or for graduates of Associate Degree programs which are not NLN-accredited. If all examinations are successfully completed, the 24 credits will be granted. RN Option students must meet prerequisite requirements as outlined in the "Admission to the Nursing Major." All RN Option students must hold a current license to practice professional nursing issued by a state or territory of the U.S. A photocopy of the licenses must be submitted to the Nursing Department.

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

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major must be taken on a Grade Only basis.

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.

300 - Basic Caring Skills I—2 S.H.

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.

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 - NLN Mobility Profile II: Care of the Adult Client—6 S.H.

Includes questions which focus on the nursing care of clients in a variety of settings and at various stages of the wellness-illness continuum. Items also are included in this exam which assess nursing skills in meeting physiologic and psychosocial needs of clients with stable conditions. P/NC only.

***304 - NLN Mobility Profile II: Care of Client During Childbearing—6 S.H.

Focuses on nursing care during the antepartal, intrapartal and neonatal periods. Emphasis is on the normal, although some common, complications. P/NC only.

***306 - NLN Mobility Profile II: Care of the Child—6 S.H.

Is concerned with nursing care of children of all ages at various stages of health and illness. P/NC only.

*****308 - NLN Mobility Profile II: Care of the Client with a Mental Disorder—6 S.H.**

Consists of questions which reflect the broad spectrum of psychological wellness-illness. The content includes psychosocial assessment and intervention strategies to support the client's strengths. P/NC only. (NOTE: *** indicates for diploma and ADN graduate of non-NLN accredited schools)

320 - Caring Concepts I—3 S.H.

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, advocate and teacher emphasized. Prerequisite: admission to the major. Grade only.

321 - Caring Concepts II—3 S.H.

Focuses on health promotion for self, individuals and groups, and building on professional role development as case manager and change agent. Prerequisite: N320. Grade only.

327 - Introduction to Public Health—3 S.H.

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.

330 - Nursing Role Development I—3 S.H.

Beginning integration of ethical decision-making, communication and therapeutic nursing interventions into the caregiver, advocate, scholar and teacher roles with clients in a variety of settings. Ninety hours practicum for semester. Prerequisite: admission to the major. Grade only.

331 - Nursing Role Development II—3 S.H.

Integrates professional nursing roles of provider of care, advocate, teacher, case manager, change agent and researcher in nursing care of individuals, families and a community. Ninety hours practicum for semester. Prerequisite: N330. Grade only.

345 - Health Assessment I—3 S.H.

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. Grade only.

346 - Health Assessment II—2 S.H.

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. Prerequisite: completion of N345 or instructor's permission. Grade only.

360 - Pharmacology—1 S.H.

An introduction to general principles of drug therapies in self-care and in nursing practice. Prerequisite: chemistry course or instructor's permission. Grade only.

366 - Pathophysiology—3 S.H.

Covers the human pathologic processes and common treatment modalities for frequently occurring health problems. Prerequisite: completion of Anatomy & Physiology course or instructor's permission. Grade only.

375 - Nursing Research, Theory and Technology—3 S.H.

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. Prerequisite: N330 and statistics course or instructor's permission. Grade only.

392 - Cardiac Risk Prevention—3 S.H.

Content will be added on new technology in diagnosing and treating cardiac conditions. 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.

400 - Emerging Health Care Systems—2 S.H.

Explores American and global nursing care within the health care delivery systems including issues and trends. Prerequisite:

Senior standing in major or instructor's permission. Grade only.

410 - Nursing Care of the Aged—3 S.H.

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.

411 - Nursing of Adults and Their Families—2 S.H.

Studies the theoretical basis of nursing care for adult clients and their families in well-being and illness. Prerequisite: N330. Grade only.

412 - Critical Care Nursing—3 S.H.

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. Course includes a clinical laboratory experience.

413 - Nursing of Families Experiencing Mental Illness—2 S.H.

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: N320. Grade only.

415 - Holistic Caring - 5 S.H.

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. Grade only.

421 - Nursing of Childbearing Families—2 S.H.

Studies the theoretical basis of nursing care dealing with sexuality, reproductive health promotion and perinatal health promotion. Prerequisite: N330. Grade only.

422 - Nursing of Child-Rearing Families—2 S.H.

Studies the theoretical basis of nursing care for families with children. Prerequisite: N330. Grade only.

432 - Principles of OR Nursing—3 S.H.

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.

435 - Holistic Assessment—4 S.H.

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 the major or co-requisites of N415 and N465. Grade only.

445 - Management and Leadership—3 S.H.

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. Grade only.

455 - Continuity of Care—4 S.H.

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. Grade only.

456 - Adult Health Practicum—3 S.H.

Focuses on the nursing roles in restoring, maintaining and promoting the health of individual adults and their families in a variety of situations of well being, mental and physical illnesses, and settings. Ninety hours practicum for semester including seminar. Prerequisites or concurrents: N411 and N413. Grade only.

465 - Nursing Roles and Health Promotion—4 S.H.

Focuses on the 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. Grade only.

466 - Parent-Child Health Practicum—3 S.H.

Focuses on the nursing roles in maintaining and promoting the health of childbearing and childbearing families and others in relation to reproductive health in a variety of situations and settings. Ninety hours practicum for semester including seminar. Prerequisite or concurrent: N421, N422. Grade only.

471 - Community Health Care —2 S.H.

Explores the historical roots of public health care and addresses public health issues for vulnerable populations and ways nursing deals with chronic needs. Prerequisite: N330. Grade only.

472 - Leadership/Management in Nursing—4 S.H.

Explores leadership and management theories, attributes and behaviors within the culture of nursing. Prerequisite: N331. Grade only.

475 - Community Health Nursing—4 S.H.

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. Grade only.

480 - Holistic Approaches to Health—3 S.H.

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.

486 - Leadership/Management Public Health Practicum—3 S.H.

Focuses on the nursing roles in caring for groups of clients with groups of other health care providers in a variety of situations and settings. Ninety hours practicum for semester including seminar. Prerequisites or concurrents: N471 and N472. Grade only.

490 - Independent Study in Nursing—1-3 S.H.

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.

491 - Capstone Experience in Role Synthesis—3 S.H.

Intense site-based experiences of student's choice; designed to encapsulate the essence of baccalaureate-level professional role development. Ninety hours practicum for semester including seminar. Prerequisite: last term of senior year or instructor's permission. Grade only.

492 - Jamaica Studies: Health Care in An Emerging Country—3 S.H.

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.

493-The Patient's Voice: Experiences of Illness—2 S.H.

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.

494-Contemporary Film: Understanding the Patient's Experience—2 S.H.

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.

495 - Seminar—1-3 S.H.

Subject matter of current interest arranged by the Department. Course may be repeated when offered with different content and title.

496 - Feminist Perspectives in Nursing—2 S.H.

This seminar explores the relationship of the feminist movement, feminist theory and gender issues for nursing history and practice.

PARALEGAL

Minne Hall, Room 212, (507) 457-5400
T. Paino (Program Director)

Faculty

Troy Paino; B.A., Evangel College; J.D., Indiana University School of Law; M.A., Michigan State University; Ph.D., Michigan State University; 1997 -

Adjunct for Paralegal Program

Nancy Buytendorp; B.A., University of Wisconsin-Madison; J.D., Hamline University
Richard Jackson; B.A., University of Minnesota-Duluth; J.D., William Mitchell College of Law
Charles MacClean; B.A., University of Minnesota; J.D., William Mitchell College of Law
Rich McCluer; B.A., Winona State University; J.D., University of Minnesota
Bruce Nelson; B.S., University of Minnesota; J.D., Hamline University
Todd Rasmussen; B.S., Winona State University
Judge Gerard Ring; B.S., Georgetown University; J.D., Harvard University; L.L.B., University of Minnesota
Steven Schleicher; B.A., University of Minnesota-Duluth; J.D., William Mitchell College of Law
David Shulman; B.A., B.S., Michigan State University; J.D., University of Minnesota
Karin Sonneman; B.A., University of Maryland; M.S., University of Minnesota; J.D., William Mitchell College of Law
Kevin Vinnes; B.A., University of North Dakota; J.D., University of Minnesota
Robin Youngerman; B.S., Mankato State University; B.A., University of Montana; J.D., University of Iowa

The purpose of the Paralegal Program is to enable students to develop professional skills in the field of legal services. The program is designed to meet the needs of students wishing to enter into an occupational service for people and institutions involved with local, state and federal laws.

The program is an interdisciplinary program and includes general education, specialized legal courses, business administration, sociology, history and political science.

A high school diploma and admission to WSU are required for admission to the program. It is recommended that candidates for admission be in the upper half of the class or have a score of at least 20 on the ACT test. Students wishing to enter the program must apply for admission to WSU and seek advising from the Director of the Paralegal Program.

The WSU Paralegal Program is approved by the American Bar Association.

Pre-Law Sequence

Pre-Professional Sequences are not degree programs (e.g. major or minor) at WSU. They are programs which are preparatory for a degree at another college or university. The Pre-Law Sequence is offered through the History Department include Pre-Law. SEE the Pre-Professional Sequences section for more information about the Pre-Law Sequence at WSU.

Paralegal Phases

There are four phases to the Paralegal Program. They are:

Phase I - General Education

These requirements partially fulfill the General Education Requirements. Consult the program director for detailed information on the paralegal prerequisite courses, the General Education Program and the P/NC grade policy.

Phase II - 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 III - Legal Speciality Courses

These courses concentrate on specific aspects of the legal profession. Legal speciality 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 IV - Professional Specialization

Students choose between the Business Administration, Sociology and Multi-Services options. In addition to the core requirements for all options, students must meet the option course requirements for the option chosen.

Additional Course and GPA Requirements

Students are required to have substantially completed their General Education Requirements and Phase II requirements before they enroll in Legal Research. They also must have the academic advisor's approval.

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. 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 371: Legal Research and Writing II.

Coursework below a grade of "C" in legal specialty courses does not count toward completion of the Paralegal Major.

B.S. MAJOR - PARALEGAL

128 s.h. (No Minor Required)

CORE REQUIREMENTS FOR ALL OPTIONS (84 s.h.)**GENERAL EDUCATION (45 s.h.)****Basic Skills (12 s.h.)**

- ENG 111 English Composition (4)
- CMST191 Speech Communication (3)
- MATH 111 or MATH 113 Mathematics (3)
- Physical Education Activity (2)

Humanities (6 s.h.)

- HIST 150 American History to the Civil War (3)
- Humanities Elective outside the History Department (3)

Natural Science (6 s.h.)

- BIO 117 Human Biology (3)
- Natural Science Elective outside the Biology Department (3)

Social Science (6 s.h.)

- SOC 150 Human Society (3)
- PSY 210 General Psychology (3)

Different Culture (6 s.h.)

- Consult with advisor.

Allied Studies (3 s.h.)

- ACCT 211 Financial Accounting Principles (3)

Other Specified General Education Courses (6 s.h.)

- BIO 118 General Biology (3)
- POLS 120 Introduction to American Politics (3)

INTERDISCIPLINARY FOUNDATIONS (24 s.h.)**Communication Studies (3 s.h.)**

- 261 Public Speaking (3) OR
- 389 Persuasive Communication (3)

English (3 s.h.)

- 210 Advanced Composition (3) OR
- 439 Technical Writing (3)

History (12 s.h.)

- 151 U.S. History Since the Civil War (3)
- 365 American Legal History (3)
- 486 American Intellectual & Cultural History (3)
- 488 American Constitutional History (3)

Political Science (6 s.h.)

- 320 Constitutional Law (3)
- 420 Administrative Law (3)

HISTORY - LEGAL SPECIALTY SEQUENCE (15 s.h.)

- 370 Legal Research & Writing I (2)
- 371 Substantive Law & Ethics I (2)
- 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)

**B.S. MAJOR - PARALEGAL:
BUSINESS ADMINISTRATION**

128 s.h. (No Minor Required)

Each student's program depends on the area of specialization chosen: taxes, insurance, banking, corporations, labor relations, etc.

CORE REQUIREMENTS (84 s.h.)

As listed above.

REQUIRED COURSES (21 s.h.)**Accounting (3 s.h.)**

- 212 Managerial Accounting Principles (3) OR
- 407 Introduction to Taxation (3)

Business Administration (6 s.h.)

- 310 Business Law I (3)
- 311 Business Law II (3)

History (12 s.h.)

- 380 Paralegal Internship (12)

ELECTIVES (23 s.h.)

As approved by advisor.

**B.S. MAJOR - PARALEGAL:
SOCIOLOGY**

128 s.h. (No Minor Required)

Each student's program depends on the area of specialization chosen: criminal and family law services, police work, social services, corrections and court services.

CORE REQUIREMENTS (84 s.h.)

As listed above.

REQUIRED COURSES (24 s.h.)**Sociology (12 s.h.)**

- 210 Introduction to Criminal Justice (3)
- 216 Social Problems (3)
- 375 Introduction to Social Work (3)
- 376 Introduction to Social Research (3)

History (12 s.h.)

- 380 Paralegal Internship (12)

ELECTIVES (20 s.h.)

As approved by advisor.

**B.S. MAJOR - PARALEGAL:
MULTI-LEGAL**

128 s.h. (No Minor Required)

A student choosing the multi-legal option is required to take all of the following courses in business administration, sociology, physics and history.

CORE REQUIREMENTS (84 s.h.)

As listed above.

REQUIRED COURSES (28 s.h.)**Business Administration (3 s.h.)**

- 210 Business Law I (3)

History (15 s.h.)

- 377 Practical Legal Investigation Techniques (3)
- 380 Paralegal Internship (12)

Physics (4 s.h.)

- 310 Science & Technology in Litigation (4)

Sociology (6 s.h.)

- 216 Social Problems (3)
- 376 Introduction to Social Research (3)

ELECTIVES (16 s.h.)

As approved by advisor.

Paralegal Sequence Course Descriptions

All Paralegal History courses must be taken on a Grade Only basis except Internship and Paralegal Institute.

370 - Legal Research and Writing I—2 S.H.

Quarter Course: 370.

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.

Quarter Course: 371.

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. Prerequisite: HIST 370. Grade only. Offered yearly.

372 - Legal Research and Writing II-2 S.H.

Quarter Course: 372.

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 371. Grade only. Offered yearly.

373 - Adversary System: Civil Procedure—2 S.H.

Quarter Course: 373.

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 372. Grade only. Offered yearly.

374 - Evidentiary Rules—2 S.H.

Quarter Course: 374.

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 373. Grade only. Offered yearly.

375 - Substantive Law and Ethics II—3 S.H.

Quarter Course: 375.

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 374. Grade only. Offered yearly.

376 - Adversary System: Criminal Procedure—2 S.H.

Quarter Course: 376.

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 374. Grade only. Offered yearly.

377 - Practical Legal Investigation Techniques—3 S.H.

Quarter Course: 377.

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, HIST 365, HIST 370 and HIST 371. Grade only. Offered yearly.

380 - Paralegal Internship—12 S.H.

Quarter Course: 380.

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.

383 - Paralegal Institute—1-3 S.H.

Quarter Course: 380.

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 (chair), Hansen, Scheid

FACULTY

Craig Hansen, Associate Professor, Philosophy; B.A., Rice University; M.A., Ph.D., University of Texas-Austin; 1989 -

Kevin Possin, Associate Professor, Philosophy; B.A., Southwest State University; Ph.D., University of Wisconsin-Madison; 1990 -

Don E. Scheid, Professor, Philosophy; B.A., Colorado College; M.A., J.D., University of Utah; Ph.D., New York University; 1986 -

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 — for example: 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 Department offers a well-rounded Philosophy Minor. 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.

Note that most of the Philosophy courses also are general education courses, so you can simultaneously nearly complete the Minor while working on the general education requirements. The electives in the minor enable you to tailor your program to your own interests and major.

Pass/No Credit Courses

All courses for the Minor must be taken for a grade.

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:

- 230 Moral Theory (3)
- 330 Biomedical Ethics (3)
- 331 Business Ethics (3)
- 332 Philosophy of Law (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)
- 202 Aristotle to Medieval 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

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the minor must be taken on a Grade Only basis. The P/NC option is available to non-minors unless otherwise noted.

110 - Critical Thinking—3 S.H.

Quarter Course: 110.

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 argument identification, evaluation and construction, informal fallacy identification, and validity testing of syllogisms and propositional arguments. Practice exercises and exams are done in the Critical Thinking Lab. Offered each year.

120 - Introductory Philosophy—3 S.H.

Quarter Course: 120.

An introduction to major areas in philosophy, considering some fundamental problems and concepts. Typical issues include some of the following: 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.

Quarter Course: 130.

A practical course in moral philosophy, involving concrete moral issues. Topics may include abortion, euthanasia, sexuality and sexual morality, feminism, discrimination and affirmative action, capital punishment, pornography and censorship, animal

rights, world hunger, war and terrorism. Offered each year.

201 - Classical Philosophy—3 S.H.

Quarter Course: 201.

A study of the major philosophical ideas of the classical world, concentrating on ancient Greece: nature of the universe, knowledge, politics and morals in the Presocratics, Socrates, and Plato.

Offered each year.

202 - Aristotle to Medieval Philosophy—3 S.H.

Quarter Course: 202.

A study of Aristotle's most important views on reality, knowledge and morals, highlighting his role as founder of logic and the scientific point of view. An investigation of how philosophers elaborated on and departed from Aristotle's theories, both in later antiquity and the Middle Ages. Offered each year.

210 - Inductive Reasoning—3 S.H.

Quarter Course: 210.

Introduction to inductive reasoning and how to avoid being tricked by faulty scientific claims and arguments. Students study and practice using experimentation and observation to critically 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.

Quarter Course: 220.

An introductory course in political philosophy, the course investigates various issues concerning 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 as appropriate.

230 - Moral Theory—3 S.H.

Quarter Course: 230.

A study of major ethical theories and problems in ethical theory; 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.

Quarter Course: 240.

Examines basic issues in the philosophy 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 asks to what extent each of these has driven recent public policy on environmental issues and school curricula. Offered each year.

250 - Symbolic Logic—3 S.H.

Quarter Course: 250.

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 tips for constructing proofs. Offered each year.

260 - Problems in Philosophy—3 S.H.

Quarter Course: 260.

A variable-content course considering salient problems in philosophy. May be repeated as problems change, but may not be repeated for general education. Offered as appropriate.

301 - Early Modern Philosophy—3 S.H.

Quarter Course: 301.

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 such philosophers as Locke, Berkeley and Hume; and the constructivism of Kant. Prerequisite: one philosophy course or instructor's permission. Offered each year.

302 - Contemporary Philosophy—3 S.H.

Quarter Course: 302-3.

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 and justification, and the possibility of conceptual and ethical relativism. Prerequisite: one philosophy course or instructor's permission. Offered each year.

330 - Biomedical Ethics—3 S.H.

Quarter Course: 330.

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.

331 - Business Ethics—3 S.H.

Quarter Course: 331.

Ethical issues in business; for instance, truthful advertising, bribery, whistleblowing, product liability, employee privacy, hiring and promotion practices, environmental issues, multi-national corporations and exploitation, alternative versions of capitalism and socialism. Offered as appropriate.

332 - Philosophy of Law—3 S.H.

Quarter Course: 332.

Consideration of the philosophical foundations of law. Topics may include the nature of law, concepts of responsibility and lia-

bility, theories of punishment, causation in the law, discrimination and equality, 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.

Quarter Course: 335.

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 constitutional law. Topics may include natural law theory, the separation of powers, theories of constitutional interpretation, theories of free speech, privacy doctrine, equal protection and 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.

Quarter Course: 401.

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.

Quarter Course: 430.

A variable-content course considering issues in social and political philosophy. May be repeated as topics change. Offered as appropriate.

460 - Great Philosophers—3 S.H.

Quarter Course: 460.

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

Olson (Chairperson), Fiereck, Grob, Juare, Leaf, Matter, Mullen, Murray, Nauman, Sawyer, Sheridan, Smith, Wistrill, L. Wothke

FACULTY

Lavonne Fiereck, Associate Professor; B.S., St. Cloud State University; M.S., Southern Illinois University-Carbondale; 1969 -

Gary Grob, Professor; B.S., M.S., Winona State University; Ph.D., University of Utah; 1965 -

Stephen Juare, Professor; B.S., M.S., Winona State University; Ph.D., Florida State University; 1975 -

Michael Leaf, Instructor; B.A., St. Mary's College of Minnesota; B.S., M.A., Winona State University; 1987 -

Christa Matter, Assistant Professor, Women's Track Coach, Assistant Women's Volleyball Coach; B.S., Luther College; M.S., Indiana University; 1995 -

Sue Ann Mullen, Professor; B.S., M.S., Winona State University; 1969 -

Rob Murray, Gymnastics and Cheer Squad Coach; 1995 -

M. Jerome Nauman, Assistant Professor, Health, Physical Education and Recreation; B.S., Tarkio College; M.Ed., University of Missouri-Columbia; 1978 -

Lorene Olson, Associate Professor; B.S., M.S., University of Wisconsin-La Crosse; Ph.D., University of New Mexico; 1989 -

Tom Sawyer, Assistant Professor, Football Coach; B.S., M.S., Winona State University; 1996 -

Terri Sheridan, Assistant Professor; Women's Basketball Coach; B.S., University of Wisconsin-La Crosse; M.A., Ohio State University; 1992 -

Myron Smith, Jr., Assistant Professor; B.A., Concordia College (Minnesota); M.S., Moorhead State University; Ed.D., University of Northern Colorado; 1990 -

Don Wistrill, Assistant Professor; B.S., M.S., Winona State University; 1990 -

Leslie L. Wothke, Assistant Professor, Men's Basketball Head Coach; B.S., Greenville College (IL); M.S., Eastern Illinois University, Charleston; 1992 -

The programs in Physical Education and Recreation provide students with discipline-specific knowledge, skills, practice and professional experiences via classroom instruction, laboratory experimentation, practicum field experiences and student teaching or internship capstone experiences necessary for professional careers or graduate studies. The Department emphasizes healthy benefits of active participation through the development of physical, social, emotional, recreational, clinical and culturally diverse skills.

Degrees, options and the concentration available within the PER department are:

- B.S. Major - Recreation and Leisure Studies Option
- B.S. Major - Therapeutic Recreation Option
- B.S. Major - Physical Education (Teaching)
- B.A. Minor - Dance (THAD/PER Co-op)
- Coaching Concentration
- Developmental/Adapted Physical Education Licensure

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

In the course description section, courses with no grading designation may be taken for Grade or Pass/No Credit. Courses offered for Pass/No Credit Only or Grade Only are so designated. All courses in the major, minor, options, etc. must be taken on a Grade Only basis except Internships.

B.S. MAJOR - RECREATION AND LEISURE STUDIES OPTION

64-65 s.h. (No Minor Required)

Students in Recreation and Leisure Studies, and students in Therapeutic Recreation must maintain a 2.50 GPA in the major.

REQUIRED COURSES (58-59 s.h.)

PER (49 s.h.)

- 203 Recreation Programming (3)
- 229 Foundations of Recreation and Leisure Studies (3)
- 239 Outdoor Pursuits (3)
- 245 Therapeutic Recreation and Services (3)
- 292 Craft Activities (3)
- 302 Tourism/Eco-Tourism (3)
- 326 Organization & Administration of Recreation (3)
- 333 Wilderness Outfitting & Trip Planning (3)
- 344 Wilderness First Aid (3)
- 350 Legal & Financial Aspects (3)
- 421 Outdoor Education (3)
- 426 Recreation Facilities & Area Design (3)
- 399 Internship in Recreation and Leisure Studies (10)
- 414/514 Recreational Leadership (3)

Biology/Geography (3-4 s.h.)

- * BIO 104 Conservation of the Environment (3) OR
- BIO 203 Natural History (4) OR
- GEOG 270 Introduction to the Geography of Tourism (3)

Theatre and Dance/Music (2 s.h.)

- * THAD 141 Oral Interpretation (2) OR
- THAD 239 Creative Dramatics for Children (2) OR
- MUS 324 Recreational Music (2)

Physical Education/Recreation (4 s.h. credits required)

- 101, 102, 103, 104, 112, 122, 124, 134, 135, 137, 139, 142,
- 417 (1-3 s.h. workshops)

ELECTIVES (6 s.h.)

Courses from the list below that are designated as General Education courses may count toward both General Education Requirements and the major requirements.

Art

- * 114 2-D Design (3)
- * 115 3-D Design (3)
- * 118 Drawing I (3)
- 120 Introduction to Ceramics (3)

Biology

- * 104 Conservation of the Environment (3)
- 203 Natural History (4)

Geosciences

- 103 Minnesota Rocks & Waters (3)
- 105 Astronomy (3 or 4)
- 110 Oceanography (3 or 4)

Mass Communication

- 110 Visual Communication (3)
- 120 Electronic Media (2)
- 240 Public Relations (3)
- 260 Advertising (3)

Music

- 110 Introduction to Jazz (3)
- 116 Music of the Native American (3)
- 324 Recreational Music (2)

Political Science

- * 120 Introduction to American Politics (3)
- 221 State and Local Government (3)
- 228 Public Service (3)

Psychology

- * 210 General Psychology (3)
- 250 Developmental Psychology (3)
- 305 Theories of Personality (3)
- 325 Social Psychology (3)
- 365 Consumer Psychology (3)

Sociology

- * 150 Human Society (3)
- * 205 Social Interaction (3)
- * 212 The Family (3)
- * 216 Social Problems (3)

Theatre & Dance

- * 111 Introduction to Theatre (3)
- * 141 Oral Interpretation (3)
- 201 Play Production (3)
- 239 Creative Dramatics for Children (2)

* Courses may be used to meet certain General Education Requirements

B.S. MAJOR - THERAPEUTIC RECREATION OPTION

64 s.h. (No Minor Required)

Students in Recreation and Leisure Studies and students in Therapeutic Recreation must maintain a 2.50 GPA in the major.

REQUIRED COURSES (56 s.h.)

PER (46 s.h.)

- 229 Foundations of Recreation and Leisure Studies (3)
- 239 Outdoor Pursuits (3)
- 245 Therapeutic Recreation & Services (3)
- 302 Tourism/Eco-Tourism (3)
- 326 Organization & Administration of Recreation (3)
- 332 Leisure & Aging in Therapeutic Recreation (3)

- 342 Intervention Techniques in Therapeutic Recreation (3)
- 350 Legal & Financial Aspects (3)
- 399 Internship in Therapeutic Recreation (10)
- 414 Recreational Leadership (3)
- 426 Recreation Facilities & Area Design (3)
- 468 Programming in Therapeutic Recreation (3)
- 475 Trends & Issues in Therapeutic Recreation (3)

Biology (4 s.h.)

- * 211 Anatomy & Physiology I (4)

Psychology (6 s.h.)

- 250 Developmental Psychology (3)
- 420 Abnormal Psychology (3)

ADDITIONAL REQUIREMENTS (6 S.H.)

A minimum of 6 s.h. from two of the five disciplines listed below (Psychology, Sociology, Counselor Education, HHP):

NOTE: As one area, students must take Psychology 210 unless using for a general education requirement. It is a prerequisite for Psychology 250 and 420. Courses listed below may NOT be counted for both major and general education.

Counselor Education

- 220 Emotions & Behavior (3)

HHP

- 340 Physiology of Exercise (4)

PER

- 434 Developmental/Adapted PE (3)
- 435 Assessment in Adapted PE (4)

Psychology

- * 210 General Psychology
- 303 Brain & Behavior (3)
- 305 Theories of Personality (3)
- 325 Social Psychology

Sociology

- * 150 Human Sociology (3)
- * 205 Social Interaction (3)
- * 212 The Family (3)
- * 216 Social Problems (3)

Additional Requirements:

A minimum of 2 additional semester hours (total) from one or two of the following areas:

Biology

- 171 Medical Terminology I (1)
- 172 Medical Terminology II (1) OR

PER

PER 417 - Physical Education/Recreation/Dance Clinic (1-3 credit workshops) OR

Music

- MUS 324 Recreational Music (2)

ELECTIVES

Therapeutic Recreation majors are strongly encouraged to take additional biology, sociology, psychology and health promotion sorts of courses to fulfill their general education requirements. Through such courses Therapeutic Recreation majors should gain additional exposure to content areas included in their National Council for Therapeutic Recreation Certification (NCTRC) exam.

* Courses may be used to meet certain General Education Requirements

B.S. MAJOR - PHYSICAL EDUCATION (Teaching)

47 s.h. (No Minor Required)

NOTE: 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. Students majoring in Physical Education must have both a 2.75 overall GPA and a 2.5

GPA in the major to be admitted into the Professional Education Sequence and for degree issuance.

Dual majors, minors, adapted physical education licensure and a coaching concentration are recommended to improve marketability.

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 (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 (8 s.h.)

- 340 Physiology of Exercise (4)
- 370 Kinesiology & Biomechanics (4)

PREREQUISITES FOR STUDENT TEACHING

PER 129, 200, 201, 317 (must have a "C" or better in each course). Two activity cores, BIO 211 and BIO 212

DEVELOPMENTAL/ADAPTED PHYSICAL EDUCATION LICENSURE

21 s.h. (Physical Education Majors Only)

REQUIRED COURSES (21 s.h.)

- 331 Perceptual Motor Development (2)
- 435 Assessment in Adapted Physical Education (3)
- 436 Programming/Special Populations in DAPE (3)
- 434 Developmental/Adapted Physical Education Practicum (4)

SPECIAL EDUCATION

- 400 Education of Exceptional Children/Youth (3)
- 405 Student Management Systems (3)
- 420 Special Education Administrative Procedures (3)

COACHING CONCENTRATION

12 s.h. (Teaching Degree Recommended)

REQUIRED COURSES (9 s.h.)

- 214 Standard First Aid & CPR (3)
- 251 Sports Science (2)
- HHP 291 Prevention & Care of Athletic Injuries (2)
- 400 Coaching Practicum (2)

NOTE: 251 is waived for students taking BIO 211 or BIO 212 or HHP 340 and HHP 370

ELECTIVES (2 s.h.)

- 304 Techniques of Coaching Football (1)
- 305 Techniques of Coaching Basketball (1)
- 306 Techniques of Coaching Track & Field, Cross Country (1)
- 307 Techniques of Coaching Softball & 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)
- HHP 280 Techniques of Fitness Programming (2)

Non-Physical Education Majors must meet all prerequisites or instructor's permission prior to registration

B.A. MINOR - DANCE (THAD/PER Co-op)

26 s.h.

REQUIRED COURSES (21 s.h.)

Theory (13 s.h.)

- * BIO 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 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 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 Tech 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.

* Minor courses may be used in General Education.

PORTFOLIO REQUIREMENT

Dance minors are required to document their development by

maintaining video tapes and supporting written and visual materials, and to submit a portfolio for faculty review by May 1 in the year of graduation.

Physical Education and Recreation Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

*Physical Education
Activity Courses
Recreation*

PHYSICAL EDUCATION

129 - Perspectives of Physical Education—1 S.H.

Quarter Course: 222.

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.

Quarter Course: 309.

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.

Quarter Course: 301.

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.

Quarter Course: 214.

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.

Quarter Course: 251.

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.

300 - Motor Learning—2 S.H.

Quarter Course: 445G.

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. Grade only.

304 - Techniques of Coaching Football—1 S.H.

Quarter Course: 304.

Theory and practice of teaching and coaching football. Grade only.

305 - Techniques of Coaching Basketball—1 S.H.

Quarter Course: 305.

Theory and practice of teaching and coaching basketball. Grade only.

306 - Techniques of Coaching Track/Field & Cross Country — 1 S.H.

Quarter Course: 306.

Theory and practice of teaching and coaching track/field and cross country. Grade only.

307 - Techniques of Coaching Baseball & Softball—1 S.H.

Quarter Course: 307.

Theory and practice of teaching and coaching baseball and softball. Grade only.

308 - Techniques of Coaching Wrestling—1 S.H.

Quarter Course: 308.

Theory and practice of teaching and coaching wrestling. Grade only.

311 - Techniques of Coaching Tennis—1 S.H.

Quarter Course: 313.

Theory and practice of teaching and coaching tennis. Grade only.

317 - Curriculum & Methods of Physical Education (3 s.h.)

Quarter Course: 317.

Curriculum and teaching methods of physical education.

Prerequisites: PER 129, PER 200 and one core course. Grade only.

328 - Techniques of Coaching Volleyball—1 S.H.

Quarter Course: 310.

Theory and practice of teaching and coaching volleyball. Grade only.

329 - Techniques of Coaching Gymnastics—1 S.H.

Quarter Course: 312.

Theory and practice of teaching and coaching gymnastics.

Grade only.

331 - Perceptual Motor Development—2 S.H.

Quarter Course: 400G.

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.

Quarter Course: 315.

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—3 S.H.

Quarter Course: 413.

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.

Quarter Course: 406G.

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.

Quarter Course: 480G.

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.

Quarter Course: 490.

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.

Quarter Course: 417G.

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.

Quarter Course: 422.

Red Cross instructor certification in Basic First Aid and CPR.

434 - Developmental/Adapted Physical Education Practicum—4 S.H.

Quarter Course: 438G.

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, PER 435 and PER 436. Grade only.

435 - Assessment in Adapted Physical Education—3 S.H.

Quarter Course: 435G.

Instruction in the assessment, prescription and use of instructional methods, materials and equipment relevant to specific handicapping conditions in the adapted physical education setting. Prerequisites: PER 300, PER 331 and PER 337.

Recommended: MATH 110.

436 - Programming/Special Populations in Developmental/Adapted Physical Education—3 S.H.

Quarter Course: 436G.

Fundamental concepts and skills essential to programming and adaptation of methods, materials, physical activities and facilities to meet the needs of the learning disabled, mentally handicapped, emotionally disturbed, sensory impaired, orthopedically handicapped and other health disorders in selected activity areas.

Prerequisites: PER 331, PER 337 and PER 435. Grade only.

ACTIVITY CORES FOR PHYSICAL EDUCATION MAJORS ONLY

All courses include comprehensive development of skills, knowledge of rules, strategies, terminology, and participation in the designated activities.

130 - Badminton, Golf, Tennis, Bowling—3 S.H.

Quarter Course: 166. Grade only.

131 - Track/Field, Softball, Conditioning, Weight Training—3 S.H.

Quarter Course: 168. Grade only.

132 - Tumbling, Rhythmic & Recreational Activities—3 S.H.

Quarter Course: 172. Grade only.

133 - Flag Football, Volleyball, Basketball, Soccer—3 S.H.

Quarter Course: 173. Grade only.

ACTIVITY COURSES - ALL STUDENTS

All 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 grade. If Physical Education activity courses are repeated to improve competency, only the final grade will count in calculating GPA. All 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.

Quarter Course: 101.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play.

102 - Slow-Pitch Softball—1 S.H.

Quarter Course: 102.

Fundamental skills and knowledge necessary for the recreational purposes.

103 - Racquetball—1 S.H.

Quarter Course: 103.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play.

104 - Volleyball—1 S.H.

Quarter Course: 151.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play.

112 - Folk and Square Dance—1 S.H.

Quarter Course: 201, 220.

Fundamental skills and knowledge necessary for the recreational purposes of the participant.

116 - Modern Dance I—1 S.H.

Quarter Course: 215.

A theory and lab course introducing technique, history and basic elements of choreography and performance. May be repeated twice for credit. Grade only.

118 - Jazz Dance I—1 S.H.

Quarter Course: 212.

Introduction to the basic technique and history of jazz dance and its place among other dance forms. Grade only.

120 - Ballroom Dance—1 S.H.

Quarter Course: 230.

Introduction to the basic techniques of recreational ballroom dancing. Includes the foxtrot, waltz, lindy and rumba.

121 - Introduction to Movement & Music—1 S.H.

Quarter Course: 110.

A comprehensive, practical study of fundamental dance movement and its relationship with music. World music and dance will be investigated.

122 - Beginning Swimming—1 S.H.

Quarter Course: 209.

Basic water safety skills and knowledge including physical and mental adjustment to water for non-swimmers.

123 - Swimming & Water Safety—1 S.H.

Quarter Course: 211.

For swimmers who can handle themselves in deep water. Fundamental skills and endurance related to swimming strokes and aquatic safety.

124 - Water Safety Instructor—1 S.H.

Quarter Course: 295.

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.

Quarter Course: 232.

A theory and lab course introducing technique, history and basic elements of choreography and performance. Grade only.

134 - Skiing—1 S.H.

Quarter Course: 153, 253.

Fundamental skills and knowledge appropriate for the beginner, intermediate and advanced skier. Additional fee for those who need to rent equipment. May be repeated for credit.

135 - Weight Training—1 S.H.

Quarter Course: 121.

Fundamental skills and knowledge necessary for the recreational purposes of the participant.

136 - Tap Dance—1 S.H.

Quarter Course: 126.

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.

Quarter Course: 152.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play.

139 - Tennis—1 S.H.

Quarter Course: 208, 218.

Fundamental skills and knowledge appropriate for the beginner, intermediate and advanced player. Includes rules, conditioning and strategy of play. Students must supply their own racquet and balls.

140 - Bowling—1 S.H.

Quarter Course: 115.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play. Additional fee.

141 - Golf—1 S.H.

Quarter Course: 219.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play. Additional fee.

142 - Badminton—1 S.H.

Quarter Course: 207.

Fundamental skills and knowledge necessary for the recreational purposes of the participant. Includes rules, conditioning and strategy of play.

199 - Lifetime Fitness—2 S.H.

Quarter Course: 119, 113, 120, 124, 190.

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. P/NC only.

216 - Modern Dance II—2 S.H.

Quarter Course: 246.

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.

Quarter Course: 248. 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.

Quarter Course: 336.

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.

Quarter Course: 346. 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.

Quarter Course: 348.

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.

Quarter Course: 446.

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.

Quarter Course: 448.

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/THERAPEUTIC RECREATION**203 - Recreational Programming—3 S.H.**

Quarter Course: 203.

This course provides a perspective on current recreational and sport programming concepts. Grade only.

229 - Foundations of Recreation and Leisure Studies—3 S.H.

Quarter Course: 229.

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.

Quarter Course: 239.

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 - Trip Camping—3 S.H.

Quarter Course: 240.

Use of the environment for year-round leisure activities and learning camping/canoeing and/or kayaking and/or rafting skills. Several day to month long camping experiences. Offered on demand. Additional fee. Grade only.

245 - Therapeutic Recreation and Services—3 S.H.

Quarter Course: 245.

History, philosophy, theories and professionalism of therapeutic recreation. Factors influencing service delivery and models of service delivery will also be addressed. Grade only.

292 - Craft Activities—3 S.H.

Quarter Course: 292.

This course is designed to offer students fundamental information on handcrafts which may be used in the classroom and recreational settings. Students will gain observation, volunteer and instructional experiences with children and senior citizens. Grade only.

302 - Tourism/Eco-Tourism—3 S.H.

Quarter Course: 302.

An overview of the rapidly growing tourism industry, and its relation to the field of recreation and leisure studies. Course emphasis will be placed on 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.

Quarter Course: 326.

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.

Quarter Course: 332.

Leisure needs and perceptions of the elderly. Implications for therapeutic recreation services in clinical and community settings. Prerequisite: PER 245. Grade only.

333 - Wilderness Outfitting and Trip Planning—3 S.H.

Quarter Course: 333.

An overview of low-impact camping, equipment and techniques as well as administrative and leadership components of organized camping. PER 214 recommended. Grade only.

342 - Intervention Techniques in Therapeutic Recreation—3 S.H.

Quarter Course: 342.

Helping strategies, processes and techniques utilized by the therapeutic recreation specialist. Prerequisite: PER 245. Grade only.

344 - Wilderness First Aid—3 S.H.

Quarter Course: 344.

This class is designed to provide a background of knowledge and experiences which would enable individuals in outdoor leadership positions to carefully examine adventure experiences for hazard potential, select appropriate outdoor emergency equipment and to respond appropriately to wilderness health or accident emergencies. Grade only.

350 - Legal and Financial Aspects—3 S.H.

Quarter Course: 350.

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.

399 - Internship in Recreation and Leisure Studies or Therapeutic Recreation—1-10 S.H.

Quarter Course: 399.

The application of skill, knowledge and concepts necessary for planning, organizing and conducting recreation and therapeutic recreation programs through supervised on-site experience. Prerequisite: Director of Therapeutic Recreation and Leisure Studies' permission. Prior to placement, Therapeutic Recreation interns also must obtain a copy of his/her intern supervisor's current NCTRC certification certificate. Additionally all Therapeutic Recreation students must complete a minimum 400 hour - 10 (or more) consecutive week placement under a full-time Certified Therapeutic Recreation Specialist. P/NC only.

412 - Independent Study in Physical Education/Recreation or Dance—1-3 S.H.

Quarter Course: 490.

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.

Quarter Course: 414G.

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.

Quarter Course: 417G.

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—3 S.H.

Quarter Course: 421.

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.

Quarter Course: 426.

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.

Quarter Course: 468.

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.

Quarter Course: 475.

Professional concerns and implication related to contemporary trends and issues in the field of therapeutic recreation. Internship site selection 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
Bloom (Chairperson), Battaglini, Bolon, Hamerski, Otto, Shields, Tobin

FACULTY

Dennis Battaglini, Professor; B.S.Ed., California State University of Pennsylvania; M.A.T., Ph.D., Michigan State University; 1986 -

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 -

David E. Hamerski, Professor; B.S., St. Mary's College of Minnesota; M.S., University of Minnesota-Twin Cities; Ph.D., Washington University (Missouri); 1961 -

Frederick Otto, Associate 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 -

Gerald W. Tobin, Professor; B.S., M.S., University of Wisconsin-Stout; Ed.D., Utah State University; 1966 -

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 students who wish to work in the nuclear power industry; while 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 two teaching majors: The B.S. in Physical Science is a Minnesota-certified teaching major for high school physics and chemistry. The B.S. in Middle School Science is a Minnesota-certified teaching major for teaching science in grades 5-9.

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 FAA as an Airway Science curriculum.

Pass/No Pass Credit Courses

Any course not required for a major or minor may be taken on a pass/no credit basis.

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 this 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, you must:

1. be a physics or physical science major
2. have completed 20 semester hours of physics
3. have at least a 3.0 GPA both overall and within the major
4. identify a WSU faculty member who is willing to serve as a research advisor
5. apply to the Physics Department for admission to the program

Participation: If you are accepted into the program, you are expected to:

1. maintain a 3.0 GPA overall and within the major
2. make steady progress toward the goals of your 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 your research study at an appropriate regional meeting

Completion: If you successfully complete the Honors in Physics Program, you will have upon graduation:

1. official transcripts stamped with the words "Graduated with Honors in Physics"
2. the title of your Honors Thesis indicated on your transcript
3. your graduation status (Honors in Physics) acknowledged on the graduation program and during graduation ceremonies.

B.S. MAJOR - PHYSICS: OPTION I

69 s.h. (No Minor Required)

REQUIRED COURSES (60 s.h.)

Physics (36 s.h.)

- 221, 222, 223 University Physics I, II, III (12)
330 Electronics (4)

345 Thermodynamics (3)

350 Mechanics I (3)

430 Electricity & Magnetism I (3)

370 Optics (4)

451 Quantum Mechanics (3)

460, 461 Advanced Lab I, II (4)

Mathematics (16 s.h.)

* 160 Calculus I (4)

- * 165 Calculus II (4)
- 260 Multivariable Calculus (4)
- 270 Differential Equations I (4)

Chemistry (8 s.h.)

- * 212 Chemistry I (4)
- * 213 Chemistry II (4)

ELECTIVES (9 s.h.)

Physics

- 328, 329, 332, 333, 400, 404, 405, 420, 425, 431, 435

B.S. MAJOR - PHYSICS: OPTION II - APPLIED NUCLEAR SCIENCE

60 s.h. (No Minor Required)

REQUIRED COURSES (36 s.h.)

Physics (24 s.h.)

- 221, 222, University Physics I, II (8)
- 330 Electronics (4)
- 345 Thermodynamics (3)
- 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 (24 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)

* Courses may be used to meet certain General Education Requirements.

B.S. MAJOR - PHYSICS: OPTION III - ELECTRONICS

74 s.h. (No Minor Required)

REQUIRED COURSES (68 s.h.)

Physics (41 s.h.)

- 221, 222, 223 University Physics I, II, III (12)
- 328 Electrical Circuits I (4)
- 330 Electronics (4)
- 332 Computer Organization (2)
- 333 Microprocessor Electronics (3)
- 420 Control Theory (3)
- 425 Semiconductor Physics (3)
- 430 Electricity & Magnetism I (3)
- 451 Quantum Mechanics (3)
- 460, 461 Advanced Lab I, II (4)

Mathematics (16 s.h.)

- 160 Calculus I (4)
- 165 Calculus II (4)
- 260 Multivariable Calculus (4)
- 270 Differential Equations I (4)

Chemistry (8 s.h.)

- * 212 Chemistry I (4)
- * 213 Chemistry II (4)(8)

Computer Science (3 s.h.)

- CS 231 Fortran for Engineering and Science (3) OR
- CS 234 Algorithms and Problem Solving (3) OR
- CS 298 Unix and C Programming (3)

ELECTIVES (6 s.h.)

Physics

- 329, 345, 350, 370, 399, 400, 404, 405, 431, 435

* Courses may be used to meet certain General Education Requirements

B.S. MINOR - PHYSICS

33 s.h.

REQUIRED COURSES (16 s.h.)

Physics (8 s.h.)

- 201, 202 General Physics I, II (8) OR
- 221, 222 University Physics I, II (8)

Mathematics (8 s.h.)

- 160, 165 Calculus I, II (8)

NOTE: Students not prepared to take MATH 160 should take MATH 120.

ELECTIVES (17 s.h.)

Physics

- 223, 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, 328, 329, 350, 370, 399, 420, 425, 430, 431, 435, 451, 460, 461, 490

B.S. MAJOR - MIDDLE SCHOOL SCIENCE (Teaching)

54 s.h. (No Minor Required)

The Minnesota Board of Teaching (BOT) was in the process of changing the requirements for teaching licensure at the time this catalog went to print. The Physics Department, in cooperation with other science departments and the College of Education, is currently developing a new BOT-approvable program which will be implemented as soon as possible. Students should be aware that the program described below will be changing significantly in the near future, and they will need to work closely with their academic advisor to ensure that they will be able to graduate with a BOT-approved degree.

REQUIRED COURSES (54 s.h.)

Biology (12 s.h.)

- * 117 Human Biology (4)
- * 241, *242 Principles of Biology I, II (8)

Geosciences (18 s.h.)

- * 101 The Dynamic Earth (4)
- * 102 Evolution of the Earth & Life (4)
- * 200 Oceanography (3)
- * 220 Astronomy I (3)
- * 230 Meteorology (4)

Physics (16 s.h.)

- * 115 Conceptual Physics (4)
- * 201, 202 General Physics I, II (8)
- 311 Science Teaching Methods (4) OR
- * 115 Conceptual Physics (4)
- * 221, 222 University Physics I, II (8)
- 311 Science Teaching Methods (4)

Chemistry (8 s.h.)

- * 212, *213 Principles of Chemistry I, II (8)

NOTE: Students who have not had the equivalent of MATH 120 in high school will be required to take MATH 120 before enrolling in Physics 201.

B.S. MAJOR - PHYSICAL SCIENCE (Teaching)

62 s.h. (No Minor Required)

NOTE: The Minnesota Board of Teaching (BOT) was in the process of changing the requirements for teaching licensure at the time that this catalog went to print. The Physics Department, in cooperation with other science departments and the College of Education, is currently developing a new BOT-approvable program which will be implemented as soon as possible. Students should be aware that the program described below will be changing significantly in the near future, and they will need to work closely with their academic advisor to ensure that they will be able to graduate with a BO- approved degree.

REQUIRED COURSES (52 s.h.)

Chemistry (20 s.h.)

- 212, 213 Principles of Chemistry I, II (8)
- 350 Organic Chemistry I (4)

Plus 8 s.h. of electives from the chemistry electives below OR

- 212, 213 Principles of Chemistry I, II (8)
- 340 Organic Chemistry Survey (4)
- 360, 361 Chemical Information I, II (2) OR
- 427 Topics in Instrumental Chemistry (2) OR
- 431 Guided Studies in Teaching Chemistry (2)

PLUS 6 s.h. of electives from the chemistry electives below.

Mathematics (8 s.h.)

- * 160, 165 Calculus I, II (8)
- NOTE: Students not prepared to take MATH 160 should take MATH 120

Physics (22 s.h.)

- 201, 202 General Physics I, II (8)
- 223 University Physics III (8)
- 311 Science Teaching Methods (4)

OR

- 221, 222, 223 University Physics I, II, III (12)
- 311 Science Teaching Methods (4)

PLUS 6 s.h. of electives from physics electives below.

ELECTIVES (10 s.h.)

Chemistry

- 351, 360, 361, 400, 412, 414, 425, 427, 431, 450, 465

Engineering

- 205, 225, 316, 345, 350, 360

Physics

- 302, 328, 329, 330, 332, 333, 345, 350, 370, 400, 420, 425, 430, 431, 451

* Courses may be used to satisfy certain general education requirements.

WISCONSIN CERTIFICATION REQUIREMENTS FOR PHYSICS CONCENTRATION

22 s.h.

Select credits under Required Courses and Electives to give a concentration of 22 s.h. of physics. Other requirements for Wisconsin Certification:

- BIO 104 Conservation of the Environment (3)
- Geology Elective (3)
- Biological Science Elective (3)

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 (4)
- 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 the Special Academic Programs section of this catalog.

Physics Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensure must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

PHYSICS COURSES

115 - Conceptual Physics—4 S.H.

Quarter Course: 115.

Many demonstrations, everyday applications and hands-on interactive simulations are used to make physics understandable to the general education student. Non-mathematical approach. No prerequisites. Lab. Not open to students with credits in higher numbered non-aviation physics courses. Offered each semester.

201 - General Physics I—4 S.H.

Quarter Course: 201.

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.

Quarter Course: 202.

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.

Quarter Course: 221.

A calculus-based course covering mechanics, sound, waves and fluids 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.

Quarter Course: 222.

A continuation of PHYS 221, covering thermodynamics, electricity and magnetism, and light. Lecture and laboratory.

Prerequisites: PHYS 221 and MATH 165. Offered each semester.

223 - University Physics III-4 S.H.

Quarter Course: New.

A continuation of PHYS 222 covering relativity, nuclear physics and special topics in modern physics. Lecture and laboratory.

Prerequisite: PHYS 222. Offered yearly.

302 - Electrical Circuits—3 S.H.

Quarter Course: 302. 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.

Quarter Course: 310.

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.

Quarter Course: 311.

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.

328 - Electrical Circuits and Measurements I—4 S.H.

Quarter Course: 328.

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.

Quarter Course: 329.

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.

Quarter Course: 330.

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.

Quarter Course: 332

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.

333 - Microprocessor Electronics—3 S.H.

Quarter Course: 333.

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.

345 - Thermodynamics—3 S.H.

Quarter Course: 345.

Equations of state, first and second law, equilibrium, irreversibility and mixture. Prerequisites: PHYS 202 or PHYS 222 and MATH 165. Offered every two years.

350 - Mechanics I-3 S.H.

Quarter Course: 350.

Fundamental laws of mechanics of particles and rigid bodies including vibrations. Prerequisites: PHYS 201 or PHYS 221 and MATH 165. Offered every two years.

370 - Optics—4 S.H.

Quarter Course: 370.

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.

400-500 - Seminars—1-3 S.H.

Quarter Course: 400.

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.

Quarter Course: 404.

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.

405 - Mechanics II—3 S.H.

Quarter Course: 405.

A continuation of PHYS 350 including central force field, scattering, and Lagrangian and Hamiltonian mechanics. Prerequisite: PHYS 350. Offered every two years.

420 - Control Theory—3 S.H.

Quarter Course: 400.

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 yearly.

425 - The Physics of Semiconductors—3 S.H.

Quarter Course: 425.

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.

Quarter Course: 430.

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.

Quarter Course: 431.

A continuation of PHYS 430 with applications of Maxwell's equation to waveguides, optics and special relativity. Prerequisite: PHYS 430. Offered every two years.

440 - Mathematical Methods in Physics I—3 S.H.

Quarter Course: 440.

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.

Quarter Course: 441.

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.

Quarter Course: 451.

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 - Advanced Laboratory I—2 S.H.

Quarter Course: 460.

A study of the experimental techniques used in modern physics. Experiments are from such fields as mechanics, optics, solid state physics, atomic and nuclear physics, with an emphasis on the quantum nature of matter. Prerequisites: PHYS 223 and 6 additional semester hours of Physics. Offered yearly.

461 - Advanced Laboratory II—2 S.H.

Quarter Course: 461.

A continuation of PHYS 460, with individual experimental projects. Offered yearly.

490 - Individual Problems in Physics—1-3 S.H.

Quarter Course: 490.

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 COURSES**200 - Fundamentals of Aviation—4 S.H.**

Quarter Course: 200.

Fundamentals of aviation provides the student with the understanding, knowledge and competencies that are necessary to complete the FAA private pilot written knowledge examination as well as a general overview of aviation to include the physical principles involved in flight. Offered quarterly.

204 - Private Flight Laboratory—3 S.H.

Quarter Course: 204.

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.

300 - Fundamentals of Instrument Flight—4 S.H.

Quarter Course: 300.

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 air space, and sophisticated radio communications and navigation. Offered yearly.

301 - Instrument Flight Laboratory—3 S.H.

Quarter Course: 301.

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.

Quarter Course: 380.

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.

Quarter Course: 381.

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.

Quarter Course: 382.

An overview of the U.S. airline industry covering historical background, regulations and current operational entities and pro-

cedures 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.

Quarter Course: 383.

An overview of the U.S. and Canadian airspace system. Special emphasis on the enroute 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.

Quarter Course: 384.

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.

Quarter Course: 387.

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 the instructor's permission. Offered yearly.

388 - Legislative and Legal Aspects of Aviation—2 S.H.

Quarter Course: 388.

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.

Quarter Course: 401.

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.

Quarter Course: 402.

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.

Quarter Course: 410.

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: Physics 300 and 401 or equivalent. Offered yearly. May be repeated.

411 - Cessna Citation Pilot School-3 S.H.

Quarter Course: 411.

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.

Quarter Course: 412.

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
Grover (Chairperson), Bromeland, Csajko, Downs, El-Afandi, Lee

FACULTY

James Bromeland, Associate Professor, Political Science; B.A., M.S., Mankato State University; 1971 -
Karen Csajko, Assistant Professor, Political Science; M.A., Portland State University; Ph.D., University of California-Berkeley; 1996-
Darrell Downs, Associate Professor, Political Science; B.A., B.S., Montana State University; M.S., Oregon State University; Ph.D., Colorado State University; 1992 -
Ahmed El-Afandi, Professor, Political Science; B.Com., University of Alexandria; M.A., Ph.D., University of Missouri-Columbia; 1968 -
Yogesh Grover, Associate Professor, Political Science; B.A., M.A., University of Delhi (India); Ph.D., University of Missouri-Columbia; 1988
Frederick Lee, Assistant Professor, Political Science; A.B., University of New Orleans; A.M., Ph.D., University of Michigan; 1992 -

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 comparative 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.

See Interdisciplinary Programs for details about the B.S. Major in Public Administration and the B.S. Minor in Public Administration

Pass/No Credit Courses

All courses in the Major and Minor must be taken on a Grade Only basis except Internships. The P/NC option is available to non-majors.

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 at WSU offers the following courses. Other than a general course called Introduction to Politics (POLS 103), which is a survey of the whole discipline, other courses fall under one or more of the following sub-fields.

American Politics

- 120 Introduction to American Politics (3)
- 221 State & Local Government (3)
- 228 Public Services (3)
- 315 American Political Thought (3)
- 320 Constitutional Law (3)
- 321 The American Presidency (3)
- 322 Political Parties & Pressure Groups (3)
- 330 Race and American Politics (3)
- 333 Media & Politics (3)
- 340 Environmental Policy (3)
- 341 Health Care Politics & Policy (3)
- 360 American Congress (3)
- 420 Administrative Law (3)
- 425 Policy Studies (3)
- 426 The Politics of Public Budgeting (3)
- 429 Policy Reform (3)
- 430 Agency Reform (3)

Comparative Politics

- 135 Introduction to Comparative Politics (3)
- 224 Politics & Society in Latin America (3)
- 225 Ethnic Conflict & Nationalism (3)
- 226 Politics & Society in Africa (3)
- 270 Politics & Society in the Middle East (3)

- 332 European Political Systems (3)
- 335 Latin American Political Systems (3)
- 336 Comparative Communist & Post-Communist Systems (3)
- 337 Asian Political Systems (3)
- 390 Comparative Politics of the Third World (3)
- 475 Democratization & Its Challenges (3)

International Politics

- 130 Introduction to International Relations (3)
- 205 United Nations in World Affairs (3)
- 342 Politics of International Economic Relations (3)
- 346 International Law (3)
- 347 International Organization (3)
- 422 American Foreign Policy (3)
- 434 Developing Countries in World Affairs (3)
- 488 Issues in International Politics (3)

Political Theory

- 260 Development of Political Thought (3)
- 315 American Political Thought (3)
- 316 Medieval Political Theory (3)
- 325 Modern Political Theory (3)

Research and Methodology

- 380 Political Research I - Secondary (3)
- 410 Political Research II - Primary (3)

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.)

36 s. h. are required with at least 15 credits at the 300 level or above, and at least 3 s.h. in each of the following sub-fields: American Politics, Comparative Politics, International Politics and Political Theory. See sub-fields and courses listed above.

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 six courses is required.

REQUIRED COURSES (15 s.h.)

- 120 Introduction to American Politics (3)
- 130 Introduction to International Relations (3)
- 135 Introduction to Comparative Politics (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.)

Eighteen (18) s.h. with at least 3 s.h. each in three of the four subfields: American, Comparative, Theory, International.

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)
- 280 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)
- 280 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

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

103 - Introduction to Politics—3 S.H.

Quarter Course: 103.

A study of both modern and enduring issues and problems common to political systems, and the analysis and methods employed by political scientists to understand and solve these issues and problems.

120 - Introduction to American Politics—3 S.H.

Quarter Course: 120.

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.

130 - Introduction to International Relations—3 S.H.

Quarter Course: 130.

A general introduction to the major concepts and theories employed to analyze world affairs, and to the behavior of major actors involved — states, multinational corporations and international organizations. Can be used to meet General Education requirement for Social Science if the course is not being used in the major. Offered every semester.

135 - Introduction to Comparative Politics—3 S.H.

Quarter Course: 235.

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 treatment of case studies. Prerequisite: POLS 103. Offered yearly. Grade only.

199 - First-Year Seminar—1-3 S.H.

Quarter Course: 199.

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.

205 - The United Nations In World Affairs—3 S.H.

Quarter Course: New course.

The structure and functions of the United Nations and the way it deals with major issues of war and peace. The rules of operation of the United Nations to facilitate student participation in a Model UN Conference held every spring.

221 - State & Local Government—3 S.H.

Quarter Course: 221.

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.

Quarter Course: 124.

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. May be used for General Education Requirements under Different Culture or Social Science if the course is not being used in the major. Offered once a year.

225 - Ethnic Conflict and Nationalism—3 S.H.

Quarter Course: New course.

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.

226 - Politics & Society in Africa—3 S.H.

Quarter Course: 126.

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. May be used for General Education Requirements under Different Culture or Social Science area if the course is not used to meet the major or minor requirements. Offered fall semester.

228 - Public Service—3 S.H.

Quarter Course: 228.

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. Prerequisite: POLS 120.

260 - Development of Political Thought—3 S.H.

Quarter Course: 260.

Political ideas from ancient Greece and from the Judeo-Christian tradition. Issues to be dealt with concern the role of the individual and the state, punishment and authority, economic organization, and the role of violence in political interaction. Offered every two years.

270 - Politics and Society in the Middle East—3 S.H.

Quarter Course: 123.

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. May be used for General Education Requirements under Different Culture or Social Science area if the course is not used to meet the major or minor requirements. Offered twice yearly.

315 - American Political Thought—3 S.H.

Quarter Course: 315. 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.

316 - Medieval Political Theory—3 S.H.

Quarter Course: 316.

Political ideas from Augustine to Machiavelli. Emphasis on religious ideas and movements as they bear on political thought including Augustine, Aquinas, John of Salisbury, Marsilio of Padua, Luther, Calvin and various communal societies, and their thought. Prerequisite: sophomore standing.

320 - Constitutional Law—3 S.H.

Quarter Course: 320.

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.

Quarter Course: 321.

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.

Quarter Course: 322.

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.

Quarter Course: 325.

Political ideas from Machiavelli to the present. The problems of the development of the modern nation state system are analyzed through the writings of the following thinkers: Machiavelli, Hobbes, Locke, Rousseau, J.S. Mill, Marx, Burke and Marcuse. Prerequisite: POLS 120.

330 - Race & American Politics—3 S.H.

Quarter Course: 330.

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. Prerequisite: POLS 120 or instructor's permission.

332 - European Political Systems—3 S.H.

Quarter Course: 332.

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. Prerequisite: sophomore standing.

333 - Media and Politics—3 S.H.

Quarter Course: 333.

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.

Quarter Course: 335

A comparative study of the structure and dynamics of Latin American governments and politics. Prerequisite: Sophomore standing. Offered on demand.

336 - Comparative Communist & Post Communist Systems—3 S.H.

Quarter Course: 336.

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 which did not make the above transition. Offered every two years. Prerequisite: sophomore standing or instructor's permission.

337 - Asian Political Systems—3 S.H.

Quarter Course: 337.

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: sophomore standing or instructor's permission.

340 - Environmental Policy—3 S.H.

Quarter Course: 340.

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 manage 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.

Quarter Course: 341.

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 - Politics of International Economic Relations I—3 S.H.

Quarter Course: 240.

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.

Quarter Course: 346.

The nature and sources of international law; jurisdiction of states over persons and territory; recognition of states and governments; law of the sea; governmental immunities; principle of state responsibility; law of treaties; and transnational legal problems. Prerequisite: POLS 130 or instructor's permission.

347 - International Organizations—3 S.H.

Quarter Course: 347.

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. Prerequisite: POLS 130 or instructor's permission.

360 - Congress & Policy Process—3 S.H.

Quarter Course: 360.

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.

Quarter Course: 280.

An introduction to research approaches in the discipline of political science covering the scope of the discipline, the different schools of thought and approaches to the study of the discipline. Emphasis is placed on secondary research. Students are introduced to the "classical" works and journals in the field, usage of statistics and computers, the Internet and multimedia devices as research tools. Students also are introduced to the institutional, functional, philosophical and legal approaches to the study of politics. A strong background in mathematics and/or statistics is highly recommended. Offered fall semester. Prerequisites: POLS 103 and POLS 120 or instructor's permission.

390 - Comparative Politics-Third World—3 S.H.

Quarter Course: 290.

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. Prerequisites: sophomore standing or instructor's permission. Offered spring semester.

401 - Independent Readings in Political Science—1-3 S.H.

Quarter Course: 401.

Readings in an area of political science of particular interest to the student. Credit arranged.

410 - Political Research II-Primary—3 S.H.

Quarter Course: 410.

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. Prerequisites: POLS 280 and senior standing. Offered spring semester.

416 - Internship Program—1-12 S.H.

Quarter Course: 416.

To provide practical experience in local, state and national government, and public administration (limited enrollment). Credit arranged. (Cannot apply toward a graduate degree).

420 - Administrative Law—3 S.H.

Quarter Course: 420.

An exploration of the law of the administrative process: legislative, executive and judicial control of administrative action, the formal administrative process; administrative discretion; and the applicability of res judicata and stare decisis to administrative proceedings, with due consideration to the Federal Administrative Procedure Act. Prerequisites: POLS 120 and POLS 320.

422 - American Foreign Policy—3 S.H.

Quarter Course: 422.

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.

Quarter Course: 425.

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. Prerequisite: POLS 120.

426 - Politics of Public Budgeting—3 S.H.

Quarter Course: 426.

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.

Quarter Course: 429.

Strategies and problems of making, implementing and changing public policy. Discussion addresses policy stakeholders as they are involved in developing and reforming public policy. Prerequisite: POLS 120.

430 - Agency Performance—3 S.H.

Quarter Course: 430. The civil service movement, public personnel systems and contemporary strategies to manage personnel for higher levels of performance. Prerequisites: POLS 120 and POLS 228.

434 - The Developing Countries in World Affairs—3 S.H.

Quarter Course: 434.

Examination of the role and impact of developing countries on world affairs, the objectives of their foreign policies and the factors which hinder or facilitate their realization. The course also compares foreign policies of developing countries with those of advanced countries. Offered every two years. Prerequisite: POLS 130 or instructor's permission.

475 - Democratization and Its Challenges-3 S.H.

Quarter Course: New course.

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.

488 - Issues in International Politics—3 S.H.

Quarter Course: 488.

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.

Quarter Course:499.

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 which are preparatory for a degree at another college or university.

Pre-Dental Hygiene

Pasteur Hall, Room 215F, (507) 457-5272

Dr. David Essar, Advisor

Programs are custom-designed to meet preliminary or basic sciences of the University of Minnesota, University of Minnesota-Duluth, Mankato State University, Normandale Community College and RCTC/Minnesota Riverland Technical College.

Pre-Dentistry

Pasteur Hall, Room 215B, (507) 457-5272

Dr. David Essar, Advisor

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.

ENG * 111 College Reading and Writing (4 s.h.)

ENG * 201/223 (an upper-division English literature course) (3 s.h.)

CMST * 191 Fundamentals of Speech Communication (3 s.h.)

BIO *241, *242 Principles of Biology I, II (8 s.h.)

MATH *150, *155 Mathematics for the Earth and Life Sciences I, II (6 s.h.)

CHEM *212, *213 Principles of Chemistry I, II (8 s.h.)

CHEM 350, 351 Organic Chemistry I, II (9 s.h.)

BIO 201 Human Anatomy (4 s.h.)

PHYS *201, 202 General Physics I, II (8 s.h.)

PSY *210 General Psychology (3 s.h.)

PSY 250 Developmental Psychology (3 s.h.)

* Course may be used to fulfill certain general education requirements

Elective Courses

Elective courses 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 and molecular biology, biochemistry, histology, accounting, computer science, anthropology, business, economics, history, sociology and literature.

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.

The profile of the 1991 first-year dental school students shows 55 percent have Biology majors, with an overall GPA of 3.19, a science GPA of 3.10, and average DAT scores of 16.1 for academics and 16.01 for PAT.

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

- 231 Fortran for Engineering and Science (3)

MATH

- 160 Calculus I (4)
 165 Calculus II (4)
 260 Multivariable Calculus (4)
 270 Differential Equations and Linear Algebra (4)

PHYSICS - 8 s.h.

- 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)

GENERAL EDUCATION COURSES
Pre-Law

Minne Hall, Room 212, (507) 457-5400

Dr. Troy Paino, Advisor

University law schools require completion of a B.S. degree or its equivalent before entering law school. It is therefore suggested that interested students follow a program which provides a breadth of knowledge with in-depth study of areas of special interest. It also is 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, Political Science, Economics or Business. 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

Dr. David Essar, Advisor (Biology)

Pasteur Hall, Room 312A, (507) 457-5291

Dr. Bruce A. Svingen, Advisor (Chemistry)

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-med students choose the Cell and Molecular Option. In the Chemistry Department, most pre-med students choose Option A. Below are the minimum requirements for admission to the University of Minnesota Medical School, Mayo School of Medicine and the two-year program at Duluth, Minn., as well as the majority of medical schools in the U.S. These same requirements are applicable to osteopathic schools.

Pre-medical students should seek the advice of a pre-med 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 October prior to the planned entrance into medical school. MCAT application and AMCAS packets are available through the pre-med advisors.

RECOMMENDED COURSES

English, Chemistry and Biology sequences should be taken during the first year of college.

ENG * 111 College Reading and Writing (4 s.h.)

BIO *241, *242 Principles of Biology I, II (8 s.h.)

MATH * 150, *155 Mathematics for the Earth and Life Sciences I, II (6 s.h.) OR MATH *160, *165 Calculus I, II (8 s.h.)

CHEM *212, *213 Principles of Chemistry I, II (8 s.h.)

CHEM 350, 351 Organic Chemistry I, II (9 s.h.)

BIO 308 Cell Biology (3 s.h.)

BIO 310 Genetics (3 s.h.)

CHEM 400, 401 Biochemistry I, II (7 s.h.)

CHEM 425 Analytical Chemistry I (4 s.h.)

PHYS *201, 202 General Physics I, II (8 s.h.) OR Physics 221, 222 University Physics I, II (8 s.h.)

PSY *210 General Psychology (3 s.h.)

PSY 250 Developmental Psychology (3 s.h.)

300-400 level Humanities (3 s.h.)

300-400 level Psychology (3 s.h.)

* Course may be used to fulfill certain general education requirements

Other Courses To Complete Required Credit

Consult with your advisor for those courses necessary to complete a B.S. or B.A. degree.

Pre-Mortuary Science

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 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 312E, (507) 457-5295

Dr. David J. Rislove, 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

BIO 201 Human Anatomy (4)

BIO 209 Microbiology (3)

BIO 241 Principles of Biology I (4)

OR

For the University of Wisconsin-Madison

BIO 241 Principles of Biology I (4)

BIO 242 Principles of Biology II (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 - 8 s.h.

MATH 160 Calculus I (4)

MATH 165 Calculus II (4)

PHYSICS - 8 s.h.

PHYS 201 General Physics I (4)

PHYS 202 General Physics II (4)

ENGLISH - 7 s.h.

ENG 111 College Reading and Writing (4)

ENG 210 Advanced Expository Writing (3)

COMMUNICATION STUDIES - 3 s.h.

COMS 191 Fundamentals of Speech (3)

ECONOMICS - 3 s.h.

ECON 201 Principles of Microeconomics (3)

PSYCHOLOGY - 3 s.h.

PSY 210 General Psychology (3)

SOCIOLOGY - 3 s.h.

SOC 150 Human Society (3)

Additional elective courses must be chosen from the social sciences and the humanities. See the advisor for recommendations on these electives. Physics 221 and 222 may be substituted for 201 and 202. Students not meeting the prerequisites for Mathematics 160 will have to take additional lower-level math courses. Students exempted from English 111 must elect higher-level English courses. Biology 409 may be substituted for 209. See the advisor for PCAT and pharmacy career information.

Pre-Physical Therapy

Pasteur Hall, Room 215F, (507) 457-5271

Dr. Edward Thompson, Advisor

With few exceptions, 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 which allow application to and successful admission into a Physical Therapy Program upon graduation from WSU.

Admission to a master's-level physical therapy program is very competitive and the minimum requirements are:

1) 12 s.h. of Biology, 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,

2) 8 s.h. of Chemistry, consisting of a complete introductory course,

3) 8 s.h. of Physics, consisting of a complete introductory course,

4) 6 s.h. of Psychology,

5) 3 s.h. of Human Physiology, including systematic human physiology,

- 6) 3 s.h. of Statistics, at the college level,
- 7) 3 s.h. of Mathematics, at the level of college trigonometry or higher,
- 8) a GPA of 3.5 or better, a GRE (general test) of 1000 (verbal and quantitative) and
- 9) a genuine interest in people and the health of others, especially as shown by about six months involvement (volunteer or otherwise) in patient care and/or research at a health care facility.

Many 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 both the life and physical sciences as well as mathematics. With the Biology Major, the student is eligible to apply to certificate programs as well as master's-level physical therapy programs.

Students who are interested in entering a master's-level physical therapy program after graduation should meet soon after arrival on campus with **Dr. Thompson, 215F Pasteur Hall, WSU, Winona, MN 55987** to plan their programs of study.

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 Kastello, Department of Health and Human Performance, WSU, Winona, MN 55987** has a Ph.D. in Biological Science and a 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 215F, (507) 457-5272

Dr. David Essar, Advisor

The course of study is designed according to the graduate 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

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 courses.

Pre-Veterinary Medicine

Pasteur Hall, Room 232, (507) 457-5855

Dr. Emmanuel Brako, Advisor

This program is designed for entry into the University of Minnesota 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. 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 courses.

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 listings.

ENG *111 College Reading and Writing (4 s.h.)

BIO *241, *242 Principles of Biology I, II (8 s.h.)

MATH *150, *155 Mathematics for the Earth and Life Sciences I, II (6 s.h.)

CHEM *212, *213 Principles of Chemistry I, II (8 s.h.)

CHEM 350, 351 Organic Chemistry I, II (9 s.h.)

CHEM 400 Biochemistry (4 s.h.)

BIO 308 Cell Biology (3 s.h.)

BIO 310 Genetics (3 s.h.)

BIO 319 Vertebrate Biology (5 s.h.)

PHYS *201, 202 General Physics I, II (8 s.h.)

* Course may be used to fulfill certain general education requirements

ELECTIVES

Chemistry 425 Analytical Chemistry (4 s.h.) is recommended by the University of Minnesota Veterinary School. Sixteen (16) elective credits to be chosen from the following areas with no more than eight (8) credits or two courses from any one area: Economics (recommended), Speech (recommended), Geography, History, Political Science, Psychology, Sociology, Art, Literature, Music, Humanities. (Additional courses are required for students not earning a bachelor's degree at WSU. See the University of Minnesota Bulletin.)

PROFESSIONAL STUDIES

Somsen Hall, Room 109, (507) 457-5080

Christensen (Chairperson); Lietzau

See Interdisciplinary Programs for more information about the Major in Professional Studies.

PSYCHOLOGY

Phelps Hall, Room 231, (507) 457-5435

Sefkow, (Chairperson), Deyo, Haugen, Kesler, Lane, Marmolejo, Miene, Rieg, Soriano, J. Williams, K. Williams.

FACULTY

Richard A. Deyo, Associate Professor; B.S., Viterbo College; M.A., Ph.D., Bowling Green State University; 1990 -

Julie A. Haugen, Assistant Professor; B.A., Bethel College, St. Paul; Ph.D., University of Minnesota-Twin Cities; 1992

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, Assistant 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 -

Thomas S. Rieg, Assistant Professor; B.A., M.A., Ph.D., University of Rhode Island; 1995 -

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.Sc., University of Washington; M.A., Ph.D., University of Illinois; 1981 -

Leodegario V. Soriano, Associate Professor; B.A., M.P.A., University of the Philippines; Ph.D., University of Minnesota-Twin Cities; 1976 -

Psychology is the science of behavior, including mental processes. The Department's goal is to foster students' understanding of the many factors which can 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 which emphasize interpersonal skills or they want to better understand themselves as well as others.

Those majoring in Psychology can choose between two options: A or B. An understanding of human behavior is essential to many disciplines. Option A is attractive because its size readily 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 more exclusively for an 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 and Experimental Psychology 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 which 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; for example, clinical or counseling psychologist, child psychologist, school psychologist, industrial psychologist, rehabilitation counselor, experimental psychologist, college professor, etc.

Pass/No Credit Courses

All courses in the major and minor must be taken on a Grade Only basis. Courses offered on a Pass/No Credit basis are designated in their course descriptions. Only Psychology 400 can be taken P/NC and be credited toward a Psychology major or minor.

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

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 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 Psychology 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.

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. Requirements for Honors in Psychology are as follows. Students must:

1. Have a declared 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. Have successfully completed at least 20 s.h. in Psychology, including Psychology 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 four full-time faculty members who volunteer to serve. The committee meets monthly 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. The student is 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) OR
- STAT 110 Fundamentals of Statistics (3) OR
- STAT 305 Biometry (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

49-50 s.h. (No Minor Required)

CORE REQUIRED COURSES (17 s.h.)

- 210 General Psychology (3)
- 231 Statistics (3) OR
- STAT 110 Fundamentals of Statistics (3) OR
- STAT 305 Biometry (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 (5-6 s.h.)

Courses meeting the following requirements are listed below. Students having 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. Those earning an "A" or "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, 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.

*Course may also meet general education requirements.

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

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor and options must be taken on a Grade Only basis except teaching assistantships and field experiences. The P/NC option is available to non-majors unless otherwise noted.

210 - General Psychology—3 S.H.

Quarter Course: 210.

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.

Quarter Course: 231.

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. Offered each semester. Grade only.

250 - Developmental Psychology—3 S.H.

Quarter Course: 250.

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 lifespan are examined.

Prerequisite: PSY 210. Offered each semester. Grade only.

275 - Psychology of Women—3 or 4 S.H.

Quarter Course: 275.

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/typ-

ing, 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.

298 - Health Psychology—3 S.H.

Quarter Course: 298.

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: Operant and Classical Conditioning—3 S.H.

Quarter Course: 301.

Theory and application of basic conditioning procedures.

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.

Quarter Course: 303.

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.

Quarter Course: 305.

A survey of major theoretical perspectives. Personality theory, research and assessment is 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.

Quarter Course: 308.

Introduction to scientific methods and research techniques in psychology. Laboratory experiences are included. Prerequisites: PSY 210, PSY 231 or STAT 110 or STAT 305. Offered each semester. Grade only.

325 - Social Psychology—3 S.H.

Quarter Course: 325.

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.

Quarter Course: 330.

Psychological analysis of the legal system, focusing on perception, memory, and decision-making processes by individuals in the system. Topics include forensic psychology, eyewitness and expert testimony, jury deliberations, and current topics.

Prerequisite: PSY 210. Offered yearly. Grade only.

350 - Psychological Testing and Measurement—3 S.H.

Quarter Course: 350.

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 or STAT 110 or STAT 305. Offered each semester. Grade only.

360 - Psychology of Work Behavior—3 S.H.

Quarter Course: 360.

Analysis and review of applied psychology in the field of work including personnel selection, performance evaluation, training, work-team dynamics, supervisory leadership, employee motivation, human engineering, fatigue, safety and physical working conditions. Prerequisite: PSY 210. Offered yearly. Grade only.

365 - Consumer Psychology—3 S.H.

Quarter Course: 365.

Analysis and review of consumer behavior concepts, theories and research methods applicable to strategic and tactical problems in marketing, advertising and social policy decision-making from a multi-theoretical perspective. Prerequisite: PSY 210.

Offered yearly. Grade only.

369 - Cognitive Psychology—3 or 4 S.H.

Quarter Course: 369.

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.

375 - Theories of Learning—3 S.H.

Quarter Course: 375.

Behavioral, associative, and cognitive theories of learning and memory are reviewed. Prerequisite: PSY 210. Recommended are PSY 301 and PSY 308. Offered biannually. Grade only.

400 - Independent Study or Research—1-3 S.H.

Quarter Course: 400G.

Independent study or research for credit under the guidance of a faculty member with prior permission. Can be repeated.

Teaching assistantships and field experience may be available but only on a P/NC basis. Prerequisites: PSY 210 and as determined by the instructor. Offered each semester. Grade only. Only 6. s.h. credits of Psychology 400 may count toward a Psychology Major. Only 3. s.h. may count toward the Psychology Minor.

408 - Advanced Experimental Psychology—3 S.H.

Quarter Course: 408.

Theory and methods of advanced research techniques in psychology. Individual student research projects are conducted. Prerequisites: PSY 210 and PSY 231 or STAT 110 and PSY 308.

Offered yearly. Grade only.

410 - Sensation and Perception—3 S.H.

Quarter Course: 410.

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, 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.

Quarter Course: 418G.

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 yearly. Grade only.

420 - Abnormal Psychology—3 S.H.

Quarter Course: 420G.

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. (or 4 q.h.) in Psychology. Offered each semester. Grade only.

421 - Cognitive Behavior Therapy—3 S.H.

Quarter Course: 421G.

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 yearly. Grade only.

423 - Psychopathology of Childhood—3 S.H.

Quarter Course: 423G.

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.

Quarter Course: 424G.

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. (or 8 q.h.) in Psychology or PSY 210 and PSY 275 (or WOMS 148) or instructor's permission.

Offered yearly. Grade only.

425 - Organizational Psychology—3 S.H.

Quarter Course: 425G.

An analytical survey of theory and research in organizational socialization, decision-making, organization-individual interaction, 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.

431 - Counseling and Clinical Psychology—3 S.H.

Quarter Course: 431.

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.

Quarter Course: 433.

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. (or 12 q.h.) in Psychology including PSY 303 or 9 s.h. (or 12 q.h.) in Biology. Offered yearly. Grade only.

434 - History and Systems of Psychology—3 S.H.

Quarter Course: 434.

A historical overview of psychology and its antecedents are considered to provide a richer understanding of contemporary psychology as an evolving, conceptual system. Prerequisite for non-majors: minimum of 12 s.h. in Psychology. Prerequisites for majors: PSY 210 and PSY 231 or STAT 110 and PSY 308 and a minimum of two other courses in Psychology (6 s.h. or 8 q.h.). Majors are encouraged to complete all other core requirements before registering in PSY 434. Offered each semester. Grade only.

435 - Psychology of Adulthood and Aging—3 S.H.

Quarter Course: 435.

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.

Quarter Course: 498G.

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.

SOCIAL SCIENCE/HISTORY

Minne Hall, Room 212, (507) 457-5400
Alexander Yard, Program Director
Director email: ayard@vax2.winona.msus.edu

See Interdisciplinary Programs for more information about the Major in Social Science/History (Teaching).

SOCIOLOGY/SOCIAL WORK

Minne Hall, Room 228, (507) 457-5420
Schwartz (Chairperson), Aldrich, Bublitz, Burdick (Director of Social Work Program), Charles, Collins, Dachelet, Ellenbecker, Faruque, Holmgren, Krause, Lontz, Norman, Reynolds, Stevens.

FACULTY

Brian Aldrich, Professor, Sociology; A.B., Lewis and Clark College; M.S., Ph.D., University of Wisconsin-Madison; 1976 -
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 -
John E. Burdick, Professor, Social Work; B.A., Allegheny College; M.S.W., State University of New York-Buffalo; 1984 -
Ruth A. Charles, Assistant Professor, Social Work; B.A., Gordon College, Wenham, Mass.; M.S.W., Syracuse University; Certified Social Worker, New York state; Ph.D., Syracuse University; 1997 -
John W. Collins, Assistant Professor, Social Work; B.A., Tarkio College, M.S., University of Minnesota; Ph.D., Saint Louis University; 1993 -
Helen Dachelet, Assistant Professor, Sociology; B.A. in Psychology, Winona State University; B.S. in Paralegal, Winona State University; M.S. in Community Counseling, Winona State University; A.B.D., University of St. Thomas; 1996 -
Mickey Ellenbecker, Associate Professor, Sociology; B.A., Mankato State University; M.S.W., University of Wisconsin-Madison; 1976 -
Cathy Jo Faruque, Assistant Professor, Social Work; B.S., Winona State University; M.S.W., San Diego State University; 1997 -
Ellen Holmgren, Assistant Professor, Social Work; B.S.W., Winona State University; M.S., University of Minnesota; 1996 -
Gerald P. Krause, Assistant Professor, Sociology; B.S., Mankato State University; J.D., University of Wisconsin Law School; 1997 -
Carole Lontz, Associate Professor, Social Work; M.S.S.W., University of Tennessee-Nashville; B.A., Ph.D., Washington University, St. Louis; 1991 -
J. Mark Norman, Assistant Professor, Sociology; B.S., St. Cloud State University; M.S. St. Cloud State University; Ph.D. South Dakota State University; 1996 -
James Reynolds, Professor, Sociology/Social Work; B.S., Winona State University; M.A., University of North Dakota; 1969 -
R. Stephen Schwartz, Professor, Sociology; B.S., M.S., University of Oklahoma; Post-Graduate Certificate, University of Zambia (University of London, external); Ph.D., The University of Iowa; 1973 -
Ronald A. Stevens, Professor, Sociology; Ph.B., M.S., University of North Dakota; 1968 -

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 both the private and public sectors of business and government, law enforcement and corrections, social welfare and casework, and graduate school.

Pass/No Credit Courses

All courses must be taken for grade only except field experience and internship. 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)

Admission Requirements

Complete a minimum of 32 semester hours of coursework with a minimum GPA of 2.0

Complete the B.A. Sociology foundation courses (or transfer equivalent courses) with a minimum GPA of 2.2 and no grade less

than a "C" prior to admission

Complete the program admission application form (including reference letter)

Complete the program admission assessment instrument

Graduation Requirements

Maintain a minimum, cumulative GPA of 2.5 in all B.A. Sociology courses taken at WSU.

Maintain and complete student portfolio prior to graduation

and at a level acceptable to student's advisor

Participate in an exit interview with Sociology faculty prior to graduation

Complete the program graduation assessment instrument

REQUIRED COURSES (21-22 s.h.)

- 150 Human Society (3)
- STAT 110 Fundamentals of Statistics (with lab) (4) OR
- PSY 231 Statistics (3)
- 376 Intro to Social Research (3)
- 377 Theory & Methods in Sociology (3)
- 378 Social Research Lab (3)
- 385/460 Field Experience/Internship (3)
- 499 Senior Seminar (3)

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 areas must come from the 300-level and above, be selected in consultation with their advisor and contribute to meeting the goals of the Sociology Program and student portfolio requirement.

A maximum of 6 s.h. 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.

B.S. MAJOR - SOCIOLOGY: CRIMINAL JUSTICE

62-63 s.h.

Admission Requirements

The B.S. Sociology: Criminal Justice Major is designed: 1) to prepare students 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 228 Minne Hall. The handbook includes specific requirements and application procedures. In addition to completing an application form, submitting three letters of reference and participating in an admissions interview each student is responsible for meeting the following requirements:

PROGRAM COURSE PREREQUISITES

Completion of a minimum of 32 semester hours of coursework with a minimum cumulative GPA of 2.00 for all courses taken at WSU

Completion of ENG 111 with no grade lower than a "C"

Completion of the five foundation courses with a minimum GPA of 2.60 for the five courses with a grade no lower than a "C"

RETENTION REQUIREMENTS

Once admitted to the program, students must demonstrate acceptable progress in order to remain in good standing.

"Acceptable" progress is defined by meeting the below retention requirements:

Students must maintain a 2.50 cumulative GPA for all courses taken within the Criminal Justice Program at WSU

Students must maintain their portfolio at a level acceptable to their faculty advisor and must complete their portfolio (representation of knowledge base and skills; i.e., research papers, report writing, videotapes, etc.) prior to graduation (consult with individual faculty advisors) and the portfolio requirement.

FOUNDATION COURSES (15 s.h.)

It is recommended that students complete all foundation courses within the first two years at WSU:

Sociology (6 s.h.)

- 150 Human Society (3)
- 210 Intro to Criminal Justice (3)

Political Science (6 s.h.)

- * 120 Introduction to American Politics (3)
- 228 Public Service (3)

Computer Science (3 s.h.)

- * 115 Personal Computer Use (3)

CORE COURSES (18-19 s.h.)

- * STAT 110 Fundamentals of Statistics with Lab (4) OR
- PSY 231 Statistics (3)
- 315 Criminology (3)
- 376 Introduction to Social Research (3)
- 414 Juvenile Delinquency (3)
- 418 Criminal Law & Procedure (3)
- 423 Race Relations & Minority Groups (3)

* Courses may be used to satisfy certain General Education Requirements.

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 take two separate internships: one in corrections and one in law enforcement.

LAW ENFORCEMENT - SCJL (29 s.h.)

REQUIRED COURSES (21 s.h.)

- 404 Law Enforcement Communication (3)
- 417 Operations & Procedures in Law Enforcement (3)
- 491 Crime Prevention and Community Policing (3)
- * 461 Criminal Justice Internship, Law Enforcement (12)

ELECTIVES (8 s.h.)

8 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 - SCJC (29 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 (5 s.h.)

5 s.h. at the 300 or 400 level within the Department
NOTE: Law violations may limit employment opportunities (consult with your advisor).

B.S. MAJOR - SOCIAL WORK

64 s.h. (No Minor Required)

This is a BSW Program preparing 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.

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.

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 on rare occasions may be accepted conditionally, but will most likely experience a delay in the necessary sequence of required courses. Students, however, may not continue on to Practice II, SW 385, until all requirements are met.

Admission

Social Work faculty are available to assist prospective social workers with this process. First-year students and sophomore students interested in the Social Work Major are advised to become well informed regarding the courses identified as the courses considered for admissions acceptance for a Social Work Major. (NOTE: Sociology/Social Work and Social Science courses taken to meet the requirements within the major cannot be used to meet general education requirements.) Admission into the major is limited to a specific number of students at WSU and satisfactory completion of the courses considered in admission. The prerequisite for SW 365 is SW 340 and the satisfactory completion of all foundation courses. The prerequisite for SW 385 is the student's notification of admission into the Professional Social Work Program from the faculty.

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 SW 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.

Social Work Student Association of Social Workers

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. 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 Human Society (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.)

SOC 376 Introduction to Social Research (3)

Minorities (3 s.h.)

SOC 423 Race Relations (3)

Sociology/Social Work (3 s.h.)

300- or 400-level Departmental elective (3)

Social Work (21 s.h.)

- 365 Practice I (3)
- 370 Human Behavior in the Social Environment (3)
- 380 American Social Welfare Policy (3)
- 385 Practice II (3)
- 410 Social Welfare Policy Analysis (3)
- 415 Practice III (3)
- 480 Integrative Social Work Seminar (3)

Social Work Field (13 s.h.)

- 375 Social Work Practicum Preparation (1)
- 475 Practicum (12)

NOTE: SW 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.

*Courses may be used to satisfy certain general education requirements.

SCHOOL SOCIAL WORK LICENSURE REQUIREMENTS - DEPARTMENT OF EDUCATION

Completion of the BSW Social Work Major plus the following:

REQUIRED COURSES (15 s.h.)

Social Work (6 s.h.)

- 425 Law & Social Work (3)
- 420 Child Welfare (3)

Special Education (3 s.h.)

- 400 Education of Exceptional Child/Youth (3)

Education (3 s.h.)

- 459 Professional Topics & Issues (3)

HHP (3 s.h.)

- 204 Personal & Community Health (3)

FIELD PLACEMENT

Twelve (12) credit placement required in school setting. The social work field instructor must also hold a license from the Department of Education.

NOTE: This is a special license in addition to the Social Work license and applies only in the State of Minnesota.

B.A. MINOR - SOCIOLOGY: GENERAL OPTION

18 s.h.

REQUIRED COURSES (9 s.h.)

- 150 Human Society (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 OPTION

27 s.h.

REQUIRED COURSES (18 s.h.)

- 150 Human Society (3)
- 434 Medical Sociology (3)
- 435 Family Roles & Relationships (3)
- 440 Dying and Death (3)
- 450 Sociology of Aging (3)
- 385 Field Experience (3)

NOTE: 385 is required for Sociology, Social Work and all other students except Nursing students. This course 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 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 & Social Movements (3)
- 431 Social Class & 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.

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.

CRIMINAL JUSTICE COURSE DESCRIPTIONS**210 - Introduction to Criminal Justice—3 S.H.**

Quarter Course: 210.

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.

315 - Criminology—3 S.H.

Quarter Course: 315.

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.

Quarter Course: 416.

An analysis of the systems and functions of corrections including the areas of administration of programs and security. Limited to 30 students. Prerequisite: SOC 210. Offered each semester. Grade only.

404 - Law Enforcement Communication—3 S.H.

This course is designed to introduce the student to law enforcement communication. The course provides knowledge, skills and practice in the areas of interviewing, interrogation and 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.

Quarter Course: 405.

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: SOC 210 and/or 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.

Quarter Course: 419.

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.

414 - Juvenile Delinquency—3 S.H.

Quarter Course: 414.

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.

417 - Operations and Procedures in Law Enforcement—3 S.H.

Quarter Course: 417.

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: SOC 210 and/or instructor's permission.

Limited to 30 students. Grade only. Offered each semester.

418 - Criminal Law and Procedure—3 S.H.

Quarter Course: 418.

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, SOC 210 and/or instructor's permission. Limited to 30 students. Grade only. Offered each semester.

420 - Minnesota Criminal Code and Post Review—3 S.H.

Quarter Course: 420.

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 315, SOC 418 and/or instructor's permission. Grade only. Offered yearly.

478 - Seminar in Criminal Justice—1-3 S.H.

Quarter Course: 478.

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/or instructor's permission. Grade only. Offered yearly.

490 - Correctional Administration—3 S.H.

Quarter Course: 490.

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 - Crime Prevention and Community Policing—3 S.H.

Quarter Course: 491.

An analysis of crime prevention and community policing including a proactive response to crime. Examines the principles of planning, research, and evaluation. Prerequisites: admission to Sociology: Criminal Justice Program and/or instructor's permission. Limited to 25 students. Grade only. Offered each semester.

CRIMINAL JUSTICE FIELD COURSES***385 - Field Experience—1-6 S.H.**

Quarter Course: 385.

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.

461 - Criminal Justice Internship—1-15 S.H.

Quarter Course: 461.

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.

* Note all field courses have an additional fee to cover malpractice liability insurance.

SOCIOLOGY COURSE DESCRIPTIONS

150 - Human Society—3 S.H.

Quarter Course: 150.

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.

Quarter Course: 201.

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.

Quarter Course: 205.

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.

212 - The Family—3 S.H.

Quarter Course: 212.

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.

Quarter Course: 216.

The nature, characteristics and proposed solutions for selected social problems. Recommended prerequisite: SOC 150. Grade only. Offered every semester.

315 - Criminology—3 S.H.

Quarter Course: 315.

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.

Quarter Course: 334.

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.

Quarter Course: 340.

The varieties and range of human behavior examined through comparative study of different cultures. Prerequisite: SOC

150. Grade only. Offered yearly.

350 - Population Analysis—3 S.H.

Quarter Course: 350.

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.

Quarter Course: 376.

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.

Quarter Course: 377.

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—4 S.H.

Quarter Course: 378.

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.

411 - Sociology of Religion—3 S.H.

Quarter Course: 411.

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.

Quarter Course: 412.

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.

414 - Juvenile Delinquency—3 S.H.

Quarter Course: 414G.

In-depth analysis of juvenile delinquency, its development, control, treatment, and prevention. Prerequisites: SOC150, SOC 210, SOC 315 and/or instructor's permission. Limited to 30 students. Grade only. Offered twice yearly.

421 - Urban Sociology—3 S.H.

Quarter Course: 421.

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.

Quarter Course: 423G.

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.

Quarter Course: 425.

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.

Quarter Course: 428.

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.

Quarter Course: 430.

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.

Quarter Course: 431G.

Social classes, their membership and their use of social, economic and political power. Prerequisite: SOC 150. Offered periodically.

434 - Medical Sociology—3 S.H.

Quarter Course: 434G.

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.

Quarter Course: 435G.

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.

Quarter Course: 437G.

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.

Quarter Course: 438.

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.

Quarter Course: 440.

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.

Quarter Course: 450G.

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.

499 - Senior Seminar in Sociology—3 S.H.

Quarter Course: 499.

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 - FIELD COURSES***385 - Field Experience—1-6 S.H.**

Quarter Course: 385.

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.

460 - Internship—1-15 S.H.

Quarter Course: 460.

An intensive, professionally supervised placement within an organization relevant to sociological practice. Emphasis is placed on the student assuming professional responsibilities and applying relevant knowledge and skills within the organization 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; and 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.

*Note all field courses have an additional fee to cover malpractice liability insurance.

Sociology Topics and Independent Studies Courses**480 - Variable Topics in Sociology—1-3 S.H.**

Quarter Course: 480G.

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.

Quarter Course: 485.

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.

Quarter Course: 487.

For the student interested in pursuing an independent research in Sociology. Grade only. By arrangement.

SOCIAL WORK COURSE DESCRIPTIONS**340 - Introduction to Social Work and Social Welfare—3 S.H.**

Quarter Course: 375.

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. Prerequisite: SOC 150 or instructor's permission. Grade only.

365 - Practice I—3 S.H.

Quarter Course: 390.

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 stressed. Prerequisite: SW 340, completion of foundation courses or instructor's permission. Limited to 25 students. Grade only.

370 - Human Behavior and the Social Environment—3 S.H.

Quarter Course: 404.

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 SW 340 or instructor's permission. Junior class standing minimum. Grade only. Offered each semester.

380 - American Social Welfare Policy—3 S.H.

Quarter Course: 380.

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: SW 340. Grade only.

385 - Practice II—3 S.H.

Quarter Course: 395.

This course is a continuation of Practice I (SOC 365). It looks at 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: SW 365 and acceptance into the Social Work Program. Grade only.

410 - Social Welfare Policy Analysis—3 S.H.

Quarter Course: 402.

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: SW 380. Grade only.

415 - Practice III—3 S.H.

Quarter Course: 401.

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: SW 385 and formal acceptance into the Social Work Program. Grade only. Offered each semester.

420 - Child Welfare—3 S.H.

Quarter Course: 454.

This course looks at the problems children face, and the policies and programs established to help them. Prerequisite: SW 340 or instructor's permission. Grade only.

425 - Law and Social Work—3 S.H.

Quarter Course: 403.

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: SW 340 or instructor's permission. Grade only.

430 - Aging: Policies and Services—3 S.H.

Quarter Course: 455.

This course covers the problems faced by the elderly, and the policies and programs created to help them. Prerequisite: SW 340 or instructor's permission. Grade only.

440 - Variable Topics in Social Work—3 S.H.

Quarter Course: 480.

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—3 S.H.

Quarter Course: 485.

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—3 S.H.

Quarter Course: 487.

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.

Quarter Course: 479.

This course provides the opportunity for students to integrate Social Work theory to the external world by involving students in in-depth discussions of their practicum experiences. Co-requisite: SW 475. Grade only.

SOCIAL WORK - FIELD COURSES*

350 - Field Experience—3-6 S.H.

Quarter Course: 385.

This course provides 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. Prerequisite or co-requisite: SW 340; can be taken with SW 365. P/NC only.

375 - Social Work Practicum Preparation—1 S.H.

Quarter Course: 458.

The focus of this class is to facilitate the student's preparation for the practicum experience. It includes the selection of a site and the development of both the learning contract and the research project. Prerequisite: To be taken concurrently with either SW 365 or SW 385. P/NC only.

475 - Practicum— 12 S.H.

Quarter Course: 462.

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. Co-requisite: SW 480. P/NC only.

*Note all field courses have an additional fee to cover malpractice liability insurance.

Special Academic Programs

In addition to baccalaureate and graduate degree programs, WSU offers a variety of short-term programs including one-year non-degree programs, two-year associate degree program and pre-professional sequences in dental hygiene, dentistry, engineering, law, medicine (allopathic and osteopathic), mortuary science, optometry, pharmacy, physician assistant, physical therapy, podiatry, veterinary medicine (See Pre-Professional Sequences for more information). The university also offers a Fifth Year post-baccalaureate program in teacher education which is designed for classroom teachers not planning to enter a master's degree program (See the Education Department program descriptions for more information).

GENERAL ASSOCIATE IN ARTS CURRICULUM

64 S.H.

All candidates for the general Associate in Arts must complete the following:

- I. Basic Skills (12 S.H.)
 - A. Written Communications (4 S.H.)

English 111
 - B. Oral Communications (0-3 S.H.)

CMST 191 or satisfactory completion of a special examination offered once a semester by prior arrangement.
 - C. Mathematics (0-3 S.H.)

Mathematics 100

Successful completion of any MATH or MATH/STAT course except MATH 050, STAT 115 or STAT 255. MATH 050 is an additional requirement for students with a low mathematics placement score.
 - D. Physical Education Activities (2 S.H.)

HPER 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 118, 120, 122, 123, 127, 199.
- II. Humanities (6 S.H. minimum — 2 departments)
- III. Natural Sciences (6 S.H. minimum; one lab course required — 2 departments)
- IV. Social Sciences (6 S.H. minimum - 2 departments)
- V. Different Culture (6 S.H. minimum - 2 departments)

In addition to the general education requirements, students must select electives to complete the 64 credits required for the degree.

B.A. MAJOR - PROFESSIONAL STUDIES: AVIATION MAINTENANCE MANAGEMENT OPTION

128-139 s.h. (No Minor Required)

(For students who have completed the Aviation Maintenance Program at Red Wing/Winona Technical College)

Pasteur Hall, Room 114D, (507) 457-5264
Dr. George Bolon, Advisor

This option is to prepare students to manage systems and technicians within the aviation maintenance industry. Graduates with this option will meet the needs of air carrier, the federal government and commercial aviation. IT IS OPEN ONLY to students who have completed the Aviation Maintenance Program at Red Wing/Winona Technical College. Only 40 credits will transfer from the technical college applicable toward this option. FAA Airway Science Certification is pending.

There are five aspects to this degree program: (1) General Education; (2) Management Core; (3) Advanced Aviation Courses; (4) Computer Understanding and Application; and (5) Upper-Division Electives.

1. General Education (48 s.h.)

Basic Skills (9 s.h.)

Humanities (6 s.h.)

Natural Science (7 s.h.)

MATH 140 Applied Calculus (3)

PHYS 201 General Physics I (4)

Social Science (6 s.h.)

PSY 210 General Psychology (3)

ECON 201 Principles of Microeconomics (3)

Different Culture (6 s.h.)

Allied Studies (3 s.h.)

ADDITIONAL REQUIREMENTS FOR CERTIFICATION (11 s.h.):

PHYS 202 General Physics II (4)

STAT 210 Statistics (3) OR

DIS 220 Business Statistics (3)

CHEM 212 Principles of Chemistry I (4)

2. Business Administration (18 s.h.)

DIS 220 Business Statistics (3)

BUSA 301 Business Law (3)

MGMT 315 Principles of Management (3) OR

MGMT 317 Management of Human Resources (3)

POM 334 Production and Operations Management (3)

DIS 362 Management Information Systems (3)

Marketing (3 s.h.)

3. Aviation (12 s.h.)

200 Fundamentals of Aviation (4)

383 Air Traffic Control (3)

387 Flight Safety (3)

388 Legal and Legislative Aspects

4. Computer Application (6 s.h.)

CS 130 Introduction to BASIC Computing (3) OR

DIS 312 Business Computer Programming (3)

Any Computer Science elective and/or

DIS 202 Microcomputers in Business (3)

5. Upper-Division Electives (15 s.h.)

These electives must be approved by AWS faculty advisor

6. Technical College Transfer (40 s.h.)

FAA AIRWAY SCIENCE CERTIFICATION PROGRAM

146-162 s.h. (FAA Airway Science Certification pending)

Pasteur Hall, Room 114A, (507) 457-5264
Dr. George Bolon, Advisor

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 air-space system of the future. Therefore, the FAA has initiated the Airway Science curriculum as a method of preparing the next generation of aviation technicians, managers and air-craft crew members.

WSU has been approved by the FAA as an Airway Science University and presently offers the Airway Science Computer Science and the Airway Science Management Curriculums. Students in these curriculums will, upon meeting respective major department degree requirements, receive a B.S. in Computer Science with a Physics/Airway Science/Aviation Minor or a B.S. in Business Administration with a Physics/Airway Science/Aviation Minor. With the noted additional other required courses, their transcripts will indicate that they have fulfilled the Airway Science curriculum.

AIRWAY SCIENCE OPTIONS

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: 146 s.h.

GENERAL EDUCATION AND STUDIES (45 s.h.)

Basic Skills (9 S.H.)

English (4 s.h.)

111 College Reading and Writing (4)

Communication (3 s.h.)

191 Fundamentals of Speech (3)

Physical Education (2 s.h.)

Humanities (6 S.H. - 2 departments)

- History (3 s.h.)
 - 122 Western Civilization 1815 to Present (3)
 - Electives from the approved general education courses from one department other than History

Natural Science (15 S.H. - 2 departments)

- Geoscience (3 s.h.)
 - 115 Meteorology (3)
- Mathematics/Statistics (12 s.h.)
 - MATH 125 Calculus I (4)
 - MATH 126 Calculus II (4)
 - MATH 210 Discrete Math (4)

Social Science (6 S.H. - 2 departments)

- Economics (3 s.h.)
 - 201 Principles of Microeconomics (3)
- Psychology (3 s.h.)
 - 210 General Psychology (3)

Different Culture (6 S.H. - 2 departments)**Allied Studies (3 S.H.)**

- Accounting (3 s.h.)
 - 211 Financial Accounting (3)

MANAGEMENT (12 S.H.)

- Business Administration (12 s.h.)
 - DIS 220 Business Statistics (3)
 - BUSA 301 Business Law I (3)
 - MGMT 315 Principles of Management (3) OR
 - MGMT 325 Organization of Dynamics (3)
 - POM 334 Production and Operations Management (3)

COMPUTER SCIENCE (58 S.H.)

- Computer Science (50 s.h.)
 - 150 Overview of Computer Science (3)
 - 155 Introduction to Computer Science Tools (1)
 - 234 Algorithms and Problem Solving (4)
 - 250 Algorithms and Data Structures (4)
 - 312 Microcomputer Organization (3)
 - 341 Advanced Data Structure (4)
 - 351 Introduction to Assembler and Architecture (3)
 - 376 Operating Systems (3)
 - 410 Software Engineering (3)
 - 412 Networking/Telecommunications (3) OR
 - 415 Principles of Program Language (3)
 - 417 Object Oriented Design and Development (3)
 - 420 Computer Architecture (3)
 - 425 Numerical Analysis (4)
 - 435 Theory of Computation (3)
 - 450 Compilers (3)
 - 466 Topics: General Computing Applications (3) OR
 - 485 Database System Design (3)
- Physics (2 s.h.)
 - 322 Computer Organization (2)
- Computer Science Electives (6 s.h.)
 - 301 Discrete Structures for Computer Science (3)
 - 385 Applied Database Management Systems (3)
 - 413 Advanced Networking (3)
 - 430 Computer Graphics (3)
 - 445 Artificial Intelligence (3)
 - 465 Topics: Computing Theory (1-3)
 - 476 Distributed System: Concepts and Designs (3)

AVIATION (12 S.H.)

- Physics (12 s.h.)
 - 200 Fundamentals of Aviation (4)
 - 383 Air Traffic Control (3)
 - 387 Flight Safety (3)
 - 388 Legal and Legislative Aspects (2)

OTHER REQUIREMENTS BEYOND DEGREE FOR FAA AIRWAY SCIENCE CERTIFICATION

18 s.h.

- Business Administration (3 s.h.)
 - MGMT 317 Management of Human Resources (3)
- Chemistry (4 s.h.)
 - 212 General Inorganic 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: 162 s.h.***GENERAL EDUCATION AND STUDIES**

(47 s.h.)

Basic Skills (9 S.H.)

- English (4 s.h.)
 - 111 College Reading and Writing (4)
- Communication (3 s.h.)
 - 191 Fundamentals of Speech (3)
- Physical Education (2 s.h.)

Humanities (6 S.H.)

- History (3 s.h.)
 - 122 Western Civilization 1815 to Present (3)
 - Electives from the approved general education courses from one department other than History

Natural Science (11 S.H.)

- Mathematics/Statistics (3 s.h.)
 - MATH 140 Applied Calculus (3)
- Physics (8 s.h.)
 - 201 General Physics I (4)
 - 202 General Physics II (4)

Social Science (12 S.H.)

- Economics (6 s.h.)
 - 201 Principles of Microeconomics (3)
 - 202 Principles of Macroeconomics (3)
- Political Science (3 s.h.)
 - 103 Introduction to Politics (3)
- Psychology (3 s.h.)
 - 210 General Psychology (3)

Different Culture (6 S.H.)**Allied Studies (3 S.H.)**

- Accounting (3 s.h.)
 - 211 Financial Accounting (3)

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.)

OPTION A:

MIS 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 the Department of Business Administration, Accounting, Economics and Finance or Marketing (3)

OPTION B:

A minor or second major from the Department 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.)

Computer Science (3 s.h.)
 210 Computers in Society (3)

AVIATION (18 s.h.)

Physics (18 s.h.)
 200 Fundamentals of Aviation (4)

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)

OTHER REQUIREMENTS BEYOND DEGREE FOR FAA AIRWAY SCIENCE CETIFICATION

31 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)
 Geosciences (3 s.h.)
 115 Meteorology (3)
 Mathematics (6 s.h.)
 See advisor for specific recommendations
 Psychology (3 s.h.)
 305 Theories of Personality (3)
 Sociology (3 s.h.)
 150 Human Society (3)

Internship Program

Internship programs are available in all departments by arrangement with the department chairperson. Many departments offer internship experiences with credit and, in some instances, with remuneration. See internship reference under departmental course descriptions for specific limitations.

399 General Internship—1-12 s.h.

Specific details regarding the course are contained in internship program statements from the departments using it. There is a limit of 12 internship credits per semester and 16 internship credits in total which may apply toward a degree program. Exception: in cases where combined internship credits in a major and/or minor program combination will exceed 16 credits, a maximum of 21 credits may be applied toward graduation. Students must consult the chairperson of the department in which they are majoring. Prerequisites: as set by departments. P/NC only, except 3 S.H. of work related to courses may be taken for grade with approval of department and area dean.

UNIVERSITY HONORS PROGRAM

Phelps Hall, Room 231, (507) 457-5435
 Kristi Lane (Director)

Kristi Lane, Professor, Psychology; B.A., University of North Carolina; M.A., Ph.D., George Peabody College of Vanderbilt University; 1980 -

The Honors Program provides students with a liberal education tailored to the abilities and interests of talented students. It is a program to which students with high potential can apply as an entering first-year student, transfer student or an enrolled student. The Honors Program offers courses with a multidisciplinary focus within the framework of humanities, natural sciences and social sciences. The program keeps class sizes small in order to facilitate learning by participation, discussion and integration of knowledge from multiple sources. The program represents a community of faculty and students seeking to develop the potential of Honors students. Successful completion of the Honors Program gives graduates enhanced prospects for successful career placement and graduate school admission.

Admissions Entering First Year

Incoming students who are Distinctive Admits meet qualifications for the Honors Program.

Enrolled Students

Enrolled students can apply for admission to the program if they have a college GPA of 3.25 or above.

Transfer Students

Transfer students can apply for admission if they meet the GPA criteria for enrolled students.

Recognition

Graduating students who complete the program with an overall GPA of 3.75 or above is graduated from the University "Summo Cum Honore" instead of "Summa Cum Laude." Students completing the program with a GPA of 3.5 to 3.74 is graduated "Magno Cum Honore" instead of "Magna Cum Laude." Students with a GPA between 3.25 and 3.49 is graduated "Cum Laude." The title of the Senior Thesis is placed on the transcript.

Course Descriptions

Students can substitute courses in the Honors Program to satisfy some requirements for the General Education Program. Honors 201 and 251 apply to the Humanities requirement; Honors 202 and 252 apply to the Social Sciences requirement; Honors 203 and 253 apply to the Natural Sciences requirement.

Students not in the program may take an Honors course if they have either a 3.25 GPA or the instructor's permission. These students are expected to meet course standards.

Core Courses

Core courses are variable-content courses, and a course number (201, 202, 203) can be repeated for credit provided the content changes (e.g., 201) The Western: America's Myth and 201 Women in Rural America could both be taken for credit. Core courses are 1-3 credit hours.

REQUIREMENTS (21 s.h. minimum)

Students should complete 4 of the following 6 courses listed as core courses and as special seminars. Students also must complete two "H" courses and the senior project. Students formally accepted for admission to the University Honors Program are expected to complete at least one of these courses in each of their first two years.

Complete 4 of the following 6 courses:

CORE COURSES

- 201 Thought & Culture
- 202 Classics in Social Thought
- 203 Great Ideas in the History of Science & Mathematics

SPECIAL SEMINARS

- 251 Seminar in Humanities
- 252 Seminar in Social Thought
- 253 Seminar in the History of Science & Mathematics

Complete 2 of the following courses:

"H" COURSES (3-6 s.h.)

Students should take designated "H" courses and "H" contract courses to extend an interest into a field related to their own or intensify an interest within their own field. "H" courses may include those designated by individual departments as well as the contract courses.

Complete the SENIOR PROJECT (3 s.h.)

The Senior Project requires the student to complete at least one independent study course. The senior project must include a written paper and an oral presentation. More information about the Senior Project is available in the Honors Office.

University Honors Program Course Descriptions

201 - Thought and Culture—1-3 S.H.

Quarter Course: 201

An intensive examination of some chronologically bound period or identifiable controversy involving a limited number of primary works of enduring importance in the humanities. Topics vary with each offering; for example: Violence: Films, Plays, Media; Thought & Culture: Dilemmas of Identity in Contemporary Life. Grade only.

202 - Classics in Social Thought—1-3 S.H.

Quarter Course: 202

An intensive examination of selected primary works of a number of authors generally regarded as the seminal figures in the history of social thought. Topics vary with each offering; for example: Ancient Myth and Mod Belief; Primates and Politics. Grade only.

203 - Great Ideas in the History of Science and Mathematics—1-3 S.H.

Quarter Course: 203

An examination, aimed at the non-scientist, of a limited number of scientific and technical concepts or developments which are of general intellectual or social interest. Topics vary with each offering; for example: Drama and Cosmologies. Grade only.

251, 252, 253 - Special Seminars—1-3 S.H.

Quarter Course: 251, 252, 253

Special seminars concentrate on specialized topics within one of three areas. These seminars emphasize student initiative and presentation. The topics are specialized in that their range is narrower than topics in the core courses. A high degree of technical expertise is not required. One seminar offered each year on a rotating basis. Recent offerings include Time: History & Measures; The Western: America's Myth; Media and Social Response; Writing the Honors Thesis. Prerequisite: Admission into the program or instructor's permission. Grade only.

SPECIAL EDUCATION

Gildemeister Hall, Room 221, (507) 457-5535
Long (Chairperson), Boseker, Palmer, F. Rocco

FACULTY

Barbara Boseker, Professor; B.S., 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

57 s.h.

PROFESSIONAL EDUCATION (16 s.h.)

REQUIRED COURSES (16 s.h.)

- EDUC 205 Exploring Teaching (3)
- EDUC 301 Development and Learning (4)
- EDUC 306 Instructional Planning and Assessment (3)
- EDUC 308 Human Relations and Student Diversity (3)
- EDUC 459 The Professional Educator (3)

REGULAR (ELEMENTARY & SECONDARY) METHODS (13 s.h.)

REQUIRED COURSES (13 s.h.)

- MATH 110 Math for Elementary Teachers (3) OR
- EDUC 334 Teaching Math in Elementary School (3)
- HHP 204 Personal and Community Health (3)
- EDUC 328 Teaching Reading and Language Arts I (Primary) (4)
- EDUC 429 Secondary Reading and Teaching Strategies (3)

SPECIAL EDUCATION

REQUIRED COURSES (21 s.h.)

- 400 Education of Exceptional Children/Youth (3)
- 405 Student Management Systems (3)
- 410 Introduction to Assessment/Methods (3)
- 420 Special Education Administrative Procedures (3)
- 425 Inclusion in Regular Classrooms (3)
- 411 Practicum A (3)
- 430 Characteristics of Students with Disabilities (3)
- Mental Impairment Licensure (18 s.h.)**
- 440 Assessment/Methods for Students with Mental Retardation (3)
- 441 Practicum B, Developmental Disabilities (15)
- Learning Disabilities Licensure (18 s.h.)**
- 445 Assessment/Methods for Students with Learning Disabilities (3)
- 446 Practicum B, Learning Disabilities (15)

EMPHASIS AREA REQUIREMENTS

(minimum of 8 s.h.)

In addition to the above, select ONE Emphasis Area from the six listed below.

Foreign Language (minimum of 8 s.h.)

Choose at least 8 credits from one area of German, Spanish or other language.

Spoken and Written Communication (minimum of 8 s.h.)

- CMST 261 Public Speaking (3)
- CMST 282 Communication Studies (3)
- THAD 141 Oral Interpretation (2)
- MCOM 100 Mass Media & Society (3)

Human Environment (minimum of 9 s.h.)

- CHEM 100 Chemistry Appreciation (3)
- GEO 120 The Dynamic Earth (4)
- BIO 104 Conservation of the Environment (3)
- PHYS 115 Conceptual Physics (3)

Computers/Math (minimum of 9 s.h.)

- STAT 110 Fundamentals of Statistics (3)
- MATH 110 Math for Elementary Teachers (3)
- CS 210 Computers in Society (3)
- PHILI 210 Inductive Reasoning (3)
- Geographic/Political Relationships (minimum of 9 s.h.)**
- GEOG 110 World Regional Geography (3)
- GEOG 213 Cultural Geography (3)
- ECON 202 Macroeconomics (3)
- POLS 130 International Relations (3)
- Humans as Social Beings (minimum of 9 s.h.)**
- PSY 210 General Psychology (3)
- PSY 298 Health & Wellness (3)
- SOC 150 Human Society (3)
- SOC 205 Social Interaction (3)

DOUBLE MAJOR WITH ELEMENTARY EDUCATION (28 s.h.)

Students majoring in both Special Education and Elementary Education must complete the following additional courses. Double majors are not required to take SPED 425.

Education (19 s.h.)

- 329 Teaching Reading & Language Arts II (3)
- 333 Teaching Social Studies in Elementary School (3)
- 335 Teaching Science & Environmental Studies in Elementary School (3)
- 460 Student Teaching - Elementary School (10)

Art (3 s.h.)

- 300 Elementary Art Education (3)

PER (3 s.h.)

- 200 Teaching Elementary Physical Education (3)

Music (3 s.h.)

- 320 Music for Elementary Teachers (3)

Special Education Course Descriptions

All courses must be taken on a Grade Only basis except Practicums.

400 - Education of Exceptional Children/Youth—3 S.H.

Quarter Course: 400.

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.

405 - Student Management Systems—3 S.H.

Quarter Course: 405.

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.

410 - Introduction to Assessment/Methods—3 S.H.

Quarter Course: 410.

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. Prerequisites: SPED 400, SPED 405, EDUC 334 or MATH 110, EDUC 328 and EDUC 306. Concurrent enrollment in SPED 411 or SPED 531.

420 - Special Education Administrative Procedures—3 S.H.

Quarter Course: 420.

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. Prerequisite: SPED 400. Offered twice yearly.

425 - Inclusion in Regular Classrooms—3 S.H.

Quarter Course: 425.

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. Prerequisites: SPED 400 and SPED 411 or EDUC 302. Offered yearly.

430 - Characteristics of Students with Disabilities—3 S.H.

Quarter Course: 430.

This course is designed to provide the student with an understanding of the characteristics of students who are mentally retarded, learning disabled, or emotionally/behaviorally disturbed. Implications for planning instruction and issues related to field of Special Education are identified. Prerequisites: SPED 400, SPED 405 and SPED 420.

440 - Assessment/Methods for Students with Mental Retardation—3 S.H.

Quarter Course: 440.

Knowledge and skills for professional entry-level assessment and program development/adaptation for students with mild to moderate mental impairment including transition and paraprofessional supervision. Prerequisite: concurrent enrollment in SPED

441.

445 - Assessment/Methods for Students with Learning Disabilities—3 S.H.

Quarter Course: 445.

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. Prerequisites: concurrent enrollment in SPED 446 or SPED 555. Offered twice yearly.

490 - Seminar Workshop—1-3 S.H.

Quarter Course: 490.

499 - Individual Study—1-3 S.H.

Quarter Course: 499.

411 - Practicum A—3 S.H.

Quarter Course: 411.

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. Prerequisites: admission to the Special Education Program; SPED 400, SPED 405, SPED 410 and EDUC 301; concurrent enrollment in SPED 410; advance application, Departmental permission to enroll.

441 - Practicum B Developmental Disabilities—15 S.H.

Quarter Course: 441.

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 day long, supervised school settings. Student teaching experience is full-time for a full semester.

446 - Practicum B Learning Disabilities—15 S.H.

Quarter Course: 446.

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 day long, supervised school settings. Student teaching experience is full-time for a full semester. Students are strongly recommended to see their advisor before enrolling.

THEATRE AND DANCE

Performing Arts Center, Room 215, (507) 457-5230
Bratt (Chairperson), Cohenour, Fusillo, Lewis

FACULTY

David Bratt, Professor; B.A., Calvin College; M.A., University of Iowa; Ph.D., University of California-Santa Barbara; 1976 -
Gretchen Cohenour, Associate 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.F.A., Marietta College; M.F.A., University of Massachusetts-Amherst; 1997 -

The Department of Theatre and Dance offers two majors: the B.A. in Theatre and, in cooperation with the Communication Studies Department, the B.S. in Speech-Theatre Arts Teaching.

Also available are minors in theatre, speech-theatre teaching, 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 participating in a Senior Capstone Production. 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. 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 for themselves in fields ranging from professional theatre through high school and college teaching to marketing analysis, county court management and ownership of small businesses. Recent alumni report average career satisfaction ranging between 3.0 and 3.8 on a 4.0 scale.

Pass/No Credit Courses

Courses taken to count in a major or minor sponsored or co-sponsored by the THAD Department must be taken for a letter grade unless offered P/NC only.

Lab and Production Crew Requirements

All THAD courses eligible for THAD-sponsored majors and minors, as well as THAD 100, require students to enroll concurrently in THAD 090 for 0 credits, unless excused by the Department chairperson. THAD 090 meets once each week during the semester. Selected courses in THAD-sponsored majors and minors require students to complete 20 hours of work on a THAD production crew during the semester. See Course Descriptions for details.

THAD Majors and Minors

1. Theatre majors may minor in Dance but may not minor in Theatre.
2. Theatre majors are required to confer with their departmental advisor before registering for classes each semester.
3. Students majoring in Theatre normally will be required to complete THAD 291 six (6) times with a grade of "P." Theatre minors will normally do so twice; Speech/Theatre Arts Teaching majors once. Students who believe they should be excused from some or all of this requirement must petition the Department faculty for an exemption. This petition must be filed in the semester during which the student first declares the major or minor.

Transfer Students

1. Theatre majors and minors transferring to WSU with an AA degree will be exempted from 50% of the THAD 291 requirements listed above.
2. In order to graduate with a Theatre Major from WSU, a transfer student must normally complete at least 15 credits of WSU Theatre and Dance Department coursework numbered 300 or above.

Additional Graduation Requirements

1. A grade of "C" or better must be earned in each course taken for the Theatre Major.
2. A GPA of 2.5 must be earned in courses taken for a Theatre Major.

B.A. MAJOR - THEATRE

44 s.h. (Minor Required)

Prerequisite: Students are strongly recommended 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.

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 Tech 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 (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)
- * Course may be used to satisfy certain general education requirements.

B.A. MINOR - THEATRE

19 s.h.

Prerequisite: Students are strongly recommended 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. HIST 121 also is strongly recommended prior to enrolling in THAD 210 or THAD 310.

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 Tech Theatre (2)
- 119 Play Reading (3)
- 131 Performance I (3)
- 201 Play Production (3) OR
- 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.)

- * BIOL 211 Anatomy & Physiology I (4)
- * THAD 115 Dance Appreciation (3)
- * THAD 131 Performance I (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" 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/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 Tech 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.

* Minor courses may be used in General Education.

Portfolio Requirement

Dance minors are required to document their development by maintaining video tapes and supporting written and visual materials and to submit a portfolio for faculty review by May 1 in the year of graduation.

B.S. MAJOR - SPEECH/THEATRE (Teaching)

50 s.h. (No Minor Required)

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. Teaching majors who fail to maintain an overall 2.75 GPA and a 2.50 GPA in the major or who receive a grade below a "C" in any major course will not be approved for student teaching or graduation.

PREREQUISITES

CMST 191 with a grade of "C" or better is prerequisite for CMST courses in this program; completion of ENG 111 is recommended before enrollment in major courses above the 100 level and required before enrollment in major courses above the 200 level; EDUC 150 or EDUC 202 is prerequisite for CMST 491 and COMST 492. Students are strongly recommended to take HIST 121 before enrolling in THAD 210 or THAD 310.

REQUIRED COURSES (50 s.h.)

Communication Studies (26 s.h.)

- 051 Forensics Activities (2)
- 061 Debate Practicum (2)
- 261 Public Speaking (3)
- 282 Intro to Communication Studies (3)
- 283 Intro to Rhetorical Studies (3)
- 371 Discussion & Small Group Dynamics (3)
- 375 Argumentation & Advocacy (3)
- 387 Interpersonal Communication (3)
- 491 Speech/Theatre Teaching Methods (2)
- 492 Coaching Forensics & Theatre (2)

Theatre and Dance (21 s.h.)

- 090 THAD Showcase (0; enrollment with a grade of "P" required each semester any other THAD teaching major course is taken)
- 107 Introduction to Tech Theatre (2)
- 119 Play Reading (3)
- 131 Performance I (3)
- 201 Play Production (3)
- 207 Design Communication (3)
- 210 Theatre History/Dramatic Literature I (3) OR
- 310 Theatre History/Dramatic Literature II (3)
- 291 Rehearsal & Performance (1)
- 321 Play Directing (3)

Mass Communication (3 s.h.)

- 100 Media and Society (3)

B.S. MINOR - SPEECH/THEATRE (Teaching)

37 s.h.

NOTE: Teaching minors 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. Teaching minors who fail to maintain an overall 2.75 GPA and a 2.50 GPA in the minor or who receive a grade below a "C" in any minor course will not be approved for student teaching or graduation.

PREREQUISITES

CMST 191 with a grade of "C" or better is prerequisite for CMST courses in this program; completion of ENG 111 is recommended before enrollment in major courses above the 100 level and required before enrollment in major courses above the 200 level; EDUC 150 or EDUC 202 is prerequisite for CMST 491 and CMST 492. Students are strongly recommended to take HIST 121 before enrolling in THAD 210 or THAD 310.

REQUIRED COURSES (37 s.h.)**Communication Studies (23 s.h.)**

- 051 Forensics Activities (2)
- 061 Debate Practicum (2)
- 261 Public Speaking (3)
- 282 Intro to Communication Studies (3)
- 283 Intro to Rhetorical Studies (3)
- 371 Discussion & Small Group Dynamics (3)
- 375 Argumentation & Advocacy (3)
- 491 Speech/Theatre Teaching Methods (2)
- 492 Coaching Forensics & Theatre (2)

Theatre and Dance (14 s.h.)

- 090 THAD Showcase (0; enrollment with a grade of "P" required each semester any other THAD teaching minor course is taken)
- 107 Introduction to Tech Theatre (2)
- 119 Play Reading (3)
- 201 Play Production (3)
- 210 Theatre History/Dramatic Literature I (3) OR
- 310 Theatre History/Dramatic Literature II (3)
- 321 Directing (3)

Theatre and Dance Course Descriptions

Courses offered on a Pass/No Credit Only or Grade Only basis are so designated. All courses in the major, minor, options, concentrations and licensures must be taken on a Grade Only basis except Internships and Practicums. The P/NC option is available to non-majors unless otherwise noted.

090 - THAD Showcase—0 S.H.

Quarter Course:

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; 2 of Speech/Theatre Arts Teaching majors and minors. Offered each semester. P/NC only.

100 - Theatre Activities—1 S.H.

Quarter Course: 001.

Active participation in a major theatre or dance production as performer or in box office, scenic studio or costume studio. Concurrent registration in THAD 090 required unless excused by the Department. Course may be repeated to 6 s.h.; maximum of 3 credits may be taken for general education. Offered each semester.

107 - Introduction to Tech Theatre—2 S.H.

Quarter Course: 007, 008, and 009.

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 Department. Offered yearly. Grade only.

111 - What is Theatre?—3 S.H.

Quarter Course: 111.

Designed for the general student who wishes to become familiar with theatre. Offered each semester.

115 - Dance Appreciation—3 S.H.

Quarter Course: 115.

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 unless excused by the Department. Offered each semester.

119 - Play Reading—3 S.H.

Quarter Course: 119.

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 unless excused by the Department. Offered yearly.

131 - Performance I For Everyone—3 S.H.

Quarter Course: 141.

Integration of vocal, physical and mental components of performance through solo and group improvisational and collaborative work. Concurrent registration in THAD 090 required unless excused by the department. Offered yearly. P/NC option.

137 - Dance Repertory I—2 S.H.

Quarter Course: 137.

Creation of new dances or reconstruction of previous faculty repertory for public performance, ranging from solos to large ensemble work. Prerequisite: instructor's permission. May be repeated once. Concurrent registration in THAD 090 required unless excused by the Department. Course contains production crew requirement. Offered each semester. Grade only.

141 - Oral Interpretation—3 S.H.

Quarter Course: 141.

Study of prose, poetry and drama through performance. Brings to life the printed symbol. Offered yearly.

201 - Play Production—3 S.H.

Quarter Course: 201.

Study of the procedures and planning involved in the presentation of a stage play from audience analysis through play selection, casting, design, direction and business management to performance and post-performance analysis and critique. Course contains production crew requirement for THAD 490 production. Concurrent registration in THAD 090 required unless excused by the Department. Offered yearly.

207 - Design Communication—3 S.H.

Quarter Course: 207.

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. Course contains production crew requirement. Concurrent registration in THAD 090 required unless excused by the Department. Prerequisites: THAD 107 and THAD 119. Offered yearly. Grade only.

209 - Stage Management—1 S.H.

Quarter Course: 209.

Study and practice of the functions of a stage manager. Prerequisites: THAD 201 or THAD 207 and THAD 131. Offered by arrangement.

210 - Theatre History and Dramatic Literature I—3 S.H.

Quarter Course: 210 and 211.

Survey of the works of major Western playwrights through 1600, their cultural contexts and staging practices. No prerequisite for general education students. Prerequisites for THAD majors/minors: THAD 119. HIST 121 is strongly recommended as a prerequisite. Additional assignments required. Concurrent registration in THAD 090 required unless excused by the Department. Offered yearly.

231 - Performance II—3 S.H.

Quarter Course: 231.

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—2 S.H.

Quarter Course: 237.

Continuation of THAD 137. Prerequisite: THAD 137. May be repeated once. Concurrent registration in THAD 090 required unless excused by the Department. Course contains production crew requirement. Offered each semester. Grade only.

239 - Creative Dramatics for Children—2 S.H.

Quarter Course: 239.

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.

Quarter Course: 290.

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.

Quarter Course: 100, 200, 300.

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.; Speech/Theatre Arts Teaching majors to 1 s.h. Concurrent registration in THAD 090 required unless excused by the Department. Offered each semester. Grade only.

307 - Design II—3 S.H.

Quarter Course: 307 and 308.

Advanced work in research, production, presentation and resource allocation in the areas of scenic, lighting and costume designs in various styles. Course contains production crew requirement. Concurrent registration in THAD 090 required unless excused by the Department. Prerequisite: THAD 207. Open to declared Theatre majors and minors only. Offered yearly. Grade only.

310 - Dramatic History and Literature II—3 S.H.

Quarter Course: 210 and 212.

Survey of the works of major Western playwrights 1660-1870, their cultural contexts and staging practices. No prerequisite for general education students. Prerequisites for THAD majors/minors: THAD 119. HIST 121 is strongly recommended as a prerequisite. Additional assignments required. Concurrent registration in THAD 090 required unless excused by the Department. Offered yearly.

321 - Play Directing—3 S.H.

Quarter Course: 321.

Study and application of processes affecting play selection, casting and rehearsals. Prerequisites: THAD 210, THAD 231, THAD 307 and THAD 310. Open to declared Theatre or Teaching 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.

Quarter Course: 322.

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.

Quarter Course: 331.

Theories and practice of acting in non-realistic styles. Concurrent registration in THAD 090 required unless excused by the Department. Prerequisite: THAD 231. Open to declared Theatre or Teaching majors and minors only. Offered yearly. Grade only.

337 - Dance Repertory III—2 S.H.

Quarter Course: 337.

Continuation of THAD 237. Prerequisite: THAD 237. May be repeated once. Concurrent registration in THAD 090 required unless excused by the Department. Course contains production crew requirement. Offered each semester. Grade only.

395 - Topics in Theatre—1-3 S.H.

Quarter Course: 395.

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 only. Offered yearly.

399 - Internship—1-16 S.H.

Quarter Course: 399.

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—2 S.H.

Quarter Course: 437.

Continuation of THAD 337. Prerequisite: THAD 337. May be repeated once. Course contains production crew requirement. Concurrent registration in THAD 090 required unless excused by the Department. Offered each semester. Grade only.

490 - Capstone Production Project—3 S.H.

Quarter Course: 405, 425 and 435.

Full responsibility for work as a designer, director or performer on a full-scale theatre production. 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.

Quarter Course: 495.

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.

Quarter Course: 499G.

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 134, (507) 457-5460
Cindy Killion, Interim Director

Cindy Killion, Associate Professor, Mass Communication; B.J., University of Missouri-Columbia; M.A., University of Oklahoma; 1992 -

Women's Studies at WSU is a multidisciplinary program that looks at the lives and experiences of women through many different disciplines — History, Art, Psychology, Economics and Public Health, among others. Women's Studies students explore the ways in which gender shapes women's and men's experiences in various 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 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 program focuses on three major objectives:

- coordination and administration of Women's Studies course offerings;
- guidance and leadership in the process of integrating gender issues into the WSU curriculum; and
- centralization of information about existing opportunities for exploring and addressing gender issues.

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 operates in the two 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.

B.A. MINOR - WOMEN'S STUDIES

21-28 s.h.

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.

CORE COURSES (11-14 s.h.)

- 148 Introduction to Women's Studies (3)
- 348 Topics in Women's Studies (3)
- 420 Field Experience (3-6)
- 448 Senior Seminar (2)

CORE DISCIPLINARY COURSES (6-8 s.h.)

NOTE: Students ONLY take 6-8 s.h. from the following list of courses:

- ART 252 Survey of Women Artists (3)
- NURS 260 Women's Health Issues (3)
- PSY 275 Intro to Psychology of Women (3-4)
- HIST 320 Women in U.S. History (4)
- AIS 350 Quality of Worklife (3)
- PSY 424 Women & Mental Health (3)

ELECTIVES (4-6 s.h.)

Choose 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. See the Women's Studies Program Director for an updated list.

Women's Studies Course Descriptions

All courses in the minor must be taken on a Grade Only basis except Field Experience. The P/NC option is available to non-minors unless otherwise noted.

148 - Introduction to Women's Studies—3 S.H.

Quarter Course: 148.

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.

320 - Independent Readings—1-3 S.H.

Quarter Course: 320.

This course allows students to pursue a project or topic of their own design with supervision and evaluation by instructor. Instructor's written permission is required.

348 - Topics in Women's Studies—3 S.H.

Quarter Course: 348.

In-depth study of topics of current interest in the field of Women's Studies. With different topics, course may be repeated to a maximum of 6 credits.

420 - Field Experience—3-6 S.H.

Quarter Course: 473.

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.

Quarter Course: 448.

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 348, WS 420 and Women's Studies Minor status OR instructor's permission.

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Undergraduate Admission Application

Winona State University

Admissions Office
Somsen Hall, Room 106
Winona, Minnesota 55987-5838
507 • 457 • 5100 Telephone
800 • DIAL • WSU U.S. & Canada

WINONA STATE UNIVERSITY, APPLICATION

Type or print in Ink
Term and year of beginning enrollment _____ Social Security Number _____ - _____ - _____

Full Legal Name
Last _____ First _____ Middle _____ Previous _____

Permanent Address
Street _____ City _____ State _____ Zip _____ County _____

Telephone Number (____) _____ Date of Birth _____
Month _____ Day _____ Year _____

How long have you lived there?
(If less than 1 year, please explain.)
_____ years _____

Present Mailing Address (If different from above)
Street _____ City _____ State _____ Zip _____ County _____

Current Telephone Number (____) _____ E-mail Address _____
(If different from above)

Check One
 Citizen of U.S.A.
 Permanent Resident Alien Alien Registration Number _____ Home Country _____
 International Student Home Country _____ Native Language _____
Veteran No Yes (If yes, send DD214) Dates of Active Duty From _____ MO./YR. to _____ MO./YR.

Intended major (In order of preference, if unsure, write "Undecided")
1. _____ 2. _____ 3. _____

Have you previously applied? No Yes For what term? _____ Did you enroll in classes? No Yes Dates of Attendance _____

Have you attended any other college or vocational school?
 No Yes _____
Dates of Attendance _____

Are you related to a WSU Graduate?
 No Yes Name _____ Relationship _____

STUDENTS MUST SEND AN OFFICIAL TRANSCRIPT FROM HIGH SCHOOL AND ANY OF ALL POST-SECONDARY SCHOOLS ATTENDED. THIS INCLUDES CLASSES TAKEN IN THE HIGH SCHOOL WHERE COLLEGE CREDIT IS GIVEN. FAILURE TO LIST ALL INSTITUTIONS ATTENDED IS CONSIDERED FRAUD AND IS SUFFICIENT GROUNDS FOR CANCELING ADMISSION.

Educational Record (Names of high schools, colleges, and technical schools attended. If more than three, list on separate page)
School _____ City _____ State _____ Degree Granted _____ Date Attended _____

If you did not graduate from high school, have you earned a GED certificate? No Yes. You must submit a copy of your GED score report.

WSU is an affirmative action - equal opportunity educational institution.

Sex: Female Male
Disabled: No Yes. If yes, please indicate handicap and special assistance needed. _____
Ethnic Background (Check one): American Indian Asian Black Caucasian Hispanic

I certify that the information I have provided on this application and on all other admission materials is complete, accurate and true to the best of my knowledge.

Signature _____ X _____ Date _____
Applicant Signature

Name of parent or guardian _____

Relationship _____

Address

Street

City

State

Occupation

Father

Mother

Activities/ Organizations

Number of Years

Awards/Offices Held/Achievements

School and community organizations in which you have been active

Activities and organizations in which you wish to participate at Winona State University

Employment and service record

(List most recent activities first, include military or government service, travel, or special training. Account for all periods of time since high school graduation not indicated on front.)

Date

Employer or Agency

Address

Type of work

Please list senior courses

Semester I

Semester II

Course Title

Credit

Course Title

Credit

Preparation Requirements

Minnesota State University System

This page must be completed prior to submitting the application. Failure to complete this page will delay a decision on admission. Please refer to the guidelines on page 4 when completing this page. Courses indicated should include all courses which will be completed in grades 9-12.

Name _____ Social Security # _____
Last First Middle

Please list coursework which will be completed by graduation.

<p>English</p> <p>Total (English) _____ Years</p> <p>Mathematics</p> <p>Algebra I _____</p> <p>Geometry _____</p> <p>Algebra II _____</p> <p>Trigonometry _____</p> <p>Pre-Calculus _____</p> <p>Other _____</p> <p>Total (Math) _____ Years</p> <p>Science</p> <p>Biology with lab _____</p> <p>Physics with lab _____</p> <p>Chemistry with lab _____</p> <p>Other with lab _____</p> <p>Total (Science) _____ Years</p>	<p>Social Studies</p> <p>U.S. History _____</p> <p>Geography _____</p> <p>Other _____</p> <p>Other _____</p> <p>Other _____</p> <p>Total (social studies) _____ Years</p> <p>World Language</p> <p>Total (World Lang) _____ Years</p> <p>Electives</p> <p>World Cultures _____</p> <p>Computer Science _____</p> <p>Arts: Music _____</p> <p>Theatre/Drama _____</p> <p>Visual Arts _____</p> <p>Dance _____</p> <p>Total (Elective) _____ Years</p>
---	---

To be completed by High School Official for Freshman Applicant

Applicant ranks _____ (from top) in class of _____ students (end of junior year acceptable).

ACT

English _____ Mathematics _____ Reading _____ Sci. Reas. _____ Comp. _____

Use./Mech. _____ Rhet. _____ Elem./Alg. _____ Alg./Geom. _____ Geom./Trig. _____ Soc. Sci. _____ Arts/Lit. _____

SAT (Standard Score)

Verbal _____ Math _____

Applicant meets does not meet the preparation standards requirement for the state of _____

MN WI IL IA

Signature of certifying official X _____ () _____

Title Phone Number Date

Office Use Only		NEF for _____	
Honors _____	Regular _____	Adv.Stndg _____	Visit _____
Other _____	Denial _____		
RM _____	TS _____	NM _____	NM(recip) _____
Def _____	Date _____		
Complete _____	Fhst _____	Adm test _____	Other _____
Date _____	Initialed _____		

WINONA STATE UNIVERSITY, APPLICATION

College Preparation Standards: Guidelines for completing this form

Preparation Standard Requirements: This page describes Minnesota State University System (MSUS) preparation requirements. This form will help you determine which of your high school courses count for college preparation. **The following are only examples to help you. If you aren't sure if a course meets the requirements, ask your counselor.** Complete the form as accurately as you can and get it signed before sending in your application.

English: four years. English courses help you learn to read, write, and speak in English. Appropriate courses emphasize English usage, writing, style, theory analysis, understanding, evaluation, research, and public speaking. Courses that focus only on technical applications (for example, graphics and layout or speed reading) do not generally count. Examples of appropriate courses include modern fiction, world literature, American literature, composition, college writing, public speaking, and speech.

Mathematics: three years. Preparation for college requires two years of algebra (at or above the level of beginning algebra or algebra 1) and one year of geometry. Appropriate math courses help you learn to solve problems, use reasoning skills, and understand statistics and computational processes.

Science: three years. Science courses that meet this requirement should help you learn how to use scientific facts, analyze problems, and develop a scientific vocabulary. They should focus on theory, knowledge, principles, and methods and their application. At least one course must be in a biological science and one in chemistry or physics. All courses should include laboratory experiences. Examples of appropriate courses are anatomy and physiology, biology, botany, zoology, astronomy, earth science, chemistry, physics, physical science and geology.

Social Studies: three years. Social studies courses teach you about the nations and cultures of the world and provide skills to help you participate in a democracy. Appropriate courses will

focus on the knowledge, theories and methods of the social sciences; teach research writing skills; and foster a tolerance for conflicting viewpoints. At least one course in US history is required and one course or its equivalent in geography is highly recommended (if a high school does not offer such a course, a student is still eligible for admission provided all other preparation requirements have been satisfied). Examples of appropriate courses are US history, world history, civics, political science, government, economics, geography, psychology, and sociology.

World Language: two years. Appropriate courses focus on listening, speaking, reading, and writing skills; provide conversational experiences; and foster an understanding and knowledge of the culture. Any language, including American Sign Language (ASL), is acceptable. "Sampler" or language review courses do not meet this requirement.

Specific elective: one year. To be prepared for college and participation in our global society, you need to understand and appreciate diverse cultures and be able to express yourself in diverse ways. Appropriate electives may come from the following:

- **World Cultures.** These are non-language courses which teach about other cultures, provide a global perspective, and foster an understanding of other cultures. Examples of appropriate courses are area studies (such as Asian studies), Russia/China, international relations, and ethnic studies (such as African-American studies).
- **Computer Science.** Courses should focus on computer applications, theory, and or programming. Keyboarding and word processing do not meet this elective requirements.
- **The Arts.** Appropriate art courses focus on creating or performing; teach about the history of an art form and its place in cultures; and foster aesthetic appreciation. Ideally, these courses will include both creative expression and history/criticism. Appropriate courses include music (vocal, instrumental, theory, composition), theater and drama (performance, production), dance (performance, choreography), visual arts (photography, painting, drawing, sculpture), and survey courses (art history, music history, history of the theater).

Before a decision can be made on your application for undergraduate admission to Winona State University the following must be sent to:

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

Internet Address: <http://www.winona.msus.edu>
E-Mail Address: admissions@vax2.winona.msus.edu

- A completed four page Application for Undergraduate Admissions. **Failure to complete page 3 will delay the application process.**
- \$20 non-refundable application fee. Make check payable to Winona State University.
- An official High School transcript showing rank and admission test scores (ACT or SAT). (While an admission decision may be made on class rank alone, an ACT score must be on record for enrollment and registration purposes.)
- Proof of immunization against measles, mumps, and rubella, (given on or after 12 months of age and diphtheria, & tetanus (given within the past 10 years) must be sent to WSU Student Health Services.**

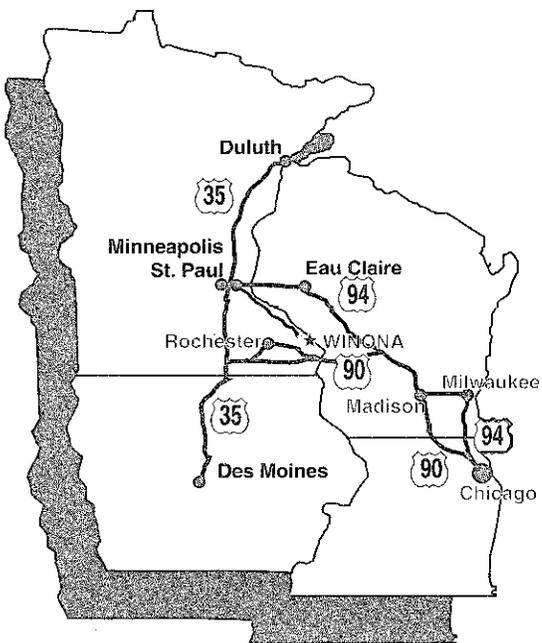
WINONA

STATE UNIVERSITY

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