

9-1966

The Bulletin of Moorhead State College, Catalogue of Graduate Studies for 1966-67 (1966)

Moorhead State College

Follow this and additional works at: https://red.mnstate.edu/graduate_bulletins



Part of the [Higher Education Commons](#), and the [Teacher Education and Professional Development Commons](#)

Researchers wishing to request an accessible version of this PDF may [complete this form](#).

Recommended Citation

Moorhead State College, "The Bulletin of Moorhead State College, Catalogue of Graduate Studies for 1966-67 (1966)" (1966). *Graduate Bulletins (Catalogs)*. 4.
https://red.mnstate.edu/graduate_bulletins/4

This Book is brought to you for free and open access by the Course Catalogs at RED: a Repository of Digital Collections. It has been accepted for inclusion in Graduate Bulletins (Catalogs) by an authorized administrator of RED: a Repository of Digital Collections. For more information, please contact RED@mnstate.edu.

BULLETIN OF
MOORHEAD
STATE COLLEGE

Graduate Studies



Announcements For 1966 - 1967

The Bulletin Of
Moorhead State College

Moorhead, Minnesota

**Catalogue Of Graduate Studies
For 1966-67**



For further information please write to the
Office of Graduate Studies, Moorhead State
College, Moorhead, Minnesota 56560.

SEPTEMBER, 1966

THE BULLETIN of Moorhead State College,
Moorhead, Minnesota. Published quarterly.
Second class postage paid at Moorhead, Min-
nesota 56560.

Academic Calendar for 1966-67

Moorhead State College

FALL QUARTER, 1966

Fri., Sept. 9	New Faculty Orientation
Mon., Sept. 12	Faculty Meeting
Mon.-Fri., Sept. 12-16	Welcome Week
Thurs., Fri., Mon., Sept. 15,16,19	Registration
Tues., Sept. 20	Classes Begin
Thur., Oct. 27	Midterm
Wed.-Fri., Nov. 23-25	Thanksgiving Recess
Fri., Dec. 9	Final Examinations
Mon.-Thurs., Dec. 12-15	Final Examinations
Thurs., Dec. 15	Quarter Ends at 5 p.m.
Fri., Dec. 16	Grades Due in Registrar's Office at 9:30 a.m.

WINTER QUARTER, 1967

Mon., Jan. 2	Registration
Tues., Jan. 3	Classes Begin
Wed., Feb. 8	Midterm
Sat., Mar. 11	Final Examinations
Mon.-Thurs., Mar. 13-16	Final Examinations
Thurs., Mar. 16	Quarter Ends at 5 p.m.
Fri., Mar. 17	Grades Dues in Registrar's Office at 9:30 a.m.

SPRING QUARTER, 1967

Mon., March 27	Registration
Tues., March 28	Classes Begin
Fri., April 28	Midterm
Tues., May 30	Holiday—Memorial Day
Sat., June 3	Final Examinations
Mon.-Thurs., June 5-8	Final Examinations
Fri., June 9	Commencement
Fri., June 9	Grades Due in Registrar's Office at 9:30 a.m.

FIRST SUMMER SESSION, 1967

Wed., June 14	Registration
Thurs., June 15	Classes Begin
Tue., July 4	Holiday—Independence Day
Wed., July 19	First Summer Session Closes 5 p.m.

SECOND SUMMER SESSION, 1967

Thurs., July 20	Registration
Fri., July 21	Classes Begin
Wed., Aug. 23	Summer Commencement
Wed., Aug. 23	Second Summer Session Closes 5 p.m.

Contents

	Page
Graduate Faculty	3
Programs Offered	8
General Information	9
Assistantships and Scholarships	9
College Services	10
Summer School and Evening Classes	11
Tuition and Fees	12
General Regulations for Graduate Study	
Admission to Graduate Study	13
Graduate Credits	14
Requirements for Master's Degree	
Admission to Candidacy	16
Residence Requirements	16
Examination Committee	16
Written Comprehensive Examination	17
Thesis or Equivalent Requirement	17
Oral Examination	17
Sequence of Procedures for the Master's Degree	18
Master's Degree Programs	19
Master of Arts Degree in English	19
Master of Arts Degree in History	19
Master of Music Degree	20
Master of Science Degree in Biology	21
Master of Science Degree in Chemistry	21
Master of Science in Education	22
Elementary Education	23
Elementary Administration and Supervision	24
Counseling and Guidance	24
Secondary Education	26
Other Post-Baccalaureate Programs	27
Fifth Year Program	27
Certification in Special Fields	28
Instructional Communication (Audio-Visual Education)	29
Remedial Reading	29
Special Education	31
Speech Correction	32
Post-Baccalaureate Special Student Status	32
Course Offerings	33

Graduate Faculty

- John J. Neumaier, 1958 President
 B.A., Ph.D., University of Minnesota
- Roland Dille, 1963 Acting Academic Dean
 B.A., Ph.D., University of Minnesota
- Robert A. Hanson, 1959 Dean of Graduate Studies
 B.S., M.S., Ph.D., University of Minnesota
- Vincent C. DiPasquale, 1963 Director of Fifth Year Program
 B.A., University of Michigan
 M.A., University of Dayton

Department of Art

- Philip Szeitz, 1966 Chairman and Associate Professor
 B.F.A., Layton School of Art, Milwaukee
 M.S.F.A., M.F.A., University of Wisconsin
- Nels N. Johnson, 1939 Professor
 B.A., M.A., State University of Iowa
 Ed.D., Pennsylvania State University
- Lyle E. Laske, 1965 Assistant Professor
 B.S., Wisconsin State University
 M.F.A., M.S., University of Wisconsin
- Marcel C. Stratton, 1955 Assistant Professor
 B.F.A., University of Nebraska
 M.A., University of Chicago
- John Youngquist, 1961 Assistant Professor
 B.A., University of Minnesota
 M.F.A., State University of Iowa

Department of Biology

- Frank M. Noice, 1959 Chairman and Professor
 B.S., M.S., North Dakota State University
 Ph.D., University of London
- Monroe Bartel, 1963 Associate Professor
 B.A. Tabor College
 M.S., Ph.D., Kansas State University
- Thomas Collins, 1962 Assistant Professor
 B.S., Southern Illinois University
- Yvonne Condell, 1965 Assistant Professor
 B.S., Florida A.M. College
 M.A., Ph.D., University of Connecticut
- Oscar W. Johnson, 1965 Associate Professor
 B.S., Michigan State University
 M.S., Ph.D., Washington State University
- Genevieve N. King, 1947 Professor
 B.A., M.S., West Virginia University
 Ph.D., State University of Iowa
- Mary Shimabukuro, 1965 Assistant Professor
 B.S., University of Wisconsin
 M.S., Ph.D., University of Minnesota
- Kenneth Skjegstad, 1966 Associate Professor
 B.S., Moorhead State College
 Ph.D., University of California, Los Angeles
- Robert Tolbert, 1963 Professor
 B.S., B.A., Moorhead State College
 Ph.D., Rutgers University

Department of Business

- Paul Heaton, 1943 Chairman and Professor
 B.A., M.A., University of Minnesota
 Ph.D., University of Chicago
- Howard P. Lysne, 1957 Professor of Accounting
 B.S., Minn^o State Teachers College
 M.S., Montana State University
 Ed.D., University of North Dakota

Department of Chemistry

- Sol Shulman, 1965 Chairman and Associate Professor
 B.S., University of Washington
 M.S., University of Wisconsin
 Ph.D., North Dakota State University
- Dewey O. Brummond, 1966 Professor
 B.S., North Dakota State University
 M.S., Ph.D., University of Wisconsin
- Edward D. Hoganson, 1965 Assistant Professor
 B.S., Gustavus Adolphus College
 M.S., Ph.D., Iowa State University
- Dennis Krzyzaniak, 1962 Associate Professor
 B.S., M.S., North Dakota State University
- Dennis R. Mathiason, 1966 Assistant Professor
 B.S., Mankato State College
 Ph.D., University of South Dakota
- B. Spencer Meeks, Jr., 1962 Professor
 B.S., University of South Carolina
 Ph.D., Cornell University
- Janet M. Paulsen, 1966 Assistant Professor
 B.S., Moorhead State College
 M.S., Ph.D., Virginia Polytechnic Institute
- Fathi M. Salama, 1966 Associate Professor
 B.S., Cairo University, Egypt
 M.S., Ph.D., A & M College of Texas
- William B. Treumann, 1960 Professor
 B.S., University of North Dakota
 M.S., Ph.D., University of Illinois

Department of Education

- Glaydon D. Robbins, 1949 Dean of Education, Chairman
 B.S., M.A., Ph.D., and Professor
 University of Minnesota
- Herbert J. Abraham, 1964 Professor
 B.A., M.A., Oxford University, England
 Ph.D., Ohio State University
- Werner E. Brand, 1943 Professor of Education
 B.A., Concordia College
 M.S., University of North Dakota
 Ed.D., Colorado State College
- Alice Corneliussen, 1931 Assistant Professor
 B.S., Moorhead State College
 M.A., Teachers College, Columbia University
- Frances H. Dillon, 1949 Professor
 B.A., College of Wooster
 M.S., University of Wisconsin
 Ph.D., University of Chicago
- Vincent C. DiPasquale, 1963 Assistant Professor
 B.A., University of Michigan
 M.A., University of Dayton

- Allen G. Erickson, 1946 Professor
 B.Ed., Moorhead State College
 M.A., University of Minnesota
 Ed.D., University of Oregon
- Robert A. Hanson, 1959 Professor
 B.S., M.S., Ph.D., University of Minnesota
- John M. Jenkins, 1945 Professor
 B.S., North Dakota State University
 M.A., State University of Iowa
 Ed.D., University of North Dakota
- Jane Johnston, 1945 Professor
 B.A., M.A., Ph.D., University of Minnesota
- Abraham Kaufman, 1965 Associate Professor
 B.A., University of Chicago
 M.A., Roosevelt University
 Ed.D., Harvard University
- Richard Y. Reed, 1964 Director of Counseling Services and
 Professor of Education
 and Psychology
 B.S., Drury College
 M.A., Washington University
 Ph.D., University of Chicago
- Martin H. Tonn, 1957 Director and Associate Professor of
 Special Education
 B.A., M.A., Ph.D.,
 State University of Iowa

Department of English

- Clarence A. Glasrud, 1947 Chairman and Professor
 B.S., Moorhead State College
 M.A., Ph.D., Harvard University
- Rufus T. Bellamy, 1964 Assistant Professor
 B.S., M.A., Yale University
- Roland Dille, 1963 Professor
 B.A., Ph.D., University of Minnesota
- Verle Dennis Flood, 1962 Professor
 B.A., M.A., Ph.D., State University of Iowa
- Allan Hanna, 1960 Assistant Professor
 B.A., M.A., University of Michigan
- Byron D. Murray, 1929 Professor
 A.B., University of Missouri
 B.S. in Ed., Northwest Missouri State College
 Ph.D., State University of Iowa
- Mary Anne Pryor, 1965 Associate Professor
 B.A., Grinnell College
 M.N., Yale University School of Nursing
 M.A., University of Nebraska
 Ph.D., University of Nebraska

Department of Health, Physical Education and Recreation

- Donald N. Anderson, 1941 Chairman & Assistant Professor
 B.S., Moorhead State College
 M.Ed., University of Minnesota
- Laurence R. MacLeod, 1954 Assistant Professor
 B.S., Mayville State Teachers College
 A.M., Colorado State College of Education
- Robert MacLeod, 1965 Associate Professor
 B.S., M.A., University of Minnesota
 Ph.D., University of Minnesota

- T. E. Smith, 1949 Professor
 B.S., Moorhead State College
 M.Ed., University of Minnesota
 Ed.D., University of North Dakota

Department of History

- Neil B. Thompson, 1952 Chairman and Professor
 B.S., M.S., Kansas State University
 Ph.D., University of Minnesota
- F. Benjamin Carr, 1966 Assistant Professor
 B.A., Cornell University
 B.D., Union Theological Seminary
 M.S.T., Andover Newton Theological School
 Ph.D., University of London
- Victor J. Peters, 1961 Professor
 B.A., M.A., University of Manitoba
 D. Phil., University of Goettingen
- I. Kenneth Smemo, 1961 Assistant Professor
 B.S., Wisconsin State College
 M.A., University of Minnesota
- J. W. Smurr, 1961 Professor
 B.A., M.A., Montana State University
 Ph.D., Indiana University

Department of Industrial Arts

- Marlowe H. Wegner, 1947 Chairman and Professor
 B.S., Moorhead State College
 M.A., University of Minnesota
 Ed.D., University of North Dakota
- Albert G. Mudgett, 1957 Associate Professor of Engineering Graphics
 B.S., M.A., Ph.D., University of Minnesota
- Otto E. Ursin, 1946 Professor
 B.S., Bemidji State College
 M.S., University of Minnesota
 Ed.D., Bradley University
- Leland W. White, 1966 Associate Professor
 B.S., University of North Dakota, Ellendale
 M.E., Colorado State University
 D.Ed., Texas A&M University

Department of Mass Communications

- Peter A. Dart, 1964 Chairman, Associate Professor
 B.A., M.A., Abilene Christian College
 Ph.D., University of Iowa

Department of Mathematics

- Warren J. Thomsen, 1965 Chairman and Professor
 B.A., Iowa State Teachers College
 M.S., Ph.D., State University of Iowa
- Marion V. Smith, 1945 Assistant Professor
 B.A., Macalester College
 M.A., University of Minnesota

Department of Music

- Earnest N. Harris, 1962 Chairman and Associate Professor
 B.A., Concordia College
 M.A., Hamline University
- Richard S. Fischer, 1964 Associate Professor
 B.M., M.M., Eastman School of Music, Univ. of Rochester
 D.M.A., University of Arizona
- H. D. Harmon, 1948 Professor
 B.F.A., University of Nebraska
 M.M., University of Michigan
 Ph.D., State University of Iowa
- Albert Noice, 1965 Assistant Professor
 B.M., M.M., MacPhail College of Music
 Ed.D., Colorado State College
- Irwin Sonnenfeld, 1965 Associate Professor
 M.M., Florida State University, Tallahassee
 Ph.D., University of Wisconsin
- Maude H. Wenck, 1929 Professor
 B.M.E., M.M., Northwestern University
 Ed.D., Teachers College, Columbia University

Department of Physics

- William R. Alling, 1965 Chairman and Associate Professor
 B.S., LeMoyne College
 Ph.D., University of Notre Dame
- Emil Kochis, 1959 Assistant Professor
 B.S., St. Cloud State College
 M.A., Ohio State University
- Hsin-Yang Yeh, 1966 Associate Professor
 B.S., National Taiwan University
 M.S., Kyushu University, Japan
 Ph.D., University of North Carolina

Department of Political Science

- Frank Kendrick, 1963 Chairman and Associate Professor
 B.A., Grinnell College
 M.A., Ph.D., University of Chicago
- Edward Estes, 1965 Associate Professor
 B.S., M.A., Emory University
 Ph.D., University of Florida
- Alfredo B. Villanueva, 1965 Associate Professor
 B.A., University of Manila
 M.P.A., University of the Philippines
 Ph.D., University of Minnesota

Department of Psychology

- James F. Condell, 1965 Chairman and Associate Professor
 B.A., Kentucky State College
 M.A., Teachers College, Columbia University, New York
 Ed.D., University of Nebraska
- David D. Harshbarger, 1965 Assistant Professor
 B.S., M.A., West Virginia University
- Richard Y. Reed, 1964 Director of Counseling Services and
 B.S., Drury College Professor of Education
 M.A., Washington University and Psychology
 Ph.D., University of Chicago
- Abbott Schulman, 1966 Assistant Professor
 B.A., Duke University
 M.A., East Carolina State College
 Ph.D., Florida State University

Department of Sociology and Anthropology

- Max N. Burchard, 1964 Chairman and Associate Professor
 B.A., San Jose State College
 M.A., Ph.D., University of Nebraska
- Yung-teh Chow, 1962 Professor
 A.B., National Tsing Hua University
 A.M., Ph.D., University of Chicago

Department of Speech

- Delmar J. Hansen, 1958 Chairman and Professor
 B.S., University of Omaha
 M.S., Florida State University
 Ph.D., State University of Iowa

PROGRAMS OFFERED

Master's Degree Programs

- Master of Arts
 - English
 - History
- Master of Music
- Master of Science
 - Biology
 - Chemistry
- Master of Science in Education
 - Elementary Education
 - Elementary Administration and Supervision
 - Counseling and Guidance
 - Secondary Education
 - Art
 - Biology
 - Business Education
 - Chemistry
 - English
 - Health, Physical Education & Recreation
 - Industrial Arts
 - Mathematics
 - Music
 - Physics
 - Social Studies
 - Speech

Post-Baccalaureate Programs Other Than Master's Degree Program

- Fifth Year Program
- Programs for Minnesota Certification in Special
Teaching Fields
 - Audio-Visual
 - Remedial Reading
 - Special Education
- Post-Baccalaureate Special Students

General Information

Moorhead State College has become a cultural and intellectual center of Western Minnesota. Moorhead and adjacent Fargo, North Dakota, have a population of about 80,000, who, through many organizations and projects, support and supplement the programs in education and the arts offered by Moorhead State College and its neighboring institutions, Concordia College and North Dakota State University.

While Moorhead State College is primarily a four-year liberal arts college, it has added, in the past several years, as faculties have developed and research facilities have been made available, a number of graduate programs. These programs, developed and taught by scholars educated at the major universities of this country and Europe, are designed to meet professional demands for greater preparation and to prepare students for more advanced graduate work. In addition, non-graduate post-baccalaureate programs have been developed, most recently the fifth-year program for in-service teachers.

The programs offered at Moorhead State College are accredited by the North Central Association of Colleges and Secondary Schools. The College is also accredited by the National Council for Accreditation of Teacher Education.

Moorhead State College is a member of the American Council of Education, of the North Central Association of Colleges and Secondary Schools, and of the American Association of Colleges for Teacher Education.

Assistantships and Scholarships

Graduate assistantships are available to highly qualified students in all departments in which graduate programs are offered. Since nominations are made by departments, applicants should submit requests for assistantships to the appropriate department chairman, or to the Dean of Graduate Studies. Stipends vary from \$900.00 to \$1,800 for the academic year.

Residence Hall Assistants help supervise on-campus housing units in return for room and board in the dormitories where they assist. Resident Hall Counseling Assistantships, which also provide room and board, are available to students in the Guidance and Counseling Program. Applications for these positions should be made to the Dean of Students.

Graduate students in Special Education are eligible for Summer Traineeships, provided by the Minnesota Department of Education. The stipend is \$75.00 per week plus tuition and fees. Application should be made to the Director of Special Education.

A limited number of graduate scholarships are available to highly qualified students. These grants average about \$500.00 per year. Information is available from the Graduate Studies Office.

Part-time employment services, National Defense Student Loans, and other loan services are administered by the Financial Aids Office.

Moorhead State College participates in the Work-Study Program which is a part of the Economic Opportunity Act of 1964. Under this program, qualified students are offered part-time employment on the campus or in the community. The college also offers some students an opportunity to work full-time during the summer under this program. Further information and application forms may be obtained by writing to the Financial Aids Office. The Financial Aids Office also provides information and assistance for veterans covered by the 1966 "G.I." Bill. (P.L. 89-358).

College Services

The Moorhead State College Placement Bureau assists students in locating appropriate positions in education, business, industry, and government service. It offers a convenient and efficient means of providing employers with the credentials of applicants. A registration fee of \$6.00 entitles an individual to recommendation services for one year. A graduate may reactivate his file at any time by paying the \$6.00 fee. Every graduate is advised to have a permanent confidential file on record in the Placement Bureau. Current students who expect to graduate in either June or August are requested to activate their files by the preceding December. The Placement Bureau holds membership in the Minnesota Institutional Teacher Placement Association, and the Association for School, College, and University Staffing.

Accommodations in five residence halls are available to graduate students, who should apply to the Dean of Students at least two months in advance of matriculation. Cost of room and board is \$230.00 per quarter for a shared double room. The Office of Student Personnel Services also provides assistance in arranging housing in the Fargo-Moorhead area. The college food service operates a cafeteria in Kise Commons, where meals are served under the provisions of the room and board contracts. Off-campus students, faculty members, college visitors, and guests are invited to use the dining facilities at a moderate cost. Off-campus students may contract for meals on a quarterly basis.

The College Health Service, located at 706 South 16th Street provides the full-time services of a registered nurse for all students, and arranges for the services of a physician when

necessary. Medical consultation service is available to students during established office hours. Temporary infirmary care for full-time students is provided without cost, but students who do not live in one of the college residence halls are required to pay board during their stay in the infirmary. Upon a physician's orders, students who are seriously ill are transferred to a local hospital.

A group health and accident insurance program is available to students. The College urges all students to have some form of insurance protection against costs of accident and illness.

The Office of Student Personnel Services provides professional counseling without charge to students with academic, personal, vocational and social problems. Tests of aptitude, interest and personality are administered and interpreted through this office. Students interested in such assistance should contact the Director of Counseling Services.

Summer School and Evening Classes

The academic year at Moorhead State College runs from September to June and is divided into three quarters. In addition, two five-week sessions are offered each summer. By attending both sessions, a student may complete a full quarter of course work. Special institutes and workshops, carrying appropriate credit, are also offered during the summer.

Besides the daytime schedule of classes, Moorhead State College offers evening classes on the campus during the academic year. They are part of the regular campus program, and are open to full-time as well as part-time students. Most of the evening classes meet once a week, with sessions lasting from two to four hours depending on the number of quarter hours of credit offered.

Evening classes are also offered at off-campus centers in communities within a radius of approximately one hundred miles of Moorhead. All of these meet only once a week. Because of the limited opportunity of students in off-campus courses to confer with their instructors and because of the distance of off-campus centers from the college library and other facilities, off-campus courses can be used to satisfy only part of the course requirements of either undergraduate or graduate programs. Course requirements for most post-baccalaureate programs, including graduate study, can be met by courses offered in summer school and on-campus evening classes. Information is available from the Director of Field Services.

Tuition and Fees

Application Fee

All students applying for admission to Moorhead State College for the first time must submit with their application a check or money order for \$10.00. This Application Fee is non-refundable.

All students enrolled for graduate credit pay the following fees which are subject to change by the Minnesota State College Board:

Tuition

Minnesota residents	per credit hour	\$ 7.00
Non-residents	per credit hour	10.00
Off-Campus courses	per credit hour	10.00

Student Activity Fee

Full-time in the academic year	per quarter	10.00
Part-time in the academic year	(6 quarter hours or less)	5.00
Full-time in each summer session		5.00
Part-time in each summer session	(4 hours or less)	2.50

Student Union Fee

Full-time in the academic year	per quarter	\$5.00
Part-time in the academic year	(6 quarter hours or less)	2.50
Full-time in each summer session		2.50
Part-time in each summer session	(4 hours or less)	1.25

(At the time Comstock Memorial Union opens, in 1967, a new fee will be announced.)

Post-baccalaureate Students enrolling for undergraduate courses pay the current undergraduate course fees. See the general catalogue (Moorhead State College Bulletin).

A deposit of \$10.00 is required of all full-time students upon initial enrollment. Deductions are made from this deposit for laboratory breakage, lost library books, and similar losses.

The student may be required to make an additional deposit sufficient to bring his balance back to \$10.00 at the beginning of each quarter. A student withdrawing from college may apply to the college Business Office for the return of money remaining in the deposit; any balance remaining at the time of graduation is returned to the student.

Students who register late are assessed a late registration fee of \$5.00 for the first day late and \$2.00 additional for each day up to ten days. A fee of \$1.00 is charged for each change of program after classes begin.

General Regulations for Graduate Study

Admission to Graduate Study

Admission to graduate study is granted to graduates of colleges and universities of approved standing who meet the standards described below. (An undergraduate student enrolled at Moorhead State College who has 12 quarter hours or fewer to complete for graduation may be permitted by the Graduate Dean to enroll in graduate courses. This permission must be obtained in advance of registration.)

An applicant will be admitted if he meets the following requirements:

1. an overall grade-point average of at least 3.0 ("B") in undergraduate work;
2. scores of at least 500 in the aptitude test of the Graduate Record Examination and in the GRE advanced test required by the major department;
3. a raw score of at least 35 in the Miller Analogies Test.

An applicant with at least a 3.0 undergraduate grade-point average will be admitted even though his test scores fail to meet the minimum standards, if letters of recommendation and an interview with the Dean of Graduate Studies and a member of the Graduate Faculty of his major department indicate a reasonable probability of success. Such an admission may be conditional.

An applicant with less than a 3.0 undergraduate grade-point average will be admitted conditionally if his test scores, letters of recommendation, and an interview indicate a reasonable probability of success.

A student admitted conditionally must earn a minimum grade-point average of 3.0 in the first 15 hours of graduate credit (of which at least six hours must be in the major field) in order to continue in graduate study.

An applicant may appeal a decision denying him admission to graduate study to the Graduate Studies Committee; its decision shall be final.

A student who does not apply for admission to graduate study or the fifth year program but who wishes to enroll in graduate courses may, if his undergraduate grade-point average or test scores show evidence of reasonable probability of success in graduate work, be admitted as a Post-Baccalaureate

Special Student by the Graduate Dean. Such a student may not complete more than 9 credit hours of graduate work without a review of his status by the Graduate Dean.

Admission to graduate study does not insure admission to any department's graduate program. A department may set more exacting standards than those described in the above regulations. Denial of admission to a department's graduate program may be appealed by the applicant to the Graduate Faculty of the department; its decision shall be final.

Admission to graduate study or to the graduate program of a department does not insure admission to candidacy for a degree.

Because the deadlines for the completion of the applicant process are August 15 (for students entering fall quarter), December 1 (for students entering winter quarter), and March 1 (for students entering spring quarter) applicants should begin the admission process at least two months before beginning course work. To complete the application process, an applicant must submit to the Graduate Studies Office (1) official transcripts of all his undergraduate and graduate credits (2 copies), (2) a completed application form, (3) his scores in the Graduate Record Examination aptitude and advanced test, and (4) his scores on the Miller Analogies Test. (College regulations require that all full-time students have on file in the College Health Service the report of a recent physical examination.)

For admission to the full-time, on-campus graduate program, the application must be completed before the deadline date. An applicant unable to take one of the examinations before the deadline date may be given provisional admission if there is reasonable evidence of his success. If a student begins his graduate work in evening classes, off-campus classes, or summer school and is unable to meet the application deadline he may be given provisional admission, with the understanding that he complete his application for admission to graduate study, to the fifth-year program, or to Special Post-Baccalaureate status within two weeks after registration. Failure to complete such application will result in the cancellation of the student's registration. The provisionally admitted student will be notified concerning his eligibility for further registration as soon as his application is processed.

Graduate Credits

Graduate students are expected to register during the regular registration period at the beginning of each quarter or summer session. For evening and off-campus courses only, students register at the first class meeting. During the academic year, the normal graduate load per quarter is 12 to 15 quarter hours, depending upon laboratory and research work. The normal load in each summer session is 6 to 8 quarter hours.

Courses whose numbers are followed by "g" are open to graduate students as well as advanced undergraduate students; a higher level of achievement is required of graduate students in these courses. Courses numbered in the 500 series are open only to graduate students. A minimum of 15 quarter hours in the 500 series is required for a master's degree.

Grades given in graduate courses include A, B, C, D, F, and S (Satisfactory). In a continuing research course a student may be given a grade of X until the course is completed. W signifies withdrawal from the course. Only those credits which were completed with a grade of A, B, or S (or C in some programs) may be applied towards a master's degree.

The mark of I (Incomplete) is given in cases where a student is unable to complete his course requirements for reasons beyond his control. Arrangements for this must be made with the instructor before the end of the quarter. An Incomplete must be made up by the end of the next quarter in which a student is registered. It is the responsibility of the student to make arrangements for removing an Incomplete.

A student's grade point average is computed from credits earned in courses in which the grades of A, B, C, D and F are given. A grade of A earns 4 grade points per credit hour; B, 3 grade points; C, 2 grade points; D, 1 grade point and F, 0 grade points. An Incomplete (I) is counted as an F until it is made up.

An entry of V (Visitor) may be made upon a student's permanent record when he has audited a course. As an auditor a student may attend all class sessions, but need not complete assignments or projects, take part in class discussion, or take examinations. A student who wishes to audit a course must register and pay tuition fees as though he were taking the course for credit. A student may change from regular (credit) to audit status with the written permission of the instructor through the tenth day of classes during the regular quarter, or the fourth day of classes in a summer session. Credit may not be earned in courses taken as a visitor or auditor except by re-enrollment for credit and completion of the course with a satisfactory grade.

Moorhead State College will allow the transfer to a master's degree program of a maximum of nine quarter hours of graduate work completed at other accredited institutions or in off-campus credit at this college. Only courses in which a grade of B or better was earned will be accepted for such transfer credit. Summer institute courses can be applied only with the approval of the appropriate department and the Dean of Graduate Studies.

Requirements For Master's Degree

Admission to Candidacy

In the quarter following completion of 15 quarter hours of graduate work, a student must apply for admission to candidacy in his degree program. Appropriate forms for application are available in the Graduate Studies Office. If the student fails to apply, credit accumulated beyond 15 hours may not be accepted toward a degree.

Admission to candidacy will be determined by the Graduate Studies Committee after evaluating the student's ability to do satisfactory graduate work as evidenced by his undergraduate and graduate academic records, his scores on required examinations, and other pertinent information. All academic deficiencies must have been removed before the student is eligible for candidacy, and he must have at least a "B" average in all graduate courses.

A student seeking a master's degree may begin his course work up to one year after admission to graduate study. Most departments allow a student seven years to complete his work; however, a few programs require completion within five years. In certain cases the Graduate Studies Committee may approve a student's petition for an extension of time.

A candidate for a master's degree must earn a minimum of 45 credits in graduate level courses (indicated by "g" or numbered in the 500's), 36 of which must be earned in on-campus courses at Moorhead State College. At least 12 credits must be earned in one quarter during the academic year or in two summer sessions of 6 credits each. These summer sessions need not be consecutive.

A candidate for a master's degree must maintain an overall grade point average of "B" in his graduate studies. The Graduate Studies Committee may refuse further registration to any student who fails to maintain at least a "B" average. A degree candidate shall be placed on probation at the conclusion of his first 30 quarter hours, should his over-all grade point average fall below "B". His probational status will be removed if at the end of 15 additional quarter hours he has achieved a "B" over-all grade point average; otherwise he will lose his graduate status.

Examination Committee

When the candidate for the master's degree has selected a thesis topic or upon notification of the approval of his candidacy (for programs not requiring a thesis) he should petition the Graduate Studies Office for the appointment of his Examination Committee. This committee will consist of at least three faculty members, including his adviser serving as chairman.

Written Comprehensive Examination

At least three weeks before a master's degree is to be awarded (two weeks in summer sessions) the candidate must demonstrate his competence in his major field in a written comprehensive examination. The student's Examination Committee is in charge of the examination, which must be satisfactorily completed before the oral examination can be held. A student who fails to pass the examination may appeal through his committee to repeat it during a subsequent quarter. A second failure will result in termination of his candidacy for a degree.

Thesis or Equivalent Requirement

A part of the program of every master's degree candidate is the demonstration of his ability to do individual, independent work of a creative or investigative kind in an area related to his major field. Such ability may be demonstrated in a thesis, in starred papers, or in other independent study or projects as required by the major department.

Standards for the preparation of a research thesis or a starred paper may be found in William G. Campbell: **Form and Style in Thesis Writing** or in Kate L. Turabian: **Manual for Writers of Term Papers, Theses and Dissertations**. Departments may modify style requirements to suit the specific need in their field. The student must work closely in regular and frequent consultation with his adviser in the selection of a thesis topic, in the development of the research project and in the writing of his thesis.

At least two weeks before the oral examination is held, the student must submit to the Graduate Studies Office three typewritten copies (the original and two legible copies) of his thesis. These must be bound at the student's expense in a form approved by the college library. One copy will be filed in the college library, one in the Graduate Studies Office, and one with the student's adviser.

A starred paper, an extended term paper written in connection with a course or combination of courses, requires standards similar to those of the thesis. The Master of Music program requires the presentation of a major recital in lieu of written research.

Oral Examination

Upon successful completion of the written comprehensive examination and the thesis or equivalent requirement, the candidate must petition the Graduate Studies Office for an oral examination. The oral examination will be conducted by the Examination Committee and the Graduate Dean principally on the material in the thesis or starred papers, but it may require the candidate to deal with material covered in any of his course work. Failure to pass the oral examination may result in termination of the student's candidacy.

Sequence of Procedures for the Master's Degree

Procedure	Under Direction of	Date
1. Application for admission to graduate study, together with official transcript of college work, and other material described under "Admission to Graduate Study"	Graduate Studies Office	Initiate at least two months prior to first course work
2. Appointment of Adviser	Graduate Studies Office in consultation with appropriate department	Prior to enrollment
3. Compliance with any departmental admission requirements	Adviser	Prior to enrollment
4. Preparation of Extended Study Plan	Adviser	Prior to enrollment
5. Registration	Adviser	See Calendar
6. Qualifying Examination	Adviser	If required, during first quarter or summer session
7. Application for Candidacy for Master's Degree	Adviser and Graduate Studies Office	After 15 hours of graduate work
8. Selection of topic for thesis or starred papers, or planning the Major Recital in the Master of Music program	Adviser	After acceptance as a candidate for the Master's Degree
9. Appointment of Examination Committee	Graduate Studies Office	After selection of thesis topic
10. Completion of language requirements, as set by department	Adviser	Before Written Comprehensive Examination
11. Written Comprehensive Examination	Examination Committee	After completion of course work or during term in which it is being completed
12. Application for Graduation	Adviser and Office of Admissions and Records	The quarter prior to the date the candidate expects to complete all requirements for the degree.
13. Submission of thesis or starred papers or certification of satisfactory Major Recital	Graduate Studies Office	At least two weeks before Oral Examination
14. Oral Examination	Dean of Graduate Studies and Student's Examination Committee	After completion of Written Comprehensive Examination and after submission of the thesis, starred papers, or evidence of satisfactory Major Recital. At least two weeks before Commencement
15. Commencement		End of Spring Quarter or end of Summer Session. All candidates are required to attend unless otherwise excused.

Master's Degree Program

The regulations covered in the preceding pages apply to all master's degree programs. Additional requirements set by the various departments for their specific programs are discussed in the following section.

Master of Arts Degree in English

An applicant for graduate study in the Department of English is required to pass a qualifying examination administered and graded by the Department.

Course Requirements

If a student's undergraduate program did not include a course in Shakespeare he is required to take such a course without graduate credit. A student must include in his graduate program courses in Milton and Chaucer and in history of the English language or linguistics if his undergraduate work did not include these courses.

A candidate's graduate program must also include the following:

- English 500—Literary Scholarship
- One 500-level course in contemporary criticism
- Three additional 500-level courses

Candidates for the Master of Arts degree in English must demonstrate reading proficiency in French, German, or Latin before taking the written and oral comprehensive examinations. The research requirements may be satisfied by writing a 6-credit thesis (Plan A) or by writing non-credit starred papers (Plan B) for three different courses.

In addition to the thesis or starred papers and the 9 credits of required courses, a student may complete his program with 30-36 graduate credits of electives in English.

Master of Arts Degree in History

Prospective candidates for the Master of Arts degree in history must have an undergraduate history major equivalent to the B.A. degree in history offered at Moorhead State College. In addition to the completion of the required and elective courses listed below, this program requires two years of college credit in a foreign language or demonstration of an equivalent reading skill in a foreign language approved by the department.

A candidate may carry no more than 12 credit hours in any quarter and no more than 6 in any summer session. All grades in the M.A. program in history must be A or B; C is considered a failing grade. If a student receives more than one C, he is automatically suspended from the program for one quarter.

A candidate must successfully write a comprehensive examination in history and pass an oral examination conducted principally on the subject of his thesis. The thesis must constitute a contribution to knowledge of history as well as a demonstration of ability to do independent research.

Course Requirements

- History 501—Development of the Discipline of History (2 credit hours)
- History 599—M.A. Thesis (12 credit hours maximum)
- Graduate electives in History (31 credit hours minimum)

Master of Music Degree

A student who desires admission to the Master of Music (in Music Performance) degree and is judged acceptable for graduate study by the Music Department will, with the help of his adviser, develop a graduate program of 45 quarter credit hours to include a minimum of 32 credits in music in the areas listed below.

In lieu of a written thesis, the candidate will present a major recital which will count for no more than 4, nor less than 2, credit hours. The remaining credits may be taken in music or in other departments.

Course Requirements

Applied Instrument (10-18 crs.)	Music History And Literature (9-21 crs.)
550 Piano	570 Introduction to Musicology3
555 Organ	571 Music in the Middle Ages 3
560 Voice	572 Music in the Renaissance 3
565 Brass	573 Music in the Baroque..... 3
566 Woodwind	574 Music in the Classic Era 3
567 Strings	575 Music in the Romantic Era 3
	576 Music in the 20th Century 3
Music Theory (9-15 crs.)	Conducting Workshop (2-8 crs.)
316(g) Composition3	343g Instrumental Conducting II 2
510 Design & Style in Music 3	347g Choral Conducting II .. 2
520 Advanced Sight Singing..3	406g Opera Workshop 4
530 16th Century Polyphony..3	Recital
569 The Techniques of Musical Interpretation...3	505 Graduate Recitals at 1 to 2 credits per recital

Recommended Graduate Electives

Graduate electives may be taken, with the approval of the student's adviser, in such departments as English, Art, Foreign Languages, Philosophy, and Psychology.

Master of Science Degree In Biology

A prospective candidate for the Master of Science degree in biology must have a bachelor's degree with a major in biology equivalent to the B.S. in Biology offered at Moorhead State College. Deficiencies may be removed by taking courses for which no graduate credit will be allowed.

Prospective candidates must make initial application to the Biology Department for graduate study at least three months prior to the date they intend to begin their graduate work.

Course Requirements

The student must complete at least 45 graduate credits in biology including courses providing a balanced program of at least 15 credits in each of the areas of botany and zoology. A thesis based on biological research, for which a maximum of 9 credits may be granted, is required.

While in residence the student is required to attend and contribute to a graduate seminar in biology for which no credit will be allowed.

It is anticipated by the faculty in biology that the time required to complete the Master of Science degree in biology will be at least two academic years and the intermediate summer. The maximum time allowed to complete the degree will be five years from the date the student initiates his approved graduate study.

Master of Science Degree In Chemistry

The Department of Chemistry offers the Master of Science degree in chemistry with a major in one of the following areas: analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry.

In addition to the institutional requirements for admission to graduate study, a prospective M.S. in chemistry candidate should have an undergraduate major in chemistry. Upon admission to the department, the student is required to take qualifying examinations covering undergraduate work in inorganic, organic, analytical and physical chemistry. The purpose of these examinations is to determine major deficiencies in these fields. Failure to perform satisfactorily in these examinations will make it necessary for the student to take undergraduate courses without graduate credit and to remove any deficiency either by getting a "B" or better in the appropriate course or courses or by satisfactorily passing the qualifying examination no later than at the end of the third quarter in residence. Under no circumstances will a student be permitted to register in advanced courses in an area of chemistry in which a deficiency exists.

Course Requirements

1. A minimum of 45 graduate credits of work approved by the Department, of which a maximum of 15 credits may be granted for research (in Chemistry 598) leading towards a thesis that must be based on original research contributing to the knowledge of chemistry.
2. A balanced study within the field of chemistry as approved by the student's adviser.
3. A minimum of 15 graduate credits of course work in his major area in chemistry. (A student may choose to minor in another area of chemistry, or in mathematics, physics, biology or a combination of the preceding.)

A student is required to pass a comprehensive written examination in the major field of study. The maximum time allowed to complete the degree is five years.

Master of Science in Education

This program is designed for persons who are qualified for certification as teachers in the state of Minnesota and requires a minimum of 45 graduate credits. If a person is admitted to any Master of Science in Education program without the necessary background for certification on the secondary or elementary level, he must complete such requirements before enrolling for the required nine hours of graduate courses in education.

General Course Requirements

	Minimum hours required
Education 500 Introduction to Research	3 credits
Education 501 Psychological Foundations	3 credits
One additional Professional Education Course	3 credits
Major field of concentration	24 credits
Related area courses	9 credits

Before taking graduate courses in Professional Education, students must have completed at least 24 quarter credits of satisfactory undergraduate courses in Professional Education as judged by the Dean of Education.

A candidate for a Master of Science in Education degree may choose to fulfill the research requirement in either of the following ways:

Plan A: The candidate writes a thesis for which he is granted 6 credit hours to be included in the 24 credit hours required in his major field.

Plan B: The candidate writes a non-credit starred paper for each of three courses in which he is enrolled. Two of these papers must be written in connection with courses in his major field and one in a related area. The Professional Education courses required of all candidates for the Master of Science in Education degree may not be chosen for these papers.

Master of Science Degrees in Education are available in four major fields: (1) Elementary Education, (2) Elementary Administration and Supervision, (3) Counseling and Guidance, and (4) Secondary Education.

Elementary Education

Candidates for a Master of Science in Education degree in elementary education must have completed a satisfactory undergraduate program in elementary education.

Course Requirements

Group I—Professional Education (Minimum 9 hours)

- Ed. 495(g) Comparative Education (3)
- *Ed. 500 Introduction to Research (3)
- *Ed. 501 Psychological Foundations of Education (3)
- Ed. 502 Statistics in Research (3)
- Ed. 504 The School and Society (3)
- Phil. 405g Philosophy of Education (3)

*Required

Group II—Elementary School Teaching Major (Minimum hours)

- M.C. 340g Instructional Communication (4)
- M.C. 445g Preparation of Instructional Materials (3)
- Ed. 411g Introduction to Guidance (3)
- Ed. 512 Study of the Individual (3)
- *Ed. 540 Studies Affecting Elementary Education (3)
- *Ed. 541 Seminar Elementary School Teaching Problems (3)
- *Ed. 542 Elementary School Curriculum (3)
- Ed. 545 Diag. and Correction of Reading Difficulties (3)
- Ed. 546 Reading Clinic: Diagnosis (2)
- Ed. 574 Appraisal Techniques (3)
- Ed. 592 Adm. and Supervision Remedial Reading (3)
- Ed. 599 Independent Study (6)
- Eng. 390 Spec. Methods Lang. Art in Elem. School (3)
- Math 390g Spec. Methods Mathematics in Elem. School (3)
- Science 390g Spec. Methods Science in Elem. School (3)
- Soc. St. 390g Spec. Methods Social Studies in Elem. School (3)

Group III—Related Areas (minimum 9 hours)

All students are required to complete a minimum of nine quarter hours in fields other than professional education and the major area.

Elementary School Administration and Supervision

Candidates in this program must have completed a satisfactory undergraduate major in Elementary Education and have three years experience in elementary schools.

Course Requirements

Group I—Professional Education (minimum 9 hours)

- Ed. 495g Comparative Education (3)
- *Ed. 500 Introduction to Research (3)
- *Ed. 501 Psychological Foundations of Education (3)
- Ed. 502 Statistics in Research (3)
- Ed. 504 The School and Society (3)
- Phil. 405g Philosophy of Education (3)

Group II—Elementary School Administration and Supervision

- Major (minimum 24 hours)
- M.C. 420g Administration of Instructional Materials (4)
- Ed. 411g Introduction to Guidance (3)
- *Ed. 430g Supervision in the Elementary School (4)
- *Ed. 492g Administration of the Elementary School (4)
- Ed. 512 Study of the Individual (3)
- Ed. 540 Studies in Elementary Education (3)
- Ed. 541 Seminar, Elementary School Teaching Problems (3)
- *Ed. 542 Elementary School Curriculum (3)
- Ed. 550 School Law (3)
- Ed. 574 Appraisal Techniques (3)
- Ed. 590 Seminar in Elementary School Administration and Supervision (3)
- Ed. 599 Independent Study (Thesis) (6)

Group II—Related Areas (minimum 9 credits)

All students are required to complete a minimum of nine graduate credits in fields other than professional education and the major area.

* Required

Guidance and Counseling

The Guidance and Counseling Program is an interdepartmental program involving the departments of Education and Psychology and the counseling staff. The Dean of Education, the Chairman of the Psychology Department, and the Director of Counseling Services form the Guidance and Counseling Admissions and Program Committee.

A prospective candidate for this program must have completed at least one year's successful teaching in an elementary or secondary school. After admission to graduate study, a

student wishing to apply for admission to the program must take the following steps in addition to the general admission procedure:

1. Arrange with the Counseling Office to take a battery of tests as prescribed by the Admissions and Program Committee, including the Minnesota Multiphasic Examination.
2. Provide the Admissions and Program Committee with at least three written recommendations concerning professional and personal qualifications including one or more from a person in a position to evaluate the required teaching experience.
3. Request the Chairman of the Admissions and Program Committee (Dean of Education) for a personal interview with the Committee at the time when all other qualifications have been met.

Course Requirements

Group I—Professional Education (9 credits required)

- Ed. 495g Comparative Education (3)
- *Ed. 500 Introduction to Research (3)
- Ed. 501 Psychological Foundations (3)
- *Ed. 502 Statistics in Research (3)
- Ed. 504 The School and Society (3)
- Phil. 405g Philosophy of Education (3)

Group II—Guidance and Counseling Major (28 credits required)

- *Ed. 411g Introduction to Guidance (3)
- Ed. 512 Study of the Individual (3)
- *Ed. 525 Occupational & Educational Information (3)
- *Ed. 526 Principles & Techniques of Counseling (3)
- Ed. 500 School Law (3)
- *Ed. 574 Appraisal Techniques (3)
- Ed. 575 Clinical Practice—Wechsler Bellevue (3)
- Ed. 576 Clinical Practice—Stanford Binet (3)
- *Ed. 579 Organization and Administration of Guidance Services (3)
- *Ed. 591 Guidance Practicum (6)
- *Psych. 566 Psychological Effects of Physical Disabilities (4)
- Special. Ed. 420g Education of the Handicapped (3)
- Spec. Ed. 421g The Gifted Child (3)

Group III—Related Area—Psychology (12 credits required)

- *Psych. 460g Abnormal Psychology (4)
- *Psych. 465g Clinical Psychology (4)
- *Psych. 476g Theories of Personality (4)

*Required

Note: Students who do not have undergraduate credit in *Psych. 217, Personality and *Psych. 220, Social Psychology will be required to take these courses without graduate credit. Credit in these courses does not count toward the 49 graduate credits required to complete this program.

Secondary Education

High school teachers who meet the qualifications for certification in Minnesota may apply for admission to programs leading to the Master of Science in Education degree in secondary education with a major in one of the following fields:

Art	Industrial Arts
Biology	Mathematics (See note below)
Business Education	Music
Chemistry	Physics
	Social Studies, with a concentration in History, Political Science, or Sociology and Anthropology.
English	Speech, with a concentration in
Health, Physical Education and Recreation	Theatre

Except for the nine credit hours in Professional Education required of all candidates for the Master of Science in Education degree, these programs are under the direction of the student's major department.

After he is admitted to graduate study and to the department, the student will, in consultation with his departmental adviser, develop an Extended Study Plan which will meet the specific standards of the department as well as the general requirements for all master's degrees.

NOTE: Candidates for the Master of Science in Education degree with a major in mathematics are expected to provide evidence of proficiency in undergraduate mathematics courses, including one year of calculus. The degree requires, in addition to satisfactory completion of a planned program of courses, a thesis (Plan A) and written comprehensive examinations in two areas selected from the following list by the candidate and his adviser: algebra, analysis, geometry, statistics, and applied mathematics. It is anticipated that a Master of Science degree in mathematics will be available in the near future.

*Required

Other Post-Baccalaureate Programs

Fifth Year Program

The Fifth Year Program in teacher education at Moorhead State College is a post-baccalaureate program leading to a statement of completion provided by transcript but not involving candidacy for a degree. In general, the program is designed to strengthen the academic and intellectual competence of the student.

The Fifth Year Program is individualized to fit the needs of the classroom teacher. It comprises a varying mixture of substantive courses taken at the undergraduate and graduate level. All courses, however, must fit into a purposeful, related pattern.

Students planning to enter the Fifth Year Program are required to confer initially with the Director of the Program.

The purposes of the Fifth Year Program at Moorhead State College are as follows:

- (1) To strengthen the in-service teacher's preparation in the field in which he is teaching (for secondary teachers, usually the academic major; for elementary teachers, the area of concentration.)
- (2) To broaden the teacher's background and eliminate deficiencies in his undergraduate preparation.
- (3) To add depth and understanding to an academic major or area of concentration.
- (4) To allow a degree of specialization in some professional field.
- (5) To enable the student to take some graduate work in his academic major or area of concentration.

The Fifth Year Program requires the completion of 45 quarter credit hours of courses open to juniors, seniors and graduate students and requires a cumulative grade point average of 2.5.

Admission to the Fifth Year Program requires a bachelor's degree in teacher education from an appropriately accredited institution and a teacher's certificate valid in the state where the applicant teaches. Applicants are required to take the Graduate Record Examination and the Miller Analogies Test.

An applicant should have completed one year of successful teaching experience; in no instance is a student allowed to complete more than one-half of the work in a Fifth Year program before he has taught one year.

A maximum of 15 quarter credit hours of course work may be accepted in transfer from other accredited colleges and universities.

A minimum of one-third of the work in secondary pro-

grams must be taken in courses open to graduate students only—i.e. 500 courses. In elementary programs at least one-third of the work must be taken at the graduate level (i.e.) in 300 or 400 "g" courses or in 500 courses). Courses in which a D is earned are not credited toward completion of the Fifth Year program.

Before he has completed more than 12 credit hours, including transfer credits, the Fifth Year student must submit to the Director of the Fifth Year Program an Extended Study Plan, approved by his adviser, which indicates the courses he plans to take to meet the requirements of the program. Advisers are selected by the Director of the Fifth Year Program after consultation with the department in which the student will be taking most of his work.

Prior to enrolling in any course for graduate credit, a Fifth Year student must secure the approval of his adviser and the instructor of the course. A student with an undergraduate grade point average of less than 2.5 is required to take at least 15 credit hours on the undergraduate level and attain a GPA of 2.5 or better before he will be allowed to take graduate courses. Exceptions to this regulation may be made if a student obtains the permission of his adviser, the Graduate Studies Office, and the instructor of the graduate course he wishes to take.

If a student falls below the required 2.5 cumulative grade point average, he may be dropped from the program. A student may request that such a decision be reviewed by an Appeals Committee consisting of the Director of the Program and three members of the Fifth Year Committee.

The normal load for Fifth Year students is 12-16 credit hours per quarter during the regular academic year and 6-8 credit hours for a summer session. All credits used in completing the Fifth Year program must have been earned within ten years of the student's enrollment in the program.

Completion of the Fifth Year Program is officially recognized by a statement on the student's transcript and permanent record.

Certification in Special Fields

Four programs leading to certification in special areas of teaching are offered at Moorhead State College: Instructional Communication (Audio-Visual Education), Remedial Reading, Special Education (Teaching of the Mentally Retarded), and Speech Correction. Students who meet the qualifications will be recommended for certification in the state of Minnesota in the appropriate field.

Frequently students combine certification work with a Master of Science in Education degree. In any case, students in these programs must meet the requirements for admission to graduate study.

A student seeking certification in any of these four areas

should consult an appropriate adviser before planning his program. Teachers who already hold a bachelor's degree and a valid teaching certificate are often able to complete certification requirements with courses offering graduate credit in all of these fields except Speech Correction.

Instructional Communication

(Audio-Visual Education Director or Coordinator)

A **Director of Audio-Visual Education** is a teacher in charge of the Audio-Visual Program in the entire school system. To qualify for a Director's certificate in the state of Minnesota a person must meet the following requirements:

1. Have a valid teaching certificate based on a four-year degree.
2. Have at least two years successful teaching experience.
3. Have credit in the following courses:
Ed. 430g Supervision in the Elementary School
Ed. 490g Foundations of Education
Ed. 492g Administration of the Elementary School
M.C. 340g Instructional Communication
M.C. 420g Administration of Instructional Materials
M.C. 445g Preparation of Instructional Materials
M.C. 230 Photography I
M.C. 150 Filmcraft

A **Coordinator of Audio-Visual Education** is a teacher in charge of the Audio-Visual program in any single building of a school system or a school system having only one attendance unit. To qualify for a Coordinator's Certificate in the state of Minnesota a person must meet the following requirements:

1. Have a valid teaching certificate
2. Have credit in the following courses:
Ed. 430g Supervision in the Elementary School
Ed. 492g Administration of the Elementary School
M.C. 340g Instructional Communication
M.C. 420g Administration of Instructional Materials

Students seeking certification as either Coordinators or Directors of Audio-Visual Education should consult the Chairman of the Department of Mass Communication.

Remedial Reading

Elementary remedial reading teachers

Certification requirements as an elementary remedial reading teacher include:

1. An elementary school teacher's certificate, based on a bachelor's degree.
2. Two years of successful elementary teaching experience.

3. The following courses:
 - a. Language Arts 342, Reading and Language Arts in the Elementary School
 - b. Ed. 545, Diagnosis and Correction of Reading Difficulties
 - c. Ed. 574, Appraisal Techniques
 - d. Language Arts 446g, Reading Clinic: Correction
 - e. Ed. 546, Reading Clinic: Diagnosis

Secondary remedial reading teachers

1. An elementary or secondary school teacher's certificate, based on a bachelor's degree.
2. Two years of successful elementary or secondary teaching experience.
3. The following courses:
 - a. Language Arts 342, Reading and Language Arts in the Elementary School
 - b. Language Arts 448g, Teaching Reading in the Secondary School
 - c. Ed. 545, Diagnosis and Correction of Reading Difficulties
 - d. Ed. 574, Appraisal Techniques.
 - e. Language Arts 446g, Reading Clinic: Correction
 - f. Ed. 546, Reading Clinic: Diagnosis

Secondary developmental reading teachers

1. An elementary or secondary (grades 7-9) school teacher's certificate based on a bachelor's degree.
2. Two years of successful elementary or secondary teaching experience.
3. The following courses:
 - a. Language Arts 342, Reading and Language Arts in the Elementary School.
 - b. Language Arts 448g, Teaching Reading in the Secondary School.
 - c. Ed. 545, Diagnosis and Correction of Reading Difficulties
 - d. Eng. 392, Adolescent Literature.

Reading consultants and supervisors

1. An elementary or secondary school teacher's certificate.
2. A master's degree.
3. Three years of teaching experience including one year as a reading teacher.
4. The following courses:
 - a. Language Arts' 342, Reading and Language Arts in the Elementary School.

- b. Language Arts 448g, Teaching Reading in the Secondary School.
- c. Education 574, Appraisal Techniques.
- d. Education 545, Diagnosis and Correction of Reading Difficulties.
- e. Education 546, Reading Clinic: Diagnosis.
- f. Language Arts 446g, Reading Clinic: Correction.
- g. Special Education 420g, Education of the Handicapped Child.
- h. Education 592, Administration and Supervision of Remedial Reading.

Not less than three courses to be chosen from the following:
Lang. Arts 390g, Special Methods in Language Arts in the Elementary School.

- Ed. 500, Introduction to Research.
- Math. 100, Introduction to Modern Mathematics.
- Psych. 217, Psychology of Personality
- Ed. 575, Clinical Practice: Wechsler Tests.
- Ed. 576, Clinical Practice: Binet Tests.
- Ed. 411g, Introduction to Guidance.
- Ed. 416g, Mental Retardation.
- Lang. Arts 340, Literature in the Elementary School.
- Eng. 392g, Adolescent Literature.

Special Education

Students who wish to qualify for certification to teach special classes for the mentally retarded child may apply for admission to the program through the Coordinator of Special Education. Regular certification requires the completion of a minor of 24 credit hours in Special Education, of which at least 15 must be earned at Moorhead State College:

Course Requirements

- Sp. Ed. 420g, Education of the Handicapped (3)
- Sp. Ed. 416g, Mental Retardation (3)
- Sp. Ed. 440g, Meth. in Teaching the Mentally Retarded (3)
- Sp. Ed. 450g, Student Teaching of Mentally Retarded (5-8)

Elective Courses (7-10 hours)

- Ed. 411g, Introduction to Guidance (3)
- Ed. 574, Appraisal Techniques (3)

- Speech 468g, Speech Correction for Classroom Teachers (3)
- L.A. 445g, Remedial Reading (3)
- L.A. 446g, Reading Clinic: Correction (2)
- Psych. 460g, Abnormal Psychology
- Sp. Ed. 417g, Orientation to Physically Handicapped (3)
- Sp. Ed. 430g, I.A. for Special Education Teachers (3)
- Sp. Ed. 435g, Seminar—Mental Retardation (3)
- Sp. Ed. 436g, Special Problems in Special Education (1-3)
- Sp. Ed. 437g, Workshop in Special Education (4)

Applicants must have graduated from an accredited four-year teacher training institution and must hold a certificate to teach in regular elementary or secondary school classes. Candidates for certification must complete 5-8 quarter credit hours of student teaching. Special Education 416 and 440 are pre-requisites for student teaching.

An elementary or secondary teacher with two years of successful teaching experience may be provisionally certified to teach special education classes by taking Special Education 420, 416, and 440. Six of these credit hours must be taken at Moorhead State College. Provisional certification is valid for two years.

Speech Correction

The program leading to certification in Speech Correction involves no graduate course. Course requirements and other information relating to this program may be found in the general catalogue (The Moorhead State College Bulletin).

Post-Baccalaureate Special Student Status

If not admitted to a Master's Degree program or the Fifth Year Program, a student admitted to graduate study is a Post-Baccalaureate Special Student. These students must meet the general requirements for admission to graduate study, and their courses must have the approval of an adviser. Post-Baccalaureate Special Students must bear in mind that some of the courses taken in that status may not be acceptable as part of graduate degree or Fifth Year programs.

Admission as a Post-Baccalaureate Special Student does not entail admission to any other status. The student's progress is checked by the Dean of Graduate Studies after he has completed 9 credit hours; if the quality of his work is not acceptable, he can be refused further registration.

Course Offerings

Art

426g. Commercial Art II. 3 hours.

Advanced problems in layout, illustration, design, or in special areas of interest. Prerequisite: Art 326.

430g. Contemporary Art. 3 hours.

Painting from the era of Jacques David through Abstractionism, Romanticism, Realism, Impressionism, Post-Impressionism, Cubism, Fauvism, Futurism, Expressionism, Non-Objective Art, Abstract-Expressionism, and "action painting." Modern sculpture. Prerequisite: Art 270 or consent of instructor.

434g. Survey of Art in the United States. 3 hours.

Brief survey of architecture, sculpture, painting, and "the minor arts" in the United States, from pre-colonial settlement to the present. The relationship of these arts to the development of American ideas, and their expression of American ways of living. Prerequisite: Art 270 or consent of instructor.

532. Studies in Art History. 3 hours.

Individual directed study in particular problems in the history of art. Selected subject treated on the basis of its iconographical and iconological background. Course may be repeated for 3 additional hours. Prerequisite: Art 335 or consent of instructor.

540. Current Practices in Art Education. 3 hours.

Development of a philosophy; basic reading; city and state courses of study.

542. Studies in Art Education. 3 hours.

Individual directed study in selected phase of Art Education agreed upon by instructor and student. Course may be repeated for 3 additional hours.

552. Studies in Painting. 3 hours.

Individual directed studies in particular problems in painting agreed upon by instructor and student. Painting may involve oil, watercolor, and other media. Course may be repeated for 3 additional hours. Prerequisite: Art 205 or consent of instructor.

554. Studies in Sculpture. 3 hours.

Individual directed studies in sculpture agreed upon by instructor and student. Sculpture may involve use of clay, plaster, wood, stone, metal, and other sculpture materials. Course may be repeated for 3 additional hours. Prerequisite: Art 319 or consent of instructor.

556. Studies in Crafts. 3 hours.

Individual directed studies in crafts agreed upon by instructor and student. Crafts may involve all materials suitable for three-dimensional forms. Course may be repeated for additional 3 hours credit. Prerequisite: Art 311 or consent of instructor.

560. Studies in Ceramics. 3 hours.

Individual directed studies in ceramics, agreed upon by instructor and student. Prerequisite: Art 217 or consent of instructor. Course may be repeated for additional 3 hours credit.

572. Studies in Art Appreciation. 3 hours.

Individual directed studies in particular problems involving visual perception and aesthetic appreciation. Treatment of art forms as to their cultural and sociological relationships to man. Prerequisite: Art 270 and Art 335.

574. Studies in Printmaking. 3 hours.

Advanced individual studies in printmaking. Specialization in various processes. Prerequisite: Art 424. Course may be repeated for additional 3 hours credit.

580. Seminar in Art. 3 hours.

Critical investigation of books and materials of value to the art teacher.

599. The Independent Study of Art. 6 hours.

Biology

301g. Vertebrate Embryology. 5 hours.

Embryogenesis, from the formation of the germ layers through development of the organ systems of vertebrate animals. Prerequisite: Biol. 113.

302g. Histology. 4 hours.

Microscopic characteristics of animal tissues, and description of histogenesis. Prerequisite: Biol. 113.

343g. Microtechnique. 3 hours.

Basic procedures in tissue preparations for histological study and preservation, including microphotography, microscopy, plastic embedding, etc. Prerequisite: Biol. 113 (Chem. 113 or 123 desirable) or consent of instructor.

350g. Microbiology. 4 hours.

Fundamental principles, based on laboratory study of bacteria and allied microorganisms. Prerequisite: Biol. 113, or Biol. 223. Prerequisite or corequisite: Chem. 113 or 123.

355g. Principles of Wildlife Management. 4 hours.

The application of ecological principles to the management

of wildlife populations. The dynamic nature of the population is stressed, and important field techniques for measuring population phenomena are discussed and demonstrated. Prerequisite: Biol. 345.

401g. Endocrinology. 4 hours.

Introductory study of biochemical influences of hormones on the whole animal, specific tissues, and biochemical phenomena. Prerequisite: Biol. 306 and Chem. 113 or 123. Chem. 233 is recommended.

410g. Helminthology. 4 hours.

Biological principles of parasitic helminths with emphasis on the platyhelminthes. Prerequisite: Biol. 113 and consent of instructor.

414g. Protozoology. 4 hours.

A study of the protozoa, including the nonparasitic forms as to their taxonomy, reproduction, physiology, growth and significance to man and animal. Prerequisite: Biol. 113.

417g. Ornithology. 4 hours.

The basic features of avian anatomy, physiology and behavior combined with field and laboratory observations of regional birds. Prerequisite: Biol. 113.

423g. Plant Anatomy. 4 hours.

A study of the structure of vascular plants, with special emphasis on developmental stages, from seedling through transition from root to stem, and from vegetative to reproductive. Prerequisite: Biol. 223.

424-425g. Plant Physiology I and II. 4 hours each.

A study of the metabolic processes, germination, growth, and reproduction of plants. Prerequisite: Biol. 223.

433g. Plant Morphology: the lower forms. 4 hours.

A study of the structure, development, life cycles, and relationships of the algae, fungi, and bryophytes. Prerequisite: Biol. 223 or consent of instructor.

434g. Plant Morphology: the vascular plants. 4 hours.

A study of the structure development, evolution, life cycles, and relationships of the vascular plants. Prerequisite: Biol. 223 or consent of the instructor.

441g. Principles of Human Genetics. 3 hours.

Lecture-discussion course on genetics as applied to man with emphasis on clinical genetics. Prerequisite: Biol. 341 or consent of instructor.

445g. Advanced Ecology. 4 hours.

Study of major plant and animal communities of western Minnesota. Prerequisite: Biol. 345.

450g. Cell Physiology I. 4 hours.

A study of plant and animal cells with an emphasis on the relationship between structure and metabolic function, including pathways for energy production in plant and animal cells. Prerequisite: Chem. 231-232 (organic)

451g. Cell Physiology II. 4 hours.

A study of intracellular metabolism including biosynthesis and degradation of macromolecules, such as polynucleotides, proteins and carbohydrates, as related to structural organelles of plant and animal cells. Prerequisite: Biol. 450.

455g. Recent Developments in the Biological Sciences. 2 hours.

A series of lectures and discussions based upon recent research designed to acquaint students with advances in modern biology. Prerequisite: 30 quarter hours of biology or consent of instructor.

461g. Virology. 4 hours.

A study of virus diseased plants. Methods of transmission isolation, identification and multiplication in plant cells. Prerequisites: Biol. 223 and Chem. 239 or Chem. 233.

501. Comparative Embryology. 4 hours.

A comparative study of gametes, cleavage and gastrulation, and organogenesis of representative vertebrates with occasional comparisons to invertebrates.

502. Comparative Histology. 4 hours.

A survey of tissue and organ microstructure in representatives from varied animal phyla. Prerequisite: Biol. 302 and graduate status.

511. Parasitic Arthropoda. 4 hours.

Study of the parasitic arthropoda and parasitic forms in other minor phyla. Prerequisite: Biol. 113 and consent of instructor.

523. Advanced Plant Anatomy. 4 hours.

A concentration on the development, growth, and differentiation of vascular plants with the major emphasis on the meristems and their derivatives. Prerequisite: Biol. 423g.

525. Advanced Plant Taxonomy. 4 hours.

Study and identification of plant groups selected by the student. Prerequisite: Biol. 325 and the consent of the instructor.

526. Experimental Plant Physiology. 4 hours.

An advanced laboratory emphasizing the application of modern techniques to the study of physiological processes. Prerequisite: Graduate standing and consent of the instructor.

545. Limnology. 4 hours.

An analysis of the dynamics of various physical, chemical, and biotic factors that interrelate in the ecology of lakes, ponds, and streams. Prerequisite: 30 quarter hours college biology and 1 year college chemistry.

555. Molecular Biology of Development. 3 hours.

A study of the genetic control of cell differentiation, enzyme regulation, RNA synthesis, macromolecules as the basis of structure, and biochemical induction. Prerequisites: Biol. 301 or Biol. 423 and organic chemistry.

580. Graduate Seminar. 1 hour.

Seminars will consist of students presenting papers based upon topics developed from graduate courses, laboratory research and/or literature research. Prerequisite: Candidate status for M.S. in Biology degree.

584. Curriculum and Methods for the Secondary School. 3 hours.

For students enrolled in the Master of Arts in teaching degree program, majoring in biology. Consisting of curriculum development and methods and materials typical to high school biology and those unique to the B.S.C.S. curriculum versions. Prerequisite: Graduate status.

599. The Independent Study in Biology.

Original investigation for the master's thesis, requiring extensive library and laboratory work. The student should register for this course, and choose a thesis topic, upon entering the graduate program, or no later than the date at which five graduate credit hours have been accumulated. Registration only after consultation with the research director.

Business Education

ACCOUNTING

330-331-332 (g). Intermediate Accounting I, II, III. 3 hours each.

330: Nature and content of Balance Sheet, Income Statement, and Retained Earnings Statement. Reviewing of the accounting process. Analysis and methods of valuation and statement presentation of the working capital accounts. 331: Analysis and methods of valuation and statement presentation of non-current accounts. 332: Analysis and methods of valuation and statement presentation of corporate capital. Preparation of statements from incomplete records, errors and their correction, financial statement analysis, and statement of application of funds. Prerequisite: Acctg. 231. Must be taken in sequence.

355 (g). Government Accounting. 4 hours.

Basic principles underlying governmental and institutional accounting. Prerequisite: Acctg. 231.

430-431 (g) Advanced Accounting I, II. 2 hours each.

Special accounting problems. 430: Partnerships and joint ventures, installment and consignment sales, receiverships, liquidations, estates, and trusts. 431: Branch accounting, and merger and consolidations of corporations. Prerequisite: Acctg. 332.

450-451 (g). Federal and State Tax I, II.

Federal and state income tax laws. 450: As applied to individuals and partnerships. 451: As applied to corporations. Other special federal and state taxes applied to individuals, partnerships, and corporations. Prerequisite: Acctg. 331. Must be taken in sequence.

470 (g). Accounting Systems. 4 hours.

Developing, organizing, and using accounting data; Analyzing and improving accounting systems; and automated data processing systems. Prerequisite: Accounting 332 and 352.

480 (g). CPA Review. 4 hours.

A review of accounting theory, accounting practice, auditing, business law and taxation to assist the CPA candidate in preparing for the Uniform CPA examination. Prerequisite: Accounting 461.

530. Managerial Accounting. 4 hours.

Accounting reports, interpretation of accounting reports, using accounting information for budgetary planning, accounting information for control of operation, accounting, and decision making.

BUSINESS MANAGEMENT

358 (g). Principles of Investments. 4 hours.

The different types of investments, and the policies and practices of the different types of investors.

360 (g). Personnel Management. 4 hours.

Human Relations in industry; mechanisms and practices of manpower management policy determination; development and use of personnel records and reports. Prerequisite: Econ. 416 or consent of instructor.

400 (g). Elements of Business Management. 4 hours.

Modern methods of control in business, from organization to sales; production theory. Prerequisite: Econ. 112.

401 (g). Case Studies in Business Management. 4 hours.

Problem solving, field trips. Prerequisite: Bus. Mgt. 400.

405 (g) Small Business Management. 4 hours.

Analysis of management problems confronting owners in the operation of a small retail, wholesale, or manufacturing enterprise. Prerequisite: Elements of Business Management.

408 (g). Business Management. 4 hours.

Industrial management is occupied primarily with the problems faced by the industrial manager and techniques he uses in solving them. Prerequisite: Elements of Business Management 400.

510. Managerial Economics. 4 hours.

Techniques in dealing with business problems.

550. Business and Public Policy. 4 hours.

Social and political implications of business decisions and the impact of society and government on the business firm.

599. Seminar in Business Management. 4 hours.

A capstone course in business management requiring the student to demonstrate analytical approaches to business problems.

MARKETING

402 (g) Traffic and Physical Distribution. 4 hours.

Interrelationship of traffic management, warehousing, material handling, and packaging oriented with a total cost approach with emphasis upon alternates or trade-offs. Prerequisite: Marketing 410, Transportation.

408 (g). Sales Management. 4 hours.

The role of the sales manager in modern marketing with emphasis on the line and staff responsibilities, organization and control of the field sales force, and the selection, supervision, compensation, and motivation of the sales force. Prerequisite: Marketing 324, Salesmanship.

430 (g). Problems in Credit and Collection. 4 hours.

This course follows the recommendations of the National Institute of Credit. Prerequisite: Mktg. 330.

Chemistry

361-362(g). Introduction to Biochemistry I, II. 3 credits each.

A brief survey of the chemistry of carbohydrates, lipids, proteins, nucleic acids, vitamins, enzymes, coenzymes and intermediary metabolism. Not open for graduate credit to chemistry majors. Prerequisite: Chem. 238 or Chem. 232.

405(g). Chemical Literature. 1 credit.

Introduction to chemical literature in journals, handbooks, abstracts, monographs, and patents, instruction in the use of these sources. Prerequisite: Senior standing or consent of instructor.

411(g). Scientific Glass Apparatus Fabrication. 2 credits.

Techniques of construction of specialized glass apparatus. Prerequisite: Instructor's approval.

427-428-429(g). Topics in Analytical Chemistry I, II, III. 1 to 3 credits each.

Selected topics in analytical chemistry such as, polarography, infrared spectrophotometry, ultra-violet spectrophotometry, nuclear magnetic resonance spectrophotometry, optical rotatory dispersion, electrometric techniques, chromatography. Prerequisite: Chem. 421 and consent of instructor.

430(g). Organic Preparations. 1 to 3 credits.

Preparation of organic compounds (selected to illustrate a variety of reaction types and particularly a variety of laboratory techniques) with emphasis on the use of original literature, and of techniques and equipment not available in Chem. 231-233. Prerequisite: Chem. 233. Credit arranged.

431(g). Organic Qualitative Analysis. 5 credits.

The identification of organic compounds and separation of mixtures, with emphasis on the relationship of structure to physical and chemical properties. Prerequisite: Chem. 233.

432(g). Organic Synthetic Reactions. 3 credits.

Consideration of synthetic reactions used in organic chemistry. Prerequisites: Chem. 233 or 239.

436(g). High Polymers. 3 credits.

Polymerization reaction mechanisms and techniques, and the structure and properties of natural and synthetic high polymers. Prerequisite: Chem. 233.

450(g). Inorganic Preparations. 1 to 3 credits.

Preparation of selected inorganic compounds to illustrate laboratory technique and theoretical principles. Prerequisite: Chem. 342.

461-462-463(g). General Biochemistry I, II, III. 3 credits each.

A survey of the chemistry of carbohydrates, lipids, proteins, nucleic acids, vitamins, enzymes, coenzymes and intermediary metabolism. Prerequisite: Chem. 233 or Chem. 239.

464-465-466(g). General Biochemistry Laboratory I, II, III. 2 credits each.

Some representative experiments in the isolation, quantitation and metabolism of naturally occurring substances. Prerequisite: Chem. 461, 462, 463 or concurrent registration.

467(g). Nutrition. 3 credits.

Essential metabolites including vitamins, amino acids, fatty acids, etc. as related to nutrition. Prerequisite: Chem. 362 or Chem. 463.

480-481(g). Seminar. 1 credit each.

Prerequisite: Senior standing and/or consent of instructor.

511. Chemical Bonding and Molecular Structure. 3 credits.

Nature of covalent and ionic bonds. Theories of Chemical Bonding. Valence Bond Theory, Crystal Field Theory, Molecular Orbital Theory. Prerequisites: Chem. 343, Chem. 452, and consent of instructor.

531-532. Organic Reaction Mechanisms and Stereochemistry I, II. 3 credits each.

Consideration of mechanisms of ionic and free radical reactions. Stereochemistry including stereospecific reactions, conformational analysis. Prerequisites: Chem. 343, and consent of instructor.

537-538-539. Topics in Organic Chemistry I, II, III. 3 credits each.

Selected topics in organic chemistry such as heterocyclics, steroids, alkaloids, photochemistry, etc. Prerequisite: consent of instructor.

541-542. Chemical Thermodynamics I, II. 3 credits each.

Fundamental laws of thermodynamics and their application to chemical problems. Prerequisite: Chemistry 343 and consent of instructor.

546. Chemical Kinetics. 3 credits.

Consideration of theories of rates and mechanisms of chemical reactions. Prerequisite: Chemistry 343 and consent of instructor.

547-548-549. Topics in Physical Chemistry I, II, III. 3 credits each.

Selected topics in physical chemistry such as, electrochemistry, colloids, phase rule, catalysis, spectroscopy, x-ray crystallography. Prerequisite: Chem. 343 and consent of instructor.

557-558-559. Topics in Inorganic Chemistry I, II, III. 3 credits each.

Selected topics in inorganic chemistry such as: Coordination chemistry, Acid-base theories, Nonaqueous solvents, Nuclear chemistry, Stereochemistry.

561. Intermediary Metabolism. 3 credits.

The major pathways of intermediary metabolism and factors which influence them. Prerequisite: Chem. 463.

562. Enzymes. 3 credits.

Isolation, purification, and study of the kinetics of enzyme action: a study of the mechanisms of enzyme action and enzyme biosynthesis and control. Prerequisite: Chem. 561.

563. Special Techniques in Biochemistry. 2 to 3 credits.

Special techniques used in biochemical research. Prerequisite: Chemistry 463.

598. Research. 1 to 5 credits per quarter.

Original investigation in any area of chemistry. Registration only after consultation with the research advisor.

599. Thesis. 1 to 6 credits.

Registration only after consultation with major professor.

Economics

415(g). Government and Business. 4 hours.

Growth of modern business organization and resultant government regulations. Prerequisite: Econ. 112.

416(g). Labor Problems. 4 hours.

Wage and employment theory, and the institutions associated with labor (unions, collective bargaining, social legislation). Prerequisite: Econ. 112.

420(g). Comparative Economic Systems. 4 hours.

A comparison of alternative solutions to the fundamental economic problem as manifested in capitalism, socialism, communism, and fascism and the modifications and combinations of these ideologies practiced in existing economic systems around the world. Prerequisite: Econ. 112.

425(g). International Economic Relations. 3 hours.

Exchange and trade, economic analysis, commercial policy. Prerequisite: Econ. 112.

Education

Courses are listed numerically under the headings
Education and Special Education

405(g). Philosophy of Education. 3 hours.

Same as Philosophy 405(g).

411(g). Introduction to Guidance. 3 hours.

The philosophy, principles, and practices of the school guidance program.

430(g). Supervision in the Elementary School. 4 hours.

For elementary school principals. Principles and practices in democratic educational leadership. Prerequisite: Consent of instructor.

456(g). Seminar in Supervision of Student Teaching. 3 hours.

Methods and procedures for effective supervision of student teachers. Prerequisite: Teaching experience and consent of instructor.

490(g). Foundations of Education. 3 hours.

The concluding course in the required sequence of education courses; historical, philosophical, social and professional foundations of American education. Prerequisite: Ed. 212 or 213, 305, 306 or 307 and Student Teaching. Each quarter.

492(g). Administration of the Elementary School. 4 hours.

Administrative responsibilities, procedures, and problems.

495(g). Comparative Education. 3 hours.

The educational systems and problems of other nations; the activities of the agencies of the United Nations in the field of education.

500. Introduction to Research. 3 hours.

Methodology of design of research studies. Preparation of effective technical reports.

501. Psychological Foundations of Education. 3 hours.

Schools and systems of psychology; principles underlying learning and instruction.

502. Statistics in Research. 3 hours.

Basic statistical theory, techniques, and application in educational research.

504. The School and Society. 3 hours.

History and development of social structures in America; relationship between social structures and the school.

505-510. Junior College-Community College Institute.

2 hours each.

For administrators, teachers, and graduate students already employed in junior college positions, or preparing for employment in junior or community colleges. Summer only.

512. Study of the Individual. 3 hours.

Case study methods, practical application, laboratory experience.

525. Occupational and Education Information. 3 hours.

Locating, evaluating, selecting, and using occupational and educational information and materials. Prerequisite: Ed. 411(g).

526. Principles and Techniques of Counseling. 3 hours.

Instruments and techniques used in counseling; directive and non-directive techniques used in counseling. Prerequisite: Ed. 411(g), consent of instructor.

540. Studies Affecting Elementary Education. 3 hours.

Survey of published research.

541. Seminar in Elementary School Teaching Problems. 3 hours.

Individual problems, problems common to the group. Admission upon approval of instructor.

542. Elementary School Curriculum. 3 hours.

History, development, evaluation and revision of the curriculum.

545. Diagnosis and Correction of Reading Difficulties. 3 hours

Advanced study of reading difficulties.

546. Reading Clinic: Diagnosis. 2 hours.

Individual case studies. Prerequisite: Ed. 545 and consent of instructor.

550. School Law. 3 hours.

Legal relationships of the schools to state and federal government; school and church; school district organization and control; authority, procedure, and liability of school officers; laws relating to school finance; legal relationships of the school to teachers and pupils.

574. Appraisal Techniques. 3 hours.

Theory and practice in group and individual intelligence tests.

575. Clinical Practice: Wechsler. 3 hours.

576. Clinical Practice: Stanford-Binet. 3 hours.

579. Organization and Administration of Guidance Services. 3 hours.

Problems and principles of organization and administration

of the school guidance program and services. Prerequisite: 12 hours in Guidance and Counseling course work or permission of instructor.

590. Seminar in Administration and Supervision in the Elementary School. 3 hours.

591. Practicum in Guidance. 6 hours.

This course has been designed to give the graduate student with a major in guidance and counseling practical experience in guidance activities. The program is worked out on an individual basis for each student. Prerequisite: Ed. 411(g), 524, consent of instructor.

592. Administration and Supervision of Remedial Reading. 3 hours.

The administration and supervision of remedial reading programs in elementary and secondary schools and in colleges. Course conducted as a seminar. Prerequisites: Six hours of remedial reading courses.

599. The Independent Study in Education. 6 hours.

Major study in chosen problem area. Open only to candidates for the master's degree. Project must be approved by the student's advisory committee.

Science 390g. Special Methods for Science in the Elementary School. 3 hours.

SPECIAL EDUCATION

416(g). Mental Retardation. 3 hours.

Incidence and description of mental retardation. Methods of diagnosis and educational organization. Prerequisites: Ed. 212 or 213, 305 or Psych. 210, or permission of instructor. Same as Psych. 416(g).

417(g). Orientation to the Physically Handicapped. 3 hours.

Finding and determining psychological and medical needs of children with physical handicaps.

420(g). Education of the Handicapped Child. 3 hours.

An introductory course in the recognition, incidence, and needs of children with physical, mental, or psychological handicaps. Prerequisites: Ed. 212 or 213, 305 or Psych. 210, or permission of instructor. Same as Psych. 420(g).

421(g). The Gifted Child. 3 hours.

Definition, identification, and current school program for the mentally superior or specially talented child.

430(g). Industrial Arts for Special Education Teachers. 3 hours.

Projects and experiences in industrial arts and crafts designed for teachers of the mentally retarded.

435(g). Seminar in Mental Retardation. 3 hours.

Special problems of brain injured; behavior problems; occupational education; review of research in mental retardation; laboratory work. Prerequisite: consent of instructor.

436(g). Problems in Special Education. 1-3 hours.

Directed reading and/or research in Special Education.

437(g). Workshop in Special Education. 4 hours.

Organization and curriculum of programs in the area of mental retardation. Includes parental counseling and occupational programs. Problems of children with cerebral dysfunction. Prerequisite: Sp. Ed. 416.

440(g). Methods in Teaching the Mentally Retarded. 3 hours.

Methods of teaching the mentally retarded child. Curriculum and materials. Prerequisite: Spec. Ed. 416(g).

450(g). Student Teaching of the Mentally Retarded. 5-8 hours;

Experience under qualified supervising teacher in classroom for mentally retarded. Prerequisite: consent of instructor.

English

Courses are listed numerically under the headings

English and Language Arts

301-302-303(g). Early English Literature. 4 hours per quarter.

301: The Anglo-Saxon period and the beginning of Middle English literature: the Venerable Beede, King Alfred, *Beowulf*, and other Anglo-Saxon documents in modern English translation, with a glance at selected passages in the original; the *Ancrene Riwe* and *Piers Plowman*; medieval romance generally and Arthurian romance: *Sir Gawain and the Green Knight* and Malory's *Le Morte d'Arthur*; specimens of lyric and alliterative verse, in Middle English. 302: Chaucer I: *Troilus and Criseyde* and the other more important poems apart from *The Canterbury Tales*. 303: Chaucer II: *The Canterbury Tales*. The first two quarters are offered occasionally, the third quarter regularly.

311-312-313(g). English Literature of the 16th Century. 4 hours per quarter.

311: More, Elyot, Lyly; the drama through Kyd; Skelton, Wyatt, and Surrey; the Elizabethan translators. 312: Prose narrative through Deloney; the University Wits; later Elizabethan poetry: Sidney and the sonneteers, Marlowe and Ovidian romance, and the pastoral. 313: Spenser.

321-322-323(g). English Literature of the 17th Century. 4 hours per quarter.

321: Prose, drama, and poetry of Jonson and his contemporaries, principally the King James translators of the Bible,

Bacon, Donne, and Herbert. 322: Later Caroline writers: Her-
rick, Marvell, Crashaw, Vaughan, and Sir Thomas Browne;
Cowley and Hobbes. 323: Milton.

**331-332-333(g). English Literature of the Restoration and
18th Century. 4 hours per quarter.**

331: Restoration comedy and heroic tragedy; Dryden and
his lesser contemporaries; Bunyan. 332: Early 18th-century
literature, especially Pope, Swift, Addison and Steele, and De-
foe. 333: Boswell and Dr. Johnson; mid-century and later poets:
Collins, Gray, and Cowper; Fielding and the rise of the novel;
Goldsmith and Sheridan.

**341-342-343(g). English Literature of the Romantic Movement.
4 hours per quarter.**

341: Crabbe, Burns, and Blake; Jane Austen; the Gothic
novel; Scott. 342: Southey, Landor, Wordsworth and Coleridge,
Hazlitt, De Quincey, and Lamb. 343: Byron, Shelley, and Keats.

**351-352-353(g). English Literature of the Victorian Period.
4 hours per quarter.**

351: Cobbett and the literature of social reform; Carlyle
and Macaulay; Tennyson and Browning; the Brontes and Dick-
ens. 352: Newman, Mill, and Huxley; Arnold, Clough, and Fitz-
Gerald; Thackeray, George Eliot, and Trollope. 353: Ruskin
and Pater; the Pre-Raphaelites, Swinburne, and Morris; Mere-
dith, Hardy, and Gissing.

**361-362-363(g). English and American Literature of the 20th
Century. 4 hours per quarter.**

361: From the Nineties to World War I: Shaw, Yeats, Frost,
Conrad, Joyce, and others. 362: The literature of World War I
and the 1920s, including Eliot, Lawrence, Fitzgerald and Hem-
ingway, and O'Neill. 363: Writers of the 1930s and World
War II, especially the Auden group, novelists of social protest,
Faulkner, Waugh, Greene, and Dylan Thomas.

376-377-378(g). Development of the Drama. 3 hours per quarter.

Representative readings in dramatic literature from the
Greek theater to the present day. 376: From Aeschylus to
Shakespeare. 377: From Shakespeare to Ibsen. 378: From Ib-
sen to the present. Same as Speech 322-324-326(g).

381(g). World Literature I: Greece and Rome. 3 hours.

An examination of some of the earliest traditions of Wes-
tern literature. No knowledge of Greek or Latin is required.

**382(g). World Literature II: The Hebraic-Christian Tradition.
3 hours.**

Study of selected portions of the Old and New Testaments,
with emphasis upon the various types of literature; survey of

the influence of the King James Bible upon English and Amer-
ican thought.

**383(g). World Literature III: The Middle Ages and the Renais-
sance. 3 hours.**

Medieval epic and romance: Dante and other poets of the
later Middle Ages; social and political treatises, especially those
of Erasmus, Castiglione, and Machiavelli; Rabelais, Montaigne,
and Cervantes.

**384(g). World Literature IV: Rationalism and Romanticism.
3 hours.**

Voltaire's *Candide*, Pope's *Essay on Man*, Rousseau's *Con-
fessions* and *Emile*, Goethe's *Faust* Part I, Byron's *Manfred*,
Pushkin's *Evgenie Onyegin*, Emerson's *Nature*, and Thoreau's
Walden.

385(g). World Literature V: The Modern Age. 3 hours.

Fiction and drama of continental Europe from Ibsen and
Chekhov through Gide, Mann, Kafka, and writers of the period
after World War II.

391(g). Teaching English in the Secondary School. 4 hours.

An examination of current practices in teaching high school
English: observation of high school English classes; discussion
of curriculum and materials in language and literature; analysis
of typical approaches; and preparation of materials for use in
student teaching. To be taken immediately before student
teaching in English. Fall and Spring.

392(g). Adolescent Literature. 3 hours.

The teaching of literature in junior and senior high schools;
literature written for adolescents; organization of school litera-
ture programs; teaching the various genres; the relation of
literature to other aspects of the English program.

**393(g). Language and Composition in the Secondary School.
3 hours.**

Special study of the teaching of the English language and
composition in junior and senior high schools: comparison of
traditional and recent descriptions of the language; implica-
tions of recent language study for the teaching of English;
organization of English language study in high schools; the role
of language study in the teaching of writing; organization of
school composition programs.

397(g). History of the English Language: Old English. 3 hours.

A historical and linguistic approach to the phonological
and morphological development of Old English from Primitive

Germanic to 1100 with occasional readings in Old English. Prerequisite: consent of instructor.

398(g). History of the English Language: Middle to Modern English. 3 hours.

A historical and linguistic approach to the phonological and morphological development of the English language from 1100 to the Modern period with occasional readings in Middle English. Prerequisite: consent of instructor.

399(g). History of the English Language: American English. 3 hours.

The development and present status of American English. Prerequisite: consent of instructor.

400(g). English Language Studies. 3 hours.

A survey of current thought on the characteristics, functions, and potentialities of language.

401(g). Transformational Grammar. 3 hours.

An introduction into the theory of generative grammar and its applications, with emphasis on a pedagogical approach to the teaching of grammar and literature. Prerequisite: consent of instructor.

402(g). Literary Criticism. 3 hours.

A study of the major literary essays in English from Sir Philip Sidney to T. S. Eliot, with consideration of Aristotle's *Poetics* and the pertinent classical and continental background.

404(g). Advanced Shakespeare. 3 hours.

The great tragedies, the problem plays and the sonnets; Shakespearean criticism. Prerequisite: English 374-375 or consent of the instructor.

406(g). Dryden and Pope. 3 hours.

A study of neo-classical critical theory and dramatic and poetic practice as seen in the work of the two major Augustan poets.

408(g). The 18th-Century Novel. 4 hours.

The development of the English novel from Defoe to Sterne, with some consideration of earlier prose narrative.

410(g). Arnold and His Milieu. 3 hours.

An examination of the great controversies—literary, social, religious, and intellectual—of the Victorian Age, particularly as seen in the writings of Arnold, Huxley, Newman, Carlyle, Mill, Ruskin, and others.

412(g). The 19th-Century Novel. 4 hours.

The work of major English novelists from Jane Austen to Hardy.

414(g). Modern Symbolist Poets. 3 hours.

The modernist movement in poetry from its origins in the French *Symboliste* writers and the Imagist group to the major work of Yeats and Eliot.

416(g). English Literature of the 1920s. 3 hours.

Tradition and experiment: Joyce, Lawrence, the Bloomsbury Group, and Huxley.

430(g). Significant Books in American Culture. 3 hours.

The history of ideas, in the study of books articulating major traditions in American culture. Prerequisite: English 371-372-373, History 212-213-214, or consent of the instructor

432(g). Hawthorne, Melville, and Poe. 3 hours.

Extensive reading in major American authors: Hawthorne's *Twice-Told Tales*, *Mosses from an Old Manse*, and *The House of Seven Gables*; Melville's tales and *Typee*, *Mardi*, and *Billy Budd*; Poe's poetry, tales and criticism. Prerequisite: English 371-372-373.

434(g). Emerson, Thoreau, and Whitman. 3 hours.

Extensive reading in major American authors: Emerson's essays and poetry; Thoreau's poetry and *A Week on the Concord and Merrimack Rivers*; Whitman's *Leaves of Grass*, *Democratic Vistas*, and *Specimen Days*. Prerequisite: English 371-372-373.

436(g). Twain, Howells, and James. 3 hours.

Extensive reading in major American authors: Twain's *Connecticut Yankee* and *The Mysterious Stranger*; Howells' *Criticism and Fiction* and *The Rise of Silas Lapham*; James' critical prefaces, *Daisy Miller*, and *The Portrait of a Lady*. Prerequisite: English 371-372-373.

438(g). American Literature of the 1920s. 3 hours.

The Lost Generation, the expatriate attitude, and the imaginative rediscovery of America.

440(g). The Southern Literary Renaissance. 3 hours.

Faulkner's Yoknapatawpha cycle: experiment, tradition, and the myth of the South; the Fugitive poets and critics, especially Ransom, Tate, and Warren; such younger writers as Carson McCullers, Eudora Welty, and Shirley Ann Grau.

442(g). Contemporary Fiction. 3 hours.

The novel and short story since World War II: from Cozens and Warren to such younger writers as Kingsley Amis and Iris Murdoch.

444(g). Contemporary Poetry. 3 hours.

Poetry since World War II: from the later Auden to such recent poets as Philip Larkin and James Wright.

500. Literary Scholarship. 3 hours.

Problems and techniques of literary scholarship.

502. Studies in Shakespeare. 3 hours.

A survey of the classical, medieval, and contemporary sources of Shakespeare; study of the bibliographical and critical problems of the plays. Prereq: consent of the instructor.

504. Studies in 16th-Century Literature. 3 hours.

506. Studies in 17th-Century Literature. 3 hours.

508. Studies in 18th-Century Literature. 3 hours.

510. Studies in 19th-Century Literature. 3 hours.

512. Studies in 20th-Century Literature. 3 hours.

514. Studies in American Literature. 3 hours.

540. Problems in Secondary School English. 3 hours.

Individual and class problems.

598. Directed Readings in English. 3 hours.

599. The Independent Study in English. 6 hours.

Research and the writing of the master's thesis.

LANGUAGE ARTS

345(g). Problems in the Teaching of Reading. 3 hours.

Critical analysis of trends in reading programs; plans for adjusting the reading program to individual differences; diagnostic and corrective work in reading; evaluation of pupils' progress. Prereq: Language Arts 342 and teaching experience.

390(g). Special Methods in Language Arts in the Elementary School. 3 hours.

Areas determined by special needs and experience of those enrolled. On request.

446(g). Reading Clinic: Correction. 2 hours.

Supervised practice in teaching remedial reading, including diagnosis and correction. Prereq: Language Arts 342 and teaching experience.

448(g). Reading in the Secondary School. 3 hours.

Emphasis is on the development of essential reading skills necessary for success in secondary school including vocabulary, comprehension, individual differences, rate, and word recognition. Prerequisite: Ed. 211 and 305.

Foreign Languages

Courses are listed numerically under the headings Foreign Language, French, German, Russian, and Spanish.

FOREIGN LANGUAGE

441(g). Methods and Materials in Teaching Foreign Languages. 3 hours.

Analysis of objectives and current techniques. Prerequisite: completion of an intermediate course in any foreign language.

FRENCH

315(g). French Culture and Civilization. 3 hours.

Lectures on French culture and civilization: Art, Music, History, Architecture, Daily Life and Geography. Conducted in French. Texts of lecture summaries, and tapes of each lecture unit will be available to students for later use. Prerequisite: 2 years of college French, or permission of the instructor.

401(g). Nineteenth Century Novel in France. 3 hours.

Trends of thought as shown in the writings of representative authors of Romanticism, Realism, and Naturalism. Prerequisite: French 300, 301, 302 and consent of instructor.

402(g). Nineteenth Century French Poetry. 3 hours.

The major French poets from Romanticism through Symbolism. Prerequisite: French 300, 301, 302, and consent of the instructor.

403(g). Contemporary French Drama. 3 hours.

Representative readings in the 20th century drama. Prerequisite: French 300, 301, 302 and consent of instructor.

404-405(g). Modern French Novel I, II. 3 hours each.

The French novel after Naturalism, 1900-1930. Major figures such as France, du Gard, Gide, Barres, and Proust. 405: The contemporary French novel after 1930. Prerequisite: French 300, 301, 302 and consent of instructor.

406(g). Modern French Poetry. 3 hours.

French poetry of the 20th century, 1900-1960, from Rimbaud to Saint-Jean Perse. Development of the French lyric after Symbolism. Prerequisite: French 300, 301, 302 and consent of instructor.

416-417(g). Seventeenth Century French Drama I, II.
3 hours each.

416: Origins of the classical drama; Corneille and Racine.
417: The French Theatre; Moliere. Prerequisite: French 310-311-312.

418(g). Seventeenth Century French Prose. 3 hours.

Social life as mirrored in the letters, novels, maxims, and memoirs. Prerequisite: French 310-311-312.

420(g). Syntax and Composition. 3 hours.

Systematic study of syntax and style. Prerequisite: French 232.

599. Independent Study in French. 2-6 hours.

GERMAN

315(g). German Culture and Civilization. 3 hours.

Lectures on German culture and civilization: Art, Music, History, Architecture, Daily Life and Geography. Conducted in German. Texts of lecture summaries and tapes on each lecture unit will be available to students for later use. Prerequisite: 2 years of college German, or permission of the instructor.

410(g). German Syntax and Composition. 3 hours.

An advanced course in syntax and stylistics. Prerequisite: Two years of college German or equivalent.

SPANISH

315(g). Latin American Culture and Civilization. 3 hours.

Lectures on Latin American culture and civilization: Art, Music, History, Architecture, Daily Life and Geography. Conducted in Spanish. Texts of lecture summaries and tapes of each lecture unit will be available to students for later use. Prerequisite: 2 years of college Spanish, or permission of the instructor.

434-435(g). Spanish-American Novel I and II. 3 hours each.

Reading and analysis of social novels. Lectures on history and cultural backgrounds, and discussion of the literature.
434: Azuela, Gallegos, Guiraldes. 435: Algeria, Lynch, Barrios. Prerequisite: at least two years of college Spanish.

437(g). Cervantes. 3 hours.

Principal aspects of the works of Cervantes: *Don Quixote*, *Novelas Ejemplares*; *Entremeses*.

Geography

410(g). Regional Geography. 4 hours.

A regional approach to countries of the world, global relations, and geo-politics.

411(g). The Geographic Factors in Cultural Development. 3 hours.

The role of geography in the development of cultures.

422(g). Conservation Policies. 3 hours.

Importance of natural resources; conservation programs. On request.

502. Climatology. 3 hours.

Types of climate, distribution, climate control. On request.

520. Historical Geography of the United States. 3 hours.

Selected periods in American history, studied in relation to the geographical settings. On request.

540. Problems in Geography Education. 3 hours.

Objectives, materials, and procedures in teaching geography in the elementary and secondary schools; individual problems and projects. On request.

Health, Physical Education and Recreation

Courses are listed in numerical sequence under the headings
Health, Physical Education, and Recreation.

HEALTH

412(g). Marriage and Family Life Education. 4 hours.

Discussion and study of the problems of courtship, marriage, and family relationships, with special emphasis on the role of health as it affects children, parents, home, and society.

465(g). Organization and Administration of School Health Education. 3 hours.

Programs in grades 1-12 with emphasis on the policies, procedure, and responsibilities of the school staff and administration.

474(g). Workshop in Health Education. 2 hours.

A course designed to meet the needs of teachers who are directly or indirectly responsible for health in the schools. Emphasis on practical solution of problems. Summer.

540. Problems in Health Education. 3 hours.

Study of individual problems and problems common to groups.

565. Coordination of School Health Education. 3 hours.

Coordination of the school health education program in grades 1-12. Emphasis on health guidance, coordination, administration, and evaluation. Prerequisite: H. 465 or 465g, or equivalent.

599. The Independent Study in Health. 6 hours.

PHYSICAL EDUCATION

380(g). Supervision of Physical Education in the Elementary School. 4 hours.

Supervisory and teaching experience in the elementary school physical education program. Prerequisite: P.E. 240. Fall, Winter, Spring.

452(g). Adapted Physical Education. 3 hours.

A course designed to promote a knowledge and understanding of the problems, responsibilities, and procedures of physical education for the exceptional individual. The preventive, corrective and remedial aspects of physical education are included in the content of the course. Prerequisite: Physical Education major or minor with senior standing or consent of the instructor. Fall, Winter.

475(g). Administration of Athletics. 3 hours.

Study of problems, policies, and procedures in the administration of the high school athletic program. Prerequisite: P.E. 110 and senior standing.

495(g). Administration of Physical Education. 3 hours.

Policies, procedures, and problems in administration of physical education. Prerequisite: P.E. 110, and senior standing.

505. History and Philosophy of Physical Education. 3 hours.

540. Problems in Physical Education. 3 hours.

Study of individual problems, and problems common to groups.

560. Studies in Athletic Training. 3 hours.

Directed reading and discussions; special emphasis on research in athletics. Prerequisite: Playing and/or coaching experience in athletics.

574. Tests and Measurements in Physical Education. 3 hours.

Standardized tests, test construction and administration.

599. The Independent Study in Physical Education. 6 hours.

RECREATION

465(g). Organization and Administration of Recreation. 3 hours.

Policies, procedures, and problems in establishing and operating a municipal recreation program.

540. Problems in Recreation. 3 hours.

Individual projects: problems common to the group.

599. The Independent Study in Recreation. 6 hours.

History

301-302-303(g). East Asian History I, II, III. 3 hours per quarter.

The cultural, political, and economic growth of East Asia, with emphasis on China and Japan. 301: From earliest times to the 10th century. 302: From the 10th century to the eve of modern times. 303: The last century, with emphasis on Asian nationalism. Prerequisite: Hist. 101-203, or consent of the instructor. Must be taken in sequence.

323-324-325(g). History of Africa I, II, III. 3 hours per quarter.

323: Prehistory and the Pharaonic heritage. Syriac, Hellenic, and Christian intrusions. Early Sudanic kingdoms and the triumph of Islam. 324: Islam at high tide. Sudanic empires, eastern commercial states, and the Ethiopian enclave. Bantu culture before the Whites. 325: The Western intrusion and its consequences. Prerequisite: Hist. 101-203, or consent of the instructor. Must be taken in sequence.

328(g). History of the Reformation. 3 hours.

Sixteenth century Europe during the Reformation and Counter-Reformation period. The development of the modern state system; political, social and economic environment. Prerequisite: Hist. 101-203, or consent of the instructor.

329-330(g). History of Germany I, II. 3 hours each.

329: Survey of political, social, and economic development of Central Europe; from the 15th century to the end of the 18th century. 330: Survey of political, social, economic, and cultural development of Germany from the beginning of the 19th century to the present. Prerequisite: Hist. 101-103, or consent of the instructor.

331-332-333(g). History of Latin America I, II, III. 3 hours per quarter.

331: A summary of pre-Spanish Indian culture, the Iberian background, and the Era of the Conquistadores. 332: The Spanish Empire and the Wars for Independence in Latin America. 333: The 19th and 20th centuries in Latin America. Prerequisite: Hist. 101-203, or consent of the instructor. Must be taken in sequence.

351-352-353(g). Russian History I, II, III. 3 hours per quarter.

351: A study of the development of Russia from earliest times to the 18th century. 352: A study of the development of Russia during the 19th century to the March Revolution, 1917; an introduction to Russian achievements in literature, art, music, architecture, and science. 353: A study of the Soviet Union: its history, government, domestic and foreign policies, from 1917 to the present. Prerequisite: Hist. 101-203, or consent of the instructor. Must be taken in sequence.

354(g). National Histories. 4 hours.

Short histories of various nations of interest to Foreign Language majors and others. A single nation each time, according to demand. Prerequisite: declared major in foreign language, or consent of the instructor. Recommended: reading knowledge of a foreign language.

355-356-357(g). History of England I, II, III. 3 hours per quarter.

355: Roman, Germanic, and Norman England. National character and institutions in the age of the Tudors. 356: From Elizabeth to the French Revolution: the emergence of modern England and the Pax Britannica. 357: From world leadership through two great wars to the England of today. Prerequisite: Hist. 101-203, or consent of the instructor. Must be taken in sequence.

360(g). The American West. 4 hours per quarter.

The frontier movement as a factor responsible for U.S. character and institutions. Prerequisite: one year of college U.S. history, or consent of the instructor.

399(g). Methods of Research in History. 2 hours.

To instruct the student of history in the correct method of historical writing and the critical method of historical research. Prerequisite: Junior class standing in the History Department or the consent of the instructor.

406-407-408(g). Diplomatic History of the United States I, II, III. 3 hours per quarter.

406. The rejection of Europe. Expansion in North America. The Civil War and its aftermath. 407: The new imperialism, the Wilsonian adventure, and the second rejection of Europe. Darkening clouds in Asia. 408: Collapse of the Pax Britannica. Failure of the League of Nations. The United States as a Western leader. Prerequisite: one year of college U. S. history, or consent of the instructor. Must be taken in sequence.

411-412(g). Economic History of the United States I, II. 4 hours per quarter.

Analysis of economic forces and their effects upon Ameri-

can life. 411: From the colonial period to the eve of the industrial age. 412: The age of industry. Prerequisite: one year of college U. S. history, or consent of the instructor. Must be taken in sequence.

415-416(g). Constitutional History of the United States I, II. 4 hours per quarter.

415: The origins and development of the American Constitution from colonial times to the beginning of the industrial age. 416: The American Constitutional system in its historic setting from early industrial times to the present. Prerequisite: one year of college U. S. history, or consent of the instructor. Must be taken in sequence.

421-422(g). Social & Intellectual History of the United States I, II. 4 hours per quarter.

The social and intellectual evolution of the American nation. 421: From the beginnings to mid-19th century. 422: From Darwin to the present. Prerequisite: one year of college U. S. history, or consent of the instructor. Must be taken in sequence.

425(g). Comparative History. 4 hours.

Searching for meaning in history through comparative analysis of the grand phenomena. Prerequisite: Hist. 101-203, senior standing in the department, and consent of the instructor.

427-428(g). Intellectual History of Western Civilization I, II. 4 hours per quarter.

427: European attitudes toward the fundamental problems of life. From early times to the triumph of 'Progress.' Prerequisite: History 101-103, or consent of the instructor. 428: European attitudes toward the fundamental problems of life. The 20th century, with special consideration of European societies overseas. Prerequisite: History 427g or consent of the instructor.

429-430(g). Colonial America I, II. 4 hours per quarter.

429: The European background of American history; the transit of European civilization; the beginnings of the British Empire in America, 1607-1713. 430: The growth of the English colonies in the eighteenth century; the disruption of the British Empire; and the establishment of the new nation. Prerequisite: one year of college U. S. history, or the consent of the instructor. Must be taken in sequence.

461(g). Canadian History. 4 hours.

Discovery and exploration; the period of British rule and the Dominion; the British North American Act and the development of the commonwealth idea. Course terminates with the end of World War II. Prerequisite: background in European and American history.

501. Development of the Discipline of History. 2 hours.

An examination of how the idea of history has grown from the time of the Hebrew chroniclers to the present day.

502. Seminar in European History. 2 hours.

Problems in European history for graduate students in history. Topics for analysis chosen to fit the capabilities of the class. Prerequisite: Graduate standing in the Department of History.

503. Seminar in Asian History. 2 hours.

Problems in Asian history for graduate students in history. Topics for analysis chosen to fit the capabilities of the class. Prerequisite: Graduate standing in the Department of History.

504. Seminar in North American History. 2 hours.

Problems in North American history for graduate students in history. Topics for analysis chosen to fit the capabilities of the class. Prerequisite: Graduate standing in the Department of History.

560. Tutorial in History: Graduate. 1 to 3 hours.

Directed readings and discussion on particular problems in history agreed upon by the instructor and pupil. Prerequisite: Bachelor's degree in History and consent of both instructor and department chairman.

599. M.A. Thesis. 12 hours maximum.

Research and writing of the M.A. thesis. Prerequisite: Completion of the Comprehensive Examination for the M.A. degree in history.

Industrial Arts

420(g). Wood Technology. 3 hours.

Advanced study in woods; wood products, mechanical properties and factors affecting mechanical properties of wood, working stresses of lumber, destructive agencies of wood and preservative measures, effects of natural elements on wood. Experimentation, including effects of heat and water on wood adhesives.

441(g). Tests and Evaluation in Industrial Arts Subjects.

3 hours.

Study and application of principles of evaluation of shop and drawing subjects for the purpose of improving the instructional program. For Industrial Arts graduates, or with consent of the instructor.

450(g). Graphic Arts Technology. 4 hours.

Advanced study in the Graphic Arts. Historical backgrounds, the organization of the industry, production methods

and techniques, new research and experimentation, and the future of the field. Prerequisite: 4 hours of printing, or consent of the instructor.

460(g). The General Shop. 4 hours.

Special problems in organizing and teaching industrial arts in the general shop. Current practices in equipment, selection of educational areas, objectives, layout of shop, organization of subject matter, and personnel organization.

501. History and Philosophy of Industrial Arts Education. 3 hours.

History of handwork instruction, and the developments leading to the industrial arts program. Consideration of various points of view necessary to form a workable philosophy.

502. Trends and Developments in Industrial Arts Education. 3 hours.

A course to develop knowledge and appreciation of the changing concepts and achievements.

503. Literature of Industrial Arts Education. 3 hours.

Survey of periodicals, various types of books, bulletins, and special material from the field of Industrial Arts. Some emphasis on developing skills in locating materials through bibliographies, library services, etc.

504. School Shop Equipment Care and Maintenance. 1 hour.

Open only to graduate students with a major in Industrial Arts or Vocational Education. Care and maintenance of major machines in wood and metal areas; lectures, slides, cutaway models, drawings. Disassembly and reassembly of machines. Maintenance adjustments and repairs. Summer only.

542. Curriculum Planning in Industrial Arts Education. 3 hours

Courses of study and broad general curriculums. Techniques for scientific analysis of industry, the community, and the nation as a basis for courses of study and the curriculum for one shop schools, multi-shop schools, and community programs.

590. Administration, Organization, and Supervision of the Industrial Arts Program. 3 hours.

Objectives, programs, practices, laws, rulings, standards, and certification. Open to superintendents, principals, supervisors, and teachers.

599. The Independent Study in Industrial Arts. 6 hours.

Mass Communications

The Department of Mass Communications includes journalism, broadcasting, films, and instructional communication (formerly audio-visual education).

340(g). Instructional Communications. 4 hours.

Types and effective use of audio-visual materials.

420(g). Administration of Instructional Materials. 4 hours.

Solving educational problems with instructional materials; the role of the A-V administrator. Prerequisite: M.C. 340g or 445g.

445(g). Preparation of Instructional Materials. 3 hours.

Basic techniques for preparation of inexpensive instructional materials. Laboratory experience. Prerequisite: M.C. 340g or consent of instructor.

450(g). Cinematography. 4 hours.

The technique of pictorial continuity in the cinema. Practical experience in producing sound films. Prerequisite: M.C. 210 or equivalent and consent of instructor.

580. Problems in Instructional Communications. 3 to 4 hours.

Individual problems in areas of specific interest to the student. Prerequisite: consent of instructor.

Mathematics

Courses are listed numerically under the headings Mathematics and Astronomy.

341(g). Special Methods in Mathematics in the Elementary School 3 hours.

Adapted to the needs and experience of those enrolled. Prerequisite: Elementary school teaching experience. On request.

391(g). Foundations of Mathematics. 3 hours.

Formerly Math. 401. Nature of Mathematics. Study of axiomatic systems; symbolic logic, sets, geometries, algebras. Prerequisite: Math. 233. Fall, Winter, Spring, Summer, 1968.

400(g). History of Mathematics. 3 hours.

Topical and chronological survey of the main branches of mathematics. Prerequisite: Math. 233 or consent of instructor. Spring, 1968; alternate years.

415(g). Foundations of Geometry. 4 hours.

Formerly Math. 420. Euclidean Geometry. Comparison of the postulates of Euclid and Hilbert. Transformations, cross-ratio, geometry of circles, constructions. Prerequisite: Math. 233. Fall, Summer, 1967.

416(g). Modern Geometry. 4 hours.

Formerly Math. 419. Introduction to non-Euclidean geometries and projective geometry. Prerequisite: Math. 415. Spring, Summer, 1967.

423(g). Foundations of Algebra. 3 hours.

Formerly Math. 402. Development of the real number field from the Peano postulates. Prerequisite: Math. 233 or consent of instructor. Winter. Summer 1967, 1968.

424(g). Abstract Algebra. 4 hours.

Formerly Math. 421. Development of abstract algebraic systems; groups, rings, fields. Prerequisite: Math. 423 or consent of instructor. Spring. Summer, 1968.

427(g). Linear Algebra I. 4 hours.

Formerly Math. 422. Vectors, matrices, linear systems, linear transformations. Prerequisite: Math. 233. Fall. Summer, 1968.

428(g). Linear Algebra II. 4 hours.

A continuation of the theory of finite-dimensional vector spaces. Vector calculus, bilinear and quadratic forms, complex number field. Prerequisite: Math. 427. Winter. Summer, 1968.

431(g). Numerical Analysis. 4 hours.

Numerical solutions to equations and systems of equations. Finite difference, interpolation formulas, numerical calculus. Prerequisite: Math. 331. Spring. Summer, 1968.

433(g). Advanced Calculus. 3 hours.

Formerly Math. 412. Partial differentiation, differential geometry, integration theory, and applications. Prerequisite: Math. 331. Summer, 1967.

435(g). Complex Variables. 4 hours.

Formerly Math. 413. Introduction to complex variables. analytic functions, integration, conformal mapping. Prerequisite: Math. 331. Spring, 1968. Summer, 1969.

437(g). Real Variables. 4 hours

Formerly Math. 453. Theory of functions, sequences, limits, continuity, differentiation, and integration. Prerequisite: Math. 233. Fall, 1967. Summer, 1969.

450(g). Computer Programming. 4 hours.

Formerly Math. 430. Machine language programming, symbolic programming systems, numerical methods of problem solving. Prerequisite: Math. 231. Winter, Spring, Summer.

456(g). Applied Mathematics. 4 hours.

Formerly Math. 405. Review of ordinary differential equations, circuit problems, Fourier series, Laplace transformation, partial differential equations. Prerequisite: Math. 331. Winter, 1968.

474(g). Probability. 4 hours.

An introduction to mathematical probability. Prerequisite: Math. 233. Fall, Winter, Summer, 1968.

475(g). Mathematical Statistics I. 3 hours.

Mathematical derivations of statistical techniques and theorems. Prerequisite: Math. 233. Summer, 1968. Winter.

476(g). Mathematical Statistics II. 3 hours.

Continuation of Math. 475g. Prerequisite: Math. 475g. Summer, 1968.

495(g). Theory of Numbers. 3 hours.

Formerly Math. 414. Fundamental theorems and problems in number theory. Prerequisite: Math. 233. Spring, 1967. Summer, 1968.

540. Problems of Secondary School Mathematics. 3 hours.

Trends in methods and curriculum in secondary school mathematics. Prerequisite: Consent of instructor.

590. Special Problems in Mathematics. 1 to 4 hours.

See Math. 490.

599. The Independent Study. 6 hours.

Must have consent of adviser to register.

ASTRONOMY

411(g). Dynamics of Astronomy. 3 hours.

Mathematical formulation of concepts and theories in astronomy. May be used as an elective in mathematics. Prerequisite: Math. 233 and a course in physics dealing with principles of mechanics. Spring.

Music

313-314(g). Form and Analysis I. II. 4 hours per quarter.

313: A comparative survey, through directed listening, of the principal formal designs found in vocal and instrumental literature from Bach to the present. Technical analysis of music. 314: Special emphasis on the technical analysis of the larger musical forms—the symphony, oratorio, and opera. Prerequisite: Mus. 211.

316(g). Music Composition. 3 hours.

Consent of the instructor. May be repeated for credit.

343(g). Instrumental Conducting II. 2 hours.

Advanced conducting for instrumental students. Score analyzing, instrumentation scoring for instrumental groups, and advanced baton techniques. Prerequisite: Mus. 342.

347(g). Choral Conducting II. 2 hours.

Continuation of Choral Conducting I, with emphasis on rehearsal techniques, conducting principles, choice of music, developing vocal techniques by group methods, and practical conducting. Prerequisite: Mus. 346. Spring.

**369-370(g). Music History and Appreciation I, II.
4 hours per quarter.**

A technical course planned and required for music majors and minors. The development of musical scales, notation, forms, and styles. 369: From antiquity to 1600. 370: From the 1600's to the early 1900's. Study of trends, periods, composers, forms, and other influences upon music. Prerequisite: Mus. 211, 313.

372(g). Survey of Contemporary Music. 4 hours.

New content, style, and media, beginning with the breakdown of tonality; twelvetone technique, study of modern idioms, men and works both in and outside of the field of music. Prerequisite: Mus. 370. Spring.

373(g). American Music. 3 hours.

The history of the diversified world of America's music, rich in human and universal values. A description from the Pilgrims to the present to illuminate and evaluate the vital processes and factors of musical performance and institutions.

382(g). Solo and Ensemble Literature for Brass. 1 hour.

A course designed to give the instrumental student a knowledge and a file of good brass literature for use in all teaching and playing situations. On request.

383(g). Solo and Ensemble Literature for Woodwinds. 1 hour.

A course designed to give the instrumental student a knowledge and a file of good woodwind literature for use in all teaching and playing situations. On request.

400-404(g). Small Ensemble. 1 hour each course.

Preparation and performance of chamber music, both instrumental and vocal. On request. May be repeated for credit.

Areas as follows:

400(g). Vocal	402(g). Brass
401(g). String	403(g). Woodwind
404(g). Piano—Accompanying Techniques.	

406(g). Opera Workshop. 4 hours.

A survey of the development of opera from Peri to Menotti.

409(g). Psychology of Music. 3 hours.

A study of the different aesthetic and behavioral responses to musical stimuli. Prerequisite: Music 212, Music 370 or the consent of the instructor.

442(g). String Methods and Materials. 2 hours.

A course designed for the prospective teacher or orchestral string instruments. Study of prose literature pertaining to problems of string playing and teaching. Survey of pedagogical musical methods and materials. Analysis of common technical problems and demonstration of special exercises for their solution. Prerequisite: 2 hours of Mus. 367—secondary string instrument. (The second hour may be taken concurrently with 442.)

443(g). Stage Band Methods and Materials. 2 hours.

A course for the prospective teacher of stage bands in the public schools. Survey of Jazz History and an analysis of technical problems unique to the area of stage band: Literature, organization, instrumentation, notation, and improvisation. Prerequisite: Music 341.

450-467(g). Private Instruction, Level IV. 1 hour each course.

Private lessons. One lesson a week. Extra fee. Each quarter. May be repeated for credit. Areas as follows:

450(g). Piano	460(g). Voice	466(g). Woodwind
455(g). Organ	465(g). Brass	467(g). Strings

505. Graduate Recital. 1-2 hours.

By arrangement. May be repeated for credit.

510. Design and Style in Music. 3 hours.

The principal forms of musical design from Bach to the present. On request.

520. Advanced Sight Singing and Ear Training. 3 hours.

Development of skills in reading complex rhythms at sight. On request.

530. Sixteenth Century Polyphony. 3 hours.

Advanced course in curricular plans and materials. On request.

540. Problems in Teaching and Supervising Music. 3 hours.

Private lessons. One lesson a week. Extra fee. Each quarter. May be repeated for credit. Areas as follows:

550. Piano	560. Voice	566. Woodwind
555. Organ	565. Brass	567. Strings

550-567. Private Instruction for the Graduate Student.

1 hour each course.

569. The Technique of Musical Interpretation. 3 hours.

A course designed for the practicing musician, conductor performer and/or teacher. A study of the basic laws of rhythm, form and structure from a practical point of view as regards live sound, stressing Romantic era music as an initial point of departure.

570. Introduction to Musicology. 3 hours.

An introduction to musical research, bibliography, acoustics, philosophy of music, psychology of music, aesthetics, theory, and pedagogy.

571. Music in Middle Ages. 3 hours.

A study of music history within the Middle Ages period. A tracing of the earliest historical beginnings of Western music up to the Renaissance and consideration of key composers and their writings.

572. Music in the Renaissance. 3 hours.

A study of music history within the era of the Renaissance. A thorough, detailed study of its contributions in the vast body of both sacred and secular vocal polyphonic music, the impact upon instrumental music, compositional techniques, form, the music and composers involved.

573. Music in the Baroque. 3 hours.

A study of music history within the Baroque era. A study of representative music, composers, record listening with some preparation in a student's performing instrument if applicable.

574. Music in the Classic Era. 3 hours.

A study of representative works of the principal composers of the Classic era, and their contributions in the mainstream of music: Haydn, Mozart, Beethoven.

575. Music in the Romantic Era. 3 hours.

A study of music history in the Romantic era. A study of representative music, record listening, with some preparation in a student's performing instrument if applicable.

576. Music in the Twentieth Century. 3 hours.

A study of compositional techniques by representative composers of both the Expressionistic and Neo-Classic schools; the status of form, electronic music, music of chance; future outlooks.

599. The Independent Study in Music. 6 hours.

Philosophy

401-402-403(g). Philosophy in Literature I, II and III. 3 hours ea.

Examination of philosophical attitudes or issues as expressed in poetry, novel, and drama. 401: Animism, Aristotelian formism, classicism. 402: Kantian idealism, romanticism. 403: Realism, naturalism, Existentialism. Prerequisite: Three quarters of freshman-sophomore courses in Philosophy or consent of instructor.

405(g). Philosophy of Education. 3 hours.

Historical and critical study of theories of education. Prerequisite: Three quarters of freshman-sophomore courses in Philosophy or consent of instructor. Winter.

411(g). Philosophy of Science. 3 hours.

Critical analysis of the fundamental concepts, laws and theories of the natural and social sciences. Prerequisite: Three quarters of freshman-sophomore courses in Philosophy including Phil. 110 or 211. Spring.

Physics

321(g). Electricity and Magnetism. 4 hours.

Fundamental laws; electrostatics; magnetostatics; magnetic properties of matter; direct current; electromagnetism; alternating current. Prerequisite: Physics 117 and Math. 233. Physics 220 recommended.

323(g). Modern Physics. 4 hours.

For prospective physics teachers and science majors up-to-date background in atomic energy, nuclear energy, radioactivity, electronic developments, cosmic rays, spectroscopy, etc. Prerequisites: Physics 117 and Math. 232.

401(g). Atomic and Nuclear Physics. 4 hours.

Extra-nuclear structure and properties of the atom; theory of atomic and molecular spectra; wave concept of matter; photo-electric effect, X-rays. Properties of the nucleus; radioactivity; nuclear particles; nuclear reactions; fission and fusion; cosmic rays. Prerequisite: Physics 220 and Math. 233.

402(g). Advanced Electronics. 4 hours.

Electrical measurements, DC and AC. Transients in DC circuits, DC and AC bridges, RC and RL circuits. Resonance in AC circuits. Oscillator and amplifier circuits utilizing the television receiver. Prerequisite: Physics 318 and Math. 233.

481(g), 482(g), 483(g). Physical Science Seminar I, II, III. 1 hour each.

Presentation of reports on recent developments in physical science after a critical evaluation of the literature. Oral re-

ports by students and staff. Open to majors in physics and secondary education (physics).

599. The Independent Study in Physics. 6 hours.

Original investigation requiring extensive library consultation, literature searching, and laboratory work for the master's thesis. The student should register for this course and choose a thesis topic upon entering the graduate program, or no later than the completion of five hours of graduate credit. Registration only after consultation with the research director.

Political Science

321-322(g). International Law I, II. 3 hours each.

321: International law in times of peace; development of law forms and procedures. 322: Agents and procedures of international relations; modes of redress short of war; war; neutrality; and future developments. Prerequisite: Pol. Sci. 112 or consent of the instructor.

457(g). Communist Bloc Government Institutions. 4 hours.

Analysis and interpretation of governmental institutions in the Soviet Union, Communist China, and other Communist bloc countries. Prerequisite: Pol. Sci. 250 or consent of the instructor.

360(g). American Foreign Policy. 4 hours.

Theory and practice of U. S. foreign policy from the beginning of the nation until the present, with emphasis on the 20th century. Prerequisite: Pol. Sci. 111 and 112. or consent of the instructor.

390(g). Political Behavior. 4 hours.

A study of political behavior, primarily in America, with particular attention to voting behavior, political activity of groups, and public opinions. Introduction to research methods. Prerequisite: Pol. Sci. 110, 111, or consent of the instructor.

405(g). The Legal Process. 4 hours.

The legal institution: its functions and procedures, with emphasis on Anglo-Saxon experience. Law as a means of social control. Materials from both private and public law. Prerequisite: Pol. Sci. 110, 111, or consent of the instructor.

406(g). The Politics of the Developing Nations. 3 hours.

Description and comparative analysis of the political institutions and underlying social and economic conditions in the developing countries of the world, and their implications for United States policy; emphasis on the emerging nations of Africa. Prerequisite: Pol. Sci. 250, or consent of the instructor.

408(g). Politics and Governmental Institutions in Asia. 3 hours.

Comparative analysis and interpretation of the political forces operating in Asia, and of the governmental institutions in non-Communist countries in Asia. Prerequisite: Pol. Sci. 250 or consent of instructor.

409(g). Politics and Governmental Institutions in Latin America. 3 hours.

Comparative analysis and interpretation of the political forces operating in Latin America, and of the governmental institutions in countries in Latin America. Prerequisite: Pol. Sci. 250, or consent of instructor.

410(g). Constitutional Law: The Federal System. 3 hours.

Interpretation of the Constitution of the United States by federal courts, with emphasis on the federal system. Prerequisite: Pol. Sci. 111.

411(g). Constitutional Law: Civil Rights. 3 hours.

Interpretation of the Constitution of the United States by Federal courts, with emphasis on civil rights. Prerequisite: Pol. Sci. 111.

425(g). Public Administration. 4 hours.

Introduction to the study of public administration; problems of maintaining a responsive bureaucracy subject to democratic controls. Prerequisite: Pol. Sci. 111.

426(g). Problems in Public Administration. 3 hours.

Special problems within the field of public administration. Government personnel, reorganization, special fields of administration. Prerequisite: Pol. Sci. 425.

427(g). Topics in Public Administration. 3 hours.

Introduction to the theory and practice of public administration; attention to formal structure, informal behavior; selected problems. Prerequisite: baccalaureate degree.

428(g). Comparative Public Administration. 3 hours.

A cross-national study of the role of public administration in the modernization of developing nations and an examination of governmental organization for national development. Prerequisite: Political Science, 406g and/or Political Science 425g.

430(g). Ancient and Medieval Political Thought. 4 hours.

Political thought from ancient times to the Reformation. Prerequisite: Pol. Sci. 110, or consent of the instructor.

431(g). Political Thought of the Modern Age. 4 hours.

Political thought from the 17th century to the present. Prerequisite: Pol. Sci. 110, 430, or consent of the instructor.

455(g). American Public Policy. 3 hours.

Major policies of the United States, foreign and domestic, with emphasis on current issues. Mechanisms of the policy-making process. Prerequisite: Pol. Sci. 111 or consent of instructor (at least one advanced Political Science course preferable).

510. Theoretical Foundations of Political Science. 4 hours.

Scope, methods, and research techniques of political science. Attention is given to the integration of various theoretical approaches in political science and in other areas of social science.

520. Seminar in International Politics. 3 hours.

Intensive analysis of selected problems and issues in international politics.

530. Seminar in Constitutional Law and Politics. 3 hours.

A study of the federal judiciary as one of the policy-making branches of the federal government. Prerequisite: Pol. Sci. 410, 411.

560. Studies in Political Science. 3 hours.

Directed reading and discussion in political science in an area agreed upon by the instructor and the student.

Psychology

416(g). Mental Retardation. 3 hours.

Same as Special Education 416(g).

460(g). Abnormal Psychology. 4 hours.

Behavior pathology; theories of development of functional disorders; theories of remediation. Field trips may be required. Prerequisite: Psychology courses totaling 12 hours or the consent of the instructor.

465(g). Clinical Psychology. 4 hours.

Survey of approaches to diagnosis of maladjustment and its remediation. Introduction to techniques of psychotherapy. Prerequisite: Psych. 460.

470(g). History and Systems of Psychology. 4 hours.

Contemporary theories and their historical development. Prerequisite: 15 hours of psychology or the consent of the instructor.

476(g). Theories of Personality. 4 hours.

Theoretical approaches to the study of personality; trait theories, field theory, psychoanalysis, social theories. Prerequisite: consent of the instructor.

481-482(g). Seminar in Psychology. 2-6 hours.

Topics of special interest. For majors, and advanced students in other areas. This may be repeated. Prerequisite: Consent of instructor required for non-majors.

491-492(g). Problems in Psychology. 2-6 hours.

Individual projects on subjects of special interest. This may be repeated. Prerequisite: Consent of the instructor.

495-496(g). Field Work in Psychology. 2-3 hours.

Supervised field work, experience in social service agencies, or research settings. Prerequisite: consent of instructor. Students must have obtained prior approval by the Department of Psychology for all projects they wish to take for credit.

566. Psychological Effects of Physical Disability. 4 hours.

A study of the basic psychodynamics of the effects of physical abnormalities on psychological development. Prerequisite: consent of instructor.

Social Studies

390(g). Special Methods in Social Studies in the Elementary School. 3 hours.

Adapted to the special needs and experiences of those enrolled. On request.

540. Problems in Social Studies. 3 hours.

Individual problems and problems common to the group.

550. The Scope, Method, and Validity of the Social Sciences. 3 hours.

Theory, methods, and foundations of the social sciences; basic assumptions and epistemology in history, political science, economics, sociology, and anthropology.

599. The Independent Study in Social Studies. 6 hours.

Sociology and Anthropology

SOCIOLOGY

409(g). Statistical Methods and Social Measurement. 3 hours.

Special problems of social relationships are described and interpreted in terms of statistical methods. The practical application of research principles and experimental designs. Theoretical analysis of social measurements; logic of inquiry; standardization of measuring instruments; and the influence of value-judgments in sociology. Prerequisite: consent of instructor.

410(g). Methods in Sociological Research. 3 hours.

Relationship of theory, method, and data. Major methods employed in social research. Formulation of research problems. Prerequisite: Soc. 205.

415(g). Social Organization. 3 hours.

Analysis of social groups and complex organizations. Characteristics of bureaucracy. Integration and disintegration of social organizations. Prerequisites: Soc. 110, and 12 credits in history of the social sciences.

417(g). Social Change. 3 hours.

Analysis of social heritage, social evolution, cultural inertia, conservatism, human nature and culture.

418(g). Sociology of Education. 3 hours.

Social processes and patterns of interaction in education institutions; relation of the school to other groups and institutions; methods and data of sociology applied to the school situation. Prerequisite: 12 hours in sociology, or consent of the instructor.

420(g). Analytical Sociological Theory. 3 hours.

Analysis of problems in the development of sociological theory. Review of major sociological theories and concepts. Prerequisite: Soc. 415, or consent of the instructor.

421(g). Development of Modern Social Thought. 3 hours.

Key trends in social thought from the Renaissance to the emergence and foundation of the Social Sciences in the 19th century, with special emphasis on the conditions contributing to the origins of sociology. Prerequisite: Soc. 110, or 12 credits in the social sciences, or consent of the instructor.

424(g). Comparative Social Organization. 3 hours.

An examination of the social organization of several world regions; the demographic and ecological characteristics, stratification system, organization, and forms of association in several world regions, with special attention to the national community. Prerequisite: 20 hours in Sociology, Economics, Political Science, or consent of the instructor.

461(g). Reading in Sociology. 2-4 hours.

Selected reading in sociology under the close supervision of the members of the department. Prerequisite: senior status and permission of department chairman.

500-501. Sociological Theory I, II. 3 hours each.

Advanced current sociological theory. Prerequisite: graduate standing and permission of instructor.

510. Individual Research. 3-6 hours. Maximum 3 hours per quarter. May be repeated once for credit.

Research on selected topics in sociology under the close supervision of the members of the department. Prerequisite: graduate standing and consent of the instructor.

512. Topical Seminar in Sociology. 3-6 hours. Maximum 3 hours per quarter. May be repeated once for credit.

Detailed exploration of selected topics in sociology. Prerequisite: graduate standing and permission of instructor.

513. Topical Seminar in Sociology. 3-6 hours. Maximum 3 hours per quarter. May be repeated once for credit.

Detailed exploration of selected topics in sociology. Prerequisite: graduate standing and permission of instructor.

560. Studies in Sociology. 3 hours.

Directed reading and discussion in the field agreed upon by the instructor and the student. Prerequisite: major in Sociology, or consent of the instructor.

Speech

Courses are listed numerically under each of the three headings: Theatre; Speech Pathology and Audiology; and Public Address.

(THEATRE)

322(g). Development of the Drama I. 3 hours.

Representative readings in dramatic literature from Aeschylus to Shakespeare.

324(g). Development of the Drama II. 3 hours.

Representative readings in dramatic literature from Shakespeare to Ibsen.

326(g). Development of the Drama III. 3 hours.

Representative readings in dramatic literature from Ibsen to the present.

328(g). The American Theatre. 4 hours.

The development of the American theatre from its beginnings to the present, with representative readings in the American drama.

330(g). Dramatic Productions I 3-6 hours.

Theory and practice in the play production techniques of acting, directing and technical theatre through the production processes of preparing one play weekly for summer theatre audiences. Prerequisite: consent of instructor.

331(g). Dramatic Productions II. 3-6 hours.

Theory and practice in the play production techniques of acting, directing and technical theatre through the production processes of preparing one play weekly for summer theatre audiences. Prerequisite: consent of instructor.

332(g). Advanced Acting. 4 hours.

The advanced study of character analysis, voice training, and movement problems, in terms of acting styles. Prerequisite: Speech 222 or consent of instructor.

334(g). Principles of Scene Design. 4 hours.

The fundamentals of pictorial representation, including composition, perspective, and color rendering in the planning and execution of scenic design. Prerequisite: Speech 225 or consent of instructor.

336(g). Advanced Scene Design. 4 hours.

Detailed investigation of historical developments and current practices in scenic design with experience in scenic rendering. Prerequisite: Speech 334 or consent of instructor.

338(g). Stage Costume Design. 4 hours.

A history of the development of clothing from the Egyptians to the twentieth century. Practical experience in costume design and water color rendering techniques.

430(g). Period Play Production. 4 hours.

The study of the problems involved in directing and acting in the production of historical drama. Prerequisite: Speech 222 and Speech 344 or consent of instructor.

432(g). Advanced Play Direction. 4 hours.

Advanced study of techniques of visual dramatization through the use of movement pantomime, tempo, and the analysis of character. Prerequisite: Speech 344 or consent of instructor.

434(g). Special Projects in Dramatic Arts. 4 hours.

Opportunity for the advanced theatre student to do individual creative or investigative work in a particular phase of dramatic arts. Prerequisite: consent of instructor, senior standing or graduate student.

436(g). Experimental Theatre Design. 4 hours.

Advanced investigation in scene design and projects in scene, costume, property, and lighting design for standard and experimental plays. Prerequisite: Speech 336 or consent of instructor.

520. Seminar in Educational Theatre. 3 hours.

An examination of the problems involved in the development of educational theatre programs. Prerequisite: consent of instructor.

522. Dramatic Theory and Criticism. 3 hours.

Principles of dramatic criticism from Aristotle to the present day. Critical standards and methods, and theory application in the evaluation of drama in performance. Prerequisite: consent of instructor.

(SPEECH PATHOLOGY AND AUDIOLOGY)

358(g). Organic Speech Disorders. 4 hours.

Etiology, symptomatology, and therapy of the more prevalent organic disorders of speech. Prerequisite: Speech 352 or consent of the instructor.

460(g). Stuttering. 3 hours.

Significant theories and therapies for stuttering in children and adults.

462(g). Advanced Speech Correction. 3 hours.

Advanced study of the major disorders of speech; emphasis on individual study and application of research and diagnostic techniques to speech therapy. Prerequisite: nine credits in speech pathology.

466(g). Clinical Practicum. 6 hours.

Supervised clinical practice with speech defective children and adults in the college Speech Clinic. Prerequisite: consent of the instructor.

**468(g). Speech Correction for the Classroom Teacher.
3 hours.**

The major disorders of speech, emphasizing the teacher's role in detecting and helping the speech handicapped child.

470(g). Special Problems in Speech. 2 to 9 hours.

Individual study in speech pathology and audiology. Prerequisite: consent of the instructor.

(PUBLIC ADDRESS)

410(g). Classical Rhetoric. 4 hours.

An examination of the Greek and Roman rhetoricians with an emphasis on Aristotle, Plato, Quintilian and Cicero. Prerequisite: Speech 200 or 314, or consent of instructor.

**412(g). History and Criticism of American Public Address.
4 hours.**

A course in the history of American public address from the Eighteenth Century to the present. A critical study of the speeches and speaking careers of outstanding American statesmen, lawyers, and clergymen, considering especially the sources of their effectiveness. Prerequisite: Speech 200 or 314, or consent of instructor.

414(g). History and Criticism of British Public Address. 4 hours.

A course in the history of British public speaking from the Eighteenth Century to the present. A critical study of the speeches and speaking careers of outstanding British statesmen and lawyers, considering especially the source of their effectiveness. Prerequisite: Speech 200 or 314, or consent of instructor.

540. Problems in Speech Education. 3 hours.

An examination of the problems involved in the development of speech programs.

599. The Independent Study in Speech. 6 hours.

Opportunity for the advanced student to do individual creative or investigative work in an area of speech for which he has had basic training.

INDEX

—A—	
Academic Calendar	1
Accounting Courses	38
Accreditation	9
Activity Fee	12
Admission to graduate study	13
Admission to candidacy	16
Anthropology courses	71
Art courses	33
Art Major, M.S. in Ed. degree	
Assistantships	9
Astronomy courses	63
Audio-visual education (See Instructional Communication)	
Audio-visual education director or coordinator	29
Auditing courses	15
—B—	
Biology courses	34
Biology Major, M.S. in Ed. degree	26
Biology, Master of Science degree	21
Business Education courses	38
Business Education, M.S. in Ed. degree	26
Business Management courses	38
—C—	
Certification in special fields	28
Chemistry courses	40
Chemistry, Master of Science degree	21
Chemistry major, M.S. in Ed. degree	26
College services	10
Comprehensive examinations	17
Counseling and guidance program	24
Counseling service	11
Course load	14
Course numbers	15
—D—	
Development Reading teacher	30
—E—	
Economics courses	42
Education courses	43
Education, Master of Science degree	22
Elementary Administration and Supervision	24
Elementary Education	23
Employment	10
English courses	46
English major, M.S. in Ed. degree	26
English, Master of Arts degree	19
Evening classes	11
Examination Committee	16
—F—	
Fees	12
Fifth Year Program	27
Financial Aids	9
Food Service	10
Foreign Language courses	52
French courses	52
—G—	
General information	9
German courses	53
Grades	15, 16
Graduate credits	14
Graduate Faculty	3
Guidance and Counseling program	24
—H—	
Health courses	54
Health Insurance	11
Health Service	10
Health, Physical Education and Recreation Major, M.S. in Ed. degree	26
History courses	56
History, Master of Arts degree	19
Housing	10
—I—	
Industrial arts courses	59
Industrial Arts, M.S. in Ed. degree	26
Instructional Communication	29, 61
—L—	
Language arts courses	51
—M—	
Marketing courses	39
Mass Communication courses	61
Master of Arts degree in English	19
Master of Arts degree in History	19
Master of Music degree	20
Master of Science degree in Biology	21
Master of Science degree in Chemistry	21
Master of Science in Education degree	22
Master's degrees, general requirements	19
Mathematics courses	61
Mathematics, M.S. in Ed. degree	26
Mentally retarded, teaching of	31
Music courses	63
Music, Master of Music degree	20
Music, M.S. in Ed. degree	26
—O—	
Off-campus courses	11
Oral examination	17
—P—	
Philosophy courses	67
Physical Education courses	55
Physics, M.S. in Ed. degree	26
Physics courses	67
Placement Service	10
Plan A, research requirement	22
Plan B, research requirement	22
Post-baccalaureate Special Student Status	32
Programs offered	3
Public address courses	75
—R—	
Reading consultants and supervisors	30
Recreation	57
Remedial reading teaching	29
Residence halls	10
Residence halls assistantships	9
Residence halls counseling assistantships	10
Residence requirement	16
—S—	
Scholarships	10
Secondary education	26
Sequence of procedures for the master's degree	18
Social Studies, M.S. in Ed. degree	26
Social Studies courses	71
—T—	
Starred papers	17
Summer School	11
Summer traineeships (Special Education)	9
Thesis	17
Tuition and fees	17
—W—	
Work-study programs	10

Sociology courses	71	Starred papers	17
Spanish courses	53	Summer School	11
Special Education	31	Summer traineeships (Special Education)	9
Special Education courses	45	Thesis	17
Special student status	32	Tuition and fees	17
Speech correction	32	Work-study programs	10
Speech courses	73		
Speech pathology and audiology courses	74		



LIVINGSTON LORD LIBRARY



CENTER FOR THE ARTS

