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# 2018-2019 Graduate Catalog

The information in this publication endeavors to be as current and accurate as possible. Due to the constant change in economic conditions and in student program needs, the accuracy of the details appearing here may be affected. This may be true for any and all information, which is current at the time of publication of this catalog.

**Students are expected to read and conform to the regulations in this catalog. The student, not the University nor faculty members, is primarily responsible for knowing the regulations and policies, and for meeting the requirements for a degree or certificate.**

Students are advised to study closely the *Course Offerings* available online and to consult with faculty advisors for planning.

**Address of all University Offices:**

Northwest Missouri State University  
800 University Drive  
Maryville, Missouri 64468-6001

**Academic and Administrative Office Hours:**

8:00 a.m. to 5:00 p.m., Monday through Friday  
(except holidays)

**University Information:** (660) 562-1212

**Web Address:** [www.nwmissouri.edu/graduate/index.htm](http://www.nwmissouri.edu/graduate/index.htm)

**Northwest Graduate Office:** (660) 562-1145

**E-mail:** [gradsch@nwmissouri.edu](mailto:gradsch@nwmissouri.edu)

# Accreditation

The University is accredited by the Higher Learning Commission (HLC), commission of North Central Association of Colleges and Schools.

The Professional Education Unit at Northwest Missouri State University is accredited by the National Council for Accreditation of Teacher Education (NCATE), [www.ncate.org](http://www.ncate.org). This accreditation covers initial teacher preparation programs and advanced educator preparation programs at the Maryville campus and Northwest- Kansas City. However, the accreditation does not include individual education **courses** that the institution offers to P-12 educators for professional development, relicensure, or other purposes.

The Master of Business Administration program is accredited by the Accreditation Council for Business Schools and Programs (July 1, 2008-June 30, 2018).

# Northwest Missouri State University Graduate School

## Statement of Non-Discrimination

Northwest Missouri State University emphasizes the dignity and equality common to all persons and adheres to a strict nondiscrimination policy regarding the treatment of individual faculty, staff, students, third parties on campus, and applicants for employment and admissions. In accord with federal law and applicable Missouri statutes, the University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, pregnancy, ancestry, age, disability, genetic information, veteran status, or any other legally-protected class, in employment or in any program or activity offered or sponsored by the University, including, but not limited to, athletics, instruction, grading, the awarding of student financial aid, recruitment, admissions, and housing. As an equal opportunity employer, the University promotes and maintains affirmative action programs to ensure that all individuals participate fully in every facet of employment opportunities.

Persons having inquiries concerning the University's compliance with this policy or any laws and regulations prohibiting discrimination are directed to contact the following:

- An employee with questions or concerns about any type of discrimination in the workplace, including discriminatory harassment, is encouraged to bring these issues to the attention of the Equal Employment Opportunity (EEO) Officer, who may be contacted at: EEO Officer, Northwest Missouri State University, 800 University Drive, Maryville, Missouri, 64468-6001 (660-562-1128).
- Questions or concerns regarding the University's compliance with Title IX may be directed to the University's Title IX Coordinator or Deputy Title IX Coordinators. The University has designated the following Title IX Coordinator and Deputy Title IX Coordinators as named in the University's Title IX Policies and Procedures:

Margaret-Ann Pierre, Director of Equity and Accessibility, ADA/504 and Title IX Coordinator, 2460 Student Union, 660-562-1013, mpierre@nwmissouri.edu

Nola Bond, Vice President of Strategy and Operations (Deputy Employee Coordinator), 143 Administration Building, 660-562-1763, nbond@nwmissouri.edu

Kori Hoffmann, Assistant Vice President of Student Affairs-Engagement and Development (Deputy Student Coordinator), 2290 Student Union, 660-562-1535, khoff20@nwmissouri.edu

- For ADA/Section 504 related questions or concerns, please contact:

Margaret-Ann Pierre, Director of Equity and Accessibility, ADA/504 Coordinator, 2460 Student Union, 660-562-1013, mpierre@nwmissouri.edu

- For all other inquiries related to discrimination at the University, please contact:

Nola Bond, Vice President of Strategy and Operations, 143 Administration Building, 660-562-1763, nbond@nwmissouri.edu

No individual will be subject to any form of retaliation, discipline, or other adverse action for reporting conduct in violation of the University's nondiscrimination/EEO policy, assisting/cooperating in making a complaint, or assisting with the investigation of a

complaint. Any individual who believes they have experienced or witnessed retaliation should immediately notify the appropriate member(s) of the administration as identified above. Those found to be engaging in any type of discrimination in violation of the law or University policy will be subject to disciplinary action, up to and including dismissal or termination of employment.

Copies of the University's Equal Employment Opportunity ("EEO") Guidelines are available in the Office of Human Resources.

## **Northwest's Mission, Vision and Values**

### **Mission**

Northwest Missouri State University focuses on student success - every student, every day.

### **Vision**

We will be THE university of choice for a comprehensive, exceptional student experience.

### **Values**

We value:

- Student Success
- Scholarship and life-long learning
- Intercultural competence
- Collaboration
- Respect and integrity
- Strategic thinking
- Excellence

### **History**

In 1953, Northwest Missouri State University began a feasibility study for a graduate program leading to the Master of Science in Education degree. This degree was designed specifically for elementary teachers, elementary supervisors and principals, and secondary teachers in the areas of Business, English, Health and Physical Education, and the Social Sciences.

Graduate work leading to a master's degree was offered for the first time in the summer session of 1955, and the first degree was granted in 1957. The graduate program was accredited by the North Central Association of Colleges and Schools and by the National Council for Accreditation of Teacher Education following a visit by representatives in the summer session of 1958.

The University has been continuously involved in offering graduate work since 1955. In 1961, a cooperative graduate program was developed for the Master of Education degree which was awarded by the University of Missouri. Northwest Missouri State University phased out its own program over a period of two years and continued the cooperative arrangement until 1967. The last graduate in the M.Ed. cooperative program received his degree in 1969. A cooperative program for the Specialist in Education degree in Educational Administration with the University of Missouri was begun in the 1970 summer session under the auspices of the University of Missouri. Although this program was phased out in 1982, NCA approved the Specialist in Education degree in Educational Administration as offered by Northwest since 1981.

Graduate courses have been offered off site beginning in 1978 when programs were first offered in the St. Joseph area. In 2006, the Kansas City Center was created which firmly established program offerings in the Northland Kansas City area. Since 1997, Northwest and the University of Missouri-Columbia offer a cooperative doctoral degree in leadership. This degree is awarded by the University of Missouri and requires two summers of coursework on the University of Missouri campus with the remainder of the coursework offered on the Northwest campus. Program cohorts have also been established in numerous locations throughout the state to bring educational opportunities at distance locations.



# Academic Calendar

## 2018-2019 Academic Calendar

<b>Fall Trimester 2018</b>		
August 22	Wednesday	University/Academic Unit Meetings
August 23	Thursday	Department Planning/Development
August 25	Saturday	General Registration
August 27	Monday	Classes begin
September 3	Monday	Labor Day, no classes
October 12	Friday	First Block ends
October 12	Friday	Walkout Day, no classes
October 13	Saturday	Homecoming
October 15	Monday	Second Block begins
November 20	Tuesday	Thanksgiving Break begins, 5 p.m.
November 26	Monday	Classes Resume, 8 a.m.
December 10-14	Monday-Friday	Final Exams
December 14	Friday	Commencement
December 17	Monday	Grades due at 10 a.m.
<b>Spring Trimester 2019</b>		
January 9	Wednesday	University/Academic Unit meetings
January 10	Thursday	Department/Planning Development
January 11	Friday	General Registration
January 14	Monday	Classes begin
January 21	Monday	Martin Luther King Holiday, no classes
March 1	Friday	First Block ends
March 4	Monday	Second Block begins
March 25-29	Monday-Friday	Spring Break
April 1	Monday	Classes Resume
April 29-May 3	Monday-Friday	Final Exams
May 3 & 4	Friday & Saturday	Commencement Ceremonies
May 6	Monday	Grades due at 10 a.m.
<b>Summer Trimester 2019</b>		
May 13	Monday	First Session begins and Registration
May 27	Monday	Memorial Day, no classes
June 7	Friday	First Session ends
June 10	Monday	Second Session begins and Registration
July 3	Wednesday	Second Session ends
July 4	Thursday	Independence Day, no classes
July 8	Monday	Third Session begins and Registration
August 2	Friday	Third Session ends
August 5	Monday	Fourth Session begins and Registration
August 19	Monday	Fourth Session ends, Official Graduation Date
August 20	Tuesday	Grades due at 10 a.m.



# Graduate School Statement of Mission

The Northwest Missouri State University Graduate School seeks to create a stimulating environment for applied research and interactive learning at the post-baccalaureate level for both students and faculty. The Graduate School provides programs on campus, off-site and through distance learning technologies that are responsive to regional educational needs in the arts, sciences, education, human services, professional fields, and applied studies. It creates national and international links to the region, which in turn expands its students' experiences to encompass not only contemporary society, but also its history and its aspirations.

The Graduate School seeks to enhance a lifelong commitment to learning among its students, enabling them to lead professionally rewarding and socially beneficial lives in the 21st century. It promotes the cultivation of scholarship and the expansion of knowledge, the development of professional skills and scholarly research at an advanced level, and the interchange of ideas among students, faculty and staff. The Graduate School helps learners achieve professional competencies and realize broad intellectual and social interests. Responsive to the needs of all academically qualified students, the graduate programs at Northwest provide the foundation for additional graduate studies at the doctoral level and beyond.

# Degrees

## Master of Science in Education

The University offers the Master of Science in Education (M.S.Ed.) degree to improve the qualifications and capabilities of elementary and secondary teachers for the public schools. In the major study areas, the program provides for study of advanced coursework, opportunity for the interpretation and application of findings of related research to specific school programs, independent study and investigation, and participation where possible in directed laboratory experiences either on campus or in approved situations.

For preparation in Guidance and Counseling, the M.S.Ed. program is designed to meet special needs in the area and to qualify candidates for certification as elementary or secondary counselors. The same principle applies to M.S.Ed. programs for K-12, elementary and secondary principals and supervisors. Programs are available for specialization in Reading, Special Education, Elementary Education and other specialties for teachers at various levels. (See School of Education section for M.S.Ed. in Teaching specialties.)

Programs have been developed in the following areas for the M.S.Ed. for secondary teachers: Agriculture, English, Health and Physical Education, History, Mathematics and Science Education. Students should study the specific program outlines and required sequences shown in connection with departmental offerings in preparing approved programs with advisors.

M.S.Ed. students seeking new certification in Missouri on the basis of their program are advised that the Missouri law requires the completion of a course on the psychology and teaching of exceptional children. This may be met by either a prior-approved undergraduate course or an advised graduate course which may not be part of a specific graduate program. Not all M.S.Ed. programs lead to certification. Contact the School of Professional Education for additional information.

## Master of Business Administration

The Master of Business Administration (M.B.A.) degree is offered by the Melvin and Valorie Booth School of Business and Professional Studies with appropriate courses planned in accounting, economics, finance, management, marketing, and information technology management. The MBA offers emphases in General Management, Agricultural Economics, Human Resource Management, and Marketing are also available. Course requirements for all programs are shown in the departmental listings.

## Master of Arts and Master of Science

A Master of Arts (M.A.) degree is offered in English. The Master of Science (M.S.) degree is offered in Agriculture, Biology, Applied Computer Science, Information Systems, Instructional Technology, Mathematics, Recreation, Geographic Information Science, Applied Health and Sport Science, Sport and Exercise Psychology, and Higher Education Leadership. Patterns for these programs include a minimum of 24 graduate trimester hours in the study area, with the remainder of the program to total a minimum of 30 graduate trimester hours to be approved by an advisor. These programs concentrate on courses and studies appropriate to these degrees and are outlined specifically in the departmental listings.

## Specialist in Education

The Specialist in Education (Ed.S.) program offers additional study beyond the master's degree for persons preparing for positions in educational administration and supervision. Three areas of specialization are offered: Superintendentcy, Secondary School Principalship and Elementary School Principalship. Ed.S. students seeking new certification in Missouri on the basis of their program are advised that the Missouri law requires the completion of a course on the psychology and teaching of exceptional children. This may be met by either a prior-approved

undergraduate course or an advised graduate course which may not be a part of a specific graduate program.

# Degree Steps

## Steps to Admission to Graduate School

- Submit an application for graduate admission. Applications are available online at [www.nwmissouri.edu/graduate/index.htm](http://www.nwmissouri.edu/graduate/index.htm)
- Forward official copies of baccalaureate degree transcript as well as any previous graduate transcripts to the Graduate Office. (Undergraduates of Northwest Missouri State University need not submit Northwest transcripts.)
- GRE or alternative requirements must be completed prior to acceptance or before the end of the first trimester of enrollment. (See program information for specific requirements.) International students must have the GRE completed before the application can be processed.
- GMAT or GRE requirements must be completed before an application can be processed for the MBA program. Major Field Test of 70th percentile or higher will also be accepted in lieu of the GMAT or GRE. Some programs may consider a previous Master's in lieu of the GMAT/GRE requirement. See departmental listing.
- Non-degree graduate students are not required to take the GRE.
- See individual program information in this catalog for specific program admission requirements.
- Letters of Recommendation when required (see program information for specific requirements).
- Goals Statement when required (see program information for specific requirements).

## Steps Required During First Trimester

- Official final undergraduate transcript(s) must be submitted (if not previously provided).
- Official final graduate transcript(s) must be submitted (if not previously provided).
- Official GRE scores or alternative to the GRE; depending on the program.
- Complete Degree Audit Agreement --contact your advisor.
- Writing sample—contact the advisor.

*Note: Above requirements must be met before further enrollment will be allowed.*

## Steps to Candidacy

- Official graduate transcripts for transfer credit (if applicable).
- Completion of at least 8 graduate hours (12 for School Counseling and Sport Psychology) required by the program.
- Valid teaching certificate or official PRAXIS results if required by program: must be on file in the Graduate Office prior to meeting the comprehensive assessment (for M.S.Ed. degree).
- Must maintain a 3.00 or better GPA at Northwest Missouri State University.

- Removal of deficiencies.
- Admission to Candidacy occurs after the Degree Audit Agreement is complete and above requirements for candidacy have been met. A degree-seeking graduate student may not continue past 15 graduate hours (18 for School Counseling and Sport Psychology) if he or she has not met requirements for candidacy. The Graduate Office will notify the student after he/she has been admitted to candidacy.

## **Steps to Graduation**

- Complete the Graduation Application online in CatPAWs. This application is required within the first three weeks of each term or as directed by your advisor.
- Contact your Program Advisor to make arrangements for your final Comprehensive Assessment/Portfolio Presentation. The department will notify you with specific date and time of assessment/presentation.
- Verify your graduation requirements have been met through Degree Audit.
- You will be notified via university e-mail with all information regarding the graduation process and directions to order your cap and gown
- A one-time graduation fee will be assessed by the Cashiering Office; this fee must be paid even if the student does not participate in the commencement ceremony.
- Research Component must be submitted by the department before the last day of the term you plan to graduate.

# Admission to Graduate Study

## M.A., M.S., M.S.Ed., and M.B.A.

An applicant for admission to graduate study must hold a baccalaureate degree from an institution of higher learning accredited by the appropriate regional accrediting agency. The applicant must complete the Application for Admission to Graduate School. This form may be obtained online under "Apply Now". A final transcript of baccalaureate degree and any previous graduate work must be verified by official transcripts showing both the credit and grade earned. Admission to graduate study is not the same as admission to candidacy for a master's degree. Each graduate program has specific admission policies in addition to the policies for admission to graduate study. Students needing special accommodations should contact the Graduate Office no less than 48 hours prior to attending Northwest Missouri State University. (See appropriate program in this catalog.)

There are three categories for admission:

1. **Regular admission to graduate study** requires a cumulative undergraduate GPA of 2.50 on a 4.00 scale and official scores from the GRE or GMAT test or alternative admission requirements. This admission does not constitute admission to a specific program. See specific program requirements in this catalog. A writing assessment is required during the first trimester of enrollment. Graduate students who earn below a 3.00 grade point average for two consecutive terms of enrollment will be suspended for one term. A student who has been re-admitted after a one-term suspension and who does not achieve a 3.00 grade point average for the term of re-admission will not be permitted to continue in that master's degree program.
2. **Conditional admission to graduate study** may be allowed if the student's undergraduate GPA does not meet the GPA as required by the department. The student must achieve a 3.00 GPA in his or her first eight semester hours of graduate study or be subject to suspension for one calendar year. This conditional admission does not constitute admission to a specific program. See specific program requirements in this catalog. A writing assessment is required during the first trimester of enrollment. Conditionally-admitted students, initially enrolled in eight or more hours, who withdraw from all graduate classes during their enrollment as a conditional student, will also be suspended from graduate study for one calendar year. Re-admission is possible after one year by application for re-admission to the program.
3. **Admission as a non-degree graduate student** for professional growth purposes requires that the student furnish proof of a baccalaureate degree from an institution accredited by a regional accrediting association. The student will be classified as a "non-degree" graduate student. A non-degree seeking student, who later wishes to enter a degree program, must undergo the full application and admission review process. No more than nine graduate hours earned as a non-degree student may be applied or transferred into a regular degree program. Graduate students enrolled in graduate certificate programs or in programs planned for certification only, may apply additional credits toward the degree if approved by the program advisor. Courses applied to the degree may not be older than eight years. Non-degree seeking students are not eligible for Financial Assistance.

## Ed.S.

Admission to the Ed.S. program requires completion of an Application for Admission to Graduate School. Students must also submit official copies of undergraduate (from the institution in which the baccalaureate degree was completed) and graduate transcript(s) showing evidence of a completed master's degree from a regionally-accredited institution of higher education. A valid teaching certificate must also be filed. For regular admission, the minimum grade point average must be 3.25. Conditional admission is allowed if the student's cumulative graduate GPA is between 3.00 and 3.24. The student must achieve a 3.25 GPA in his or her first eight or more semester hours of graduate study or be subject to suspension for one



year. Re-admission is possible after one year by petition to be approved by the Ed.S. faculty, the dean of the College of Education and Human Services, and the Dean of the Graduate School. See the School of Education (p. 84) section of this catalog in regard to letters of recommendation, screening procedures and other requirements.

## **GRE/GMAT Requirements**

See specific program requirements in this catalog.

## **Transfer Credit**

Only students who are in good standing as graduate students at a regionally-accredited institution are eligible to apply as graduate transfer students.

No more than nine semester hours of graduate credit consisting of no more than four courses may be transferred for a graduate program. Transfer credit must be from a regionally-accredited institution. The acceptance of the full nine hours is conditional on the applicability to the student's planned degree program. The student must be working on a specific master's degree at Northwest and have completed the Degree Audit Agreement in order to receive consideration for eligible transfer credit. The student's advisor must request, in writing, consideration of potential transfer credit from the Dean of the Graduate School. Transfer credit is not processed for non-degree or certification graduate students. Transfer credit applied toward a degree may not be older than eight years.

Only work evaluated "B" or above is acceptable for transfer credit and applicable to a specific master's degree program. Coursework taken for ungraded credit cannot be used toward a degree. Official transcripts must show that the credit is at the graduate level. No transfer credit will be accepted for courses taken by correspondence.

A student working toward the Ed.S. degree may transfer up to eight semester hours of credit from a regionally-accredited institution offering the specialist degree, if the courses are appropriate and are approved by the student's committee, if the student has grades of "B" or better, and if the credit fits into the time limit for completion of the Ed.S. degree.

Courses will be prescribed in lieu of specific requirements for those who have already completed these requirements at another institution.

Credit completed at any institution as part of an advanced degree from that institution is not acceptable for transfer toward a graduate degree at Northwest.

Northwest has the option of not accepting transfer credit from a regionally- or nationally-accredited institution for courses offered by that institution in a state outside of the state where the institution has its home campus.

## **International Student Admission**

Before deciding to attend Northwest, the international student should examine his or her financial situation very carefully. The U.S. Department of Homeland Security - and its related departments of Immigration and Customs Enforcement, Student Exchange Visitor Program, and Citizenship and Immigration Services - requires Northwest to certify that international students have been fully accepted in a graduate master's program for full-time enrollment (degree-seeking) and have sufficient funds to meet all expenses for one academic year: tuition, housing, transportation, etc. Northwest requires a Statement of Support from the student's family, sponsor, or government. The statement certifies that tuition, room and board, and personal funds are available, and that the student is permitted to export and exchange those funds into the United States. Without this certification, no I-20 form can be issued.

Students entering Northwest are required to have a reading, writing, and conversational knowledge of the English language. If the student's secondary education was obtained from a non-English speaking school or a school in which the medium of instruction is not English, and that student was hired as a teaching graduate assistant, then he or she is required to meet an English language requirement. Northwest accepts the Test of English as a Foreign Language

(TOEFL), the International English Language Testing System (IELTS) or the Pearson Test of English (PTE).

Minimum score requirements are:

TOEFL: 550 paper and pencil  
213 computer based  
79-80 Internet based

IELTS: 6.5 overall band score

PTE: 53

International students are required to have an approved health insurance plan. The student is charged for Northwest's approved plan. If the international student has a health insurance plan before entering the University, they must contact the International Affairs Office within the first two weeks of classes for approval of that policy. If approval is given, then the charge for Northwest's policy is removed from their bill.

## New International Students

To be fully admitted to Northwest, students must submit the following items to the Northwest Office of Admissions, Northwest Missouri State University, 800 University Drive, Maryville, Missouri, 64468-6001, USA. Forms are available by request from the Northwest Office of Admissions or the Graduate Office.

1. Complete International Application including supplemental and financial information (requires sponsor signature and notary seal). Application deadlines for programs with the exception of programs in the Department of Behavioral Sciences or the Department of Humanities and Social Sciences are: Fall – July 1, Spring – November 1, Summer – April 1; Guidance and Counseling accepts new students into the program only in Summer. Applications for this program are due March 1. Geographic Information Science and Applied Computer Science accept new students into the program in Fall and Spring only. See department information for application deadline.
2. Official academic transcripts from each secondary and post-secondary institution attended. If students are currently enrolled in a college or university, they should send official partial transcripts. All transcripts become the property of Northwest and cannot be released.
3. GMAT (for M.B.A. only) or GRE general test scores when required by program. See specific program for requirements.
4. Application fee in U.S. currency. (See "Fees and Costs." (p. 23))
5. Score report from the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS) or the Pearson Test of English (PTE). English proficiency scores can be no older than two years when students enroll. Minimum score requirements are:  
  
TOEFL: 550 paper and pencil,  
213 computer based,  
79-80 Internet based  
  
IELTS: 6.5 overall band score  
  
PTE: 53
6. Financial statement from a banking institution to certify that tuition, room and board, and personal funds for one academic year are available. Without this certification, no I-20 form can be issued.
7. Copy of passport.

Upon receipt of all these items, international students will be notified of acceptance or denial. The accepted student will receive a completed I-20 form which they must then present to a U.S. Consulate when applying for their student (F-1) visa. Student visas should be obtained before entering the United States, as converting from a tourist visa to a student visa is by no means assured.

## International Transfer Students

In addition to the items listed under the "International Student Admission" (p. 17) section, graduate international students who are transferring to Northwest Missouri State University from another American university should also submit a Transfer Form to the Northwest Office of Admissions. This form can be found in the International Student Application or contact the Office of Admissions. Graduate international students must also meet the guidelines set by the U.S. Immigration and Naturalization Service; check with your current institution.

The maximum graduate credit accepted for transfer is nine semester hours in no more than four courses. In order for graduate transfer credits to be evaluated, the prospective graduate student must also file a Degree Audit Form with the Northwest Graduate Office. To be considered for transfer credit, courses must have a grade of "B" or higher and may not be older than eight years at the time of degree completion.

## Admission to Graduate Study

International students must meet all admission requirements as described in "Admission to Graduate Study." (p. 16) Students must also meet any conditions described by a specific department.

Whether the undergraduate degree is from a foreign university or from an American university, graduate students should also submit the items listed in "International Student Admission." (p. 17) The prerequisites for admission to graduate school are:

- A baccalaureate-level degree from either an accredited American university or a foreign institution. If the degree is from a foreign institution, the student may have to continue undergraduate studies to fulfill Northwest requirements.
- A cumulative undergraduate grade point average of at least 2.50 on a 4.00 scale, or as required by program. Students who have a cumulative GPA between 2.20 and 2.49 may be admitted on a conditional basis. For admission to a specific program see the program requirements.
- A score report from the Graduate Record Examination (GRE) General Test (if required by the program) must be submitted prior to consideration for acceptance if pursuing a Master of Arts, a Master of Science, a Master of Science in Education, or a Specialist in Education degree. M.S.Ed. Guidance and Counseling students must submit GRE general test scores before entry according to departmental requirements. If students are pursuing a Master of Business Administration degree, a score report from the Graduate Management Admissions Test (GMAT), Graduate Record Examination (GRE), or major field achievement test must be submitted prior to consideration for acceptance.

The international student should allow approximately two months from the time all application documents are reviewed for notification of acceptance. Admission to graduate study does not constitute admission to a specific graduate program nor to candidacy for a degree.

An international student with an education degree from a foreign university may work toward an M.S.Ed. degree based on his or her undergraduate major, with the understanding that Northwest will not recommend him or her for certification anywhere in the United States unless he or she meets all certification requirements for educational programs as outlined in Northwest's current undergraduate academic catalog.

The student is eligible to study for the M.A., M.B.A., M.S., or Ed.S. degree if he or she meets admission and candidacy requirements as previously specified.

## Registration

Times for graduate registration will be announced each trimester. Courses numbered at the 500 level are available for upper division undergraduate as well as graduate students. (Students enrolling in 500-level courses for graduate credit will meet additional requirements as stated in the course syllabus.) Courses at the 600 level are for graduate students only. Courses at the 700 level are available only to Specialist in Education students. Courses at the 800 level are available only to doctoral students. No course numbered below 500 is available for graduate credit. A minimum of 16 credits of 600-level courses are required for all master's degrees. The remaining credits must be graduate level courses.

Graduate students may register for regularly-scheduled courses by contacting their advisor or the Graduate Office at 660-562-1144.

Undergraduate students who have met the requirements for dual enrollment may preregister as usual. Undergraduate students are not permitted to enroll in 600-level graduate credit courses unless approved for dual enrollment. (See "Academic Policies." (p. 32) ) Students may not dual enroll in 600-level courses by computer. Enrollment in 600-level courses must be completed in the Registrar's Office.

Each graduate student should consult the listing of department advisors and meet with his or her advisor before registration concerning the applicability of any course to his or her program as well as for any other concern.

## Admission to Candidacy

Admission to graduate study is not the equivalent of admission to candidacy for a master's degree.

The decision on a student's admission to candidacy for a master's degree will be made after the student has completed a minimum of eight semester hours of graduate credit in residence (18 hours for Guidance and Counseling), has a "B" or better average in his or her major field, and at least a "B" average in all work attempted. Decisions on candidacy will be guided by scholarship at the graduate level, evidences of professional competence, results of the GRE General Test or GMAT, as appropriate, results of other achievement tests if administered, the student's Degree Audit, other conditions specified by the department, and recommendations from the student's advisor and/or instructors.

The student may not continue past 15 graduate hours unless he or she has met the requirements for candidacy in the program and has agreed to the Degree Audit as determined with their graduate program advisor.

In addition to approval of a degree audit, admission to candidacy for the M.S.Ed. requires documentation of having met all certification requirements and approval for the appropriate level and teaching area(s) from any state. The documentation will remain on file with the Dean of the Graduate School. Students who are earning the teaching certificate as part of their graduate studies may be admitted to candidacy if the Teaching Certificate specifies all courses required to earn a Missouri Teaching Certificate. Applicants whose objectives are in non-public education may be approved by the individual program, if appropriate, without meeting certification requirements. See individual programs for exceptions.

For the M.S.Ed., M.B.A., M.A., or M.S. degrees, undergraduate courses specified by the department or college in which the applicant plans to do his or her major study may also be required. Any additional requirements specified by the department or college must also be met.

Students who are conditionally admitted or who do not qualify for conditional admission (p. 16) may not be admitted to candidacy until after they have completed eight semester hours of graduate study with a "B" or better grade point average and have met all other candidacy requirements.

The admission to candidacy procedures for the Ed.S. degree are described in the School of Education (p. 84) section.

## **Graduate Research or Professional Development Requirement**

All graduate students must complete a research or professional development component as part of their requirements for graduation. The requirement may be met through one of three options as prescribed for the individual's approved program. These options are:

- **Scholarly Paper:**

A scholarly paper is a monograph of research conducted by the student that may or may not be experimental in nature. Term papers meeting these specifications can qualify as scholarly papers. These papers can be written either individually or as a team as directed by the academic program. The student's advisor must approve the scholarly paper.

- **Thesis:**

A thesis is an in-depth scholarly examination of a particular topic that makes a contribution to the student's academic field. The specific format of the thesis may vary by academic department. The thesis requires approval of the supervising graduate faculty member, the thesis committee, and the Dean of the Graduate School. An oral defense of the thesis before the thesis committee is required. The thesis will be submitted electronically to the Dean of the Graduate School for approval by a prearranged date.

- **Professional Development Experience** A professional development experience may take the form of an internship, designated capstone class, or other prescribed experience appropriate to the discipline of the specific graduate program.

In submitting the thesis electronically, the following conditions must be met: (1) The approved graduate guidelines (available online or from the Graduate Office) must be followed for general format; (2) A specific manual prescribed by the department must be followed for the internal format of the paper; (3) Careful attention must be given to all composition skills involved; (4) An errorless original document must be submitted electronically to the Graduate Office for final approval and; (5) Consistent typing with a uniform font must be evident for the entire thesis, except for tables, charts, figures, images, photography, or similar insertions.

If approved, the thesis will be forwarded to the B.D. Owens Library. Binding of the thesis will be the responsibility of the student. Each graduate program within the department should keep files of significant research completed by their master's degree recipients.

Northwest Missouri State University subscribes to the policy that all research involving human subjects which is conducted by faculty, students, or staff must be reviewed and approved by the Institutional Review Board prior to the initiation of the research.

Northwest Missouri State University subscribes to the policy that all research involving animals which is conducted by faculty, students, or staff must be reviewed and approved by the Animal Welfare Committee prior to the initiation of the research. The Animal Welfare Committee meets once a trimester or when needed.

### **Second Degree**

A second master's degree may be earned by completing all degree requirements for the second degree. If required courses for the second degree have been completed in the first degree, appropriate course substitutions will be approved by the advisor to complete the required number of graduate credit hours required for the second degree.

## **Graduation**

The student must complete all applicable general requirements as well as those outlined for degree programs and pass the comprehensive assessment requirement.

The student must have been admitted to candidacy, and he or she must have been recommended for graduation in the prescribed manner. Recommendations for award of the

graduate degrees originate with the Graduate Council, and are acted upon by the President and the Board of Regents.

At the beginning of the last trimester of enrollment, the degree candidate must complete a Final Application for Graduate Degree (available online). The graduation fee (see “Fees and Costs” (p. 23)) is assessed whether or not the student plans to participate in commencement exercises.

Information regarding commencement exercises and ordering of cap, gown, and hood will be sent to your University email account.

Courses not required for the master’s or specialist degree that show an in-progress (IP) grade at the time of the degree conferral will not hinder the degree conferral. However, when completed and graded, those courses will be reflected within the time frame of the degree, causing the hours to count as part of the degree.

### **Participation in the Commencement Ceremony**

Students typically participate in the commencement ceremony during the trimester in which the degree is earned. A student may participate in the commencement ceremony one trimester before earning the degree if the student has 6 or fewer credit hours remaining to earn the degree in the following trimester. A student who participates in commencement in the trimester prior to earning the degree does not have to have completed the comprehensive exam, portfolio or the research component in order to participate in the commencement ceremony. Students who have earned the degree and who did not participate in commencement may participate in a later commencement ceremony. Students who want to participate in a commencement ceremony in a trimester before or after the degree is earned must contact the Graduate Office six weeks prior to commencement.

# Fees and Costs

## General Information

Statements concerning fees are announcements and are not to be regarded as offers to contract. The University reserves the right to change fees and other charges at any time by published notice before the opening of any trimester or session.

Courses taken for audit or courses taken for reduced credit or no credit will be counted at their normal credit value in computing the amount of fees to be paid.

It is the student's responsibility to pay fees and any other financial obligations to the University as they become due. Non-payment of any financial obligation may result in the administrative withdrawal of the student or legal action (at the University's option). If an outside agency/legal action becomes necessary, the collection costs will be passed on to the student. Records will be held for failure to meet payment deadlines.

If the University removes a student from a course or courses for any reason, charges will be reduced according to the published schedule. Such removal will not forgive any amounts due to the University, and records and enrollment will be held until all obligations are cleared. (See "Transcript/Diploma/Enrollment Hold" policy (p. 39).)

It is the student's responsibility to check their Northwest e-mail account often and have his or her permanent address on file in the Registrar's Office and keep the address updated.

The appeal body for most financial matters is the Student Financial Appeals Committee. Petitions are available in the Cashier's Office or online at [www.nwmissouri.edu/bursar/forms.htm](http://www.nwmissouri.edu/bursar/forms.htm).

## Residency for Fee Purposes

A student's residency status for fee purposes is determined at the time of admission according to state policy (Code of State Regulations 6CSR10-3.010). Copies of the residency policy and petitions for change of residency status are available on request from the Office of Admissions. Petitions must be submitted to the Office of Admissions prior to the beginning of the trimester for which the change is desired. A student who qualifies for Missouri residency maintains that residency as long as he/she is continuously enrolled.

## Graduate Tuition

All graduate students enrolled in the University are required to pay tuition and fees as set by the Board of Regents.

Current rates are available on the Northwest website: [www.nwmissouri.edu/bursar/tuition.htm](http://www.nwmissouri.edu/bursar/tuition.htm).

Special Programs: Tuition and fees are available at: [www.nwmissouri.edu/bursar/specialprograms.htm](http://www.nwmissouri.edu/bursar/specialprograms.htm).

Residents of all halls must have a meal contract. Block plans are sufficient for apartment residents only.

Current housing and meal rates are available at: [www.nwmissouri.edu/bursar/roomcosts.htm](http://www.nwmissouri.edu/bursar/roomcosts.htm).

Private room requests will be honored on a space available basis.

Cash meals are also available in the dining facilities.

## Senior Citizen Fee Waiver

Standard tuition (incidental and designated fees) for individuals 65 and older are waived. Individuals under this policy must pay any other fees that may be required. Enrollment in a class for this group is contingent on available space.

## Installment Payment Plan

If a student cannot pay their account in full, Northwest offers an installment plan for approved programs. If a student chooses to pay by installment, a 1% per month (12% APR) finance charge will be assessed on the remaining unpaid billed amount. Payment due dates for the Fall are the 15th of August, September, October and November. Spring payment dates are the 15th of January, February, March and April.

## Refund Policy for Dropped Courses

Tuition Reduction	Trimester Course	4-Week Summer Course
100%	Day 1-5	1st day
75%	Day 6-10	2nd day
50%	Day 11-15	3rd day
25%	Day 16-20	4th day

Other time frame prorated.

Added courses will be charged full price.

### General Information

- Refunds are based on **FULL** payment of all fees assessed.
- Payments made by financial aid, may be refunded back to the program if a student withdraws during the first 60% of a trimester.
- Refunds/reductions in charge are based on initial enrollment.
- Refunds are not made if under \$1.00 (unless requested at the Bursar/Cashiering Office).
- Refunds for off-schedule classes are prorated in line with the published schedule based on number of class meetings.

## Determination of Return of Federal Aid

Title IV funds for withdrawn students will be calculated and returned as follows:

1. Percentage of payment period (first day of class through last day of final examinations) completed is the number of calendar days the student remained enrolled divided by the total number of calendar days in the payment period.
2. Percentage of Title IV funds eligible for disbursement *earned* is the percentage of the payment period completed through the 60% point and is 100% thereafter.
3. Percentage *unearned* (to be returned to Title IV programs) is 100% minus the percentage earned.
4. The return of the Title IV funds will be allocated in the following order up to amounts received from each program: Unsubsidized Direct Loans, Federal Perkins Loans, Direct PLUS Loans, TEACH Grants.
5. The University will return up to the unearned percentage multiplied by the total institutional charges. The student is responsible for any remainder.
6. Amounts to be returned by the student to loan programs may be paid according to the terms of the promissory note. Amounts to be returned by the student to grant programs are reduced by 50%.



Examples of the application of this policy may be obtained by contacting the Office of Scholarships and Financial Assistance.

Calculated refund amounts due the students will be automatically credited to any unpaid charges.

## **Tax Credits**

Education tax credits may be available to students or parents. Contact your tax preparer for more information. Tax credit links are available through the Bursar/Cashiering Office website ([www.nwmissouri.edu/bursar/taxlinks.htm](http://www.nwmissouri.edu/bursar/taxlinks.htm)).

## **Personal Check Policy**

To insure proper credit, the Bursar's Office requests that personal checks submitted for payment or for cash have the student's Northwest ID number written on the check. If the student prefers not to have their ID number on the check, they must specifically indicate the ID number is not to be written on the check when submitting the payment. University staff will write students ID numbers on checks when the student has not done so already.

## **Miscellaneous Assessments**

**Disability Documentation.** Northwest Missouri State University is a moderately selective university. All prospective students must meet established entrance criteria and be accepted through the Admissions Office before submitting disability-related documentation. Documentation should be submitted to the Office for Equity and Accessibility (OEA), not to the Admissions Office. Please review the Acceptable Disability Documentation page carefully before contacting an OEA staff member.

After acceptance to Northwest, students with disabilities may request appropriate accommodations and submit supportive documentation to the Accessibility Coordinator. The Documentation Review Process can be found at <http://www.nwmissouri.edu/diversity/accessibility/reviewprocess.htm>. After the review has been completed, you will be contacted by an OEA member who will serve as your primary contact for services during your time at Northwest. If approved, your OEA contact will give you an accommodation letter outlining your accommodations that you will present to faculty and staff. This letter is recognized campus-wide as verification that you are a qualified student with a disability.

**Graduate Assistant Fee Reductions/Work Related Scholarships.** If employment is terminated and the student remains enrolled, the fee reduction or scholarship is prorated for time employed.

**Student Health Insurance.** International students are required to have an approved health insurance plan and will be charged for the plan through their Northwest account.

# Assistantships and Financial Assistance

Graduate assistantship information regarding eligibility, compensation and policies can be found in the Graduate Assistant Handbook (<http://www.nwmissouri.edu/graduate/ga/index.htm>). Information about other financial aid may be obtained from the Office of Scholarships and Financial Assistance.

# Financial Assistance

## Available Assistance

Northwest awards and/or administers many types of financial assistance from federal, state, University and private sources. Financial aid can be divided into three general categories:

- **Scholarships** – financial gifts based on academic, performance, or other high achievement.
- **Loans** – from Federal William D. Ford Direct Loan Program, or from private non-federal sources.
- **Employment** – either Federal Work-Study Program or institutional employment.

Scholarships are gifts that usually do not have to be repaid. Loans must be repaid with interest at a future date, which usually begins six months after the student ceases to be enrolled at least half-time. For information contact the Office of Scholarships and Financial Assistance at (660) 562-1363.

Financial aid programs assume that the primary responsibility for educational and living expenses rests with the students. Most of Northwest's assistance is designed to supplement student resources. In addition to student earnings and savings, other resources considered when determining federal aid eligibility include, but are not limited to, University fee waivers, private scholarships and veterans' benefits.

## Maximum Time Frame and Credit Hours

Master's level students are eligible to apply for aid for up to 67 attempted trimester credit hours and Specialist level students are eligible to apply for aid for up to 96 attempted trimester credit hours.

Students who have attempted the maximum number of credit hours are ineligible for any type of federal financial aid. A change of major does not extend the number of credit hours that may be attempted. Program limitations may override this credit hour maximum.

## Application Procedures

Students should contact the Northwest Office of Scholarships and Financial Assistance on or after October 1 for information and applications for federal student financial aid. Some of the information required on the Free Application for Federal Student Aid (FAFSA) must be taken from the student's federal income tax forms. **Northwest holds all financial information in strictest confidence, and uses the information only to determine eligibility for federal aid.** See the "Student Records" section (p. 40) of this catalog for more information on records privacy.

## Financial Assistance Programs Award Processing

The Office of Scholarships and Financial Assistance will attempt to meet students' financial needs pending the availability of funds. Federal financial aid will continue to be awarded until all funds are committed or until the specified deadlines, whichever occurs first.

Applications and required documentation should be submitted at the earliest possible date after October 1 for the following academic year.

Students must be enrolled in at least three (3) credit hours per trimester in order to be eligible for direct loans and for in-school deferments of previous loans.

## Award Notification

The Office of Scholarships and Financial Assistance will notify students, by mail and/or via their university assigned e-mail account, when their awards are available and how they can be accessed on their CatPAWS account in the Secure Area. Students may accept all or part of their award. All first-time borrowers at Northwest must also complete a loan entrance counseling session and a master promissory note before loan funds can be credited to their account.

## Satisfactory Academic Progress

To be eligible to receive federal student aid, students must maintain satisfactory academic progress toward a degree or certificate. The two standards utilized by the University to determine satisfactory academic progress are quantitative and qualitative progress.

Quantitative progress requires students to complete a certain percentage of attempted courses. Qualitative progress requires students to earn a predetermined Northwest cumulative grade point average. Students must be in compliance with the University's written standards for both quantitative and qualitative progress to maintain eligibility for any type of federal financial aid.

The University will attempt to notify students by e-mail or mail when they have not maintained satisfactory academic progress. However, students are responsible for being aware of the satisfactory academic progress policies and will remain ineligible, even if the University's notification is not received.

## Qualitative Progress

Qualitative academic progress will be determined at the end of each trimester. To be considered making satisfactory qualitative progress, graduate students must have the following minimum Northwest cumulative grade point averages:

Master's	3.00
Specialist	3.25

## Quantitative Progress

Quantitative progress requires students to successfully complete a certain percentage of attempted courses. Final quantitative progress will be determined at the end of each trimester. To be considered making satisfactory academic progress, students must pass at least 67% of the cumulative credit hours which they have attempted.

A credit completion rate is the ratio of a student's total credits successfully completed to the student's total attempted credits. Attempted credits include successfully completed courses, courses dropped after the drop/add period, failed courses, repeated courses, course withdrawals and transfer credits that have been accepted by the University.

## Course Audits

Students are not eligible to receive federal financial aid for courses audited. Courses audited will not be included when determining the number of credit hours a student has attempted or completed.

## Incomplete Grades

Courses in which a student received incomplete grades will be counted as hours attempted but not counted as hours completed until the final passing grade is officially posted to the student's permanent record.

## Appeal Process

If a student has special circumstances he/she wishes to report, a written petition must be submitted to the Student Financial Review Committee. The appeal must be based on

documented mitigating circumstances beyond the student's control. Petition forms must be picked up and returned to the Office of Scholarships and Financial Assistance. The Committee will consider written comments, past academic records, documentation of medical or other serious situations, and whether deficiencies can be made up in a reasonable time.

Written appeals and all supporting documentation should be submitted to the Office of Scholarships and Financial Assistance as soon as possible after the end of the trimester the deficiency occurred. The Student Financial Review Committee will review the written appeal and supporting documentation and notify the student in writing of the appeal decision within 14 days from the date received.

To appeal the Student Financial Review Committee's decision the student must submit a written appeal and all supporting documentation to the Office of the Provost within seven days from the date on the Student Financial Review Committee's written response. The Provost's decision is final.

## **Withdrawal from the University**

If a student withdraws from the University while receiving federal financial assistance, the hours of enrollment will be counted as attempted but not passed. The student must pass the required percentage of cumulative hours attempted to be considered meeting satisfactory academic progress requirements.

For a student who withdraws, the financial assistance award received will be prorated and the unused portion of the financial assistance award will be refunded to the programs involved. Depending on the proration of the aid, a balance may be owed on the student account.

## **Taxation of Financial Assistance**

Scholarships and assistantships are tax exempt only if used for tuition and fees, books, supplies, and equipment required for the course of study. Students must be candidates for degrees.

Scholarships and assistantships are taxable if designated for purposes other than tuition and related expenses or if attributable to service performed.

Fee reductions for employee dependent graduate students must be reported as taxable income for the employee.

For specific information, contact a tax preparation professional.

## **Veterans' Affairs**

The Office of Financial Assistance assists veterans and eligible persons in all phases of enrollment certification and retention of educational benefits, tutorial assistance, and veterans' work-study.

Northwest students receiving benefits from the Veterans' Administration will meet most VA conditions for satisfactorily pursuing a program of study by meeting the University's general catalog requirements. However, a few VA requirements are more stringent than the general catalog requirements.

In addition to their eligible benefits, the following non-Missouri resident students shall be awarded a tuition waiver to ensure they only pay the current in-state tuition rate:

- A Veteran using educational assistance under chapter 30 (Montgomery G.I. Bill® - Active Duty Program) or chapter 33 (Post-9/11 G.I. Bill®), of title 38, United States Code, who lives in Missouri while attending a school located in Missouri (regardless of his/her formal state of residence) and enrolls in the school within three years of discharge from a period of active duty service of 90 days or more.

- Anyone using transferred Post-9/11 G.I. Bill® benefits (38 U.S.C. §3319) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal state of residence) and enrolls in the school within three years of the transferor's discharge of release from a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 G.I. Bill® benefits (38 U.S.C. §3319) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal state of residence) and the transferor is a member of the uniformed service who is serving on active duty.
- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. §3311(b)(9)) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal state of residence).
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person described must have enrolled in the school prior to the expiration of the three-year period following discharge or release described above and must be using education benefits under either chapter 30 or chapter 33, of title 38, United States Code.

### **Regular Attendance**

VA students must attend all classes according to each instructor's attendance policies. VA benefits will be terminated as of the last date of attendance reported by the instructor for students with unsatisfactory attendance. All VA students using Chapter 30, 1607, and 1606 must verify their attendance monthly, on or after the last day of each month using the Web Automated Verification of Enrollment (WAVE) or calling 877.823.2378.

### **Unsatisfactory Progress**

The University is required to notify the Veterans' Administration that a student did not make satisfactory progress if the student:

1. receives a non-punitive grade in any course;
2. fails or withdraws from all classes; or
3. is suspended by the University.

Education benefits will be terminated for students who fail to make VA satisfactory progress.

### **Classes Not Completed**

The Veterans' Administration may require students to repay benefits received for classes dropped. All VA students must report changes in enrollment status, including drop/add/withdrawals to the school certifying official. The VA will only pay for courses that lead to a standard degree or certificate. VA benefits will not be paid for courses in which students have already earned a satisfactory grade, unless the university state that a higher grade is necessary for the completion of the curriculum. VA benefits will not be paid for courses that a student elects to audit.

### **Delayed/Incomplete Grades**

Graduate students have one year to remove an incomplete grade or they will be changed to grades of "F".

VA students should contact the Office of Veterans' Affairs before deciding to repeat a course, withdraw from the University, drop a class, take a delayed grade or interrupt class attendance to assure compliance with VA regulations.

**Contact Information**

For information and assistance in completing and maintaining the proper documents to receive VA benefits, a student should contact the Office of Financial Assistance by calling 660.562.1363 or by e-mailing [finaid@nwmissouri.edu](mailto:finaid@nwmissouri.edu).

**Vocational Rehabilitation**

All students receiving vocational funding from the State Department of Rehabilitation or Veterans' Administration should contact the Office of Scholarships and Financial Assistance for certification and counseling assistance.

# Policies and Regulations

## **Total Hours Required**

A minimum of 30 semester hours is required for all master's and specialist's degrees. Check specific program requirements in the appropriate section in this catalog. All master's degrees require 15 hours of courses at the 600 level. All other courses must be graduate level.

## **Minimum Grade Point Average to Remain in Graduate Program**

Graduate students who earn below a 3.00 grade point average for two consecutive terms of enrollment will be suspended for one term. A student who has been readmitted after a one-term suspension and who does not achieve a 3.00 grade point average for the term of readmission will not be permitted to continue in that master's degree program. For competency-based programs with alternative grading scales, please refer to the specific program for information regarding continuance of study.

## **Minimum Grade Point Average Required for Graduation**

The overall grade point average must be 3.00 ("B") or above in the major study area. All graduate coursework taken at Northwest must average 3.00 or above, with no more than six hours of "C," and no hours of "D" or "F". Transfer credit grades do not apply to calculating the 3.00 GPA in courses taken at Northwest. The Specialist in Education degree requires a 3.25 overall GPA at Northwest. For competency-based programs with an alternative grade scale, please refer to the program for minimum grade requirements.

## **Time Limitations**

All requirements submitted in fulfillment of a Master's or Specialist in Education degree must be completed within a period of eight years. Coursework for the Certificate in Instructional Technology must be taken within three years, and the ELL/ESOL Certificate has eight years to complete. In the event a student has already completed a required course taken before the eight-year time period, the academic advisor and graduate student may agree to substitute another graduate level course which would complement the student's program. This substitution must be submitted to the Graduate Office in writing. No coursework older than eight years will be counted toward the degree. These limitations will be extended only for the period of active duty of students entering the military service. The student must submit a petition upon his or her return from military service.

## **Comprehensive Assessment**

A comprehensive assessment is administered in the term in which the student expects to receive the degree. Each graduate program must have a comprehensive assessment of their students' broad knowledge of the field. Since such knowledge is beyond the scope of any single research component, the assessment cannot be limited to the content of a thesis. The comprehensive assessment must include a written component. This written component may take one (or more) of several forms:

- multiple choice (including ETS-type exams)
- take-home essay(s)
- timed sit-down essay(s)
- reflective portfolio essay(s)



Each program may choose to add additional components, such as portfolios, oral defenses, or proposals. However, such requirements do not necessarily meet the required assessment as described above.

The 5-Year Review should mandate each department present the comprehensive examination framework to demonstrate breadth and the comprehensive nature of the examination.

Students who require special accommodations should contact the Department no less than 48 hours prior to test date. The student must have been admitted to candidacy to be eligible to attempt the comprehensive assessment and must have a 3.00 GPA in all coursework. Students must contact their Program Advisor or Department no later than the third week of the trimester the student plans to complete the comprehensive assessment. Approval will be determined by the Associate Provost of Graduate Studies and Special Programs in consultation with the student's advisor. Students must achieve the minimum of an overall "B" grade in order to pass. If students lack two required courses (maximum of six semester hours), they may apply to complete the comprehensive assessment. If approved by the graduate advisor and Associate Provost of Graduate Studies and Special Programs, a student who fails the comprehensive assessment for a master's degree may take it again. The maximum number of times the student may attempt the comprehensive assessment for the master's degree is three, in three separate sessions, in fall, spring, or summer. The Specialist in Education candidate may request approval to attempt the comprehensive assessment once after failing.

The comprehensive examination will be offered each trimester during a testing period and at a location or mode of delivery to be specified by the department that is responsible for the examination. Request for flexibility in extenuating circumstances may be considered upon petition, with supporting documentation, to the Associate Provost of Graduate Studies and Special Programs prior to the scheduled examination.

## **Portfolio Requirement**

To assess program effectiveness, a performance-based graduate portfolio is required in place of the comprehensive assessment for some programs. Program advisors will provide candidates with the program specific template at the time the Degree Audit is completed.

## **Deficiencies and Teacher Certification**

A student who desires a University recommendation for certification in an area other than his or her earned master's degree must remove specified graduate deficiencies (and undergraduate, if applicable). If the student works directly with a state school agency for certification, he or she need only take courses specified by that agency. The student may pursue a second master's degree, if applicable.

## **Conduct**

Any issues relating to the conduct of a graduate student will be handled by the Graduate Council and/or the Student Conduct and Development Coordinator.

## **Superseding Grades/Repeating Courses**

A student may re-enroll in a course once for purposes of improving the grade and demonstrating greater competency. The student must have a written petition (forms are available online) and the approval of the graduate advisor or school director, and the Associate Provost of Graduate Studies and Special Programs.

A student may not be allowed to supersede a grade earned at Northwest by completing an equivalent course at another institution.

## **Pass/Fail**

With the exception of programs that are competency-based, no courses for graduate credit may be taken on a pass/fail basis.

## Academic Load

A full-time graduate student is one who takes six or more hours in a trimester. The maximum is 16 hours in a trimester. Workshop credits are counted in the academic load. (For financial aid purposes, a student must take three hours during a trimester to be considered a half-time student.)

Students working on an assistantship are subject to regulations stipulated by that award concerning minimum enrollment requirement and maximum credit load to be taken.

Courses taken for audit are included in the academic load.

## Dual Enrollment

A Northwest senior who needs fewer than 30 semester hours to complete the baccalaureate degree and who needs less than a full enrollment of required undergraduate courses in any term of the senior year may petition to take courses for graduate credit, provided prerequisites are met and he or she follows the approval procedures. The student must: 1) have a cumulative undergraduate GPA of 2.50 or above, 2) fill out a petition for dual enrollment **online**, 3) apply for admission to the Graduate School if from another regionally-accredited university, and 4) have approval of the appropriate advisor or chairperson, and the Dean of the Graduate School. The maximum load is 16 hours for any trimester in which graduate credit is involved, and no more than seven hours in a four-week summer session.

Dual enrollment is available at the graduate and the undergraduate level:

A Northwest graduate student may petition to take an undergraduate class (500 level) which is not required for their graduate program, pay undergraduate fees and receive undergraduate credit. The Petition for Dual Enrollment for Undergraduate Credit for Graduate Students must be completed during the first week of class and cannot be changed to graduate credit at any time in the future. Petitions for Dual Enrollment for Undergraduate Credit for Graduate Students are available **online** and must be approved by the Graduate Program Director and Graduate Dean. The maximum load is 16 hours for any trimester in which graduate credit is involved, and no more than seven hours in a four-week summer session.

## Accelerated Bachelor's to Master's Programs

An accelerated Bachelor's to Master's program allows a student to enroll in approved graduate courses while completing the baccalaureate degree requirements. These courses will be shared by the undergraduate and graduate degree programs. The number of credits that are shared for the undergraduate and graduate programs will vary but will not exceed 15 credits or 50% of the graduate program. See the accelerated program section under the graduate program listing in this catalog for requirements and eligibility for admission.

### Time of Application

The student is eligible to begin the accelerated graduate program when they have reached Junior status and may apply to the accelerated program the semester before they reach 60 credits. A student may apply to the program after 60 credits but this could limit the total number of graduate courses that are shared between Bachelor's and Master's degrees.

### Tuition

Undergraduate tuition rates will apply during the undergraduate portion of completing the degree requirements.

### Approved Program

The coordinator of the graduate program will determine the shared graduate courses that will be taken during the undergraduate degree. The Approved Accelerated Program form will list the courses and serve as the student's admission to the accelerated program. This form will be filed with the Graduate Office.

The student will not be eligible for any graduate-level scholarships, tuition or fee waivers, or assistantships while pursuing the baccalaureate portion of the accelerated Bachelor's to Master's program.

Upon completion of the baccalaureate degree the student will formally apply for admission to the graduate program. In most cases these students will have met requirements for candidacy as they begin their program.

### **Progress**

A student is expected to maintain the same undergraduate grades that were required for admission to the accelerated Bachelor's to Master's program. A student that is not making satisfactory academic progress in the accelerated program can be suspended or dismissed by the graduate coordinator of the program. Unsatisfactory progress may involve deficient grades for graduate courses, lowered performance on undergraduate grades, or any consideration described in the program's requirements for graduate candidacy.

Students may appeal this decision only at the department or school level due to their undergraduate status. Appeals or petitions directly related to the graduate courses, however, will follow the graduate policies in this catalog.

A student that is either dismissed or suspended from the accelerated bachelor's to master's program may still apply for graduate admission upon completion of the baccalaureate degree. Additionally, a student who chooses not to complete the accelerated program may also apply for graduate admission at a later date.

### **Graduate Transcript**

The graduate level courses that were approved in the student's Approved Accelerated Program form will be transferred to a graduate transcript only after the student is admitted to the graduate program. Students may be required to repeat courses in which a deficient grade was earned.

### **Graduate Admission**

When the student is formally admitted to the graduate program, all graduate policies will then apply. This includes the 8-year time limit on all graduate courses.

## **Code of Academic Integrity**

Visit <https://www.nwmissouri.edu/policies/academics/Academic-Integrity.pdf> for up-to-date information.

## **Audit**

Graduate students may audit graduate courses, provided the class section has available space and proper enrollment forms are completed. The normal academic load applies. Auditors will enroll for the course, pay the same fees as other students, and enjoy all the privileges of the University. Forms are available in the Registrar's Office.

The auditor is expected to attend regularly and is to determine from the instructor the amount of work expected. If an auditing student does not meet the criteria for the course, the instructor may drop the student from the class roll and the audit will not appear on the student's record.

Students who initially enroll in a course for credit may be permitted to change their enrollment to audit or remove from audit any time within the first three weeks of the trimester, eight days of a six-week or eight-week course, five days of a four-week course and two days of any shorter length course.

A course may be audited either before or after it is taken for academic credit.

## Correspondence Courses and Workshops

Northwest does not accept courses by correspondence for graduate credit. Campus-based, electronically-generated courses will be considered as residential credit. No more than six hours of workshop credit may be applied to any degree. Workshop credit is a part of the academic load.

## Credit System

The unit of credit is the semester hour. Lecture-recitation courses average one hour of meeting per week in a trimester for each hour of credit given. Laboratory courses average two or more hours per week in a trimester for each hour of credit given.

The amount of credit for each course is indicated in the departmental statements and in the *Course Offerings*.

## Course Numbering

Courses are numbered according to the following plan:

001 to 099:	Non-college Parallel
100 to 299:	Lower Division
300 to 499:	Upper Division
500 to 599:	Upper Division/Graduate (Additional requirements must be met for graduate credit.)
600 to 699:	Graduate Only
700 to 799:	Specialist in Education
800 to 899:	Doctoral

A minimum of 16 credits of 600-level courses are required for all master's degrees. The remaining required credits must be graduate level.

## Grading System

The following marks are used in evaluating the work of students:

A:	superior	AT:	audit
B:	above average	DL:	delayed grade (prior to Fall 2004)
C:	average	I:	incomplete
D:	below average	IP:	in progress
F:	failure	CBP:	competency-based pass (85% or higher)
W:	official withdrawal from University	CBF:	competency-based fail (below 85%)
P:	pass on pass/fail system	PLC:	prior learning credit
NC:	no credit		

## Incomplete Grade

The incomplete grade form is initiated with the course instructor. This grade indicates that due to unusual circumstances a small portion of a course has not been completed. In each instance when an incomplete grade is assigned, the instructor of the course, at the end of the course, indicates on the form what the student must do to complete the course. The form is turned in to the Registrar's Office at the time the final grades are submitted for the course. **Incomplete grades in graduate credit courses (with the exception of thesis courses and other courses designated by the Dean of the Graduate School) must be removed within one calendar year, or the incomplete grade becomes an "F" on the student's permanent grade record. Graduate students cannot graduate if they have an incomplete grade on their transcript.**

A student wishing to submit makeup work to remove an incomplete grade must make arrangements with the instructor. Faculty members are not obligated to accept and evaluate makeup work in order to submit a grade change after the above time periods. The student must request specific extensions of time in writing from the instructor of the course. If supported by the instructor, the request, with instructor support, must be forwarded to the

Dean of the Graduate School for implementation. If not supported by the instructor, a grade of “F” will be assigned at the end of the initial incomplete time period. Length of the extension, if granted, will be determined by the instructor in consultation with the Dean of the Graduate School.

## **In-Progress Grade**

The in-progress (IP) grade is used only for outreach courses which span more than one trimester. The IP designation is determined by the course, not the individual student. The IP grade is assigned at the end of the first trimester of the course and is replaced by the earned grade at the end of the course. If the student does not complete the course by the end of the established grading period, the appropriate grade will be assigned by the instructor. If the grade is incomplete, the existing incomplete grade policies would then apply.

Courses not required for the master’s or specialist degree that show an in-progress (IP) grade at the time of the degree conferral will not hinder the degree conferral. However, when completed and graded, those courses will be reflected within the time frame of the degree, causing the hours to count as part of the degree.

## **Final Examinations**

The University publishes an official final examination schedule for fall and spring trimesters. Summer session examinations are scheduled by each instructor on the last day of the term.

Faculty members who wish to approve individual students for a legitimate change in their final examination schedule must make this recommendation to the department chairperson. Only those students who have three examinations scheduled on the same day will have a schedule change initiated by the department chair. Students must have a written recommendation from their instructor for any change.

## **Grade Appeal Procedure**

Faculty members have a professional obligation to evaluate the progress and/or performance of students, and to assign each student a course grade which validly reflects the student’s progress and/or performance in that course. Student progress and/or performance should be evaluated solely on the academic objectives of the course.

Students are responsible for maintaining standards of academic performance established for each course in which they are enrolled. Lack of success in meeting the academic grading standards established by the instructor does not constitute a case for appeal.

A student who feels that the instructor has graded on the basis of personal opinions or other matters unrelated to the established academic standards is encouraged to consult with the instructor in the hope that a satisfactory solution can be achieved.

If the student still feels the instructor is biased or capricious in academic evaluation, the student has the right to make a written appeal of the grade within one calendar year from the last day of finals in the trimester during which the grade in question was assigned. The written appeal shall be submitted to the appeal committee appointed by the department. Such a committee consists of at least one faculty member and one student, both of whom are not directly involved in the case.

The departmental-level appeal committee will convene within a reasonable time following the student’s request for a formal hearing. If the committee feels there is reasonable justification for the student’s appeal, then it will schedule a formal hearing in which testimony from both the student making the appeal and from the instructor concerned will be considered, along with any supporting evidence. At the conclusion of the hearing, the committee will make its recommendation for the resolution of the difference, and will notify in writing the student, the instructor, and the department chair or coordinator. The written decision and the signatures of the committee members will be filed in the department.

If the departmental-level appeal committee supports the student but the instructor refuses to accept the decision of the committee, the student may, as a last resort, appeal to the department chairperson or coordinator. Should the allegation concern the department chairperson or coordinator, the final appeal will be made to the Dean of the Graduate School, or other designee of the Provost.

## **Academic Policies Appeal Process**

The process of appealing decisions based on stated academic policy beyond action of the Dean of the Graduate School requires a letter of petition clearly stating the reason for the appeal. The letter should be addressed to the Graduate Council, c/o Graduate Office. The Graduate Council will hear the appeal.

## **Adding, Dropping, and Withdrawals**

**Adding Courses:** Courses may be added during the first day of any short course, two-week course, or four-week course; during the first two days of a six-week or eight-week course, and during the first four days of any course longer than eight weeks of instruction. This includes adding a course, exchanging courses, dropping courses, and transferring from one section of a course to another section. No record of such courses is made on the student's transcript. No change in program may be made without prior approval of the student's advisor.

**Dropping Courses:** Students may drop a course during the first 80% of any length course unless under a charge of academic dishonesty. (See "Fees and Costs" section (p. 23).) Students who follow the prescribed procedure for dropping a course will have no grade entered on their permanent record. Those who do not follow the prescribed procedure for dropping a course will have a grade of "F" recorded on their permanent record. Students cannot drop all of the courses in which they are enrolled. This process is called "Withdrawal from the University" (see below).

If due to extraordinary reasons—beyond the control of the student—a student desires to drop a course after the deadline (late drop), he or she must petition the Dean of the Graduate School. Extraordinary reasons which may be considered include advisor error, administrative error, or documented medical reasons. Students who are granted a late drop will have a "DR" entered on the permanent record.

During the drop period, an instructor of a course may administratively drop a student from a course when the student is in non-compliance with the expectations of the course provided that: 1) the course syllabus clearly states the conditions under which an administrative drop would be initiated; and 2) the student is warned of a pending administrative drop and provided the opportunity, when possible, to remedy the situation. Reasons for such action may be poor attendance and/or sustained non-submissions of required work in the course.

**Courses may not be dropped during the final exam period.**

**Withdrawal from the University:** All students who wish to terminate their enrollment during a term should initially consult with their advisor. If, after meeting with the advisor, a student decides to withdraw from the University, the student must complete an Exit Report in the Graduate Office in the Administration Building. It is extremely important that a withdrawal be completed to ensure that proper entries are made on the academic transcript, that fee refunds are processed (See "Fees and Costs" section (p. 23).) and that all University records are corrected to reflect the status of the student.

If a student cannot initiate the withdrawal process in person, he or she should write or call the Graduate Office, who will process the withdrawal from the University.

Students who wish to withdraw from the University must do so before 80% of any trimester or shorter-length term has expired. A "W" will be recorded for each class.

Students who are administratively withdrawn for non-payment of fees are prohibited from attending classes.

Students who do not follow the prescribed procedure in withdrawing from the University will have recorded on their permanent record a grade of “F” for their courses.

## **Transcript of Grades**

Students may request, in writing, copies of their permanent grade record. Normally, a transcript can be furnished upon 24 hours notice; however, at the end of a term at least two weeks notice should be allowed for grade recording and processing.

The student must enclose the transcript fee (see “Fees and Costs” (p. 23)) along with the written request.

## **Transcript/Diploma/Enrollment Hold**

Failure to meet obligations to Northwest, financial (for example: tuition, room, board, telephone, parking, library fines, class materials) or otherwise (for example: incomplete admissions file) will be cause for refusal to allow an individual to enroll, receive a diploma, or receive an academic transcript.

### **Guidelines**

1. In financial situations, the Bursar will consider cases of exceptional circumstances.
  - a. An exception to a hold on a transcript will be made when (1) a transcript is required by a funding agency in order for funds due the University to be released or (2) when financial assistance personnel have verified that all necessary paperwork has been completed by the student and that a sufficient amount of assistance to cover the student’s obligation will be forthcoming.
  - b. Enrollment may be allowed at the discretion of the treasurer when there is reasonable assurance that funding will be forthcoming.
  - c. No exceptions are made to a hold on a diploma.
2. In situations where an individual has not submitted all the required transcripts and/or GRE/GMAT results, the Dean of the Graduate School may release a hold when there is reasonable assurance that the required materials are forthcoming. A hold may be placed on preregistration as well as general registration.
3. In other situations (for example: disciplinary, etc.), the Dean of the Graduate School will consider exceptional circumstances.

## **Housing**

If a graduate student chooses to live on campus, the student must abide by the regulations for living on campus.

## **Special Accommodations**

Students needing special accommodations should contact the Graduate Office no less than 48 hours prior to attending Northwest Missouri State University.

## **Motor Vehicle Registration**

All vehicles must be registered with University Police in order to use University parking facilities. Parking areas are designated for use by permit type. Permits may be purchased at the Student Services Center in the Administration Building. Maps of Northwest and copies of the *Parking and Traffic Policy* may also be obtained at the Student Services Center. All students will be responsible for knowing and observing campus parking and traffic policies. Appeals of parking and traffic fines are heard by the Student Faculty Traffic Committee and may be filed at the University Police Department.

## Student Records

Northwest complies with the Family Educational Rights and Privacy Act (FERPA) which provides guidelines on storage and releasing of student and former student records. Individuals may waive their rights to inspect records at Northwest, but the University may not require such a waiver as a condition to attendance.

Individuals may request a copy of their records, for a copying fee, from the following offices:

**Academic Records:** Office of the Registrar, Administration Building

**Advisement Records:** Graduate Office, Administration Building

**Alumni Records:** Office of University Advancement, Alumni House

**Disciplinary Records:** V.P. Student Affairs, J.W. Jones Union

**Financial Assistance Records:** Office of Scholarships and Financial Assistance, Administration Building

**Housing Records:** Residential Life, J.W. Jones Union

**Medical Records:** Wellness Services

**Placement Records:** Office of Career Services, Administration Building

**Security Records:** University Police, Support Services Building

**Student Teaching Records:** Educational Field Experiences Office, Brown Education Hall

**Teacher Education Records:** Teacher Education Student Services Office, Administration Building

Information remains confidential between the individual and the University, and will not be released to a third party without the written consent of the student. Exceptions to this rule include information released to: Northwest officials, officials of other schools where the student is seeking admission, federal or state educational authorities, financial assistance officials in connection with the receipt of financial assistance, state law officials or subpoenaed requests, accrediting organizations, and parents of dependent students.

These parties will receive a notice that the information released to them must not be further distributed without the consent of the student.

The following records are **not** available for inspection by a third party: parents' financial records, confidential letters of recommendation written before January 1, 1975, personal records of educators (e.g., instructor's grade book), law enforcement or security records, employee records, and medical or other professional records, unless the individual wishes to have a qualified professional examine his or her record.

Certain information about a currently enrolled student – name, age, address, phone, e-mail address, place and date of birth, major, grade level, enrollment status, student identification number, photograph, participation in activities and sports, weight and height of athletes, dates of attendance, degrees and awards received, and the most recent educational institution attended is considered directory information and thus is releasable to the public. If a student does not want this information in the student directory, he or she should contact the Office of the Registrar, Administration Building, within the first 10 days of the beginning of the term.

Inaccurate records may be challenged through a hearing requested from the Vice President of Student Affairs. The burden of proof that a record is inaccurate lies with the student. An impartial hearing officer will be appointed, to whom the student will have full opportunity to present his or her case. If desired, a student may submit a written explanation of the content of a record, which will become part of the record.



For any further information on student and former student records and records privacy, contact the Vice President of Student Affairs.

# Resources and Services

## Alumni Association

The Northwest Alumni Association fosters lifelong relationships through initiatives and opportunities that advance the University and its alumni, future alumni and friends. The Alumni Association has three pillars of focus: connect, mentor and promote. Through the connect pillar, the Alumni Association provides engagement opportunities for alumni, friends, parents and students to connect with each other and with the University. The focus of the mentor pillar is to provide opportunities for alumni and students to connect or benefit from each other in a professional setting. The promote pillar focus on promoting the Alumni Association and University by providing information and opportunities on all things Northwest.

Partnering with the offices of Career Services and Admissions, the Northwest Alumni Association coordinates outreach programs for career networking and student recruitment using alumni as ambassadors. As of 2017, there were 20 Northwest alumni chapters throughout the United States and a chapter in Japan. Several others are currently being formed. These chapters give alumni the opportunity to connect with each other and the University and to stay informed and involved with their alma mater. Members of the Northwest Alumni Association receive many benefits including the *Northwest Alumni Magazine*, insurance opportunities, and the Tourin' Bearcats travel program. In addition, members receive invitations to numerous events throughout the year. The Office of University Advancement, which coordinates the Northwest Alumni Association, is located in the Michael L. Faust Center for Alumni and Friends at 640 College Avenue.

## B.D. Owens Library

B.D. Owens Library is a service-oriented library in a 116,000 square foot facility designed to meet the varied learning and research needs of Northwest students, faculty, and staff. The library collections and services support scholarly research and provide current information that promotes student competencies concerning lifelong learning, critical thinking, communication and research.

The library's website provides on-campus and remote access to thousands of journal titles and eBooks for currently enrolled students and current faculty. The library's robust online catalog returns search displays with resource summaries and availability/location of books, eBooks, government documents, and audiovisual materials. Course-focused guides and tutorials along with reference and citing assistance are also available. Reference service includes a broad array of delivery methods, including text, chat, walk-in, by appointment, e-mail, and phone. The library's very popular "Help with Research" program provides learners the opportunity to receive personalized research assistance on a specific, well-defined topic.

Library users can access over 160,000 eBooks and 40,000 electronic format periodicals. Additionally, the building houses over 200,000 books, documents and bound periodicals. Additional access to over 27 million items is provided through the statewide catalog maintained by the MOBIUS Consortium. MOBIUS items arrive at B.D. Owens Library in 3-5 working days. Interlibrary loan service is available for materials not available within the state.

B.D. Owens Library is home to several key services widely used by the University community that complement the library's instructional support mission. The Talent Development Center, which offers free tutoring and other academic support services across the curriculum, the Writing Center, which offers writing across the curriculum tutoring, and the Learning & Teaching Center, which supports faculty development, administers and supports the University's instructional technology needs, are all housed on the second floor. Information Technology is also provided on the first floor.

Throughout the library, areas for private study and reading are available along with spaces and resources that invite collaboration and facilitate team project development. Additionally, Novel

Grounds, the library's full-service coffee house, provides a relaxing space for quiet conversation and contemplation. B.D. Owens Library is fully wireless.

## **Bearcat Bookstore**

The Bearcat Bookstore, a Barnes & Noble college bookstore, is located on the second floor of the J.W. Jones Student Union and is your on-campus source for Bearcat clothing and gifts, greeting cards, instructional materials and supplies, hardback and paperback books and many other items. Students have the option of charging items from the bookstore to their student accounts. Store hours during the fall and spring trimesters are Monday-Thursday, 8 a.m. - 5 p.m.; Friday, 8 a.m. - 4:30 p.m.; closed Saturdays and Sundays except for home football games or other campus-wide events. Summer trimester hours are Monday-Thursday, 9 a.m. - 4 p.m. The bookstore can also be found online at [www.nwmissouri.edu.bncollege.com](http://www.nwmissouri.edu.bncollege.com) and on Facebook at [www.facebook.com/bearcatbookstore](http://www.facebook.com/bearcatbookstore).

## **Bursar/Cashiering Office**

Located on the first floor of the Administration Building, the Bursar/Cashiering Office receives and processes all payments to Northwest. Inquiries concerning student financial accounts, installments, refunds, and automatic applications of financial assistance should be directed to the Bursar/Cashiering Office at (660) 562-1578.

Additional responsibilities of the Cashiering Office include check cashing, ticket sales (performances and athletic), parking permits, FAX service, and other services. Individuals seeking information about the University may call (660) 562-1212.

In cases of exceptional circumstances the Bursar's Office should be contacted for an extension of payment deadline. The number to call is (660) 562-1583. (NOTE: If a delay in financial assistance creates an inability to pay on time, the Office of Scholarships and Financial Assistance should be contacted at (660) 562-1363).

## **Career Services**

Information concerning current career opportunities in all occupational fields is available from Career Services. The office provides general occupational information, job search guides, internship leads, employment announcements and company information. Students can take advantage of group workshops and individual appointments that may address career planning, resume-writing and other job search-related concerns.

Graduate students, including internship candidates, are encouraged to utilize **Hire A Bearcat**, our online search tool for Northwest students and alumni. By completing the profile section and uploading a resume into the **Hire A Bearcat** database, employers are able to access qualified students through a referral process. Northwest alumni are eligible to utilize these services for a minimal fee. For more information, call Career Services at (660) 562-1250, visit the Career Services website or stop by the Career Services office in Administration Building #130.

## **Computing Services**

Northwest provides computing services to students, faculty, and staff. Students are assigned a user account which permits access to all of the services of Northwest, free of charge, including an online library catalog, online databases and full text abstracts, e-mail, and general information. Computing Services also provides a wireless notebook computer to students in eligible programs of study.

## **International Student Assistance**

The International Affairs Office assists all international students with benefit applications (SSN, Driver's License, CPT, OPT, visa renewal) and helps students navigate and avoid issues within federal immigration policy associated with DHS, USICE, USCIS, SSA, State Licensing Offices, etc. International Affairs helps convey and apply University policies and programs for international students. Further, the office provides essential travel to and from Maryville and supports

international-specific needs such as social and support system services and programs (FIS, HIS, field trips, etc.).

The comprehensive set of services and programs are designed to assist and support international students' social and academic adjustment and success at Northwest and in the USA and the world, generally. A variety of opportunities are offered from within the International Involvement Center (IIC) found on the ground floor of Owens Library (Room 108).

## **Northwest-Kansas City**

The mission of Northwest-Kansas City is to provide accredited, nationally recognized programs and professional development for place bound students. Faculty and highly qualified adjunct instructors provide instruction for various programs, many of which may be completed at our Outreach centers.

Northwest-Kansas City is located in the Northland Innovation Campus at 6889 N. Oak Trafficway in Gladstone, MO. The Office has regular office hours Monday through Friday from 8 a.m.-5 p.m. Northwest-Kansas City offers bachelor completion and graduate level programs. For more information, visit the Northwest-Kansas City website at [www.nwmissouri.edu/kc](http://www.nwmissouri.edu/kc) or e-mail [nwkc@nwmissouri.edu](mailto:nwkc@nwmissouri.edu).

## **Student Organizations**

All graduate students should acquaint themselves with the graduate student organizations on campus and other professional organizations or activities which might contribute to their total education. Information about student organizations is available in the Office of Student Involvement, (660) 562-1226, located on the second floor of the J.W. Jones Student Union.

Graduate student representation is provided on the Student Senate, and on various University committees. Graduate students are able to volunteer and an electronic vote is taken of the graduate student body at the beginning of each fall trimester for this representation.

## **Students with Disabilities**

Northwest is committed to providing quality support services to all students. Once a student has been admitted to Northwest, it is the student's responsibility to request accommodations through The Office of Equity and Accessibility and to provide disability-related documentation. Additional information is found at [www.nwmissouri.edu/diversity/accessibility](http://www.nwmissouri.edu/diversity/accessibility).

## **Academic Success and Retention**

The Academic Success and Retention unit, housed in the Student Success Center on second floor of the B.D. Owens Library, offers a variety of services and resources to the University community. The Academic Success and Retention unit employs numerous graduate assistants and graduate tutors who serve in varied academic support and student success roles. These roles include serving as academic success coach graduate assistants, tutors, and program managers. For more information or to apply, contact the Graduate Office.

## **University Police Department**

Located in the Support Services Building, the University Police Department protects the welfare of the University community. The department operates 24 hours a day, every day of the year, in order to assist in campus safety, crime prevention, and security on campus. The department is also responsible for the enforcement of University parking regulations.

## **Wellness Services**

Wellness Services believes that wellness is a way of life and involves achieving a balance among mind, body, and spirit through considering all aspects of wellness. Wellness Services operates out of the Wellness Center, which is located on the northwest corner of campus, and provides a

multitude of services to Northwest students, including Outpatient Clinical Services, Personal Development and Counseling Services, and Prevention, Outreach, and Education services.

Office Hours: 8:00am - 5:00pm, Monday - Friday

Phone: 660-562-1348

Fax: 660-562-1585

E-mail: [health@nwmissouri.edu](mailto:health@nwmissouri.edu)

**Prevention, Outreach, and Education**—This area of Wellness Services focuses on the overall wellness of our students. We help students realize they can make responsible and educated choices about their health and wellness by providing programming and presentations about all aspects of wellness. These services include public health initiatives, health and wellness speakers, awareness weeks and events, health education activities, Peer Education, and Student Health Advisory Committee. Our main initiatives focus on suicide prevention, violence prevention, responsibility regarding alcohol, and student well-being as a driver for student success.

**Personal Development and Counseling**—Wellness Services provides personal development and counseling to Northwest students, and believes it is a vital resource that can help students reach their full potential. Students use our services because they want to improve the way they live, learn, and grow. College is the perfect time to make changes in your life, consider who you are and who you want to be, and build on your strengths so you can fully flourish and thrive. Wellness Services is staffed by licensed mental health professionals who will help you get the most out of your college experience. Services provided include individual, group and relationship counseling, consultations, workshops, and presentations.

**Clinic**—Wellness Services provides primary health care to Northwest students, and is staffed with a physician, nurse practitioners, RNs and LPNs. Students can be seen in clinic for a number of health issues, ranging from routine sore throats or flu symptoms, to more urgent care problems. Wellness Services also provides screenings and immunizations in an effort to protect the campus from the spread of communicable diseases. Wellness Services strives to focus on holistic care, patient education and follow up. Our goal is making sure the student is back to optimal health as soon as possible.

Prior to enrollment, students are required to comply with certain health requirements, including:

- **Completion of a Health History Form** (required for all students)
- **Measles, Mumps, and Rubella (MMR) Requirement** (required for all students **except** online only students and dually-enrolled students)
- **Meningococcal Vaccine Requirement** (required for students living on campus or in Greek Life Chapter Houses)
- **Tuberculosis Testing** (required for first-time students who are foreign-born, students who have spent more than three months outside the U.S., and/or have a known exposure to tuberculosis)

Details on how to satisfy these requirements can be found at [www.nwmissouri.edu/wellness/beforenw.htm](http://www.nwmissouri.edu/wellness/beforenw.htm).

# Academic Structure

## College of Arts and Sciences

- Department of Language, Literature and Writing (p. 47)
- Department of Fine and Performing Arts (p. 51)
- Department of Humanities and Social Sciences (p. 51)
- Department of Mathematics and Statistics (p. 57)
- Department of Natural Sciences (p. 61)

## Professional Schools

- School of Agricultural Sciences (p. 67)
- Melvin D. and Valorie G. Booth School of Business (p. 74)
- School of Communication and Mass Media (p. 76)
- School of Computer Science and Information Systems (p. 121)
- School of Education (p. 115)
- School of Health Science and Wellness (p. 86)

# College of Arts and Sciences

## Michael Steiner, Dean

The College of Arts and Sciences is comprised of the Departments of English and Modern Languages; Fine and Performing Arts; Humanities and Social Sciences; Mathematics, Computer Science and Information Systems; Natural Sciences; and the Military Science Program.

The M.A. degree is available in English and History. The college offers the Master of Science degree in Biology, Applied Computer Science, Geographic Information Science, Instructional Technology, and Mathematics. In cooperation with the College of Education and Human Services, areas of concentration for the Master of Science in Education in teaching are provided in English, History, Mathematics, and Science.

Some graduate programs allow flexibility to meet the specific needs of each graduate student. Graduate teaching and research assistantships are available to students in the college on a competitive basis.

## Department of Language, Literature, and Writing

**Chairperson:** Michael Hobbs

**Graduate Faculty:** Ashley Davis Black, Richard Black, Wayne Chandler, Eric Dickey, John Gallaher, Robin Gallaher, Joseph Haughey, Michael Hobbs, Ildiko Olasz, Jose Palacios Perez, Luke Rolfes, Jenny Rytting, Richard Sonnenmoser

**Department Telephone:** (660) 562-1265

### Program Description and Mission

The M.A. in English and M.S.Ed. in English programs are designed to reflect the breadth and depth of the field. Most classes are designated by broad umbrella topics with specific changes in content each trimester, so that the classes may be retaken. The flexible content of the classes offers students both the variety of texts and topics and the intensity of concentration that are appropriate to advanced students. It also allows the flexibility to incorporate current theories and trends into the curriculum.

The 500-level literature courses are designated by the traditional geographical, historical and genre boundaries. These courses require that students become proficient at reading, writing and researching literary texts from a variety of times and places. The Advanced Creative Writing umbrella course is offered with changing emphasis and genre.

The 600-level seminar classes are organized conceptually rather than by historical or geographic boundaries, requiring advanced students to focus on issues of genre, on particular literary themes or theories, or on the close study of specific figures and groups. These provide concentrated study at the Master's level and good preparation for more advanced study, if students choose to pursue it.

In addition to literary study and creative writing, the department offers courses that focus on language theory and/or writing pedagogy. Pedagogy classes offer both theoretical study and guided practical experience in teaching college composition.

### Portfolio Assessment/Thesis Option

Early in the penultimate trimester of the English M.A. or M.S.Ed. program, the student will select a group of three faculty members to serve as an advisory and assessment committee for

the portfolio, designating one of them to serve as chair. A student wishing to pursue the thesis option in lieu of a portfolio must present a prospectus of the proposed thesis and an accompanying reading list, which must be approved by the graduate advisor, the department chairperson, and the chosen advisory and assessment committee. If the thesis proposal is not approved, the student will instead complete the standard portfolio. During or before the final trimester, the degree candidate will submit the portfolio or thesis to the committee for approval. Once the portfolio or thesis is approved, the committee chair will schedule a date for an oral defense. A failing portfolio or thesis may be revised and resubmitted one time only.

### Program Admission Requirements

Admission requirements are:

1. Compliance with all of the eligibility requirements as set forth in this catalog.
2. Completion of a four-year undergraduate degree from an accredited college or university with a minimum undergraduate grade point average of 3.00 on a 4.00 scale.
3. Submission of a writing sample of 8-15 double-spaced pages (which may have been written for an upper-level undergraduate course) and a statement of intent of approximately 500 words.
4. Acceptance to graduate study by the department graduate committee and the Dean of the Graduate School.

Applicants who do not meet the minimum GPA requirements but whose writing sample and statement of intent demonstrate readiness for graduate work may be accepted on the condition that they maintain a 3.00 GPA for the first nine hours of graduate study.

Applicants who do not major or minor in English as undergraduates will be required to enroll in at least one of four undergraduate surveys of English or American literature and to pass the class with a minimum grade of "C".

## English M.A.

CIP: 230101

### Requirements

15 hours must be at the 600 level

#### Required Courses

ENGL 10610	Introduction to Practical and Theoretical Criticism	3
	English Electives	21
	Approved Electives	6

#### Total Credit Hours: 30

ENGL 10580 (Methods in Secondary School English) cannot be applied toward the English M.A.

### Accelerated Bachelor's/Master's Program

This program allows outstanding students to concurrently pursue a Bachelor's degree in either English or Writing and a Master of Arts degree in English and to complete graduation requirements for both degrees within five years. It works by allowing undergraduate students in the accelerated program to complete 12 credit hours of graduate coursework, which will count towards both their Bachelor's and Master's degrees, in their junior and senior years. Students can complete the remaining 18 hours of graduate coursework in the two trimesters of the fifth year.



**Admission Requirements:**

The English graduate committee or coordinator will review applications to assess whether the applicants meet these requirements:

1. Students must be currently pursuing a B.A. or B.S. with a major in English or Writing at Northwest or transferring into one of these programs from another accredited institution within the United States.
2. Students must apply for admission to the program no sooner than the end of the sophomore year (at least 60 hours of graded courses) and no later than the beginning of the final trimester of their undergraduate program. (N.B.: Students who begin the program in their final undergraduate trimester will need to complete summer coursework in order to finish the M.A. by the end of the fifth year.)
3. Students must submit their transcripts, a writing sample, and a letter of recommendation from a faculty member in a relevant discipline to the Graduate School.
4. Students must also have an overall GPA  $\geq 3.0$  **AND** a major GPA  $\geq 3.3$ . Students with a slightly lower GPA may be considered for conditional admittance to the program with a strong writing sample and recommendation letter.
5. Applicants must satisfy all of the eligibility requirements of the Graduate School as outlined in the Graduate Catalog at the beginning of the fifth year.

Students are not eligible to apply to the accelerated program after they are awarded a Bachelor's degree but can still apply for the traditional English M.A. program. Students who are not admitted to the accelerated program may reapply later and/or apply for the traditional program.

**Advising for courses in the junior and senior years:**

1. The program will begin after a student is admitted to it. Students can enroll in graduate courses only after the sophomore year (60 graded hours).
2. The students' undergraduate academic advisors and the English graduate coordinator will assist them in developing a plan for enrolling in classes to complete both degrees within a five-year time frame.
3. During the junior or senior years, a student may take graduate courses under the following conditions:
  - a. Students can enroll in 500- and 600-level courses for undergraduate and graduate dual credit.
  - b. Students may take a maximum of 3 hours of graduate credit per trimester during the junior year with no more than 16 total credit hours.
  - c. Students may take a maximum of 6 hours of graduate credit per trimester during the senior year with no more than 16 total credit hours.
  - d. The graduate coordinator and the associate provost of graduate studies may approve exceptions to the maximum credit hours.
  - e. Earned undergraduate credits cannot be retroactively applied as graduate credit.

**Advising during the fifth year:**

1. The English graduate coordinator will be the primary advisor for all fifth-year students.
2. Students will complete the M.A. degree by fulfilling the degree requirements as stated in the graduate catalog.

**Degree Status:**

1. Students are awarded a B. S. or B.A. degree as soon as those degree requirements are completed and are then admitted as candidates for the M.A. degree.
2. Students are awarded an M.A. degree in English as soon as their M.A. requirements are completed.
3. For the purposes of financial aid and scholarships, students are considered to be undergraduates until the B.S. or B.A. degree is awarded and graduate students thereafter. Students are eligible for graduate assistantships after receiving the B.S. or B.A. degree but not before.

Please review the policy section on Accelerated Programs (p. 34) for additional information.

**Teaching: English M.S.Ed.**

(For students without Teaching Certification)

CIP: 131305

**Requirements****Core Requirements (6)**

EDUC 61695	Philosophy of Education	3
	OR	
EDUC 61649	Issues in Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

**Subject Field Requirements (20)****Education Requirements (6)**

EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3

**English Requirements (14)****Language (3)**

ENGL 10504	Language and Linguistics	3
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**Research (3)**

ENGL 10610	Introduction to Practical and Theoretical Criticism	3
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**Methodology (3)**

ENGL 10698	Problems in Teaching Literature and Composition	3
	OR	
ENGL 10580	Methods in Secondary School English	3

English Department 500- and 600-level electives to total 14

ENGL 10580 is required of and limited to students with no previous course in English methods.

**Approved Electives (6)**

The content of ENGL 10590 is required for state licensing; use this class to fill one 3-credit English elective if you haven't already taken it.

**Total Credit Hours: 32-33**

A member of the graduate education faculty will serve as the major advisor. A graduate faculty member from the Department of English will serve as area advisor. The major advisor will assist students in approving and submitting the Degree Audit to the Graduate Office. When updates are complete, the student will be notified to review and agree to the Degree Audit. The major advisor must approve any additional changes to the student's Degree Audit by notifying the Graduate Office.

Students seeking the M.S.Ed. in English will complete an English Department portfolio and oral defense. In addition, students will complete the required assessment for the Education Department, which will be evaluated separately. Students must pass all portions of both assessments.

### **M.A. and M.S.Ed. in English with Speech Emphasis**

Students in the M.A. program may elect to take a concentration in Speech by declaring their intention to do so when filing for candidacy. They will be advised to take their six hours of unspecified electives in Speech, and depending on their backgrounds in English, they may elect to take up to six additional hours in Speech in the M.A. program. In no case will a student take fewer than 14 hours of English. Neither ENGL 10698 nor ENGL 10590 will be counted toward those 14 hours. Speech emphasis is not available in the M.S.Ed. program.

Students seeking the M.A. in English with a Speech Emphasis will complete an English Department portfolio and oral defense and will complete a comprehensive examination in the area of speech. Each department will be responsible for construction and evaluation of its part of the final assessment.

### **Department of Fine and Performing Arts**

**Chairperson:** Kathryn Strickland

**Graduate Faculty:** Debra Brown, Katheryn Bilbo, Patrick Immel, Stephanie Jorandby, Ernest Kramer, Joe Kreizinger, Theophil Ross, Kathryn Strickland, Stephen Town

**Associate Graduate Faculty:** John Bell, Rebecca Dunnell, Brian Lanier, Armin Muhsam, Anthony Olson, William Richardson, Pamela Shannon

**Department Telephone:** (660) 562-1326

Graduate courses in music, art and theatre are available as supporting electives for students working toward degrees in other disciplines. No graduate degrees are offered specifically in music, art or theatre.

### **Department of Humanities and Social Sciences**

**Chairperson:** Dawn Gilley

**Graduate Faculty:** Joel Benson, Kimberly Casey, Brett Chloupek, Mark Corson, Patricia Drews, Elyssa Ford, Dawn Gilley, Theodore Goudge, Ming-Chih Hung, Kevin Romig, Robert Voss, Yi-Hwa Wu

**Associate Graduate Faculty:** Luke Campbell, James Eiswert, Richard Field, Jessica Gracey, Brian Hesse, David Jerome, Devlin Scofield

**Department Telephone:** (660) 562-1290

### **Geography / 32**

The department offers an online Master of Science degree in Geographic Information Science. The degree program focuses on applied geographic information science as used in industry and the public sector. Students may earn a certificate in Geographic Information Science by taking a subset of courses required for the Master's degree.

The department also offers traditional graduate-level geography courses, which permit greater curriculum enrichment for those students seeking the M.S.Ed. in Teaching History with an emphasis in social science, or as general electives toward degrees in other disciplines.

### **Program Admission Requirements for the Online M.S. in Geographic Information Science**

Applicants seeking admission to the M.S. in Geographic Information Science program must meet the following requirements:

1. Compliance with all of the eligibility requirements of the Graduate School as set forth in this catalog.
2. Acceptance to graduate study by the Associate Provost of the Graduate Studies and Special Programs.
3. Completion of a four-year undergraduate degree from an accredited college or university with an undergraduate grade point average of 2.75 on a 4.00 scale.
4. Minimum verbal plus quantitative GRE score of 286. Students not meeting this score must maintain a 3.00 average for the first nine hours of graduate credit before admission to candidacy. GRE scores must be on file in the Graduate Office before a student's application for admission will be evaluated. The GRE will be waived for applicants with a graduate degree (Master's or higher) from an accredited institution, for those who have earned the graduate GIScience certificate at Northwest, and for those with one year of documented full-time GIS professional work experience or three years of documented full-time professional work experience in any field.
5. Two references on the student's ability to do graduate work, submitted with the student's application for admission to the Graduate School. The references are to be submitted using the Department of Humanities and Social Sciences' reference form.
6. A two-page essay describing the applicant's career goals and how the Geographic Information Science program will help the applicant meet these goals. Applicants are to submit the essay as part of the application for admission to the Graduate School. The essay will serve as the writing sample required by this catalog. An unacceptable ability to write will necessitate some remedial work and a subsequent writing sample on a topic to be provided by the Department of Humanities and Social Sciences.

The Department of Humanities and Social Sciences reserves the right of final decision in accepting students to graduate degree candidacy in the department. Criteria for admittance to the program and acceptance to degree candidacy may include academic qualifications and performance, letters of recommendation, number of applicants, and available resources.

## **Geographic Information Science, Thesis Option M.S.**

CIP: 450702

Completion of 30 hours of approved graduate credit (courses numbered 500 or above) is required. Fifteen hours must be 600-level or above. A maximum of six advisor-approved hours may be taken outside the department. A thesis is required for this option.

### **Requirements**

#### **Prerequisite Course (exam to test out)**

GEOG 32545	Principles of GIS	3
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#### **Required Core Courses**

GEOG 32543	Applications of Remotely Sensed Data	3
GEOG 32580	Spatial Analysis and Geostatistics	3
GEOG 32582	Cartographic Design and Visualization	3
GEOG 32601	GIScience Research Seminar	3
GEOG 32650	GIS Database Design	3

#### **Electives (Choose 12 hours)**

GEOG 32611	Special Topics in Geographic Information Science	1 to 3
GEOG 32620	GIS Theory and Research	3
GEOG 32630	Raster-based GIS and Modeling	3
GEOG 32641	Geoprocessing with Python	3
GEOG 32642	Internet GIS	3

GEOG 32655	GIS Project Management	3
GEOG 32660	Trends in GIS	3
GEOG 32663	Digital Image Processing	3
	Advisor approved electives	6

**Thesis**

GEOG 32699	GIS Thesis	1 to 3
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Thesis should be taken for 3 credit hours.

**Total Credit Hours: 30-33****Geographic Information Science, Non-Thesis Option M.S.**

CIP: 450702

Completion of 31 hours of approved graduate credit (courses numbered 500 or above) is required. Fifteen hours must be 600-level or above. A maximum of six advisor-approved hours may be taken outside the department. A research paper will fulfill the research component.

**Requirements****Prerequisite Course (exam to test out)**

GEOG 32545	Principles of GIS	3
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**Required Core Courses**

GEOG 32543	Applications of Remotely Sensed Data	3
GEOG 32580	Spatial Analysis and Geostatistics	3
GEOG 32582	Cartographic Design and Visualization	3
GEOG 32601	GIScience Research Seminar	3
GEOG 32650	GIS Database Design	3

**Electives (Choose 15 hours)**

GEOG 32611	Special Topics in Geographic Information Science	1 to 3
GEOG 32620	GIS Theory and Research	3
GEOG 32630	Raster-based GIS and Modeling	3
GEOG 32641	Geoprocessing with Python	3
GEOG 32642	Internet GIS	3
GEOG 32655	GIS Project Management	3
GEOG 32660	Trends in GIS	3
GEOG 32663	Digital Image Processing	3
	Advisor approved electives	6

**Research Paper**

GEOG 32698	GIS Research Paper	1
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**Total Credit Hours: 31-34****General Requirements and Policies for M.S. in Geographic Information Science**

1. All requirements of the Graduate School must be met.
2. A minimum grade point average of 3.00 in all graduate work is required for graduation.
3. A grade of "B" or better must be earned in all courses that are prerequisites to other courses.
4. No more than six semester hours of "C" grades may be applied toward the master's degree.

**Advisement**

A member of the Graduate Faculty of the Department of Humanities and Social Sciences will serve as the major advisor. The major advisor will assist students in submitting the Degree Audit to the Graduate Office. When updates are complete, the student will be notified to review and agree to the Degree Audit. The major advisor must approve any additional changes to the student's Degree Audit by notifying the Graduate Office.

### **Comprehensive Examination/Thesis Committees**

A student selecting the thesis option, in consultation with his or her major advisor, will select other faculty members to serve with the major advisor on the student's comprehensive exam and thesis committees. Both committees will consist of three faculty members and will be chaired by the major advisor. In addition to the major advisor, at least one other member of each committee must be a faculty member of the Department of Humanities and Social Sciences.

For students selecting the non-thesis option, the Department will designate the three faculty members who will comprise the comprehensive exam committee.

### **Comprehensive Examination**

The examination will be scheduled, administered, and evaluated by members of the student's comprehensive exam committee. The examination will consist of a timed online exam consisting of two parts of two hours each. The degree candidate must earn an average grade of "B" or better to pass the examination.

#### **Research Component**

**Thesis option:** A student selecting the thesis option must submit a thesis proposal to his or her thesis committee. The committee members must approve the proposal before the student proceeds with the thesis. A formal defense of the thesis is required. The student must enroll in at least one thesis credit hour each trimester that he or she expects to consult with his/her thesis committee or use university resources for thesis research.

**Non-thesis option:** A student selecting the non-thesis option will write a research paper that originates in a GIScience course in their degree program and is revised and completed in 32-698, GIS Research Paper. The paper must meet quality standards established for the research component.

## **Geographic Information Science Certificate**

CIP: 450702

Students taking a selected subset of courses for the online Master's degree may earn a Certificate in Geographic Information Science.

### **Gainful Employment Disclosure**

Federal regulations require Northwest Missouri State University to report certain information about students who are enrolled in eligible educational programs that lead to gainful employment in a recognized occupation.

Visit [www.nwmissouri.edu/academics/disclosure/gis.htm](http://www.nwmissouri.edu/academics/disclosure/gis.htm) for more information.

## **Requirements**

### **Prerequisite Course (exam to test out)**

GEOG 32545	Principles of GIS	3
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### **Required Courses**

GEOG 32543	Applications of Remotely Sensed Data	3
GEOG 32582	Cartographic Design and Visualization	3

### **Electives (choose 6 hours)**

GEOG 32580	Spatial Analysis and Geostatistics	3
GEOG 32620	GIS Theory and Research	3
GEOG 32630	Raster-based GIS and Modeling	3
GEOG 32641	Geoprocessing with Python	3
GEOG 32642	Internet GIS	3
GEOG 32650	GIS Database Design	3
GEOG 32655	GIS Project Management	3
GEOG 32663	Digital Image Processing	3
Subtotal: 12-15		

### **Program Admission Requirements for the Certificate in Geographic Information Science**

Applicants seeking admission to the Certificate in Geographic Information Science program must meet the following requirements.

1. Compliance with all of the eligibility requirements of the Graduate School as set forth in this catalog.
2. Acceptance to graduate study by the Dean of the Graduate School.
3. Completion of a four-year undergraduate degree from an accredited college or university with an undergraduate grade point average of 2.75 on a 4.00 scale.
4. Two references on the student's ability to do graduate work, submitted with the student's application for admission to the Graduate School. The references are to be submitted using the Department of Humanities and Social Sciences' reference form.
5. A two-page essay describing the applicant's career goals and how the Geographic Information Science program will help the applicant meet these goals. Applicants are to submit the essay as part of the application for admission to the Graduate School.

### **General Requirements and Policies for Certificate in Geographic Information Science**

1. All requirements of the Graduate School for GIScience certificate students must be met. Applicants must have a bachelor's degree from an accredited institution and submit undergraduate transcripts. A member of the Graduate Faculty of the Department of Humanities and Social Sciences will serve as the major advisor for the student's certificate program. The major advisor will assist students in submitting the Degree Audit to the Graduate Office. When updates are complete, the student will be notified to review and agree to the Degree Audit. The major advisor must approve any additional changes to the student's Degree Audit by notifying the Graduate Office.
2. A minimum grade point average of 3.00 must be earned for the courses in the certificate program.
3. A grade of "B" or better must be earned in all courses that are prerequisites to other courses.
4. No more than three semester hours of graduate credit may be transferred from a regionally- or nationally-accredited institution for the certificate in Geographic Information Science. All other Graduate School policies related to transfer credit must be satisfied.
5. All courses for the certificate must be completed within an eight-year period beginning with the date of the first course taken for the certificate.
6. All courses in the certificate program can be applied toward the M.S. in Geographic Information Science program. (Such students must formally apply for admission to this program and complete all admission requirements, including the writing sample. The GRE will be waived for students who have earned the graduate certificate in Geographic Information Science from Northwest.)

**History / 33**

In cooperation with the College of Education and Human Services, the department offers an M.S.Ed. in Teaching History designed to improve the qualifications and capabilities of those teaching in secondary schools. This degree will improve the student's understanding of past and present society, broaden perspectives, sharpen critical skills, and develop leadership potential.

**Teaching: History M.S.Ed.**

CIP: 131328

A member of the graduate education faculty will serve as the major advisor. A graduate faculty member from the history area will serve as area advisor, and both signatures will be required on the Degree Audit Form. Any change in a Degree Audit Form must be initiated by the student and be submitted to the Graduate Office accompanied with written approval from both advisors. This degree requires 32 credits, at least 16 of which shall be from courses numbered 600 or above.

**Requirements****Core Requirements (6)**

EDUC 61695	Philosophy of Education	3
	OR	
EDUC 61649	Issues in Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

**Subject Field Requirements (21)****Education Requirements (6)**

EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3

**History Requirements (15)**

HIST 33601	Research Methods and Historiography	3
SOSC 36680	Problems of Teaching Secondary Social Science	2
	History Electives as directed	10

**Unspecified Electives (5)****Total Credit Hours: 32****Program Admission Requirements**

Students with a minimum undergraduate grade point average of 2.75 (4.00 scale) and a minimum score of 146 on the verbal section of the GRE General Test will be accepted. The official score must be filed with the Graduate Office prior to admission but not later than the end of the first trimester of enrollment. If the score is not submitted by the end of the first trimester, the student cannot re-enroll until the score is submitted. Students who do not meet the cutoff score of 146 may be accepted on the condition that they maintain a grade point average of at least 3.00 for the first 15 credit hours at the graduate level.

To maintain enrollment in the program, students must attain a 3.00 GPA with no grade lower than a "C" acceptable for degree requirements.

Deficiencies in undergraduate preparation will be assessed by the instructor, advisor, and graduate faculty, and remedial procedures will be prescribed. This could mean additional coursework or special examination. In general, all but 600-level courses are open to any major, but individual instructors retain the prerogative of admission of individual students into their course where eligibility appears questionable.

**Comprehensive Examination**



The content of the comprehensive examination will be equally divided between those courses required in education and the history area. The School of Education and the Department of Humanities and Social Sciences are responsible for the scheduling, construction, and evaluation of their respective portions of the comprehensive examination. The degree candidate must pass both portions of the examination.

## **Department of Mathematics and Statistics**

**Chairperson:** Christine Benson

**Graduate Faculty:** Christine Benson, Kurtis Fink, Abdelmonaem Jornaz, Cheryl Gregerson Malm, Brian Haile, Justin Hoffmeier, Jawad Sadek, Mary Shepherd, Jennifer Wall

**Associate Graduate Faculty:** David Vlieger

**Department Telephones:** (660) 562-1230

## **Mathematics / 17**

### **Mathematics M.S.**

CIP: 270101

Program Admission Requirement

Option 1. Students with a minimum undergraduate GPA of 2.75 and a score of 2 on a writing assessment administered by the Department of Mathematics and Statistics will be accepted. The writing assessment must be completed no later than the end of the second week of the first trimester of enrollment. The writing assessment is not designed to test proficiency in a specific subject. It is rather a test to evaluate applicant's abilities to critique, organize, and write a concise argument. Any student who fails the writing assessment must repeat the assessment within two weeks. Any student who fails the second writing assessment will meet with the chairperson of the Department of Mathematics and Statistics to discuss options. \*

Option 2. Students with a minimum undergraduate GPA of 2.75 and a composite score of 280 or higher on the verbal and quantitative sections of the GRE General Test will be accepted. \*

Option 3. Undergraduate mathematics majors within 30 hours of completing their undergraduate degree in Mathematics, with a GPA of 2.8 overall and 3.2 in mathematics may apply for admission to the accelerated program. Students in this option can complete their undergraduate and graduate degrees in Mathematics in 5 years. Please review the policy section on Accelerated Programs (p. 34) for additional information.

\* The official score must be filed with the Graduate Office prior to admission but no later than the end of the first trimester of enrollment. If the score is not submitted by the end of the first academic trimester, the student cannot re-enroll until the score is submitted. Students who do not meet the cutoff scores may be accepted on the condition that they maintain a grade point average of at least 3.00 for the first nine graduate hours in mathematics.

Advisement

A graduate faculty member from the mathematics/mathematics education area will serve as an area advisor, and her/his signature will be required for the Degree Audit. Any change in a Degree Audit must be initiated by the student and be submitted to the Graduate Office accompanied by written approval from advisors.

Comprehensive Examination

Two comprehensive exams (courses chosen by student) must be passed in order to graduate.

## Requirements

### Required Courses

MATH 17602	Introduction to Higher Mathematics	3
MATH 17652	Analytic Geometry	4
MATH 17643	Principles of Mathematical Analysis and Applications	4
MATH 17617	Combinatorics	3
MATH 17618	Number Theory with Applications	3
MATH 17639	Data Analysis	4

### 9 hours of Advisor Approved Electives from the Following Areas:

Mathematics, Computer Science, Data Mining, Instructional Technology, Mathematics Pedagogy

**Total Credit Hours: 30**

## Teaching: Mathematics M.S.Ed.

CIP: 131311

In cooperation with the School of Education, an area of concentration in mathematics is provided for teachers to teach mathematics at the high school level. The purpose of the program is to help mathematics teachers:

1. Acquire increased competency in a broad spectrum of the mathematical sciences.
2. Develop additional skills and understanding in the art of good mathematics teaching, including teaching special students.
3. Study current trends and issues in education, and, in particular, mathematics education.

## Requirements

### Core Requirements (6)

EDUC 61695	Philosophy of Education OR	3
EDUC 61649	Issues in Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

### Subject Field Requirements (21)

#### Education Requirements (6)

EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3

#### Mathematics Requirements (selected from the following courses) (15)

MATH 17511	Applied Linear Algebra	3
MATH 17518	Number Theory	3
MATH 17535	Probability Theory	3
MATH 17536	Statistical Inference	3
MATH 17602	Introduction to Higher Mathematics	3
MATH 17617	Combinatorics	3
MATH 17618	Number Theory with Applications	3
MATH 17624	Research Project	1
MATH 17635	Computer Methods in Statistics I	3
MATH 17643	Principles of Mathematical Analysis and Applications	4
MATH 17652	Analytic Geometry	4

### Unspecified Electives (5)

**Total Credit Hours: 32**

## Program Admission Requirements

Students with a minimum undergraduate GPA of 2.75 and composite score of 280 or higher on the verbal and quantitative sections of the GRE General Test will be accepted. The official score must be filed with the Graduate Office prior to admission but not later than the end of the first trimester of enrollment. If the score is not submitted by the end of the first academic trimester, the student cannot re-enroll until the score is submitted. Students who do not meet the cutoff score of 280 may be accepted on the condition that they maintain a grade point average of at least 3.00 for the first nine graduate hours in mathematics.

## Writing Sample

Students must complete a writing assessment administered by the Department of Mathematics and Statistics no later than the end of the first week of the first trimester of enrollment. Any student who fails the writing assessment must repeat the assessment within two weeks. Any student who fails the second writing assessment will meet with the chairperson of the Department of Mathematics and Statistics to establish a program of remediation and qualification.

## Advisement

A member of the graduate education faculty will serve as the major advisor. A graduate faculty member from the mathematics area will serve as area advisor, and both signatures will be required on the Degree Audit Form. Any change in a Degree Audit Form must be initiated by the student and be submitted to the Graduate Office accompanied by written approval from both advisors.

## Comprehensive Examination

The content of the comprehensive examination will be equally divided between those courses required in education and the mathematics area. The School of Education and the Department of Mathematics and Statistics are responsible for the scheduling, construction, and evaluation of their respective portions of the comprehensive examination. The degree candidate must pass both portions of the examination.

## Elementary Mathematics Specialist Certification

The call to improve student achievement in mathematics is particularly challenging at the elementary level where teachers generally receive limited specialized training in mathematics or mathematics pedagogy. In order to address this demand for highly-trained mathematics teachers who may act as administrators and supervisors of mathematics programs, mathematics coaches, and teachers of mathematics at the elementary level, the Missouri Department of Elementary and Secondary Education has established an advanced certification of Elementary Mathematics Specialist. This program is designed to prepare students for this certification by offering in-depth study of grade appropriate mathematics as specified in the Common Core State Standards for Mathematics (2010), supervised application of pedagogy and leadership training.

### Prerequisites for Elementary (1-6) Mathematics Specialist Certificate

1. A valid teaching certificate;
2. A current teaching position in elementary school or middle school mathematics.

### Requirements Beyond the Coursework for this Advanced Certification

1. A recommendation of the certification officer at Northwest or other university with an approved program of study. (See the Subject Field Requirements (24 hr.) below.)
2. A completed Missouri content Assessment for Elementary Mathematics Specialists with a score equal to or greater than the Missouri Qualifying Score.

## Requirements

### Subject Field Requirements (24)

MATH 17623	Data and Probability for Elementary Mathematics Specialists	3
MATH 17625	Number and Operation for Elementary Mathematics Specialists	3
MATH 17626	Rational Numbers and Ratio and Proportional Relationships for Elementary Mathematics Specialists	3
MATH 17627	Algebraic Reasoning for Elementary Mathematics Specialists	3
MATH 17628	Geometry and Measurement for Elementary Mathematics Specialists	3
EDCI 62623	Mathematical Leadership for Elementary Mathematics Specialists: Foundations	2
EDCI 62624	Mathematical Leadership for Elementary Mathematics Spec.: Influencing and Facilitating Improvement	3
EDCI 62625	Seminar and Internship in Number and Operation	1
EDCI 62626	Seminar and Internship in Rational Numbers and Proportional Thinking	1
EDCI 62627	Seminar and Internship in Algebraic Reasoning	1
EDCI 62628	Seminar and Internship in Geometry and Measurement	1

Teachers wishing to earn a M.S.Ed. degree that includes the courses required for the Elementary Mathematics Specialist advanced certification (see above), must meet the following requirements and do the following additional course work.

## Elementary Mathematics M.S.Ed.

### Program Admission Requirements

1. A minimum overall GPA of 2.75 on the undergraduate transcript or an undergraduate overall GPA of 2.50 to 2.74 and a 3.25 GPA on eight hours of required graduate coursework at Northwest in the major program where admission is requested.
2. A valid teaching certificate.
3. A current teaching position in elementary school or middle school mathematics.
4. A letter of recommendation from a current administrator who has completed a performance-based annual evaluation on which the teacher has achieved the level of *developing* or higher.
5. Successful completion of the Analytical Writing Assessment.

### Comprehensive Exam

The degree candidate must pass the Missouri content Assessment for Elementary Mathematics Specialists.

## Requirements

### Core Requirements (5)

MATH 17681	Curriculum Construction in Mathematics	3
MATH 17622	Introduction to Research Methods for the Social Sciences	1
MATH 17624	Research Project	1

### Subject Field Requirements (24)

MATH 17623	Data and Probability for Elementary Mathematics Specialists	3
MATH 17625	Number and Operation for Elementary Mathematics Specialists	3
MATH 17626	Rational Numbers and Ratio and Proportional Relationships for Elementary Mathematics Specialists	3
MATH 17627	Algebraic Reasoning for Elementary Mathematics Specialists	3

MATH 17628	Geometry and Measurement for Elementary Mathematics Specialists	3
EDCI 62623	Mathematical Leadership for Elementary Mathematics Specialists: Foundations	2
EDCI 62624	Mathematical Leadership for Elementary Mathematics Spec.: Influencing and Facilitating Improvement	3
EDCI 62625	Seminar and Internship in Number and Operation	1
EDCI 62626	Seminar and Internship in Rational Numbers and Proportional Thinking	1
EDCI 62627	Seminar and Internship in Algebraic Reasoning	1
EDCI 62628	Seminar and Internship in Geometry and Measurement	1

### Approved Electives (3)

Any advisor-approved graduate course from any department may be selected as an elective providing the student will have completed 16 semester hours at the 600 level. These may include any of the prerequisite courses that have not been completed. They must be taken at the graduate level to be applied to the M.S.Ed. degree.

**Total Credit Hours: 32**

## Department of Natural Sciences

**Chairperson:** Mark Corson

**Graduate Faculty:** Peter Adam, Michael Bellamy, Alisha Campbell, James Campbell, Himadri Chakraborty, Gregg Dieringer, Arghya Goswami, Kurt A. Haberyan, Rafiq Islam, Lee Rex McAliley, Jay McGhee, Ahmed Malkawi, Mohammed Meziani, Lorita Mihindukulasooriya, John Pope, David Richardson, Shelley Riley, Karen L. Schaffer, Rena' Smith, Kathleen Spears, Kory Stiffler, Gretchen Thornsberry, Jeffry Thornsberry, Richard Toomey

**Associate Graduate Faculty:** Rená Smith

**Department Telephone:** (660) 562-1388

The Department of Natural Sciences offers two Masters degrees, a Master of Science in Biology and a Master of Education in Teaching: Science.

Graduate students pursuing the Master of Science in Biology are able to specialize in fields such as cellular/molecular biology, organismal biology, ecology, and environmental science. Although there are common courses for all graduate students within this program, each individual student selects his or her field of specialty and specific coursework, in consultation with the Biology graduate advisor and their primary scholarly mentor. The Biology graduate program is designed to strengthen the student's content knowledge, problem solving skills and research capability. Students who complete the degree will have an increased specialization in a biological discipline and an enhanced ability to do research. Students will be able to demonstrate their ability to interpret data and communicate such data in both a written and oral manner. Students will be prepared to work in the discipline of biology and will have sufficient background to be successful in future professional or doctoral studies.

In cooperation with the School of Education, the Department offers a Master of Education in Teaching: Science. This area of concentration is provided for teachers who have certification to teach science at the middle or senior high school level. The purpose of the program is to help science teachers to develop and strengthen their science content knowledge, develop skills and techniques to promote scientific inquiry in the classroom, investigate current trends and issues in education, particularly science education, and construct a curriculum and assessment that is aligned with the national science standards.

### Chemistry / 24, Geology / 27, Physical Science / 40, and Physics / 25

Graduate courses in chemistry, geology, physics, and physical science are available as supporting electives for students working toward degrees in other disciplines. No graduate degrees are offered specifically in these disciplines.

**Biology / 04****Biology M.S.**

CIP: 260101

**Option 1 (Thesis) and Option 2 (Scholarly Paper)**

Completion of 32 hours of approved graduate credit (courses numbered at 500 or above) is required. Sixteen hours must be at the 600 level or above. A maximum of 16 approved hours may be taken outside of the department.

**Option 1: Thesis****Required Courses**

	Approved Electives	20-23
BIOL 04680	Graduate Seminar in Biology	1
BIOL 04698	Thesis Research in Biology	1 to 5
BIOL 04699	Thesis	3

**Completion and Defense of an Approved Research Project and Thesis**

The thesis project may involve a maximum of 11 hours (8 hours thesis research and 3 hours thesis) toward the 32-hour degree. No credit or grade will be issued for these courses until completion of the thesis and research, including the oral defense of the thesis.

Subtotal: 32

**Option 2: Scholarly Paper****Required Courses**

	Approved Electives	26-28
BIOL 04680	Graduate Seminar in Biology	1
BIOL 04697	Scholarly Paper in Biology	1 to 5

Subtotal: 32

**Completion and Presentation of the Scholarly Paper**

The scholarly paper may involve a maximum of 5 hours toward the 32-hour degree. No credit or grade will be issued for these hours until completion of the project, paper, and a seminar (presentation).

**Areas of Concentration**

Although there are common courses for all biology graduate students, each individual student selects, in conjunction with his or her cooperating professor, his or her field of specialty and specific coursework. Students are expected to have a broad background in biology as well as the research concentration and/or the topic of the scholarly paper. Specific areas of study will depend upon the specialties of the biology faculty.

For each area of concentration, some specific coursework may be required. The Biology Graduate Committee, in consultation with the area specialist, will indicate specific coursework to an applying graduate student.

**Program Admission Requirements**

Admission to graduate study by the Graduate Office does not admit a student to candidacy for a degree in biology. The Department of Natural Sciences reserves the right of final decision in accepting graduate students to graduate degree candidacy in the department. Acceptance by the Department of Natural Sciences will be determined by the biology faculty via the Biology Graduate Committee (appointed by the department chairperson) according to the following requirements and policies.

**Eligibility**

1. Compliance with all of the eligibility requirements of the Graduate School as set forth in this catalog.
2. Acceptance to graduate study by the Dean of the Graduate School.
3. Completion of a four-year undergraduate degree from an accredited college or university with an undergraduate grade point average (GPA) of 2.75 (4.00 scale). An applicant with a GPA of 2.50 to 2.74 can apply to be accepted conditionally. If accepted, the student would need to complete the first eight graduate hours with a 3.0 GPA or be subject to suspension for one calendar year. (A student who does not meet the GPA criteria could apply to the university as a non-degree seeking student. If the student achieves a 3.0 in his/her first eight hours of graduate study, the student may reapply but must undergo the full applications and admission review process. Admission to the department is not guaranteed.)
4. Applicants must have completed at least 24 semester hours in acceptable undergraduate courses in biology; at least 13 semester hours in chemistry; at least precalculus mathematics; and at least 4 hours of physics. Additional courses (such as calculus, computer science and statistics) may be required depending upon the anticipated graduate program of the applicant. Acceptability of courses and additional requirements will be determined by the Biology Graduate Committee. Deficiencies must be corrected before official acceptance into degree candidacy in biology.
5. A satisfactory score on the GRE general test. A quantitative (Q) plus verbal (V) score of at least 286 is considered minimal. The analytical writing section must also be submitted. A student who does not meet the required GRE score may be accepted conditionally to the program. However, a score of at least 286 must be attained during the first trimester of enrollment. In extenuating circumstances, the student may appeal to the Biology Graduate Committee.
6. A writing sample is also to be evaluated by the graduate advisor and two other faculty members as required by this catalog during the initial trimester of enrollment. A student will be required to compose a handwritten, impromptu composition on a subject provided by the Department of Natural Sciences. An unacceptable ability to write will necessitate some remedial work and a subsequent writing sample.

### **Initial Acceptance Procedures and Policies**

1. When applying for admission, the following information should be sent to the Graduate Office: 1) official copies of all the applicant's undergraduate and any graduate transcripts; 2) copy of the applicant's score on the Graduate Record Exam. Acceptable performance on this examination as judged by the Biology Graduate Committee is required. (See "Eligibility" above); and 3) two letters of recommendation from individuals who can attest to the applicant's ability to do graduate work; and 4) a one or two page (typed) statement of purpose describing the area of biology the applicant is interested in and why, along with the applicant's goals.
2. The applicant's academic file will be forwarded to the department and will be assessed by the Biology Graduate Committee. The committee will notify the Graduate Office of its decision and of any academic deficiencies an accepted applicant may have. The successful applicant who has any deficiencies will be accepted on a provisional status until the deficiencies are corrected. The Graduate Office will notify the student of the Biology Graduate Committee's decision.
3. Upon acceptance, the applicant, in consultation with the graduate advisor and other faculty members as needed, should declare an area of concentration available within the scope of the Biological Sciences area. A student whose area of interest is undecided is encouraged to tour the department and talk with faculty.
4. After declaring his or her area of concentration, the applicant should contact the faculty specialist in that area to be his or her major and thesis advisor. The faculty specialist will determine if the interests of the applicant are compatible with his or her expertise and if

he or she is able to act as the applicant's advisor. The biology faculty reserves the right to determine which students and how many they are able to advise. Upon mutual agreement between applicant and faculty specialist, the faculty specialist would then function as the thesis and major advisor of the graduate student. The graduate advisor shall, however, maintain a file on each graduate student for record-keeping purposes.

5. A Degree Audit Form must be filed with the Graduate Office during the first trimester of enrollment.
6. Upon completion of all the above requirements and upon formal application to the graduate advisor, the applicant will be notified of acceptance to degree candidacy by the Department of Natural Sciences. It should be noted that character weaknesses, incompatible research interests, lack of facilities, as well as academic inadequacies such as judged by the biology faculty via the Graduate Committee are sufficient reasons for non-acceptance to degree candidacy.
7. The Graduate Office will review the student for candidacy when at least 8 semester hours of graduate credit in residence have been completed.

### **General Requirements and Policies**

1. All requirements of the Graduate School must be met.
2. A grade point average of 3.00 in all graduate work is required for graduation.
3. Not more than six semester hours of "C" grades may be applied toward the master's degree.
4. A graduate student may take more than 8 hours of current topics (CT) and advanced current topics (ADV CT) courses, but only 8 total hours (of combined CT and ADV CT courses) will count toward the student's program of study. Exceptions to this policy can be made upon petition to the Biology Graduate Committee.
5. A maximum of nine semester hours of transfer credit, as approved by the Biology Graduate Committee, may be applied toward the master's degree.
6. For Option 1: A thesis defense and/or seminar covering the thesis or research paper (as applicable) must be given in the trimester of graduation. For Option 2: A seminar covering the scholarly paper must be given during a trimester prior to graduation or in the trimester of graduation.
7. If an advisor is unsatisfied with the progress of the student or if personality conflicts arise, the advisor may request that the student be removed from the project or area of specialization, or removed from the Biology program with the approval of the Biology Graduate Committee.
8. A written comprehensive examination is required for all students receiving the M.S. degree. The examination will consist of timed, sit-down essays or take-home essays or a combination of the two. Students must achieve the minimum of an overall "B" grade in order to pass. The assessment may be repeated up to three times according to existing graduate policy.

### **Research, Scholarly Paper and Comprehensive Examination Committee Formation and Responsibilities**

Upon acceptance by a major advisor, the graduate student in consultation with his or her major advisor should select a committee to evaluate the student's comprehensive examination and for Option 1, to evaluate the student's research/thesis. For Option 2, the committee will also evaluate the student's scholarly paper and presentation.



## Teaching: Science M.S.Ed.

CIP: 131316

### Requirements

#### Core Requirements

EDUC 61695	Philosophy of Education OR	3
EDUC 61649	Issues in Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

#### Subject Field Requirements

##### Education Requirements

EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3

##### Science Requirements

SCED 28682	Seminar in Science Education	1
SCED 28684	Science Assessment and Evaluation	2
SCED 28686	Curriculum Development in Science	2
	Electives from 500- and 600-level courses in biology, chemistry, earth science, physics, physical science, statistics, computer science or science education	9

#### Unspecified Electives (6)

**Total Credit Hours: 32**

#### Program Admission Requirements

Students with a minimum undergraduate grade point average of 2.50 (4.00 scale) and a minimum composite score of 280 on the verbal and quantitative sections of the GRE General Test will be accepted. The official score must be filed with the Graduate Office prior to admission but not later than the end of the first trimester of enrollment. If the score is not submitted by the end of the first trimester, the student cannot re-enroll until the score is submitted. Students who do not meet the cutoff score of 280 may be accepted on the condition that they maintain a grade point average of at least 3.00 for the first nine graduate hours in science.

#### Writing Sample

Students must complete a writing assessment administered by the Department of Natural Sciences during their first trimester of enrollment. Any student who fails the writing assessment must repeat the assessment within three weeks. Any student who fails the second writing assessment will meet with the chairperson of the department to establish a program of remediation.

#### Comprehensive Examination

The content of the comprehensive examination will be equally divided between those courses required in education and the science area. The School of Education and the Department of Natural Sciences are responsible for the scheduling, construction, and evaluation of their respective portions of the comprehensive examination. The degree candidate must pass both portions of the examination.

## International Study / 80

Study Abroad Office

The Study Abroad Office at Northwest strives to provide students and faculty with exposure to different educational systems and insight into new cultures that will allow them to develop necessary skills to interact in a world of constant change.

Studying abroad is one of many academic options that Northwest students from all academic areas are invited to experience. Whether a short-term program, a summer program, a trimester or an academic year, students have the opportunity to earn Northwest credit abroad, at the same time they are exposed to a new educational system. Students broaden their horizons by traveling to an international location to study with local citizens and/or international students to experience global living.

The Study Abroad Office assists students in identifying the program best suited to meet their academic and cultural interests. Study Abroad advisors link students with academic advisors, financial aid counselors and other student service providers to plan a rewarding international educational experience.

# School of Agricultural Sciences / 03

**Chairperson:** Rod Barr

**Program Advisor:**

**Graduate Faculty:** Nigel Hoilett, Arley Larson, Callie Mullins, Thomas Zweifel

**Department Telephone:** (660) 562-1155

Students in the School of Agricultural Sciences may participate in three master's degree programs: the M.S., M.S.Ed., and M.B.A., the latter with an emphasis in Agricultural Economics. All those pursuing a degree program must meet the general requirements of the Graduate School before they are admitted to candidacy. Students pursuing the M.B.A. with an emphasis in Agricultural Economics must meet the requirements for admission and retention as specified by the Melvin D. and Valorie G. Booth College of Business and Professional Studies. The Department of Agricultural Sciences requires that all students must have completed 24 hours of acceptable undergraduate coursework in agriculture prior to admission to candidacy. Students must complete at least 16 hours of 600-level courses during their 32-hour graduate program.

Agriculture graduate students may not take more than three hours of independent study, problems, special topics and special methods and materials courses as a part of their master's degree program.

## Agriculture M.S.

CIP: 010000

The Master of Science program in Agriculture is designed to further develop the technical knowledge and professional training necessary for those preparing for occupations in agriculture and for more advanced graduate studies. The emphasis is on current knowledge and how it may be adapted to future problems of all those engaged in producing, processing and marketing agricultural products. This program is implemented by selecting one of the following options:

### Option One: Thesis

All agriculture students in the graduate program who choose the Thesis Option are required to take the core courses listed below (AGRI 03691; AGRI 03699; AGRI 03693; MATH 17637). Based on the option chosen i.e. Animal Science or Agronomy Track options students will be required to choose 9 - 12 credit hours of electives in their program area (Agronomy or Animal Science) and another 6 - 9 credit hours outside of their program area. Choice of courses will be determined through consultation with their advisors.

### Required Courses

AGRI 03691	Methods of Research in the Life Sciences	3
AGRI 03699	Research in Agriculture	1 to 5
MATH 17637	Computer Methods in Statistics II	3
AGRI 03693	Seminar in Agriculture	1

### Agronomy Track

In addition to the core courses listed above (AGRI 03691; AGRI 03699; AGRI 03693; MATH 17637) students choosing the Agronomy Track option will be required to choose 9 - 12 credit hours of electives in Agronomy and another 6 - 9 credit hours outside of Agronomy/Agriculture. Choice of courses will be determined through consultation with their advisors. Agronomy Track students choosing the Thesis Option will work with their advisor on

a research project and submit a thesis on their research to their graduate committee. (Coursework option - non-thesis described below)

### **Animal Science Track**

In addition to the core courses listed below (AGRI 03691; AGRI 03699; AGRI 03693; MATH 17637) students choosing the Animal Science track option will be required to choose 9 - 12 credit hours of electives in Animal Science and another 6 - 9 credit hours outside of Animal Science. Choice of courses will be determined through consultation with their advisors. Animal Science track students choosing the Thesis Option will work with their advisor on a research project and submit a thesis on their research to their graduate committee. (Coursework option - non-thesis described below)

Students, in conjunction with their advisor, must petition the graduate faculty of the agricultural sciences department in order to be admitted to and pursue the thesis option. Students must have a combined verbal/quantitative score of at **least** 284 on the GRE before full acceptance into the program.

Students having a combined verbal/quantitative GRE score of less than 284 can petition the graduate faculty of the Agricultural Sciences Department for a waiver of the GRE requirement.

The graduate program director, together with each student pursuing this option, will appoint an advisory committee consisting of a thesis advisor, who will direct the research of the student, a second faculty member from agriculture, and a faculty member from a field related to the student's program. The advisory committee will assist the student in planning the research program and will conduct an oral examination of the student over the thesis upon completion of the student's research project.

Subtotal: 30

### **Option Two: Coursework**

#### **Required Courses**

All agriculture students in the graduate program who choose the Coursework option are required to take the core courses listed below (AGRI 03691; AGRI 03693; MATH 17637). Based on the track chosen i.e. Animal Science or Agronomy Track options students will also be required to take two (2) credit hours of special topics class. Agronomy track students will be required to take AGRI 03649 -Special Topics in Agronomy; whereas Animal Science Track students can choose between AGRI 03669 - Special Topics in Animal Science or AGRI 03679 - Special Topics in Dairy Science. The Special Topics class would vary based on the interest area of the student. Students choosing the Coursework Option will also be required to take 12 credit hours of electives in their program area (Agronomy or Animal Science) and another 10 credit hours outside of their program area. Choice of elective courses will be determined through consultation with their advisors.

AGRI 03691	Methods of Research in the Life Sciences	3
MATH 17637	Computer Methods in Statistics II	3
AGRI 03693	Seminar in Agriculture	1
AGRI 03649	Special Topics in Agronomy	1 to 3
AGRI 03669	Special Topics in Animal Science	1 to 3
AGRI 03679	Special Topics in Dairy Science	1 to 3
AGRI 03698	Scholarly Paper in Agriculture	1 to 3

Subtotal: 30

#### **Total Credit Hours: 30**

Students must have a combined verbal/quantitative score of at **least** 284 on the GRE before full acceptance into the program.

Students having a combined verbal/quantitative GRE score of less than 284 can petition the graduate faculty of the Agricultural Sciences Department for a waiver of the GRE requirement.

A student must complete 9 credit hours outside of agriculture, which forms a collateral field supportive of the student's interest in agriculture. These courses will be chosen in conjunction with, and approved by, the graduate program director. The student must maintain a "B" or better GPA in the collateral field.

The department graduate program director, together with each student pursuing this degree option, will appoint an advisory committee consisting of a major advisor from the student's chosen field of interest and a second faculty member from agriculture. This committee will assist the student in planning a program.

### Writing Sample

All graduate students are required to submit a writing sample during the first trimester of their coursework. The writing sample will be evaluated by the graduate faculty of the Department of Agricultural Sciences to determine if there is a need for supplemental coursework in writing skills.

### Comprehensive Assessment

Students pursuing Option One (Thesis) or Two (Coursework) must also take a written comprehensive examination over his or her coursework.

## Teaching: Secondary Agricultural Education M.S.Ed.

CIP: 131301

The Master of Science in Education degree with a concentration in Teaching Secondary Agricultural Education is available for those pursuing a career in teaching. This program is particularly adapted to the needs of agricultural education teachers who embark upon a graduate program. The student continues the development of their professional educational background while concentrating on their area of specialization in agriculture. The graduate study will improve the qualifications and capabilities of the students, provide opportunity for independent study and investigation, and provide the necessary education for graduate students to enter further advanced degree programs. Students must meet the requirements of the School of Education in addition to the requirements of the Department of Agricultural Sciences. For additional information see the School of Education section of this catalog.

### Program Admission Requirements

Students must have a minimum undergraduate GPA of 2.50 on a 4.00 scale and a score of at least 284 on both the verbal and quantitative portions of the GRE before full acceptance into the program. No GRE subject test is required.

Students having a combined GRE score of less than 284 on verbal and quantitative can petition the graduate faculty of the Department of Agricultural Sciences for a waiver of the GRE requirement.

Students must take a writing assessment during their first trimester of enrollment. This assessment will be scheduled by the School of Education. The graduate faculty will evaluate the writing sample and determine if there is a need for supplemental coursework in writing skills.

## Requirements

### Core Requirements (6)

EDUC 61695	Philosophy of Education	3
	OR	
EDUC 61649	Issues in Education	3
EDUC 61682	Improvement of Instruction through Action Research	2

EDUC 61683	Action Research Paper	1
<b>Subject Field Requirements (20)</b>		
EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3
	Agriculture Requirements	14

**Unspecified Electives (6)**

Any graduate course from any department may be selected as an elective providing the student will have completed at least 16 semester hours at the 600 level.

**Total Credit Hours: 32****Advisement**

A member of the graduate education faculty will serve as the program director. A graduate faculty member from the agriculture area will serve as area advisor and both signatures will be required on the Degree Audit Form. Any change in a Degree Audit Form must be initiated by the student and be submitted to the Graduate Office accompanied with written approval from both advisors.

**Comprehensive Examination**

The examination will be scheduled and administered by faculty members in the School of Education. The content of the examination will be equally divided between those courses required in education and the agriculture area. Each department will be responsible for the construction and evaluation of its portion of the comprehensive examination. The degree candidate must pass both portions of the examination.

**Agricultural Economics Emphasis M.B.A.**

CIP: 520201

The Melvin D. and Valorie G. Booth College of Business and Professional Studies, in conjunction with the Department of Agricultural Sciences, offers the Master of Business Administration degree with an Agricultural Economics emphasis for those pursuing a career in the business aspect of agriculture or for those preparing for advanced graduate work. This program is a logical extension for students who have completed an undergraduate degree in Agricultural Business. The student must have two advisors for this program, one from the M.B.A. faculty, and one from the Department of Agricultural Sciences.

**Requirements****Prerequisites**

In addition to the general requirements prescribed by the Graduate School, all MBA students from non-business fields must take 54201: MBA Business Foundations.

**For the area in Agricultural Economics, the following course prerequisites must be met before admission to the graduate program:**

ECON 52151	Principles of Microeconomics	3
	OR	
AGRI 03102	Introductory Agricultural Economics	3
AGRI 03130	Plant Science	4
	OR	
AGRI 03232	Crop Production	3
AGRI 03150	Animal Science	4
AGRI 03302	Agricultural Marketing	3
AGRI 03304	Farm Management and Records Analysis	3
AGRI 03234	Fundamentals of Soil Science	4

These courses cannot be taken for audit or pass/fail.

**All M.B.A. students must complete the following courses at the graduate level:**

(See the course descriptions for the appropriate prerequisite courses.)

ACCT 51646	Managerial Accounting	3
ECON 52651	Macroeconomics for Business Managers	3
	OR	
ECON 52654	Managerial Economics	3
FIN 53621	Financial Management	3
MGMT 54616	Organizational Behavior in Administration	3
MGMT 54618	Executive Seminar	3
MKTG 55630	Strategic Marketing	3
CSIS 44623	Information Technology Management	3
	Agricultural Economics Electives	12

All M.B.A. students with an area in Agricultural Economics must complete four graduate-level courses (12 hours) in agricultural economics from those listed in this catalog. They are not permitted to take AGRI 03509 as part of their program.

Under ACBSP accreditation standards, graduate students pursuing M.B.A. degrees must complete at least 30 hours in courses reserved exclusively for graduate students (that is, 600-level courses) **and** that cover material beyond that contained in the undergraduate Common Professional Component (CPC) courses. (See the *Northwest Undergraduate Academic Catalog* for a list of CPC courses.) The Northwest M.B.A. degree requires 33 hours. Thus, graduate students may take up to three hours of approved electives at the 500 level. However, M.B.A. students who did not take International Business as an undergraduate student are required to take the graduate International Business (MKTG 55631) course for a total of 36 hours.

**Comprehensive Examination for the Agricultural Economics Emphasis**

Students will take the Graduate Management Business Exam (ETS) during their last trimester of enrollment. The test will be scheduled early in the term. Students who wish to take the ETS exam must submit their application to take the comprehensive examination and their application to graduate to the Graduate Office no later than the end of the first week of the term in which they wish to sit for the exam.

Online students who live more than a two-hour drive from the Northwest Missouri State University campus in Maryville, or the Kansas City Center should contact the Office of the Dean for details about taking the exam.

# Melvin D. and Valorie G. Booth School of Business

**Stephen Ludwig, Director School of Business**

**Chi Lo Lim, MBA Program Coordinator, Advisor**

**School Telephone: (660) 562-1835**

**School Website: <http://www.nwmissouri.edu/business/index.htm>**

The Melvin D. and Valorie G. Booth School of Business offers the Master of Business Administration degree (MBA): MBA with Agricultural Economics emphasis, MBA with General Management emphasis, MBA with Human Resource Management emphasis, and MBA with Marketing emphasis.

CIP: 520201

**Graduate Faculty:** Casey Abington, Benjamin Blackford, Terry Coalter, Ben Collier, Tolina Fufa, Araceli Hernandez, Nigel Hoillet, Arley Larson, Chi Lo Lim, Stephen Ludwig, Janet Marta, Callie Mullins, Tiebing Shi, Deborah Toomey, James Walker, Tekle Wanorie, Tom Zweifel.

A master's degree in business administration involves the study of management — that is, the process of organizing and directing resources, which include people, finances, materials and information. The MBA program provides an opportunity to become a business leader by developing skills in ethical decision making, financial planning, quantitative analysis, policy formulation, and interpersonal relationships, understanding how these skills are applied in achieving business and organizational goals in an international environment.

The MBA is one of the most flexible degrees available. It prepares students for leadership in organizations, in independent businesses and in their own communities. It gives future managers the knowledge, concepts and skills necessary to direct resources to meet specific organizational goals.

With an MBA, one can achieve a more fulfilling career. Its versatility is a special advantage. Although an MBA is not a guaranteed ticket to success, it can provide access to many personal and professional opportunities and can help achieve greater responsibility, higher earnings, more job satisfaction, greater visibility for career advancement opportunities and contributions in their communities. The MBA opens many doors. Because of the high value all organizations place on decision making and problem solving abilities, our MBA graduates are sought after by a wide variety of organizations in different segments of the economy.

When former students were asked, "What are the advantages of obtaining an MBA degree?" five major benefits were listed in order of importance:

- (1) career entry and/or advancement – which includes labor market opportunities, increased career options, contacts, credentials and faster career mobility;
- (2) development of management abilities and business-related knowledge;
- (3) personal satisfaction;
- (4) increased compensation; and
- (5) other reasons, such as receiving a scholarship or using the MBA to gain entry to other academic programs.

## **Accreditation**



Northwest Missouri State University, through its Melvin D. and Valorie G. Booth School of Business, is nationally accredited by the Accreditation Council for Business Schools and Programs (ACBSP) for the offering of the following degree programs: (1) at the graduate level, for the Master of Business Administration (MBA) degree; (2) at the undergraduate level, for the Bachelor of Science (B.S.) degree with majors in accounting, finance, management information systems, business technology, business education, business economics, business management, international business and marketing.

## **MBA Admission Requirements**

Applicants to Northwest Missouri State University's MBA program with a bachelor's degree in business from a regionally accredited university must have a cumulative grade point average (GPA) of 2.5 on a 4.0 scale, and one of the following:

- Three years of continuous professional full-time work experience
- Three years of continuous full-time United States enlisted or commissioned military service
- Graduate degree from a regionally accredited university with a minimum 3.0 cumulative GPA
- A GMAT score of 440 or above
- An admission index of 1100 (undergraduate GPA x 200 + GMAT)
- A GRE score of 285 or above
- An admission index of 965 (undergraduate GPA x 200 + GRE)
- A 70th percentile on the Business Major Field Test score or above.
- Applicants to the MBA program who do not have a bachelor's degree in business are required to successfully complete the MBA Business Foundation course, MGMT 54201, which is designed specifically for students who are new to business curriculum.

International applicants must meet one of the following English proficiency requirements:

- TOEFL score of 550 (paper), 213 (computer) or 79/80 (internet-based)
- IELTS score of 6.5
- PTE score of 53

The English proficiency requirement may be waived for international applicants with a bachelor's degree from any United States regionally accredited institution.

International students must submit applications and all required materials to the Office of Admissions by the following dates. International students should allow approximately two months from the time all application documents are received for notification of acceptance.

Fall Trimester—July 1

Spring Trimester—December 1

Summer Trimester—May 1

## **Comprehensive Examination—ETS MBA-MFT**

Students must take the ETS MBA-Major Field Test (ETS MBA-MFT) comprehensive exam in order to complete the MBA program. To be eligible to take the exam, students must:

- Be enrolled in their final trimester
- Be admitted to candidacy

- Have achieved a minimum cumulative GPA of 3.0
- Have submitted a completed Research Component Form
- Have applied for graduation (no later than the end of the 2nd week of their final term)

The ETS MBA-MFT is available on campus in Maryville and remotely.

- On-campus testing will be scheduled each trimester and students who have met the above requirements will be notified of the date and location.
- Remote testing must be arranged with the Assessment Office and the test must be completed two weeks prior to the scheduled date for on-campus testing. Students are responsible for the remote proctoring fee.

**Alternate Exam for International Students**

If remote testing of the ETS MBA-MFT is unavailable for international students living outside of the United States, an alternate comprehensive exam will be offered upon the approval of the MBA Program Coordinator.

**Research Component**

All MBA students must complete a research component as part of their requirements for graduation. A research paper, at a minimum, is a paper that surveys the literature on a particular topic. In such papers, students should demonstrate that they understand various arguments, hypotheses or theories put forward in the literature, can compare and contrast such, and draw appropriate conclusions therefrom. Term papers meeting these specifications can qualify as research papers. Research papers can be written either individually or as a team, as directed by the academic program. The student's advisor must approve the research paper and file the Research Component Form with the Graduate Office.

**MBA Course Prerequisites**

In addition to the general requirements prescribed by the Graduate School, all MBA students from non-business fields must take 54201: MBA Business Foundations.

**MBA Agricultural Economics Emphasis**

The student who desires a career in the business aspect of agriculture may choose to pursue the MBA with emphasis in Agricultural Economics which is offered in conjunction with the School of Agricultural Sciences. This program is a logical extension for students who have completed an undergraduate degree in Agricultural Business. The MBA-Agricultural Economics emphasis candidate will have two advisors, one from the School of Agricultural Sciences, and the MBA Coordinator.

**MBA General Management Emphasis**

**Requirements**

MBA candidates who choose the General Management emphasis must complete the following courses.

ACCT 51646	Managerial Accounting	3
ECON 52651	Macroeconomics for Business Managers	3
FIN 53608	Employment Law	3
FIN 53621	Financial Management	3
MGMT 54611	Business Decision Analysis Tools	3
MGMT 54616	Organizational Behavior in Administration	3
MGMT 54618	Executive Seminar	3
MKTG 55630	Strategic Marketing	3

Three advisor approved business courses from 51600, 52600, 53600, 54600, 55600. 9

**Subtotal: 33**

\*Executive Seminar must be taken during the last term of enrollment.

## MBA Human Resource Management Emphasis

### Requirements

MBA candidates who choose the Human Resource Management emphasis must complete the following courses.

ACCT 51646	Managerial Accounting	3
ECON 52651	Macroeconomics for Business Managers	3
FIN 53608	Employment Law	3
FIN 53621	Financial Management	3
MGMT 54611	Business Decision Analysis Tools	3
MGMT 54616	Organizational Behavior in Administration	3
MGMT 54618	Executive Seminar	3
MGMT 54620	Advanced Human Resource Management	3
MGMT 54652	Managing Compensation and Benefits	3
MGMT 54654	Organizational Training and Development	3
MKTG 55630	Strategic Marketing	3

**Subtotal: 33**

\*Executive Seminar must be taken during the last term of enrollment.

## MBA Marketing Emphasis

MBA candidates who choose the Marketing emphasis must complete the following courses.

### Requirements

ACCT 51646	Managerial Accounting	3
ECON 52651	Macroeconomics for Business Managers	3
FIN 53608	Employment Law	3
FIN 53621	Financial Management	3
MGMT 54611	Business Decision Analysis Tools	3
MGMT 54616	Organizational Behavior in Administration	3
MGMT 54618	Executive Seminar	3
MKTG 55630	Strategic Marketing	3
MKTG 55631	International Business	3
MKTG 55635	Advanced Marketing Communications	3
MKTG 55636	Global Marketing Management	3

**Subtotal: 33**

\*Executive Seminar must be taken during your last term of enrollment.

# School of Communication and Mass Media

**Director:** Matt Walker

**Graduate Faculty:** Joy Daggs, John Katsion, Bayo Joachim, David Shadinger, Matt Walker

**Associate Graduate Faculty:** Fred Lamer

**Department Telephone:** (660) 562-1361

The School of Communication and Mass Media offers courses at the 500- and 600-levels as unspecified electives for other graduate degree programs.

## **Strategic Communication M.A.**

### **Requirements**

CIP: 090901

The Master of Art in Strategic Communication is a 32-credit online program focusing on skills that may be applied to multiple employment venues such as businesses, non-profits and government agencies.

Within this competency-based program, students learn and demonstrate knowledge and skills through exercises and activities. The program is designed for working professionals allowing students to complete the competencies at their own pace.

At Northwest, students may also earn credit through prior learning assessments giving students the opportunity to proceed through the program at a faster pace.

### **Admission Requirements**

- Minimum overall grade point average (GPA) of 2.75 on the undergraduate transcript
- Application fee required
- Submit with the application a two-page, double-spaced Statement of Purpose. Faculty teaching in the Strategic Communication program in the School of Communication/Mass Media will evaluate the Statement of Purpose as part of the application process, and a score of 3.5 or higher must be met. The score guide used by the GRE Analytical Writing Measure will be used. If the applicant does not successfully complete the Statement of Purpose, the applicant's application may be considered for conditional admission, with remediation assigned in the applicant's first semester.

### **Completion**

- Each student will complete the Capstone Domain at the conclusion of the five domains. While each student will have a unique capstone activity, the majority of the work will be research-based, and will be under the supervision of the student's faculty mentor.
- A requirement for the successful completion of the degree program is the portfolio. Each student will also write a reflective statement for their portfolio.
- Research Component Requirement will be met through Capstone Domain.

### **Enrollment**

- Subscription based enrollment where a minimum of 9, and a maximum of 12 credit hours are required with the exception of student's final term.

## Grading

- CBP Competency Based Pass indicates course completion with 85% or above
- CBF Competency Based Fail indicates course completion below 85%
- CBP Competency Based Prior Learning Credit can be awarded up to 11 credit hours. See associated fees on Bursar's Website.
- Incomplete grade are not an option for competency based programs. If unable to complete course, a CBF will be assigned and student will be required to re-enroll in the following term.

Students will have the opportunity to complete an assessment for each course a maximum of three times. If students do not successfully complete the course assessment they will be dismissed from the program.

## Course Requirements List

### Foundational Domain

- COM 29610 Foundational Domain in Strategic Communication 3 hrs

### Organizational Dynamics Domain

- COM 29620 Organizational Dynamics 6 hrs

### Strategic Communications Management Domain

- COM 29630 Strategic Communications 6 hrs

### Project Management Domain

- COM 29640 Project Management 7 hrs

### Communication Skills and Techniques Domain

- COM 29650 Strategic Communication Skills and Techniques 7 hrs

### Capstone

- COM 29660 Capstone in Strategic Communication 3hrs

**Total Credit Hours: 32**

# School of Computer Science and Information Systems

**Director:** Carol Spradling

**CSIS Graduate Program Advisors:** Ajay Bandi, Nancy Zeliff, Joni Adkins

**Graduate Faculty:** Joni Adkins, Charles Badami, Ajay Bandi, Scott Bell, Denise Case, Nathan Eloie, Aziz Fellah, Doug Hawley, Charles Hoot, Jr, Michael Oudshoorn, Zhengrui Qin, Michael Rogers, Carol Spradling, Cindy Tu, Roger Von Holzen, Nancy Zeliff

**Associate Graduate Faculty:** Cari Cline

**Department Telephone:** (660) 562-1600

## **Computer Science and Information Systems / 44**

### **Applied Computer Science M.S.**

CIP: 110501

The Master of Science in Applied Computer Science offers students with a strong undergraduate background in a technical computing discipline an opportunity to increase their technical expertise and to complement that expertise with fundamental business concepts related specifically to information technology. By increasing students' knowledge in high-demand areas, such as network security, web services and applications, human-computer interaction, software development and database systems, graduates of this program will be well-prepared to succeed in a very competitive job market. A two-term, six-credit hour Master's Project will give students an opportunity to apply their knowledge. Graduates of this program will:

1. Have a high degree of competence in areas of high-demand and emerging technologies.
2. Have good project management skills and will understand fundamental business concepts, as related specifically to information technology.
3. Have experience in design and implementation of a large project.
4. Know how to work in teams.
5. Have good written, communication, and presentation skills.

Full-time students with no deficiencies can expect to complete this program in two academic years. Students who attend during the summer session may be able to reduce the amount of time required to 16 months.

#### **Program Admission Requirements**

Candidates for the M.S. in Applied Computer Science should meet the following requirements:

1. Compliance with all of the eligibility requirements of the Graduate School.
2. Acceptance to graduate study by the Dean of the Graduate School.
3. Completion of a four-year undergraduate degree from an accredited college or university with an undergraduate grade point average of 3.00 on a 4.00 scale. Applicants are expected to have a major or minor in a technical computing discipline, including coursework in:

- data structures
- computer networks
- database systems
- discrete mathematics
- statistics

With the exception of data structures, applicants who do not satisfy these requirements may take undergraduate level courses to remove any deficiencies. A student who has not completed a course in data structures cannot be admitted to the program.

4. Minimum total GRE score of 290.

Applicants who do not meet these requirements may be admitted by considering the full academic profile and/or the professional experience.

The Computer Science and Information Systems area reserves the right of final decision in accepting students to graduate degree candidacy in the department. Criteria for admittance to the program and acceptance to degree candidacy may include academic qualifications and performance, number of applicants and available resources.

### **Advisement**

A member of the graduate faculty of the Computer Science and Information Systems area will serve as the major advisor. The major advisor will assist students in approving and submitting the Degree Audit to the Graduate Office. When updates are complete, the student will be notified to review and agree to the Degree Audit. The major advisor must approve any additional changes to the student's Degree Audit by notifying the Graduate Office.

### **Comprehensive Examination**

The comprehensive examination will be scheduled, administered and evaluated by members of the graduate faculty in the Computer Science and Information Systems area.

### **What is the Accelerated BS/MS program?**

This program allows outstanding students to concurrently pursue a Bachelor of Science (B.S.) degree in Computer Science and a Master of Science (M. S.) degree in Applied Computer Science, and to complete graduation requirements for both degrees within five years at Northwest Missouri State University (Northwest).

Overview of Accelerated BS/MS program:

The M.S. program in Applied Computer Science (ACS) at Northwest requires 33 credit hours of graduate courses. Students complete the M.S. degree in four trimesters *i.e.* sixteen months including two six-week summer sessions. The accelerated B.S./M.S. program will allow undergraduate students to complete a maximum of 15 credit hours of graduate coursework in their junior and senior years. These courses would count towards both their B.S. and M.S. degrees. Students can complete the remaining 18 hours of graduate coursework in the two trimesters of the fifth year.

Admission Requirements:

The MS-ACS program coordinator will review the application to assess each applicant's eligibility.

- 1) Students who are currently pursuing a B.S. in Computer Science at Northwest.

- 2) A student must apply for admission to the program no sooner than the end of their sophomore year (graded courses up to a total of 60 hours) and no later than the beginning of their first trimester of the senior year (graded courses up to a total of 60 hours) of the undergraduate program.
- 3) Students must submit their transcripts and a letter of recommendation from their undergraduate academic advisor to the Graduate School.
- 4) The student must also satisfy one of the following GPA criteria (both overall GPA and major GPA are on the 4.0 scale):
  - a) Overall GPA  $\geq 3.0$  **and** major GPA  $\geq 3.33$

**or**

  - b) Overall GPA is between 2.90 and 2.99 **and** major GPA is between 3.0 and 3.32 with any of the following test scores (before the program coordinator is allowed to review the application, the Graduate School must verify one of these scores):
    - i) A minimum ACT score of 22
    - ii) A minimum SAT score of 1100
    - iii) A minimum GRE score of 290
- 5) Applicants must satisfy these criteria at the beginning of the fifth year:
  - a) Compliance with all the eligibility requirements of the Graduate School as outlined in the Graduate Catalog.
  - b) Completion of these courses with a minimum letter grade of 'C' or better:
    - i) Statistics or Precalculus
    - ii) Discrete Mathematics
    - iii) Data Structures
    - iv) Network Fundamentals
    - v) Database Systems
- 6) Students are not eligible to apply to the accelerated B.S./M.S. program after they are awarded their B.S. degree. However, they could still apply for the traditional M.S. program.

**Advising for courses in the Junior and Senior years:**

- 1) A student can enroll in graduate courses only after their sophomore year (60 graded hours).
- 2) The student's undergraduate academic advisor, the MS-ACS program coordinator and the MS-ACS assistant program coordinator will assist the student in developing a plan for enrolling in classes to complete both degrees within a five-year timeframe.
- 3) During their junior and senior years, a student can take graduate courses under the following conditions:
  - a) Students can enroll in 500 level courses for undergraduate and graduate dual credit.
  - b) Students can enroll in a maximum of 3 hours of graduate credit in 600 level courses.
  - c) Students with junior status may take a maximum of 3 hours of graduate credit per trimester and not enroll in more than 16 total credit hours during a given trimester.



- d) Students with senior status may take a maximum of 6 hours of graduate credit per trimester and not enroll in more than 16 hours total credit hours during the given trimester. The School Director and the Associate Provost of Graduate Studies and Special Programs can approve exceptions only in the senior year.
- e) If a course has already been taken for undergraduate credit, it cannot be overridden for graduate credit.
- 4) Students are expected to enroll in these courses in their junior or senior year for graduate credit:
  - a) 44555 – Network Security
  - b) 44560 – Advanced Topics in Database Systems
  - c) 44563 – Developing Web Applications and Services
  - d) One of these courses count towards Elective-1 for graduate credit
  - i) 44550 – Operating Systems
  - ii) 44525– Theory and Implementation of Programming Languages
  - e) 44643 (or) 44644 – Mobile Computing iOS (or) Mobile Computing Android

**Advising during the Fifth Year:**

- 1) The MS-ACS program coordinator and the assistant program coordinator will be the primary and secondary advisors for all fifth-year students.
- 2) The student will complete the M.S. degree in the usual manner fulfilling the degree requirements.
- 3) Students will enroll in these courses in the fifth year for graduate credit:
  - a) 44618 – Project Management in Bus & Tech
  - b) 44623 – Information Technology Management
  - c) 44664 – Human Computer Interaction
  - d) 44691 – CS Graduate Directed Project-I
  - e) 44692 – CS Graduate Directed Project-II
  - f) Advisor Approved Elective (This could be a 500 or 600 level course)

**Degree Status:**

- 1) The student is awarded a B. S. degree in Computer Science as soon as the B.S. requirements are completed. Then, the student will be admitted as a candidate for the M.S. degree.
- 2) The student is awarded an M.S. degree in Applied Computer Science as soon as their M.S. requirements are completed.

Please review the policy section on Accelerated Programs (p. 34) for additional information.

**Requirements–M.S. in Applied Computer Science**

Thirty-three hours of graduate credit are required for completion of the M.S. in Applied Computer Science, with at least 16 hours at the 600-level.

**Required Courses**

CSIS 44542	Object-Oriented Programming	3
CSIS 44555	Network Security	3
CSIS 44560	Advanced Topics in Database Systems	3
CSIS 44563	Developing Web Applications and Services	3
CSIS 44618	Project Management in Business and Technology	3
CSIS 44623	Information Technology Management	3
CSIS 44664	Human Computer Interaction	3
CSIS 44691	CS Graduate Directed Project I	3
CSIS 44692	CS Graduate Directed Project II	3
CSIS 44643	Mobile Computing-iOS	3
	OR	
CSIS 44644	Mobile Computing-Android	3
	Advisor approved electives	3

**Total Credit Hours: 33****Information Systems M.S.****Requirements - M.S. in Information Systems**

CIP: 110101

The primary objective of this program is to prepare students to compete in the global IT job market. To that end, our program provides:

- A sound background in information systems fundamentals
- Extensive hands-on practice to ensure that students have the necessary technical skills to quickly become productive employees and IS managers
- Experience in developing and managing software projects
- Experience in working as a lead team member on projects
- Opportunities to use and improve communication skills, both oral and written

Students in the MSIS program study information systems analysis and design, cybersecurity, database design and development, human-computer interaction, financial decision making for information systems, and management of IT projects. Additional coursework provides students with hands-on experience in today's major platforms – including Java, modern database engines and current project management tools.

A capstone Information Systems Development project is designed to expose the students to real world IT practices, enhancing their communication skills and preparing them to enter the job market.

**Admissions Requirements**

Students seeking admission to this program are expected to have completed a four-year undergraduate degree from an accredited college or university with an undergraduate grade-point average (GPA) of 2.75 or better on a 4.0 scale. In addition, applicants must have a total GRE score (verbal + quantitative) of 285. Applicants are expected to have a major or minor in an information systems, computer science, business, or engineering discipline, including coursework in:

- Information systems
- Statistics
- STEM field

## Duration of Program

Students can complete this program in four trimesters (16 months, including twelve-week summer session).

### Required Courses

CSIS 44623	Information Technology Management	3
CSIS 44617	Information Systems Analysis and Design	3
CSIS 44641	Developing Object-Oriented Systems with Java	3
CSIS 44660	Database Design and Implementation	3
CSIS 44651	Enterprise Networking and Internetworking	3
CSIS 44662	User Centered System Design and Evaluation	3
CSIS 44652	Cybersecurity and Information Security Management	3
CSIS 44654	Professionalism in the Information Systems Environment	3
CSIS 44618	Project Management in Business and Technology	3
CSIS 44638	Financial Modeling and Decision Making for IT	3
CSIS 44632	Business Intelligence and Analytics	3
CSIS 44693	Information Systems Capstone Project	3
Subtotal: 36		

# School of Education

## **Timothy Wall, School of Education Dean and Director of Teacher Education**

- Department of Professional Education
- Career Education
- Horace Mann Laboratory School
- Phyllis and Richard Leet Children and Family Center

The School of Education offers programs for three graduate degrees: the Master of Science in Education for those pursuing careers in professional education in nine areas; the Master of Science for those pursuing careers in higher education; and the Specialist in Education for those pursuing careers in educational leadership. A doctoral degree in Educational Leadership is offered cooperatively with the University of Missouri, which confers the doctoral degree.

The School of Education, in addition to offering on-campus programs, offers outreach courses and programs at Centers in the Kansas City and St. Joseph areas.

## **Vision Statement**

The vision of the School of Education is to provide highly competent professionals who are lifelong learners, reflective thinkers and ethical leaders exemplifying the ideals of literacy, scholarship and social justice in a diverse and ever-changing world.

## **Mission Statement**

The mission of the School of Education is to create learning communities in which students and professionals develop partnerships with families, communities, schools, businesses and other public agencies to assist students in acquiring knowledge, skills and values critical to a democratic society. As a result, we prepare students for leadership careers in business, industry, education, government, recreation, public service, health and wellness.

The goals of the college are to:

- Provide students a strong knowledge base in general education.
- Provide opportunities for specialization through majors and minors.
- Provide opportunities to develop values and ethics within the academic discipline.
- Provide opportunities for students and faculty to collaborate in research.
- Provide services to the community and surrounding region.
- Provide opportunities for continuing and graduate education.

## **Continuous Improvement and Program Quality**

The organizational structure is designed to maximize input from and empowerment of the entire education community. Cross-functional teams of college faculty, PK-12 faculty, and students function to ensure continuous study and improvement of programs and processes. These improvements and initiatives may include issues of importance to the college, such as technology integration, a curriculum which is representative of our nation's diversity and consistent evaluation of assessment data on program performance.

One source of input for program improvement is gathered from comment cards provided throughout the University and available online at the Northwest website for use in bringing issues of importance to the attention of the appropriate administrator. Students, faculty and staff may use these cards to share comments, suggestions, or complaints regarding an office, department, program or activity in the University community. All comment cards relating to teacher preparation are compiled for reporting of issues and opportunities for program or process improvements to the Council on Teacher Education.

### **Vision Statement for the Professional Education Unit**

The Northwest Missouri State University Professional Education Unit prepares highly effective, ethical, professional educators who possess the knowledge, skills and professional dispositions in order to embrace the responsibility for the learning of all children in a diverse and dynamic society.

### **Mission Statement for the Professional Education Unit**

The Northwest Missouri State University Professional Education Unit will be a catalyst for education excellence by preparing P-12 professional educators who apply best practices to positively impact learning.

### **Our Pledge for the Professional Education Unit:**

Based upon our vision and mission, the Northwest Missouri State University Professional Education Unit serves education candidates as our primary focus in order to develop professionals who:

- Possess the requisite level of knowledge, skills, and professional dispositions;
- Model integrity and professionalism;
- Promote social justice, the inherent worth of each individual, and the ideals of a democratic society;
- Facilitate an educational environment that embraces diversity;
- Collaborate and build partnerships with educational professionals, students, parents, communities, and other social agencies;
- Use technology in a meaningful, purposeful, and authentic manner.

### **Competency Evidence and Assessment**

All Northwest undergraduate and graduate education students are required to purchase a subscription to Tk20. This database system provides evidence to the state and national accreditation associations that educators have mastered the knowledge and skill competencies required for their degree and certification.

### **Education Degree Graduate Diversity Experience**

Education degree-seeking graduate students and post-baccalaureate students seeking teacher, administrator or counselor certification are required to complete diversity experiences. It is expected that this will be a meaningful experience through which the student will evaluate assumptions about teaching/administration/counseling in diverse settings and reflect on how the experience may alter those assumptions. The overall goal is to enable the education candidate to observe and reflect on effective educational practice in diverse settings. All students approving their Degree Audit and Teacher Certification Contract are expected to fulfill this requirement. The Graduate Diversity Experience will be listed by the advisor on the Degree Audit as a requirement. For post-degree graduate students seeking certification only, this requirement will be included in the certification contract. Guidelines and forms for this experience will be presented to graduate students in one of two classes, either Issues in Education (EDUC 61649) and/or Philosophy of Education (EDUC 61695). Upon completion of

the Graduate Diversity Experience, the student will submit the Graduate Experience in Diverse Setting Reflective Thinking Template and the Graduate Experience in Diverse Setting Verification Form to the Tk20 system.

Forms and information may be found online at <http://www.nwmissouri.edu.dept/edlead/tess/ExperienceDiversity.pdf>

## Candidate Advanced Program Dispositions

Advanced program dispositions will be collected at four specific transition points during the academic program of all candidates in advanced education programs. The first transition point will be entry into the education program and will be completed by a supervisor who has professional knowledge of the candidate to be used in place of a reference letter. The second transition point will be during a midpoint (after 9-12 hours depending on the program) of the candidate's degree program and will be completed by an advisor or a course instructor who has had the candidate. The third transition point will be at the end of his or her program and completed as a candidate self-report. Additionally, at the end of the program, an advisor or group of faculty who have had the candidate in advanced courses will complete a disposition form on the candidate.

Two Advanced Program Dispositions reports will be generated and data will be reviewed weekly and semi-annually. An aggregate report of all advanced program candidate dispositions will be reviewed by the Assessment System and Unit Evaluation Team (ASET) and departments on a semi-annual basis.

In addition to the disposition transition point, the dispositions form may be used at any time during a candidate's career when a course instructor, advisor, supervisor, or cooperating teacher wishes to report dispositions which are below expectation. The Assessment Director will review the results from dispositions forms weekly. If the Assessment Director finds cause for concern or the need for remedial action based upon the review of disposition forms submitted, the advisor of the candidate and the Assistant Director of Teacher Education will be notified via e-mail. The Assessment Director will copy comments from the Tk20 disposition form and share these with the advisor and the Assistant Director of Teacher Education. The Assessment Director, the Assistant Director of Teacher Education and the Advisor will confer on next steps. The steps that may be taken are:

1. An individual conference is held with the student;
2. A letter is sent to the student with remedial actions and a timeline;
3. The student is asked to develop a plan to rectify the disposition; or
4. In the case of severe or multiple dispositional offenses, the student is referred to the Education Guidance Committee (EGC).

## Department of Professional Education

**Director of Teacher Education:** Timothy Wall

**Graduate Faculty:** Kristina Alexander, Johannah Baugher, Shantel Farnan, William Daniel Gordon, Nissa Ingraham, Jeongae Kang, David Kiene, Gregory Rich, Vicki Seeger, Everett Singleton, Linda Gray Smith, Tim Wall, Sue Wood

**Associate Graduate Faculty:**

**Director of Field Experience (graduate):** Gregory Rich

**Principal of Horace Mann School:** Laura King

**Director of Leet Center for Children and Families:** Cindy Rouser

**Coordinators:**

Alternative Certification – William Daniel Gordon  
 Doctor of Educational Leadership (MU Ed.D collaborative) – Tim Wall  
 Early Childhood –  
 Educational Leadership (M.S.Ed.) – David Kiene  
 Educational Leadership (Ed.S.) – Kristina Alexander  
 Elementary – Sue Wood  
 English Language Learners – Nissa Ingraham  
 Reading – Johannah Baugher  
 Special Education – Shantel Farnan  
 Teaching: Secondary/GIST – William Daniel Gordon  
 Middle School - Linda Gray Smith

**Department Telephone:** (660) 562-1239

## **Statement of Mission**

Northwest Missouri State University is a learning-centered community of scholars offering undergraduate and selected graduate programs. The University is committed to preparing broadly educated and engaged citizens for a world of constant change, applying information technology to improve learning processes, and promoting continuous improvement to enhance performance in all its activities. Northwest seeks to expand access to learning and promote research designed to address the needs of our students and stakeholders.

Changes to programs during this catalog cycle may be made related to changes in certification requirements and/or program changes approved by both Department of Elementary and Secondary Education.

All education majors are required to purchase the Tk20 assessment package. Students who have not purchased the subscription will not be admitted into the Professional Education Unit.

## **Education: Curriculum and Instruction / 62 Program Admission Requirements**

Students wishing to pursue a graduate degree in Professional Education in the program area of Curriculum and Instruction must meet the admission requirements of the University and department as stated in this catalog. See admission requirements under specific program descriptions.

### **Admission Appeal**

Students not meeting the departmental GPA admission standards as stated may appeal to the departmental admission committee. Appeals should be made in writing to the department chairperson.

If after a second attempt on the GRE the student is unable to attain the minimum admission score, he or she may appeal to the departmental admission committee. Appeals should be made in writing to the department chairperson.

Students not successfully completing a second writing assessment may appeal in writing to the department chairperson.

### **Departmental Admissions Appeal Committee**

The chairperson will appoint a committee of three department members, including the advisor, and two professors, one who has had the student in class and one who has not.

The student is to:

1. Submit a portfolio including, but not limited to:
  - a. Transcripts of all credits.

- b. A written request for alternative admission (minimum 250 words not to exceed three double-spaced typed pages).
  - c. Two employer/supervisor recommendations.
2. Make an oral presentation to the committee including:
  - a. Statement of personal and professional reasons for appeal.
  - b. Factors or motivation for seeking a graduate degree.
  - c. Projected plans for degree completion.

Students seeking admission through the appeal process should contact respective program advisors for portfolio guidelines.

### **Comprehensive Exam**

To assess program effectiveness, a comprehensive exam is administered for the M.S.Ed., Teaching: Early Childhood Education program. Students should contact the advisor for more information.

### **Portfolio Requirement**

To assess program effectiveness and meet the comprehensive assessment requirement, a performance-based graduate portfolio is required of all students completing the following programs:

#### **M.S.Ed., Reading**

#### **M.S.Ed., Teaching English Language Learners**

Program advisors will provide candidates with the **program-specific** portfolio template at the time the Degree Audit Form is completed. See General Portfolio Template below.

### **General Portfolio Template**

The portfolio will include artifacts from the following categories, in addition to two that will be chosen by the candidate. The portfolio should include:

1. A presentation of the candidate's teaching and learning philosophies.
2. Artifacts that demonstrate a knowledge of and the ability to apply educational theories and research to practice. Artifacts will demonstrate competency to meet the department's knowledge base and the Missouri Standards for Preparation of Educators (MOSPE). Scoring guides for artifacts in the candidate's program are to be included in the portfolio.
3. A reflection will be written for each standard that includes a description of:
  - The artifact included under a given standard and context in which it was prepared and/or delivered. This should be an overview of what a reviewer would see in the portfolio.
  - How artifacts relate to one or more of the specific standards chosen for the organization of the portfolio (i.e. Missouri Standards for Preparation of Educators, Missouri Educator Evaluation System), and uses the vocabulary of the standards.
  - How artifacts relate to the Missouri Learning Standards for K-12 students (refer to Missouri performance and content standards printed on the "placemat," or use the standards from the student's state of residence or employment). Use vocabulary of the standards.
  - How artifacts reflect theory/research.



- Why this particular teaching strategy/procedure was used to achieve the learning objectives.
  - How artifacts assisted the candidate's growth and development as a teacher—include those things that went well and things in need of change if the experience was being conducted again. Address what was learned in the process.
  - What the student(s) learned or what was learned about the student(s). Include samples/examples/protocol of student's work/assessment to add to the portfolio.
  - How the teaching (or learning) experience represented by the artifact affected growth as an ethical decision-maker based on the candidate's beliefs about teaching and students. Reference personal educational philosophy or belief statements and the dispositions of an effective teacher.
4. An appendix which contains two artifacts of candidate's choice. The candidate will preface each artifact with a written rationale that explains how each artifact demonstrates standard competency. Examples could include, but are not limited to: a video tape with analysis, action research in the classroom, teaching innovations, professional activities, career ladder projects, etc.

The portfolio is to be submitted to the appropriate program advisor no less than 30 days in advance of the oral presentation of the portfolio to the review team. Candidates are responsible for communicating with the appropriate program advisor regarding plans for scheduling the specific time of the portfolio review session.

### **Diverse Field Experience**

The Department of Professional Education is committed to preparing professionals to work with all students. To facilitate multicultural awareness and understanding of issues related to teaching students from diverse backgrounds, the department requires a twelve-clock-hour field experience in a diverse setting for candidates in all of the following programs:

- M.S.Ed., Early Childhood
- M.S.Ed., English Language Learners
- M.S.Ed., Reading
- M.S.Ed., Special Education
- M.S.Ed., Teaching Elementary

Guidelines for this experience will be presented to graduate students when the Degree Audit Form is completed.

#### **M.S.Ed. Teaching Programs**

The following advanced programs are designed to further prepare school personnel for classroom teaching positions and/or certification in different subject areas and varying grade levels—early childhood through post-secondary—with formats that allow for individually-prescribed programs based on the background and specific needs of the classroom teacher involved. More structured programs are also provided for the elementary self-contained classroom teacher and the secondary teacher who wishes additional subject area content.

### **Curriculum and Instruction M.S.Ed.**

CIP: 130301

Note: Completion of this program does not lead to teacher certification.

#### **Program Admission Requirements**

1. A minimum overall grade point average of 2.75 on the undergraduate transcript OR an undergraduate overall GPA of 2.50 to 2.74 and a 3.0 GPA on six hours of required graduate coursework at Northwest in the major program where admission is requested.
2. Documentation of one of the following:
  - 3.5 or higher on the analytical writing measure of the GRE OR
  - successful completion of another Master's Degree from a regionally accredited institution of higher education with at least a 2.75 GPA OR
  - National Board Certification OR
  - Successful completion of nationally normed educational performance assessment (MoPTA, EdTPA) OR
  - Department analytical writing assessment that is evaluated using a writing scoring guide based on the modified CUNY scales with a score of 4.0 or higher OR
  - Valid teaching certificate OR 2 years prior teaching with a valid teaching certificate.

**Extra Requirements**

**Comprehensive Assessment**

To meet exit comprehensive requirements, students are required to complete the Written Assessment of Competency Mastery. The assessment will include reference to artifact/course content, and reflection on personal growth as a curriculum leader. The assessment will be administered during EDUC 61669: Capstone Seminar.

**Research Component**

A research component form must be turned into the Graduate Office prior to graduation.

**Program Outcomes (linked to University Outcomes)**

- The program completer who successfully completes the M.S.Ed. in Curriculum and Instruction: Engagement, Learning and Achievement demonstrates the use of critical thinking skills to recognize and implement improvement practices related to curriculum and instruction - Critical Thinking
- The program completer who successfully completes the M.S.Ed. in Curriculum and Instruction: Engagement, Learning and Achievement demonstrates the ability to manage information and analyze data to improve practices related to curriculum and instruction - Managing Information
- The program completer who successfully completes the M.S.Ed. in Curriculum and Instruction: Engagement, Learning and Achievement will demonstrate the ability to integrate brain science research into improvement of practices related to curriculum and instruction - Valuing
- The program completer who successfully completes the M.S.Ed. in Curriculum and Instruction: Engagement, Learning and Achievement will model diversity, equity and inclusion through improvement of practices related to curriculum and instruction - Social Justice

**Course Requirements**

**Core Requirements**

EDUC 61622	Visionary School Leadership	3
EDUC 61641	Data Literacy and Assessment for Schools	3
EDUC 61642	Multicultural Education for Diversity, Equity, and Inclusion	3

**Subtotal: 9****Subject Field Requirements**

EDUC 61606	Culture & Student Engagement	3
EDUC 61687	Feedback and Goal Setting	3
EDUC 61689	Leading In The Digital Age	3
EDUC 61691	Change Management In Education	3
EDUC 61653	Trends and Issues in Curriculum and Instruction	3
EDUC 61697	Academic Inquiry	3
EDUC 61699	Capstone Seminar	3

**Subtotal: 21**

Subtotal: 30

**Teaching: Elementary M.S.Ed. (Self-Contained)**

CIP: 131202

**Program Admission Requirements**

1. A minimum overall grade point average of 2.75 on the undergraduate transcript or an undergraduate overall GPA of 2.50 to 2.74 and a 3.25 GPA on eight hours of required graduate coursework at Northwest in the major program where admission is requested.
2. A valid teaching certificate.
3. Successful completion of the Analytical Writing Assessment\* (read, summarize and critique a pre-selected scholarly journal article that is evaluated using a writing scoring guide based on the Modified CUNY Scales) conducted by the department during the first trimester of enrollment. If the student has taken the GRE, a score of 3.5 or higher on the Writing section may be substituted for the Analytical Writing Assessment requirement.
4. Alternative GRE requirement for experienced teachers:
  - a. In-service teachers (with more than two years of teaching experience – PRAXIS II or Missouri Content Assessment score and one letter of recommendation from a current administrator who has completed a performance-based annual evaluation of the candidate's ability).
  - b. In-service teachers who were certified prior to the PRAXIS II or Missouri Content Assessment requirement – submit two letters of recommendation (one from a current administrator and one from a professional colleague; the administrator must have completed a performance-based annual evaluation of the applicant's ability).
5. GRE requirements:
  - a. New teachers (one–two years of teaching experience) or international students – take and pass GRE (minimum combined score of 280 on the verbal and quantitative sections).

\*The Analytical Writing Assessment has been revised to include a measure of reading and critical thinking.

**Course Requirements****Core Requirements (6)**

EDUC 61649	Issues in Education	3
	OR	
EDUC 61695	Philosophy of Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

**Subject Field Requirements (21)**

EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3
EDCI 62603	Mathematics in the Elementary School	3
EDCI 62605	Science in the Elementary School	3
EDCI 62607	Language Arts in the Elementary School	3
EDCI 62610	Social Studies in the Elementary School	3
EDCI 62655	Reading in the Elementary School	3

**Electives (5)**

**Total Credit Hours: 32**

**Teaching: Early Childhood Education M.S.Ed.**

CIP: 131210

**Program Admission Requirements**

1. A minimum overall grade point average of 2.75 on the undergraduate transcript or an undergraduate overall GPA of 2.50 to 2.74 and a 3.25 GPA on eight hours of required graduate coursework at Northwest in the major program where admission is requested.
2. GRE requirements:
  - a. New teachers (one–two years of teaching experience) or international students – take and pass GRE (minimum combined score of 280 on the verbal and quantitative sections).
3. Alternative GRE requirement for experienced teachers:
  - a. In-service teachers (with more than two years of teaching experience – PRAXIS II or Missouri Content Assessment score and one letter of recommendation from a current administrator who has completed a performance-based annual evaluation of the candidate’s ability).
  - b. In-service teachers who were certified prior to the PRAXIS II or Missouri Content Assessment requirement – submit two letters of recommendation (one from a current administrator and one from a professional colleague; the administrator must have completed a performance-based annual evaluation of the applicant’s ability).
4. Score of 3.5 or above on the writing component of the GRE, or successful completion of a supervised writing assessment conducted by the department during the first trimester of enrollment.

**Course Requirements**

This program is designed for students who wish to gain advanced training in the specialized field of early childhood education for children birth to age eight.

**Core Requirements (6)**

EDUC 61649	Issues in Education	3
	OR	
EDUC 61695	Philosophy of Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

**Subject Field Requirements (17-18)**

EDCI 62542	Curriculum and Methods in Early Childhood Special Education	3
EDCI 62617	Early Childhood Program Evaluation	3
EDCI 62618	The Reflective Practitioner: Seminar and Practicum in Teaching Early Childhood	3
PSYC 08627	Advanced Child and Adolescent Psychology	3
EDCI 62602	Supervision of Early Childhood Programs	3

EDCI 62630

Field Experience in Early Childhood

3 to 4

**Prescribed Electives and/or courses required for certification (7-8)**

(see advisor for certification requirements and approved electives)

**Total Credit Hours: 32**

The M.S.Ed. in Teaching Early Childhood does not lead to certification in Early Childhood Education. Individuals interested in obtaining initial certification should see their advisor for additional course requirements.

**Early Childhood Special Education (Certifies Birth - 3) Certificate Program**

Persons who hold an early childhood certification\* may be eligible (see advisor) for certification in early childhood special education by completing the following courses:

**Requirements****Required Courses**

EDCI 62542	Curriculum and Methods in Early Childhood Special Education	3
EDCI 62544	Practicum in Early Childhood Special Education	3

**Total Credit Hours: 6**

\*Persons not holding an early childhood certification should see their advisor for additional requirements.

**Reading M.S.Ed.**

CIP: 131315

The complexities of developing approved instructional programs have brought about a demand for highly-trained specialists. This program is designed to prepare students as reading specialists (administrators and supervisors of reading programs, reading clinicians, and teachers of reading) at elementary through secondary levels. The course of study affords the opportunity for application of the learned skills in closely supervised developmental, diagnostic, and remedial reading situations.

**Prerequisites for this program are:**

1. A valid teaching certificate.
2. Two or more years of classroom teaching experience.

**Program Admission Requirements**

1. A minimum overall grade point average of 2.75 on the undergraduate transcript OR an undergraduate overall GPA of 2.50 to 2.74 and a 3.0 GPA on six hours of required graduate coursework at Northwest in the major program where admission is requested.
2. Documentation of one of the following:
  - 3.5 or higher on the analytical writing measure of the GRE OR
  - Successful completion of another Master's Degree from a regionally accredited institution of higher education with at least a 2.75 GPA OR
  - National Board Certification OR
  - Successful completion of nationally normed educational performance assessment (MoPTA, EdTPA, etc.) OR
  - Department analytical writing assessment that is evaluated using a writing scoring guide based on the modified CUNY scales with a score of 4.0 or higher.

Missouri Reading Certification available through consultation with your advisor.

## Course Requirements

### Required Courses

The two courses listed below are shared with other graduate programs in the School of Education. Those programs are: Educational Leadership, Special Education, and Curriculum and Instruction.

EDUC 61641	Data Literacy and Assessment for Schools	3
EDUC 61642	Multicultural Education for Diversity, Equity and Inclusion	3

### Subject Field Requirements

EDCI 62601	Literacy-Based Assessment and Analysis	3
EDCI 62604	A Survey of Literacy Professionals and Practices	3
EDCI 62612	Literacy in the Elementary School	3
EDCI 62619	Literacy in the Secondary School	3
EDCI 62650	Graduate Elementary Literacy Practicum	3
EDCI 62651	Graduate Secondary Literacy Practicum	3
EDCI 62694	Literacy-Focused Academic Inquiry	3
EDCI 62695	Literacy Capstone	3

**Total Credit Hours: 30**

## Special Education M.S.Ed.

CIP: 131007

A graduate degree is offered in Special Education with a focus on working with students with mild to moderate disabilities. These disabilities include students in multicategorical areas of learning disabilities, intellectual disabilities, emotional disturbance, and physical and other health impaired. All required courses are offered as on-line courses. Check with the Special Education Coordinator for periodicity of the courses.

### Competency Assessment

To assess program effectiveness and meet the comprehensive assessment requirement, a Written Assessment of Competency Mastery is required of all students completing the M.S.Ed., Special Education. The assessment will include reference to artifact/course content, standards, and reflection on growth as a teaching professional. The assessment will be completed during EDCI 62699 Seminar: Selected Topics in Special Education.

### Research Component

A research component form must be turned into the Graduate Office prior to graduation.

## Program Admission Requirements

1. A minimum overall grade point average of 2.75 on the undergraduate transcript OR an undergraduate overall GPA of 2.50 to 2.74 and a 3.0 GPA on six hours of required graduate coursework at Northwest in the major program where admission is requested.
2. Valid teaching certificate OR two years teaching experience while under a valid teaching certificate.
3. Documentation of one of the following:
  - 3.5 or higher on the analytical writing measure of the GRE OR
  - Successful completion of another master's degree from a regionally accredited institution of higher education with at least a 2.75 GPA OR
  - National Board Certification OR

- Successful completion of nationally normed educational performance assessment (MoPTA, EdTPA, etc.) OR
- Successful completion (3.0 or higher) of the Alternative Certification program in Special Education at Northwest OR
- Department analytical writing assessment that is evaluated using a writing scoring guide based on the modified CUNY scales with a score of 4.0 or higher.

## Course Requirements

### Core Requirements (6)

EDUC 61641	Data Literacy and Assessment for Schools	3
EDUC 61642	Multicultural Education for Diversity, Equity, and Inclusion	3
		<b>Subtotal: 6</b>

### Subject Field Requirements (24)

EDCI 62642	Introduction to Teaching Students with Mild to Moderate Disabilities	3
EDCI 62643	Teaching Students with Mild to Moderate Disabilities	3
EDCI 62635	Techniques for Conferencing and Collaboration	3
EDCI 62652	Psych-Education Measurement	3
EDCI 62608	Trans/Career Proc & Res	3
EDCI 62645	Theories and Techniques of Behavior Analysis and Intervention	3
EDCI 62621	Administration of Special Education	3
EDCI 62699	Seminar: Selected Topics in Special Education	3
		<b>Subtotal: 24</b>

Transfer courses and course substitution approval will be approved by advisor on a case-by-case basis. This program does not grant teacher certification.

Subtotal: 30

## Education: Educational Leadership / 61

### Educational Leadership: K-12, 30 credit hours, MEd

Students wishing to pursue a graduate degree in Professional Education in the program area of Educational Leadership must meet the admission requirements of the University and department as stated in this catalog. See admission requirements under specific program descriptions.

### Program Admission Requirements

#### MEd Educational Leadership: K-12

Applicants must qualify with both of the following:

1. A minimum overall grade point average of 2.75 on the undergraduate transcript OR an undergraduate overall GPA of 2.50 to 2.74 and a 3.0 GPA on six hours of required graduate coursework at Northwest in the major program where admission is requested.
2. Documentation of one of the following:
  - 3.5 or higher on the analytical writing measure of the GRE OR
  - successful completion of another Master's Degree from regionally accredited institution of higher education with at least a 2.75 GPA OR
  - National Board Certification OR

- Successful completion of nationally normed educational performance assessment (MoPTA, EdTPA) OR
- valid state issued teaching certificate OR
- two years of previous teaching experience with a valid teaching certificate OR
- departmental analytical writing assessment that is evaluated using a writing scoring guide based on the modified CUNY scales with a score of 4.0 or higher

### **Written Assessment of Competency Mastery (Master's)**

All students seeking a Master's in Educational Leadership: K-12 degree are required to complete the Written Assessment of Competency Mastery. The assessment will include reference to artifacts/course content, their relationship to PSEL/NELP standards, and reflection on personal growth as an educational leader.

This assessment will be given during the 61-668 Practicum in School Leadership (Capstone) course.

### **Research Component (Master's)**

The student will participate in a research component related to the use of data in the field of education. This data project will be completed during the Data Literacy and Assessment for Schools course. A research component form must be turned into the Graduate Office prior to graduation.

### **Program Outcomes - Linked to University Outcomes**

The program completer who successfully completes the building level educational leadership preparation program demonstrates the capability to create quality educational experiences of all students by enlisting all stakeholders in the development and implementation of a vision promoting a positive school culture - leadership.

The program completer who successfully completes the building level educational leadership preparation program demonstrates the ability to foster relationships through creation of effective systems for communication, engagement, partnerships and advocacy resulting in the success and well-being of students - communicating.

The program completer who successfully completes the building level educational leadership preparation program demonstrates the promotion of student learning through a synthesis of curriculum planning and design, research based instructional practice, data literacy, and assessment, and effective learning supports - critical thinking.

The program completer who successfully completes the building level educational leadership preparation program demonstrates the importance of challenging the status quo through innovative actions supporting diversity, equity, and inclusion resulting in a professional culture for student achievement - diversity, equity, and inclusion.

The program completer who successfully completes the building level educational leadership preparation program demonstrates skills to cooperatively implement systems that ethically support students and staff academically, behaviorally, and operationally through data analysis, fiscal management, and legal compliance - teamwork.

### **Portfolio Requirement - Specialist**

All students seeking a Specialist in Education degree are required to compile and submit a professional portfolio. The portfolio should be designed to convey a clear picture of the student's professional philosophy, motivations and capabilities.



The Educational Leadership portfolio is based on the Missouri School Leaders Performance Assessment. The portfolio should provide evidence that the candidate has demonstrated competency based on these tasks.

The portfolio should include: Current Résumé (1-2 pages); Professional Development Plan  
Candidates who complete an advanced program in Educational Leadership should provide evidence based on the Missouri Leader Standards that they possess professional knowledge, skills and dispositions. Evidence should be based upon artifacts and reflections that come from the practicum experience as outlined in the practicum/intern seminar.

The portfolio should also include artifacts and reflections that indicate they can provide and promote:

Standard 1: The Shared Vision of Learning

Standard 2: The Culture of Teaching and Learning

Standard 3: The Management of Organizational Systems

Standard 4: Collaboration with Families and Stakeholders

Standard 5: Integrity, Fairness and Ethics in Learning

Standard 6: Professional Development

The student should maintain this portfolio during the program and internship. It will be reviewed at the practicum/intern seminar and must be submitted at the time of the portfolio defense as established by the department. Each candidate must present the portfolio to be assessed and defend the work to a department committee.

### Program Delivery - Specialist

Many courses in the Specialist program are offered using a blended model. The student may enroll in two courses at the same time on the same night. Each class meets for four clock hours on five nights throughout the trimester, for a total of 20 clock hours of direct instruction. These hours will be supplemented by 15 clock hours of field-based experience, and 20 clock hours of online instruction.

## Educational Leadership: K-12 M.S.Ed.

CIP: 130401

### Requirements

#### Courses

EDUC 61622	Visionary School Leadership	3
EDUC 61623	Relational School Leadership	3
EDUC 61624	Instructional School Leadership	3
EDUC 61626	Managerial School Leadership	3
EDUC 61627	Innovative School Leadership	3
EDUC 61641	Data Literacy and Assessment for Schools	3
EDUC 61642	Multicultural Education for Diversity, Equity, and Inclusion	3
EDUC 61665	School Law	3
EDUC 61667	Practicum for a Guaranteed and Viable Curriculum	3
EDUC 61668	Practicum in School Leadership: K-12 Capstone	3

**Subtotal: 30**

### Higher Education Leadership MS

The MS in Higher Education Leadership program is based on the idea that higher education leaders should be equipped with a understanding of leadership as it exists in the 21st century, including such concepts as: cultural competence, compliance, management vs leadership, adult learning theory, and institutional structures and operations.

Degree Requirements: Fulfillment of admission requirements, course work, application for graduation, and outcomes-based synthesis of learning as a culminating examination. All are required prior to conferment of the degree.

Transfer Credit: According to university policy, up to 9 hours of graduate credit may be transferred in to fulfill course requirements. These will be approved by the coordinator of the program.

Time Limitations: Students have 8 years to complete the graduations requirements for the course. Any courses that are 8 years or older are not allowed to fulfill any of the degree requirements.

Admission Requirements: Applicants must qualify with both of the following:

1. A minimum overall grade point average of 2.50 on the undergraduate transcript or an undergraduate overall GPA of 2.25 to 2.49 and a 3.0 or higher on six hours of required graduate coursework in the major program.
2. Documentation of one of the following:
  - a. 3.5 or higher on the analytical writing measure of the GRE
  - b. successful completion of a previous Master's degree
  - c. 450 or higher on the GMAT
  - d. two years of successful work experience in higher education (documented through a letter from a supervisor attesting to the work history of the applicant)

Research Component: The student will participate in a research requirement related to the use of data in the field of higher education. This research component form must be submitted to the Graduate Office prior to graduation.

**Required Courses**

EDUC 61652	Leadership Issues in Higher Education	3
EDUC 61654	Higher Education Administration	3
EDUC 61656	College Students in America	3
EDUC 61658	Law, Policy, and Finance in Higher Education	3
EDUC 61659	Introduction to Institutional Research	3
EDUC 61642	Multicultural Education for Diversity, Equity, and Inclusion	3
EDUC 61689	Leading In The Digital Age	3
EDUC 61691	Change Management In Education	3
EDUC 61741	Internship in Secondary Administration	2-4
EDUC 61669	Capstone in Higher Education Leadership	3

**Total Credit Hours: 30**

**Educational Leadership: Elementary M.S.Ed.**

CIP: 131408

**Requirements**

**Core Requirements (6)**

EDUC 61695	Philosophy of Education	3
	OR	
EDUC 61649	Issues in Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

**Subject Field Requirements (23)**

EDUC 61665	School Law	3
EDUC 61630	Foundations of Educational Administration	3
EDUC 61631	School Supervision	3

EDUC 61633	Curriculum Design	3
EDUC 61686	The Principalship	3
EDUC 61694	Practicum in Elementary School Administration and Supervision	1 to 4
EDUC 61610	Specialized Topics and Projects in Educational Administration	1 to 6
EDUC 61610	Specialized Topics and Projects in Educational Administration	1 to 6
	Minimum of 3 hours in education courses focused upon administration and supervision	3

**Electives (3)****Total Credit Hours: 32**

Any graduate course from any department may be selected as an elective with written approval from the major advisor.

**Educational Leadership: Secondary M.S.Ed.**

CIP: 130409

**Requirements****Core Requirements (6)**

EDUC 61695	Philosophy of Education	3
	OR	
EDUC 61649	Issues in Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

**Subject Field Requirements (23)**

EDUC 61630	Foundations of Educational Administration	3
EDUC 61665	School Law	3
EDUC 61631	School Supervision	3
EDUC 61633	Curriculum Design	3
EDUC 61686	The Principalship	3
EDUC 61693	Practicum in School Administration and Supervision	1 to 4
EDUC 61610	Specialized Topics and Projects in Educational Administration	1 to 6
EDUC 61610	Specialized Topics and Projects in Educational Administration	1 to 6
	Minimum of 3 hours in education courses focused upon administration and supervision	3

**Elective (3)****Total Credit Hours: 32****Middle School Principal's Endorsement**

Persons completing the requirements for either the elementary or secondary programs in administration and supervision may qualify for an additional certificate as a middle school principal by meeting one of the following requirements:

1. The candidate shall meet the M.S.Ed. requirements as outlined for Administration and Supervision: Elementary including EDCI 62511 Middle School Curriculum, Methods and Practicum, and EDUC 61570 The Middle School.
2. The candidate shall meet the M.S.Ed. requirements as outlined for Administration and Supervision: Secondary including EDCI 62511 Middle School Curriculum, Methods and Practicum, and EDUC 61570 The Middle School.
  - a. Reading—two courses, with one course to be techniques of teaching reading in content fields, a minimum total of five semester hours.
  - b. Mathematics—one course of at least two semester hours in the methods of teaching elementary mathematics.

## Special Education Administrator Certificate Program

Prerequisites for this certificate include:

1. A professional certificate of license to teach in an area of special education or student services;
2. A minimum of two (2) years special education or student services teaching experience approved by the Department of Elementary and Secondary Education;
3. All required professional education coursework must be completed with no grade lower than a “C”.
4. Completion of a course in Psychology and/or Education of the Exceptional Child;
5. Completion of a master’s degree in educational leadership from a college/university meeting approval of the Missouri Department of Elementary and Secondary Education;

## Course Requirements

### Required Courses

EDCI 62652	Psych-Education Measurement	3
EDCI 62643	Teaching Students with Mild to Moderate Disabilities	3
EDCI 62504	Creating Inclusive Classrooms	3
EDCI 62621	Administration of Special Education	3
EDCI 62622	Internship in Special Education Administration	2 to 4

## Teacher Leader M.S.Ed.

CIP: 130404

### Teacher Leader in Preparation for National Teacher Board Certification

The M.S.Ed. Teacher Leader degree is designed for experienced teachers who hold a current teaching certificate, and wish to earn a Master’s degree while simultaneously working on the components for National Board Certification in a specific certification area. These individuals desire to become more involved in instructional and curricular leadership within their school and district, but do not want to become a building or district administrator. The program is designed to prepare teachers to successfully apply for National Board Certification; and to meet Missouri criteria for the “High-Quality Career Certificate” to be exempt from “Required Professional Development for Educators.” It consists of 34 hours of graduate credit; the coursework is divided into three phases, 1) Architecture of Accomplished Teaching; 2) Theory and Practice of Accomplished Teaching; and, 3) Analysis of and Reflection on Accomplished Teaching. Teacher leaders remain in the classroom or become academic coaches and influence others to enhance teaching and learning, which will result in student success, and school and district improvement. The program’s portfolio component will mirror National Board Certification criteria and requirements. The Teacher Leader Program is delivered through cohort groups.

### Program Admission Requirements

1. All candidates entering the Teacher Leader Program will have three years of teaching experience prior to entering the program. Candidates MUST have completed three years of teaching prior to applying for the National Board Certification process.
2. All students who enter the Teacher Leader Program must submit a writing sample answering a prompt prior to beginning coursework. It is expected the candidate score a 3.5 or above on a 5.0 rubric on the writing sample. The written sample is designed to ensure the candidate will perform successfully on the written components for National Board Certification and the portfolio required for graduation from the Teacher Leader Program.
3. A minimum overall grade point average of 2.75 on the undergraduate transcript.

4. A minimum overall grade point average of 2.75 on any graduate work completed prior to entry into the Teacher Leader Program.
5. Current and valid teaching certificate on file.
6. Official copies of all transcripts from undergraduate and graduate coursework at previously attended institutions. (Undergraduates of Northwest Missouri State University do not need to submit Northwest transcripts.)
7. One letter of reference from a school administrator who can write about the candidate's potential to become a teacher leader.

## Requirements

### Course Requirements

EDUC 61602	Role and Practice of a Teacher Leader	3
EDUC 61603	The School Community: Examining Diversity and Bias	2
EDUC 61604	Teacher Leader Action Research	2
EDUC 61605	Differentiation through Instructional Strategies	3
EDUC 61618	Educational Theory Applied to Practice	3
EDUC 61619	Content Knowledge: Competency through Assessment Resources	2
EDUC 61620	Assessment and Data-Driven Decision Making	3
EDUC 61621	Effective Teaching Practice	2
EDUC 61661	Technology & Instruction	3
EDUC 61662	Effective and Reflective Practitioner	2
EDUC 61663	Partnering with Communities and Families	3
EDUC 61664	Retrospective and Accomplished Teaching	2
	Advisor approved electives	3
		<b>Subtotal: 33</b>

### Elective-choose one advisor-approved elective from the list below:

EDCI 62655	Reading in the Elementary School	3
EDCI 62553	The Reading Program in the Secondary School	3
EDCI 62603	Mathematics in the Elementary School	3
EDCI 62605	Science in the Elementary School	3
EDCI 62607	Language Arts in the Elementary School	3
EDCI 62610	Social Studies in the Elementary School	3
EDUC 61569	Multiculturalism in Education	3
EDCI 62687	Sociolinguistics	3
EDCI 62504	Creating Inclusive Classrooms	3
EDUC 61665	School Law	3

Exit requirements for the M.S.Ed. Teacher Leader Program include completion and submission of the National Board Certification components to the National Board of Professional Teacher Standards at points during course completion and prior to graduation. Successful completion of an oral presentation and defense at the end of the coursework is required. The presentation must focus on each of the four components required for completion of the National Board Certification process. The defense will be before a panel of at least two individuals. Completing this degree will not result in receiving additional certification, but does earn an advanced degree.

## Alternative Certification Program

The Northwest Alternative Certification Program is a two-year, graduate-level, certification-only program for candidates with content-related undergraduate degrees who are seeking Missouri teacher certification. It is not a master's program.

The purpose of the Alternative Certification Program is to:

1. Provide an alternate route to Missouri teacher certification for quality candidates who are employed as teachers of record in Missouri school districts.

2. Provide an intensive teacher preparation program designed to provide these teachers with the knowledge and skills needed to perform effectively in the classroom.

## Provisional Missouri Teacher Certification

Provisional certification is available in areas offered through the traditional route through Northwest at the secondary and middle school levels, several K-12 areas (physical education, art, music, foreign language) and special education/K-12 mult categorical. Northwest does not currently offer alternative certification at the elementary level. Candidates must meet all requirements for provisional certification including minimum GPA, successful background check, continuing employment, beginning teacher requirements, etc.

### Program Admission Requirements

1. Must hold a bachelor's degree in the content area or closely related field.
2. Must have a minimum 2.75 GPA overall and a minimum 3.0 GPA in their content area from all previous coursework.
3. Must submit all undergraduate and graduate level transcripts and résumé to the Alternative Certification Office for transcript audit. This audit may include a writing assessment and dispositions inventory.
4. Interview with Department may be required.
5. Make application to the Graduate School.
6. Provide proof of employment as teacher of record in a Missouri K-12 school district.
7. Completed the Memorandum of Agreement from candidate and school district.
8. Complete all Provisional Certification paperwork including a Fingerprint and Criminal Background Check as designated by Missouri Department of Elementary and Secondary Education.

Northwest alternative certification students are in a certification-only program. Acceptance in the Northwest Alternative Certification Program does not guarantee acceptance into any Northwest master's program.

### Program Requirements

1. Northwest alternative certification students are responsible for the material as printed in the graduate catalog.
2. Alternative certification students can qualify for financial aid in trimesters when they are enrolled in a minimum of 5-6 credit hours.
3. Students are expected to take only the classes approved through the two-year program of study. Students can only enroll in non-program classes with written approval from the Northwest Alternative Certification Director (or her/his designated appointee) who serves as advisor for all alternative certification candidates. If a student has not progressed by completing their prescribed program, they will not be allowed to continue in the program or be recommended for certification.
4. Content area classes required on individual programs of study do not have to be taken through Northwest but must be approved by the Northwest Alternative Certification Director (or her/his designated appointee) before a candidate takes the class to ensure that the content meets the program requirement. If a student takes a class without this approval, he/she may have to take another class to meet the requirement. Northwest is not responsible if the student takes a class without prior approval.

- Purchase access to and utilize Tk20 Assessment System.

## Program Completion Requirements

- Complete all class requirements as outlined on program of study with
  - a minimum 3.0 GPA in all graduate level coursework and content area courses
  - a cumulative 2.75 GPA is required of all undergraduate and graduate coursework
- Complete two-year teaching requirement and meet classroom observation component.
- Successfully complete MoPTA.
- Successfully complete the Missouri Content Area Assessment for the certification area sought.
- Submit all required initial teacher certification paperwork.
- Complete all university certification program paperwork.
- Complete Final Application for Comprehensive Assessment and Graduate Degree.

## Secondary Alternative Certification Program

### Requirements

#### Required Courses

EDUC 61614	Introduction to Teaching	3
EDUC 61615	Organizing for Learning	3
EDUC 61616	Teaching Strategies	5
EDUC 61617	Organizing for Learning II	3
EDUC 61633	Curriculum Design	3
EDUC 61569	Multiculturalism in Education	3
EDUC 61649	Issues in Education	3
EDCI 62553	The Reading Program in the Secondary School	3
EDCI 62654	Analysis and Correction of Reading Disabilities	3
	Content Methods Course	2-3

(each of the 13 content areas have their own numbers for their specific content methods course)

28 hours plus any content area deficiencies will be added to the total. See program coordinator for advisement.

## Middle School Alternative Certification Program (5-9 Endorsement)

### Requirements

#### Required Courses

EDUC 61614	Introduction to Teaching	3
EDUC 61615	Organizing for Learning	3
EDUC 61616	Teaching Strategies	5
EDUC 61617	Organizing for Learning II	3
EDUC 61569	Multiculturalism in Education	3
EDUC 61570	The Middle School	3
EDUC 61649	Issues in Education	3
EDCI 62553	The Reading Program in the Secondary School	3
EDCI 62654	Analysis and Correction of Reading Disabilities	3
EDUC 61633	Curriculum Design	3
	Content Methods Course	2-3

(Each of the 13 content areas has their own content methods course number.)

34-35 hours plus any content area deficiencies will be added to the total. See program coordinator for advisement.

## Special Education Alternative Certification (K-12 Endorsement)

### Requirements

#### Required Courses

EDUC 61614	Introduction to Teaching	3
EDUC 61615	Organizing for Learning	3
EDUC 61617	Organizing for Learning II	3
EDUC 61569	Multiculturalism in Education	3
EDCI 62654	Analysis and Correction of Reading Disabilities	3
EDCI 62508	Transition/Career Education for Students with Disabilities	2
EDCI 62540	Behavior Management Techniques	3
EDCI 62635	Techniques for Conferencing and Collaboration	3
EDCI 62642	Introduction to Teaching Students with Mild to Moderate Disabilities	3
EDCI 62643	Teaching Students with Mild to Moderate Disabilities	3
EDCI 62652	Psych-Education Measurement	3
EDCI 62655	Reading in the Elementary School	3
		<b>Subtotal: 35</b>

## Specialist in Education

### Degree Policies and Requirements

The Specialist in Education program offers additional study beyond the master's degree for persons preparing for positions in educational leadership. Three areas of specialization are offered: superintendency, secondary school principalship and elementary school principalship.

### Advisement

Upon initial registration the student will seek advisement and course approval as stated on the Degree Audit Form from the coordinator of advisement for the Specialist in Education program.

### Degree Requirements

Degree requirements for the Specialist in Education program include the following:

1. Satisfactory completion of a minimum of 32 approved graduate semester hours beyond the master's degree (at least 11 of which must be at the 700 level) with a minimum grade point average of 3.25 overall and at Northwest.
2. Two years of teaching/supervisory or administrative experience in elementary and/or secondary schools.

### Transfer Credit

A student may transfer up to nine semester hours in no more than four courses from regionally-accredited institutions offering the specialist degree if the courses are appropriate, are approved by the candidate's advisor, and are graded at a "B" or higher.

### Time Limitations

All requirements submitted in fulfillment of the degree must be completed within a period of eight years.

### Initial Enrollment



The initial enrollment is the first enrollment term in which a student seeking the Specialist in Education degree is registered.

During the initial enrollment, students seeking admission to the Specialist in Education program must:

1. Meet all general requirements for admission to the Graduate School set forth by this catalog.
2. Supply evidence of a completed master's degree from a regionally- or nationally- accredited institution of higher education with a minimum grade point average of 3.25. Conditional enrollment is allowed if the student has a cumulative graduate GPA between 3.00 and 3.24. The student must achieve a 3.25 GPA in his or her first eight semester hours of graduate study or be subject to suspension for one year. Re-admission is possible after one year by petition to be approved by the Specialist in Education faculty, the Dean of the College of Education and Human Services, and the Dean of the Graduate School.
3. Submit a GRE score with a combined minimum score for the verbal and quantitative sections of 285 and at least a 4.0 on the writing sample section of the GRE. A student who has completed two or more years of satisfactory teaching may substitute the Departmental Admissions Exam (DAE) in place of the GRE.
4. Submit an application for admission to the Specialist in Education program.
5. Have three letters of recommendation on file. One letter must refer to the student's academic qualifications, one letter must refer to employment experience, and one may be a general character reference.
6. Supply evidence of holding a valid teaching certificate.

### **Screening Committee**

In cases of denial, a student may appeal to the Dean of the College of Education and Human Services who will order a hearing before a faculty committee; denial of the appeal may be re-appealed to faculty of the Specialist in Education program.

### **Admission to the Specialist in Education Program**

Admission to the program is granted when a student:

1. Has completed all requirements as listed under "Initial Enrollment."
2. Has been approved by the program advisor and graduate dean for entry into the program.

### **Admission to Candidacy**

Admission to candidacy is granted when a student:

1. Has been admitted to the Specialist in Education program.
2. Has completed at least 20 semester hours of graduate work in education courses focused upon leadership including:
  - a. Elementary or Secondary School Administration, 2 semester hours
  - b. School Supervision, 2 semester hours
  - c. Elementary or Secondary School Curriculum, 2 semester hours

If taken at the master's level, none of these hours will count toward the 32 semester hour Ed.S. degree requirements. Other courses taken as a part of another graduate degree will not be counted toward the 32 semester hour requirement.

3. Has GRE scores on file in the Graduate Office meeting the minimum admissions score, or if applicable, the DAE.
4. Has earned a minimum of eight semester hours of graduate credit beyond the master's degree at Northwest approved by the coordinator of advisement for the Specialist in Education degree with a grade point average of 3.25.
5. Has an approved program of study filed on which admission to candidacy is indicated.

### Certification Requirements

In addition to fulfilling the Specialist in Education degree requirements listed, students seeking Missouri certification must:

1. Successfully complete the course EDCI 62641, Educating the Exceptional Child (if the requirement has not previously been met).
2. Submit a signed, notarized morality statement if not previously certified in the State of Missouri.

The student has the responsibility of applying for any new certification.

## Superintendent Ed.S.

CIP: 130411

### Course Requirements

The faculty advisor or graduate dean may accept courses taken prior to application and admission to the Specialist in Education degree program and may substitute courses for those requirements met in prior graduate work.

### Core Requirements

All students in the Superintendent Ed.S. program are required to complete the following core courses:

EDUC 61569	Multiculturalism in Education	3
EDUC 61681	School and Community Relations	3
EDUC 61695	Philosophy of Education	3
EDUC 61721	Seminar in Problems, Trends, and Issues in Educational Administration and Supervision	1
EDUC 61721	Seminar in Problems, Trends, and Issues in Educational Administration and Supervision	1
EDUC 61723	Writing and Interpreting Educational Literature and Statistics	3
EDUC 61724	Field Study in Administration and Supervision	1-6
EDUC 61725	OR Thesis in School Administration and Supervision	2-6

### Choose one of the following courses

EDUC 61738	Internship in School Administration and Supervision	1-4
EDUC 61739	Internship in Elementary Administration	2-4
EDUC 61741	Internship in Secondary Administration	2-4

EDUC 61721: must be taken twice with a different topic covered each time.

### Additional course requirements

The core requirements and the following courses to total a minimum of 32 semester hours:

EDUC 61613	School Personnel Administration	3
EDUC 61665	School Law	3
EDUC 61740	The Superintendency	3
EDUC 61675	School Finance	3

EDUC 61633	Curriculum Design	3
EDUC 61670	School Buildings and Equipment	2
EDUC 61610	Specialized Topics and Projects in Educational Administration	1 to 6

## Educational Specialist Elementary School Principal

CIP: 130411

The Specialist in Education program offers additional study beyond the master's degree for persons preparing for positions in educational leadership. Three areas of specialization are offered: superintendency, secondary school principalship, and elementary school principalship.

### Program Admission/Initial Enrollment Requirements Educational Specialist Elementary Principal:

Initial enrollment is the first enrollment term in which a student seeking the Specialist in Education degree is registered.

Students wishing to pursue a graduate degree in Professional Education in the program area of Educational Leadership must meet the admission requirements of the University and department as stated in this catalog. See admission requirements under specific program descriptions.

The student has the responsibility to work with the department of education within their respective state to determine individual certification requirements.

The Ed.S. applicant must supply evidence of a completed master's degree from a regionally or nationally accredited institution of higher education with a minimum grade point average of 3.00/4.00.

Documentation of one of the following:

\*3.75 or higher on the analytical writing measure of the GRE **OR**

\*Successful completion of the Departmental Entrance Exam (DAE) **OR**

\*Valid state teacher (classroom teacher) certificate **OR**

\*National Board Certification

### Transfer Credit

A student may transfer up to 9 semester hours in no more than four courses from regionally-accredited institutions offering the specialist degree if the courses are appropriate, not used to complete a previous degree, approved by the candidate's advisor, and are graded at a "B" or higher.

Any courses previously taken to complete another degree cannot count towards the minimum 30 credit hour requirement.

### Time Limitations

All requirements submitted in fulfillment of the degree must be completed within a period of eight (8) years. Any courses past the eight-year requirement must be retaken for program credit.

### Written Assessment of Competency Mastery

All students seeking an Educational Specialist - Elementary Principal are required to complete the Written Assessment of Competency Mastery. The assessment will include reference to artifacts/course content, their relationship to PSEL/NELP standards, and reflection on personal growth as an educational leader. This assessment will be given during 61739 (Internship).

## Research Component

The student will participate in a research component related to the use of data in the field of education. This data project will be completed during the field study (61723).

## Required Courses

All courses are required for this program; there are no electives. If a student has previously successfully taken a required course, the student must replace credit hours to obtain a minimum of 30 credit hours with electives provided by the advisor (graduate level courses only).

EDUC 61642	Multicultural Education for Diversity, Equity and Inclusion	3
EDUC 61622	Visionary School Leadership	3
EDUC 61624	Instructional School Leadership	3
EDUC 61627	Innovative School Leadership	3
EDUC 61623	Relational School Leadership	3
EDUC 61665	School Law	3
EDUC 61570	The Middle School	3
EDUC 61723	Writing and Interpreting Educational Literature and Statistics	3
EDUC 61739	Internship in Elementary Administration	2-4
EDUC 61626	Managerial School Leadership	3
		<b>Subtotal: 30</b>

## Specialist in Education Secondary Principal

CIP: 130411

The Specialist in Education program offers additional study beyond the master's degree for persons preparing for positions in educational leadership. Three areas of specialization are offered: superintendency, secondary school principalship and elementary school principalship.

### Program Admission/Initial Enrollment Requirements Educational Specialist Secondary Principal:

Initial enrollment is the first enrollment term in which a student seeking the Specialist in Education degree is registered.

Students wishing to pursue a graduate degree in Professional Education in the program area of Educational Leadership must meet the admission requirements of the University and department as stated in this catalog. See admission requirements under specific program descriptions.

The student has the responsibility to work with the department of education within their respective state to determine individual certification requirements.

The Ed.S. applicant must supply evidence of a completed master's degree from a regionally or nationally accredited institution of higher education with a minimum grade point average of 3.00/4.00.

Documentation of one of the following:

\*3.75 or higher on the analytical writing measure of the GRE **OR**

\*Successful completion of the Departmental Entrance Exam (DAE) **OR**

\*Valid state teacher (classroom teacher) certificate **OR**

\*National Board Certification

### Transfer Credit

A student may transfer up to 9 semester hours in no more than four courses from regionally-accredited institutions offering the specialist degree if the courses are appropriate, not used to complete a previous degree, approved by the candidate's advisor, and are graded at a "B" or higher.

Any courses previously taken to complete another degree cannot count towards the minimum 30 credit hour requirement.

### Time Limitations

All requirements submitted in fulfillment of the degree must be completed within a period of eight (8) years. Any courses past the eight-year requirement must be retaken for program credit.

### Written Assessment of Competency Mastery

All students seeking an Educational Specialist – Secondary Principal are required to complete the Written Assessment of Competency Mastery. The assessment will include reference to artifacts/course content, their relationship to PSEL/NELP standards, and reflection on personal growth as an educational leader. This assessment will be given during 61741 (Internship).

### Research Component

The student will participate in a research component related to the use of data in the field of education. This data project will be completed during the field study (61723).

All courses are required for this program; there are no electives. If a student has previously successfully taken a required course, the student must replace credit hours to obtain a minimum of 30 credit hours with electives provided by the advisor (graduate level courses only).

### Required courses

All EdS Secondary Principals students must successfully complete the required courses - there are no electives to gain the minimum 30 credit hours.

EDUC 61570	The Middle School	3
EDUC 61622	Visionary School Leadership	3
EDUC 61623	Relational School Leadership	3
EDUC 61624	Instructional School Leadership	3
EDUC 61626	Managerial School Leadership	3
EDUC 61627	Innovative School Leadership	3
EDUC 61642	Multicultural Education for Diversity, Equity and Inclusion	3
EDUC 61665	School Law	3
EDUC 61723	Writing and Interpreting Educational Literature and Statistics	3
EDUC 61741	Internship in Secondary Administration	2-4
<b>Subtotal:</b>		<b>30</b>

## Secondary Education

### Statement of Mission

The Northwest Professional Education Unit (PEU) is committed to preparing highly effective professional educators who accept responsibility for educating all children. In order to prepare these professionals, the department, through the secondary education coordinator, has overall responsibility for coordinating secondary teaching education programs in all academic areas. These programs will prepare them for their roles as master professionals and facilitators of life-long learning in environments that are diverse and changing. The culminating indicator of master professionals is their ability to engage in effective assessment processes and reflection that improves instruction. The mission provides the conceptual framework for creating programs that develop master professionals who are effective in developing knowledge as a

mediator of knowledge, perfecting their skills as a coordinator of learning and modeling professional dispositions as a promoter of dignity, responsibility and self-worth.

## Secondary Education Competencies

Specific objectives of the M.S.Ed: Teaching programs vary somewhat by academic specialty options. Objectives common to all options include the following:

1. Demonstrate a greater depth of knowledge in the major curriculum areas.
2. Acquire the knowledge, attitudes, and skills to implement teaching strategies that are multicultural and nonsexist in nature.
3. Have a broader repertoire of teaching skills, strategies and styles through simulated and direct classroom practice.
4. Develop basic knowledge and skills in conducting, interpreting, reporting and applying the results of educational research.
5. Develop an awareness of the various provisions for locating, identifying and serving youth with special needs.

## Program Admission Requirements

1. Compliance with eligibility requirements of the Graduate School.
2. Acceptance to graduate study by the Dean of the Graduate School.
3. Undergraduate GPA of 2.50–3.00. See individual programs for specific requirements.
4. Students with a minimum composite verbal/quantitative GRE score of 280 and at least a 3.5 on the writing sample section of the GRE will be accepted unconditionally. The score must be submitted no later than the first trimester of enrollment. Students not meeting the 280 minimum may be accepted on the condition that they maintain a 3.00 GPA for the first eight graduate hours in the program.
5. Students must complete a writing assessment, administered by the department, during their first trimester of enrollment.

## Comprehensive Examination

The examination will be scheduled and administered by faculty members in the College of Education and Human Services and the department in which the option is offered (Agriculture, English, History, Mathematics, and Science.) The degree candidate must pass both portions of the examination.

## Diverse Field Experience

The Department of Professional Education is committed to preparing professionals to work with all students. To facilitate multicultural awareness and understanding of issues related to teaching students from diverse backgrounds, the department requires a twelve-clock-hour field experience in a diverse setting for candidates in all Teaching: Secondary M.S.Ed. and GIST programs.

## Teaching: Secondary M.S.Ed.

CIP: 131205

## Requirements

### Core Requirements (6)

EDUC 61649

Issues in Education

	OR	
EDUC 61695	Philosophy of Education	3
EDUC 61682	Improvement of Instruction through Action Research	2
EDUC 61683	Action Research Paper	1

**Subject Field Requirements (20)**

EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3
	Prescribed Program (Area of Concentration)	14

**Unspecified Electives (6)**

Prescribed Program: A student who has a B.A. or B.S. degree may earn teacher certification by completing the GIST program concurrently with a graduate degree in Teaching Secondary in the following programs: Agriculture Education, English, Social Science, Mathematics, and Science Education (see department listings for specific requirements). A currently certified teacher may select a concentration in any of the subject areas listed above, or they may select a concentration in instructional technology, or work with the secondary education advisor to develop an individually designed program concentration.

**Total Credit Hours: 32****Graduate Internship in Secondary Teaching (GIST)**

Graduate Internship in Secondary Teaching (GIST) is a Northwest graduate option designed for the person who wants to become a secondary teacher, and who possesses a college degree (B.S. or B.A.) in a certifiable field but lacks certification to teach. GIST candidates meet the same state and institutional requirements for secondary teacher certification as undergraduate students, but they substitute graduate-level courses for undergraduate-level courses wherever possible. The GIST option should not be confused with the Missouri Alternative Certification Program. The GIST option is restricted to students who are candidates for the M.S.Ed., Teaching: Secondary degree in Agriculture Education, English, History, Mathematics, and Science.

A person with no undergraduate deficiencies who enters GIST in June may complete secondary certification requirements by the following May. An additional summer of study may enable the candidate to complete an M.S.Ed., Teaching: Secondary degree. As a practical matter, however, most candidates should expect a longer period of enrollment because of undergraduate deficiencies in general education and academic specialty requirements.

The option includes a trimester-long teaching internship in a secondary school and a series of professional classes in which GIST candidates enroll along with experienced teachers, allowing the candidates to benefit by working and studying with professional colleagues. All GIST students seeking certification must take and pass the appropriate Missouri Content Assessment.

**GIST Option Requirements****Requirement for Missouri Secondary Certification (Professional Certificate I)**

EDUC 61615	Organizing for Learning	3
EDUC 61616	Teaching Strategies	5
EDUC 61617	Organizing for Learning II	3
EDUC 61633	Curriculum Design	3
	Special Methods Course (480 or 580) from area of specialization	2-3
EDUC 61649	Issues in Education	3
EDUC 61569	Multiculturalism in Education	3
EDCI 62553	The Reading Program in the Secondary School	3
EDCI 62654	Analysis and Correction of Reading Disabilities	3
EDUC 61690	Internship in Secondary Teaching	8

Any content area deficiencies will be added to the total. See program coordinator for advisement.

## National Board Certification Graduate Credit Option

National Board Certified teachers may receive a total of six graduate credit hours for completing the certification.

### Requirements

**Depending on need, the candidate will be given the following options:**

EDUC 61650	Improvement of Teaching and	3
EDUC 61651	Seminar and Practicum in Teaching OR	3
EDUC 61550	Trends in Curriculum Development	1 to 3

EDUC 61550 is a special topics course and must be taken as two separate courses for a total of six hours. The offerings are: Sp. Top: NBPTS\* Curriculum Standards (3) and Sp. Top: NBPTS Assessment Center (3)

\*NBPTS-National Board Professional Teaching Standards

## Doctor of Education

Northwest is cooperating with the University of Missouri-Columbia to offer an Ed.D. in Educational Leadership. The program is also available through several other regional campuses in Missouri. The degree is awarded by the University of Missouri-Columbia and was designed through the collaboration of professors, school administrators, teachers and other educational and business leaders across Missouri.

### Program Design

The program is an advanced study in educational leadership for administrators, program leaders, and teachers/researchers for a variety of positions in public and private education, government and industry. The goal is to enhance the knowledge and competencies of leaders so they provide optimal leadership for education of all learners.

### Characteristics of the Program

1. Students progress through the program as a “cohort.”
2. Students from each regional institution are a site cohort, with students from all institutions forming a state cohort.
3. Coursework is completed in six concurrent trimesters, beginning in the summer and concluding in the spring trimester two years later.
4. Dissertation research follows the two years of coursework.
5. Coursework instruction occurs at each regional site during the fall and spring trimesters. Summer instruction is in residence at the University of Missouri-Columbia.
6. Technology is used as a medium for instructional delivery throughout the program.
7. Curriculum is integrated, thematic and problem-based.

### Program Curriculum

Some primary themes of the curriculum:

#### Leadership Theory and Practice

Leadership skills and theory  
Ethical and moral issues  
Internal/external communication



Conflict resolution  
Organizational culture  
**Organizational Analysis**

Organizational theory/analysis  
Strategic planning  
Change facilitation  
Problem analysis/solving  
Infrastructure issues  
Resource acquisition  
Social implications of technology  
**Content and Context for Learning**

Diverse learners  
Learning theories and models  
Instructional models  
Technology in learning  
Program assessment  
**Analyzing Educational Policy**

Educational inquiry  
Policy analysis  
Social, political, legal issues  
**Research, Inquiry and Evaluation**

Educational planning/evaluation  
Qualitative research  
Quantitative research  
**Application and Admissions Process**

Students interested in application to the program should contact the Department of Professional Education at Northwest (660) 562-1095 and visit with the campus liaison or call (573) 882-8221 at the University of Missouri-Columbia.

## **Superintendent Certification Option with Completed MU/Northwest Doctorate**

CIP: 130411

### **Prerequisites**

1. Accepted and enrolled in Cooperative Doctorate Program
2. A valid teaching certificate
3. A valid elementary or secondary principal certificate
4. Recommendation from Northwest Department of Professional Education faculty

### **Requirements**

#### **Required Courses to Fulfill Program Competencies**

School Personnel Administration	3
School and Community Relations	3
School Plant Design	2
The Superintendency	3
School Finance	3
Completion of the Ed.S. Comprehensive Examination	
Doctoral Dissertation (Focus on PK-12)	

**Upon successful completion of the doctorate degree and all optional requirements, the Department of Educational Leadership will make the recommendation for superintendency.**

**Requests for the Superintendent Certification Option with a Completed Doctorate in Educational Leadership from another accredited university must be evaluated and approved by the program advisor.**

### **Career Education**

Northwest Missouri State University Outreach offers a professional development certificate program in Career and Technical Education. Upon successful completion of this program, career and technical educators meet DESE certification in career education at the secondary or adult levels and build their present knowledge in the areas of teaching, curriculum, and assessment. Courses are offered at Northwest's Outreach Centers in blended delivery of both face-to-face and online learning delivery modes. Dee Moore coordinates the program.

# School of Health Science and Wellness

**Director:** Terry Long

**Assistant Directors:** Alisha Francis - Behavioral Sciences

**Graduate Faculty:** Jerrold Barnett, Rhonda Beemer, Loren Butler, Jessica Cascio, Keely Cline, Alice Foose, Alisha Francis, Bradlee Gamblin, Shelly Hiatt, Augustus Hallmon, Jackie Kibler, Lauren Leach-Steffens, Jodie Leiss, Terry Long, Sue Myllykangas, Eric Mosier, Shinichi Nagata, Chase O'Gwin, Kyoung Ho Shin, Matthew Symonds, Tyler Tapps, Ryan Wessell.

**Associate Graduate Faculty:** Sarah Creason, Elizabeth Dimmitt, Michele Veasey.

**Department Phone:** (660) 562-1297

The School of Health Science and Wellness offers an array of graduate degrees:

- M.S. Ed. in Health and Physical Education
- M.S. in Applied Health and Sport Sciences
- M.S. in Recreation
- M.S. Ed. in School Counseling

## Graduate Assistantships

Graduate assistantships are available on a competitive basis for qualified students. Students must be fully accepted into a graduate program and have a 2.75 cumulative GPA to be eligible for assistantships.

## Division of Health and Wellness

**Assistant Director:** Loren Butler

**Graduate Faculty:** Rhonda Beemer, Loren Butler, Alice Foose, Augustus Hallmon, Jodie Leiss, Sue Myllykangas, Shinichi Nagata, Matthew Symonds, Tyler Tapps

**Graduate Coordinator & Advisor:** Tyler Tapps

The Division of Health and Wellness in the School of Health Science and Wellness offers a Master of Science in Education in Health and Physical Education, a Master of Science in Recreation, and a Master of Science in Applied Health and Sport Sciences.

Students seeking a Master of Science in Education with a major in Health and Physical Education must either hold teacher certification upon entry into the program or seek Missouri teacher certification requirements as part of their M.S.Ed. degree program.

Those seeking a Master of Science in Education may choose to complete coursework in one or both of the following two interest areas: Health Education or Physical Education. Those seeking a Master of Science in Recreation may choose to complete coursework in one or both of the following two interest areas: Recreation Resources Management or Therapeutic Recreation. Students choosing to seek a Master of Science in Applied Health and Sport Sciences will complete a program that encompasses both health and sport science content.

## Program Admission Requirements

Students wishing to pursue a graduate degree in the School of Health Science and Wellness must meet the admission requirements of the University and department as stated in this catalog:

- Make application to the Graduate School

Undergraduate GPA	Requirement
<b>2.50 to 2.74*</b>	GRE required. Conditional admission if GRE over 280, must earn 3.25 in first term and enroll in 45-633 Research Report Writing.
<b>2.75 to 2.99</b>	GRE required. Full admission if GRE is over 280. Full admission if GRE is under 280 and successfully completes 45-633 Research Report Writing.
<b>3.00 or higher</b>	Full admission, no GRE required.

\* = not eligible for graduate assistantship.

Deadlines for submission of graduate admissions packet are as follows:

Fall Admission – August 1

Spring Admission – December 1

Summer Admission – April 1

### Admission Appeal

Students not meeting the departmental GPA admission standards as stated may appeal to the department. Appeals should be made in writing to the School of Health Sciences and Wellness graduate studies coordinator by the deadlines for submission of graduate admissions packets as stated above in Program Admission Requirements. Appeals will be heard and voted upon by the department graduate faculty. Approval requires a majority vote.

The student is to:

1. Submit a portfolio including:
  - a. Transcripts of all credits.
  - b. A written request for alternative admission (minimum 250 words not to exceed three double-spaced word-processed pages).
  - c. Two employer/supervisor recommendations.
2. Make an oral presentation to graduate faculty including
  - a. Statement of personal and professional reasons for appeal.
  - b. Factors or motivation for seeking a graduate degree.
  - c. Projected plans for degree completion.

### Thesis or Research Project

Once a graduate student has enrolled in the Thesis or Research Project class, the student must continue to register for at least one hour of the Thesis or Research Project class each trimester until the work is completed, whether the student is in residence or away from the campus. Failure to maintain continuous enrollment in thesis or research project may require enrollment in three additional hours of thesis or research project before the degree is granted.

### Graduate Assistantships

Graduate assistantships are available on a competitive basis for qualified students. Students must be fully accepted into a graduate program and have a 2.75 cumulative GPA to be eligible for assistantships.

## Health and Physical Education M.S.Ed.

CIP: 131314

The curriculum is composed of courses in professional education, research, the theoretical base of physical education, and the teaching specialty.

The objectives of the program are as follows. The students will:

1. Develop basic knowledge and skills in conducting research, and in interpreting, reporting, and applying the results of research.
2. Demonstrate depth and breadth of knowledge in an area of interest.
3. Acquire skills and principles used to administer a program successfully.
4. Explain the role of the discipline in education and in society.
5. Discuss trends, issues, and problems associated with the discipline and suggest solutions to problems.
6. Develop as a self-directed, life-long learner, who can effectively communicate with and motivate individuals for wellness and movement related activities.
7. Facilitate and/or collaborate successfully with others in authentic conditions.
8. Develop, adopt, practice and promote ethical behaviors for themselves and others.
9. Become a “Master Professional.”

Key Quality Indicators have been developed for the program.

1. Developing knowledge
2. Perfecting skills
3. Acquiring professional dispositions

This degree **does NOT lead to teacher certification**. Students who have not yet achieved teacher certification and wish to do so must meet requirements for the state where they intend to be employed.

### Core Requirements (6)

HPER 22630	Curriculum in Health and Physical Education	3
EDUC 61649	Issues in Education	3
HPER 22630: Comprehensive Exam Course		

### Research Core Requirements (9)

HPER 22636	Research Methods in Health, Physical Education and Recreation	3
HPER 22665	Qualitative and Quantitative Analysis of Data	3
HPER 22690	Research Project	1 to 4
HPER 22636 and HPER 22665: Comprehensive Exam Courses		

### Physical Education

REC 45547	Grantsmanship	3
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HPER 22640	Improving Instruction through Systematic Observation	3
HPER 22510	Special Topics	1 to 3
HPER 22555	Intervention and Strategies for Health Behavior Change	3
HPER 22637	Sports and Exercise Nutrition	3
		<b>Subtotal: 13-15</b>

Subtotal: 30

**Note:** No more than three hours of Independent Study can be applied toward a degree.

Detailed information on program advisement, completion of the research project, comprehensive examinations, and other aspects of the program can be found in the Graduate Program Handbook: School of Health Science and Wellness, which may be obtained from the graduate advisor or the School Director.

### Program Completion Requirements

In addition to successful completion of the Steps Toward a Master's Degree (p. 14), successful completion of the following School of Health Science and Wellness requirements are necessary for degree completion:

1. Completion of an approved Plan of Study.
2. Successful passage of comprehensive examination.
3. Research project.

### Recreation M.S.

CIP: 310599

The curriculum is composed of courses in theoretical and philosophical foundations, research and current practices in recreation. Upon completion of the graduate program in recreation, student will possess the following competencies:

1. Demonstrate understanding of theoretical and philosophical foundations of the profession.
2. The ability to conceptualize, conduct and apply research to areas of recreation specialization.
3. Demonstrate the ability to maintain appropriate continuing education activities and remain current with best practices.
4. Demonstrate knowledge of the critical importance of being an advocate for the profession and those served.

Key Quality Indicators have been developed for the program.

1. Competence in Discipline
2. Communicate the personal and societal value of leisure services

### Course Requirements

#### Core Requirements (12)

REC 45630	History and Philosophical Concepts of Parks and Recreation	3
REC 45635	Trends and Issues in Recreation/Leisure	3
REC 45648	Human Resources and Ethics	3
REC 45680	Graduate Recreation Internship	1 to 3
REC 45630 and REC 45635:	Comprehensive Exam Course	

#### Research Core Requirements (9)

HPER 22636	Research Methods in Health, Physical Education and Recreation	3
HPER 22665	Qualitative and Quantitative Analysis of Data	3
REC 45699	Thesis in Recreation OR	1 to 3
HPER 22690	Research Project	1 to 4
HPER 22636 and HPER 22665: Comprehensive Exam Course		

### Subject Field Requirements (select from the following interest areas) (9)

#### Recreation Resources Management

REC 45511	Golf Course Maintenance and Management	2
REC 45512	Aquatic Facility Maintenance and Management	2
REC 45513	Outdoor Recreation Facilities Maintenance and Management	2
REC 45525	Commercial Recreation	3
REC 45533	Recreation Sports Management	3
REC 45540	Group Dynamics	3
REC 45545	Risk Management	3
REC 45546	Administration of Recreation	3
REC 45547	Grantsmanship	3
REC 45640	Sociological and Psychological Aspects of Recreation	3
REC 45645	Assessment and Evaluation of Recreation/Leisure Services	3
REC 45650	Finance and Marketing Recreation	3
REC 45655	Natural Resource History and Interpretation	3
REC 45660	Recreation Facility Design and Management	3
REC 45665	Leisure and Aging	3

#### Therapeutic Recreation

HPER 22556	Health in the Later Years	3
REC 45520	Challenge Course Facilitator Training	3
REC 45540	Group Dynamics	3
REC 45542	Trends and Issues in Therapeutic Recreation	3
REC 45547	Grantsmanship	3
REC 45562	Assessments, Diagnostics, and Treatment Planning in Therapeutic Recreation	3
REC 45640	Sociological and Psychological Aspects of Recreation	3
REC 45665	Leisure and Aging	3

#### Elective Courses (3)

Select three hours from courses inside and/or outside the School of Health Science and Wellness to support area of interest. (Course selections must be approved by the Graduate Curriculum Committee and listed in a student's approved degree program.)

#### Total Credit Hours: 33

*Note: No more than 3 hours of Independent Study can be applied toward a degree.*

#### Program Completion Requirements

All students are required to successfully complete the comprehensive examination for the Master's in Recreation. The written exam will be comprised of questions derived from the content of the Recreation Core courses.

In addition to successful completion of the Steps Toward a Master's Degree, successful completion of the following School of Health Science and Wellness requirements are required:

1. Completion of an approved internship experience of at least 200 hours (unless waived by student's graduate advisor.)
2. Completion of an approved Plan of Study.
3. Presentation of thesis or research project.

4. Thesis or research project.
5. Successful completion of the comprehensive examination.

## Applied Health and Sport Sciences M.S.

CIP: 310599

The curriculum is composed of courses that present an in-depth knowledge base for the area of applied health and sport sciences. The courses and requirements in the program will allow students the opportunity to expand not only their knowledge, but also skills and competencies. Upon completion of the graduate program in Applied Health and Sport Sciences, students will possess the following competencies:

- Demonstrate knowledge in key areas of health and sport science, including the physical, psychological, and environmental aspects of human performance.
- Demonstrate research and inquiry competencies by completing the research core, by writing a research paper.
- Demonstrate professional and appropriate dispositions.

## Program Requirements

This program of study is designed to prepare students to work, manage and interact in a variety of health, wellness, and physical activity and sport settings. Students who have not met prerequisite requirements for listed courses will be required to complete these prerequisites as part of their degree program.

### Courses

HPER 22636	Research Methods in Health, Physical Education and Recreation	3
HPER 22665	Qualitative and Quantitative Analysis of Data	3
HPER 22690	Research Project	1 to 4
REC 45633	Research Report Writing	1
HPER 22681	Administration of Health, Physical Education and Sport	3
HPER 22632	Exercise Physiology	3
HPER 22534	Evidence Based Practice in Health Science and Wellness	2
HPER 22515	Issues in Sport	3
HPER 22512	Socio-Psychological Aspects of Human Performance	3
HPER 22555	Intervention and Strategies for Health Behavior Change	3
HPER 22536	Mechanical Analysis of Sports Skills	3
HPER 22529	Theory and Fundamentals of Strength and Conditioning/Personal Training	3
	OR	
HPER 22532	Exercise Testing, Prescription, and Analysis of Cardiac Function	3
	OR	
HPER 22680	Health Sciences Field Experience	1 to 3

HPER 22636, HPER 22665, HPER 22681, and HPER 22632 are comprehensive exam courses.

### M.S. Applied Health and Sport Sciences Program Completion Requirements

In addition to successful completion of Steps to Graduation, successful completion of the following School of Health Science and Wellness requirements are required:

1. Completion of an approved fieldwork experience of 200 hours\*
2. Completion of a degree audit.
3. Successful passage of Comprehensive Exams.



4. Research paper.

\*Students who have completed at least 200 hours of field experience in a related content area can request a course substitution for field experience. The past field experience must be documented and the course substitution must be approved by the graduate coordinator.

**Total Credit Hours: 33**

## **Division of Behavioral Sciences**

**Assistant Director:** Alisha Francis

**Graduate Faculty:** Jerrold Barnett, Jessica Cascio, Keely Cline, Bradlee Gamblin, Shelly Hiatt, Jackie Kibler, Chase O'Gwin, Lauren Leach-Steffens, Kyoung Ho Shin, Ryan Wessell

**Associate Graduate Faculty:** Sarah Creason, Elizabeth Dimmitt, Michele Veasey

**Coordinators of Advisement:** M.S.Ed. Guidance and Counseling – Michele Veasey

**Division Telephone:** (660) 562-1297

## **Master of Science in Education: School Counseling**

CIP: 131101

The M.S.Ed. program in School Counseling is structured to prepare future school counselors to plan, organize, implement, and evaluate a comprehensive developmental school counseling program at the elementary, middle, and secondary school level. Emphasizing the premises of the Missouri Comprehensive School Counseling Program (Gysbers, Kostek-Bunch, Magnuson & Starr), the graduate program in School Counseling stresses the importance of student learning in the public school setting and the counselor's role in the teaching-learning process. The primary goal of the graduate program is to prepare school-counselors-in-training for the school counselor roles and skills necessary to prepare children and adolescents to effectively cope with their academic, career, and social-emotional development.

### **Program Admission and Completion Requirements**

All students pursuing a graduate degree in the department must meet the general requirements of the University and specific department requirements. For the most recent changes in programs or requirements, visit our website at [www.nwmissouri.edu/](http://www.nwmissouri.edu/). Department requirements to be completed in the following sequence are:

1. In addition to applying for admission to the University, graduate students must apply for admission into a specific program in the department. Only summer entrants are accepted for the M.S.Ed. School Counseling program. **The department application deadline is March 1.** Students accepted into the program are expected to begin courses the following June.
2. Contact with the coordinator should be made prior to enrolling in any graduate courses.
3. **M.S.Ed. School Counseling Student Selection Criteria**
  - a. Submission of an undergraduate transcript from an accredited college which indicates:
    - i. A minimum overall grade point average of 2.75 or above;
    - ii. A minimum GPA in the undergraduate declared major of 3.00;
  - b. Submission of scores from the general Graduate Record Examination
  - c. A 2-3 page written statement that addresses why you are interested in the program, how the program aligns with your career goals, and your philosophies of working with

children and adolescents is required. This paper is your writing sample for program admission. It will be evaluated based upon the content, how you address the 3 required topics, and grammar and mechanics.

- d. A letter of recommendation from a school counselor, a Licensed Professional Counselor, a school administrator, or a college professor attesting to the applicant's potential as a graduate student and as a school counselor.
  - e. While a teaching certificate is preferred, an applicant can take additional coursework in lieu of a teaching certificate. An additional core of teaching courses in concert with Missouri certification rules is required.
4. Degree candidacy will be based upon the recommendation of the Graduate Studies Committee of the Department of Behavioral Sciences at Northwest after the student has completed a minimum of 12 required hours in the program with a minimum GPA of 3.00.
  5. Satisfactorily complete a comprehensive examination.
  6. Satisfactorily complete a research project under the supervision of a member of the graduate faculty.
  7. An incomplete grade (I) must be removed within one year.
  8. Complete at least 45 graduate hours (M.S.Ed. School Counseling) in the approved program with at least a 3.00 ("B") overall GPA. Students receiving grades of "C" or lower in more than 6 of the hours required in their approved program (including grades that are superseded) will be removed from candidacy, and grades of "C" or lower in courses (SCGD 68671, SCGD 68640, SCGD 68628, SCGD 68629, and SCGD 68630) will not count to fulfill those course requirements.
  9. All graduate students in the program are required to become actively engaged in research activities as part of their graduate training. These activities should be planned in consultation with the coordinator of advisement.
  10. Continuous enrollment every trimester is required. Exceptions must be approved in writing by the program coordinator.

Detailed information on these requirements are in the Program Outline published by the department and can be obtained from any program faculty member or the department chairperson.

### Restricted Enrollment

Enrollment in most courses in the M.S.Ed. program is restricted to students accepted into that program. However, 500-level courses permit enrollment by qualified undergraduate seniors and graduate students. Two other courses in the School Counseling program (PSYC 08603 and PSYC 08627) allow graduate students to enroll when their own graduate program recommends it. Web-based 600-level courses require potential students to meet the academic qualifications for admission into the School Counseling program and those of the Graduate School; these classes also require consent of the instructor, relevant program director, and/or department chairperson. Enrollment in any other 600-level core area course is restricted pending approval of the program director and/or assistant director of the Division of Behavioral Sciences. Approval is likely for those who have completed a counseling degree at another institution or for those who need some additional courses to meet licensure/certification requirements.

### Required Courses

SCGD 68636	Methods in Counseling Research	3
SCGD 68652	Group Appraisal	3

SCGD 68671	Student Appraisal and Intervention	3
SCGD 68660	Organization and Administration of School Counseling Programs	3
SCGD 68654	Occupational and Educational Information	3
SCGD 68570	Principles and Practices of the K-12 School Counseling Program	3
SCGD 68610	Counseling Theory and Techniques	3
SCGD 68640	Group Counseling Techniques	3
SCGD 68628	Supervised Practice in Elementary/Secondary School Counseling	3
SCGD 68629	Practicum in Elementary School Counseling OR	3 to 6
SCGD 68630	Practicum in Secondary School Counseling	3 to 6
SCGD 68629 and SCGD 68630 should be taken for 6 credit hours.		
SCGD 68639	Research Project	3
PSYC 08603	Advanced Educational Psychology	3
PSYC 08605	Social and Cultural Foundations of Counseling	3
PSYC 08627	Advanced Child and Adolescent Psychology	3
An additional 6-9 hours are required for dual certification. See program coordinator for proper course selection for certification.		

Subtotal: 45

**Required Sequence—Summer Entry**

First Year			
Summer I:	Summer II:	First Fall:	First Spring:
SCGD 68570, PSYC 08603	SCGD 68654, PSYC 08627	SCGD 68652, SCGD 68610	SCGD 68640, SCGD 68636
Second Year			
Summer I:	Summer II:	Second Fall:	Second Spring:
SCGD 68660, SCGD 68671	SCGD 68654, PSYC 08627	SCGD 68628, SCGD 68639	PSYC 08605
Third Year			
SCGD 68629 or SCGD 68630 for elementary or secondary certification			

**Additional courses for students entering the program without a B.S.Ed. degree include:**

EDUC 61650	Improvement of Teaching	3
EDUC 61651	Seminar and Practicum in Teaching	3
EDCI 62641	Educating the Exceptional Child	3
EDCI 62540	Behavior Management Techniques	3

# Courses

## **ACCT - Accounting**

### **ACCT 51201 - Accounting I (3)**

A beginning course in the principles and theory of accounting.

### **ACCT 51202 - Accounting II (3)**

A continuation of ACCT 51201, with the partnership and corporation as forms of business organizations emphasized. Prerequisite: ACCT 51201 with a minimum grade of C.

### **ACCT 51600 - Trends in Business Curriculum (1 to 2)**

### **ACCT 51641 - Legal and Ethical Aspects of Business (3)**

A seminar in the legal and ethical aspects of business with the objective of introducing the student to the major legal and ethical rules, regulations and pronouncements affecting today's business professional, while also looking forward to tomorrow's demands on the profession from both internal and external constituencies.

### **ACCT 51643 - Advanced Accounting Principles (3)**

Study of the development of contemporary corporate reporting practices, reporting issues currently undergoing change, and the implications for future domestic and international accounting practice. This is a seminar class at an advanced level.

### **ACCT 51644 - Auditing Problems (3)**

Comprehensive study of the development of auditing practice and thought, the evolution of auditing theory, and the application to practical problems through case study. This is a seminar class at an advanced level.

### **ACCT 51645 - Accounting Information Systems (3)**

Detailed study of accounting system analysis, identification of critical information flows, and means for modifying accounting systems to improve efficiency and effectiveness. The changing information needs of modern management will provide the framework within which these topics will be developed.

### **ACCT 51646 - Managerial Accounting (3)**

This course is designed to give the student an understanding of the accounting concepts that are useful in making managerial decisions.

## **AGRI - Agriculture**

### **AGRI 03102 - Introductory Agricultural Economics (3)**

Principles of productions, supply and demand are applied to economic problems of agriculture and agriculturally related industries. Emphasis is placed on understanding the theoretical underpinnings of decision analysis within the biological, institutional and structural parameters of the agricultural sector. (F, S)

### **AGRI 03130 - Plant Science (4)**

A survey course that covers fundamentals of structure, function and environmental interactions of higher plants. The application of science to the study and utilization of plants is examined. Three hours of lecture and a two-hour laboratory per week. (F, S)

### **AGRI 03150 - Animal Science (4)**

An introductory animal science course dealing with the meat animal and dairy industry. Includes basic principles of selection, nutrition, reproduction, anatomy, physiology, management, and an overview of the livestock industry. (F, S)

### **AGRI 03232 - Crop Production (3)**

A study of how current technology, along with principles of adaptation, development and culture are applied to the productions of agronomic and other crops. Prerequisites: AGRI 03-130 or BIOL 04-112/04-113, or consent of instructor. (F)

### **AGRI 03234 - Fundamentals of Soil Science (4)**

Characterization of soils as a natural resource emphasizing their physical, chemical, mineralogical, and biological properties in relation to plant growth, land-use management, soil and water quality, and food production. Prerequisites: CHEM 24-112/24-113 or CHEM 24-114/24-115, or permission of instructor.

### **AGRI 03302 - Agricultural Marketing (3)**

A course surveying the nature of production, the marketing system, and the market for farm products, market functions and institutions' commodity problems. Prerequisite: AGRI 03-102. (F, SS)

**AGRI 03304 - Farm Management and Records Analysis (3)**

Economic principles applied to the organization and operation of farms, complete and partial budgeting, farm record analysis, farm financial management and problems involving farm decision-making. Prerequisite: AGRI 03-102. (F, S)

**AGRI 03500 - Special Offering (1 to 4)**

**AGRI 03502 - Agricultural Prices (3)**

A study of the factors affecting prices of agricultural products; longtime cyclical, seasonal and other price movements; sources of information relating to production and demand factors; government activities as they relate to prices of agricultural products, and problems of price analysis and forecasting. Prerequisite: AGRI 03102 and AGRI 03302. (S)

**AGRI 03503 - Agricultural Law (3)**

The farmer's legal setting, deeds, mortgages, leases, water and fencing rights, easements, estate planning and other aspects. (F)

**AGRI 03504 - Futures Trading (3)**

An advanced course designed to provide an in-depth treatment of how the futures market is used throughout the marketing chain from farm production to end product use. Includes extensive study of the more technical aspects of charting and how to use these techniques as price forecasting tools. Prerequisite: AGRI 03309 OR graduate standing. (S, SS)

**AGRI 03505 - Agricultural Resource Economics (3)**

Physical, economic and institutional factors that affect the role of land in economic life; population and resource requirements; principles of land utilization; returns from land; land value; property rights and tenure rights; social controls; and rural and urban land development. Prerequisite: AGRI 03102. (F, odd years)

**AGRI 03508 - Agriculture Policy (3)**

An analysis and history of the current economic problems of agriculture with emphasis on the influence of governmental

policies. A term paper will be required. Prerequisite: AGRI 03102. (S, SS)

**AGRI 03509 - Problems in Agricultural Economics (1 to 3)**

Studies in the area of agricultural economics. Consent of instructor necessary. Course is repeatable with topic change for a total of 3 hours. (F, S, SS)

**AGRI 03510 - Techniques in Agricultural Surveying (3)**

Water management on the farm as it relates to maintaining soil productivity. Includes surveying, design, and layout of soil conservation engineering practices, such as waterways, diversions, terraces, farm ponds and drainage systems. (SS)

**AGRI 03518 - Agricultural Drainage and Irrigation (3)**

A study of the needs for drainage and irrigation in agriculture including the design and application of drainage and irrigation systems under various conditions. Prerequisite: AGRI 03234. (F, even years)

**AGRI 03519 - Problems in Agricultural Mechanization (1 to 3)**

Studies in the area of specialization of agricultural mechanization arranged with a member of the faculty. Consent of instructor necessary. Course is repeatable with topic change for a total of 3 hours. (F, S, SS)

**AGRI 03524 - Methods of Instruction and Assessment in Agricultural Education Laboratories (2)**

Methods of teaching and assessment, conducting, managing, and maintaining agricultural education program laboratories. How to analyze data and plan facilities and curriculum; select tools, equipment, and supplies; organize course content and facilities as applied to agricultural laboratories. (S)

**AGRI 03525 - Induction Year Beginning Teacher I (2)**

A continuing education course for the professional development of first-year teachers of agriculture. Course focuses on the pedagogical knowledge, skills, attitudes, and managerial skills needed by beginning teachers of agriculture.

**AGRI 03527 - Induction Year Beginning Teacher II (2)**

A continuing education course for the professional development of second-year teachers of agriculture. Focus is on the pedagogical knowledge, skills, attitudes, and managerial skills needed by beginning teachers of agriculture. (SS)

**AGRI 03529 - Problems in Agricultural Education (1 to 3)**

Studies in the area of agricultural education. Consent of instructor necessary. Course is repeatable with topic change. (F, S, SS)

**AGRI 03530 - Soil Formation and Classification (3)**

Identification and evaluation of soil morphological characteristics; study of the form and dynamics of soil bodies across the landscape and soil-forming factors and processes; introduction to pedological features used in Soil Taxonomy. Prerequisite: AGRI 03234. (F, even years)

**AGRI 03534 - Plant Breeding (3)**

A study of the improvement of agricultural plants by application of the principles of heredity. Prerequisite: AGRI 03130 or BIOL 04112 and BIOL 04113. (S)

**AGRI 03536 - Soil Fertility (3)**

Principles of soil productivity and nutrients required for crop growth; fertilizer sources and nutrient reactions in soil; methods of fertilizer nutrient placement in major tillage systems; interpretation of soil test and plant analyses for determining crop nutrient requirements. Prerequisite: AGRI 03234. (S)

**AGRI 03540 - Grain Crops (3)**

This course uses systems concepts as the basis for studying humankind's most important crops. An integrative approach is taken in the examination of production processes, management strategies, and environmental issues. Prerequisite: 12 hours of agriculture. (F, odd years)

**AGRI 03543 - Soil Chemistry: Environmental Quality and Plant Nutrition (3)**

A comprehensive study of chemical processes in soil systems. Prerequisite(s): CHEM 24112 and CHEM 24113 or CHEM 24114 and CHEM 24115 or AGRI 03234 or AGRI 03130 or instructor's consent. (F, odd years)

**AGRI 03549 - Problems in Agronomy (1 to 3)**

Studies in the area of agronomy arranged with members of the staff. Consent of instructor necessary. Course is repeatable with topics changing for a total of 3 hours. Prerequisite: AGRI 03234. (F, S, SS)

**AGRI 03566 - Genetics of Livestock Improvement (3)**

Applications of genetics to the breeding and improvement of livestock. Prerequisite: AGRI 03150. (F)

**AGRI 03569 - Problems in Animal Science (1 to 3)**

Studies in the area of animal science arranged with a member of the faculty. Consent of instructor necessary. Course is repeatable with topic change for a total of 3 hours. (F, S, SS)

**AGRI 03580 - Methods of Instruction and Assessment in Agricultural Education (2)**

A course in the special methods and materials of teaching agriculture, with an emphasis on teaching strategies and assessment of student progress utilizing student data. Prerequisite: Admittance to Teacher Education. (F)

**AGRI 03582 - Plant Diseases (3)**

A study of diseases affecting ornamentals and crop plants; their causes, nature, economic effects, epidemiology, and control. Prerequisites: AGRI 03130 or BIOL 04112 and BIOL 04113, and CHEM 24112 and CHEM 24113 or CHEM 24114 and CHEM 24115. (S)

**AGRI 03585 - Principles of Postharvest Agriculture (3)**

A study of the physical and physiological principles related to harvest packaging, transportation, marketing, quality and safety of horticultural crops. Prerequisites: AGRI 03130 or BIOL 04112 and BIOL 04113, and AGRI 03234.

**AGRI 03589 - Problems in Horticulture (1 to 3)**

Studies in the area of horticulture arranged with members of the staff. The course requires consent of the advisor and supervising staff member. Course is repeatable with topic change for a total of 3 hours. (F, S, SS)

**AGRI 03590 - International Agriculture Travel Experience (3)**

Exploration of agronomic, horticultural, livestock and economic principles including

sustainable and best management practices, agricultural marketing, food quality, and food safety as they apply to conventional and organic agricultural systems abroad. International travel required. Prerequisite: sophomore standing or permission of instructor.

**AGRI 03598 - Advanced Agricultural Applications of Computers and GPS (3)**

A study of the use of statistical analysis and mathematical models in the agricultural business decision-making process.

Prerequisites: MATH 1714 or MATH 17610, CSIS 44130 or AGRI 03308. (S, odd years)

**AGRI 03600 - Special Offering (1 to 4)**

**AGRI 03602 - Advanced Agricultural Economics (3)**

Addresses advanced topics of the economics of agricultural production, marketing, finance, and policy. Requires the application of various skills and tools to delve into these four areas. Review of professional literature as well as use of statistical methods and economic theory will allow students to develop a comprehensive understanding of some of the major issues in agriculture and equip them to understand new issues as they evolve. Prerequisite: AGRI 03102.

**AGRI 03608 - Seminar in Agricultural Economics (3)**

An integration of the economics of agricultural production, marketing, and public policy.

**AGRI 03609 - Special Topics in Agricultural Economics (1 to 3)**

In-depth independent investigation, literature reviews, and conferences on selected topics of special interest to the student in agricultural economics.

Prerequisite: consent of instructor. (F, S, SS)

**AGRI 03619 - Special Topics in Agricultural Mechanization (1 to 3)**

Literature reviews and conferences on selected topics in agricultural mechanization according to needs and interests of the students. Prerequisite: consent of instructor. (F, S, SS)

**AGRI 03629 - Special Topics in Agricultural Education (1 to 3)**

Literature reviews and conferences on selected topics in agricultural education

according to needs and interests of the students. (F, S, SS)

**AGRI 03638 - Advanced Crop Production (3)**

A comprehensive course to understand and apply advanced agronomic thinking and decision making with respect to crop production. (S)

**AGRI 03640 - Soil Morphology, Genesis and Classification (3)**

Soil origins and developments as determined by environmental factors, classification, and distribution of soils. Prerequisite: AGRI 03234.

**AGRI 03648 - Principles of Spray Application and Technology (3)**

A comprehensive course to understand the principles of spray applications and learn the importance of nozzle selection, tank mix properties, application parameters and technology resulting in successful spray applications. Prerequisite: AGRI 03292. (S)

**AGRI 03649 - Special Topics in Agronomy (1 to 3)**

Literature reviews and conferences on selected topics in agronomy according to the needs and interests of the student.

Prerequisite: consent of instructor. (F, S, SS)

**AGRI 03650 - Laboratory Techniques with Domestic Animals (3)**

A study of laboratory analysis often used in animal research. Analyses of blood, muscle, fat, and other short-term research studies will be conducted.

**AGRI 03658 - Advanced Animal Science (3)**

Addresses current topics of the production, marketing, and processing of beef, dairy, swine, sheep, and their products. Requires application of various general principles of livestock production, marketing, processing, and the understanding of current topics in the livestock industry. Reviews professional literature, new government standards, and current national livestock industry news to allow student to understand evolving issues. Prerequisite AGRI 03150.

**AGRI 03664 - Reproductive Physiology (3)**

A study of the anatomical structures, physiological processes and endocrinological processes concerned with animal reproduction. Prerequisite: AGRI 03366.

**AGRI 03669 - Special Topics in Animal Science (1 to 3)**

Literature reviews and conferences on selected topics in animal science according to needs and interests of students.  
Prerequisite: consent of instructor. (F, S, SS)

**AGRI 03679 - Special Topics in Dairy Science (1 to 3)**

Literature reviews and conferences on selected topics in dairy science according to needs and interests of students. (F, S, SS)

**AGRI 03680 - Breeding and Improvement of Horticultural Plants (3)**

The status, progress and the application of breeding principles to improvement of horticultural crops.

**AGRI 03689 - Special Topics in Horticulture (1 to 3)**

Literature reviews and conferences on selected topics in horticulture according to the needs and interests of the student.  
Prerequisite: consent of instructor. (F, S, SS)

**AGRI 03691 - Methods of Research in the Life Sciences (3)**

A basic course preparing the student to do research in his or her chosen field. Emphasis is placed on methods of research and the reporting of that research. MATH 17635 recommended. (F)

**AGRI 03692 - Special Methods and Materials in Agriculture (2)**

A course designed to prepare and update teachers of agriculture in secondary schools for the training of their students for the many extra-curricular activities which are a part of the agricultural program at most schools. This course may be repeated for graduate credit any number of times providing that the emphasis of study is in a different one of the following areas: agricultural economics, agricultural mechanization, animal science, crop science, dairy science, horticulture, meat science, parliamentary procedures, poultry science or soil science. Only two hours credit in this course may be applied to a master's degree. (SS)

**AGRI 03693 - Seminar in Agriculture (1)**

Oral presentation and discussion of current research topics in agriculture.

**AGRI 03698 - Scholarly Paper in Agriculture (1 to 3)**

Independent research in an approved field of study in agriculture. (F, S, SS)

**AGRI 03699 - Research in Agriculture (1 to 5)**

Independent research in an approved field of study in agriculture. Required for the M.S. and M.S.Ed. degrees with a major in agriculture when Option One is selected. Not valid with Option Two. (F, S, SS)

**ART - Art****ART 13501 - International Graduate Studies in Art (3 to 6)**

A course involving international travel emphasizing the art, architecture, and culture of selected foreign countries. Students may earn approved art history and/or studio credit. Course length is approximately one month. Students may enroll twice in the same session for a maximum of six credits. Prerequisites are determined by the intended application of this credit toward the student's degree. (Alt. summers)

**ART 13509 - Photography Processes (2 to 6)**

Advanced directed studies in various techniques in black and white or digital photography. Repeatable, up to 6 credit hours, for additional experience, new material and progression of study.  
Prerequisite: Permission of instructor. (F, S)

**ART 13529 - Drawing Processes (2 to 6)**

Advanced studio work providing students with opportunities for extended studies in various media and directions. Repeatable, up to 6 credit hours, for additional experience, new material and progression of study.  
Prerequisite: Permission of instructor. (F, S)

**ART 13539 - Printmaking Processes (2 to 6)**

Advanced directed studies in various media, techniques, and directions. Repeatable, up to 6 credit hours, for additional experience, new material and progression of study.  
Prerequisite: Permission of instructor. (F, S)

**ART 13549 - Painting Processes (2 to 6)**

Advanced studio work providing students with opportunities for extended study in various media and directions. Repeatable, up to 6 credit hours, for additional experience,



new material and progression of study.  
Prerequisite: Permission of instructor. (F, S)

**ART 13569 - Ceramics Processes (2 to 6)**

Advanced studio work providing students the opportunity to further develop work in ceramics. Study in all phases of studio practice. Repeatable, up to 6 credit hours, for additional experience, new material and progression of study. Prerequisite: Permission of instructor. (F, S)

**ART 13579 - Sculpture Processes (2 to 6)**

Advanced studio work facilitated through discussions on contemporary concepts in sculpture, directed research and group critiques. Emphasis on student's understanding of the content of his/her work and where that fits into the continuum of sculpture. Repeatable, up to 6 credit hours, for additional experience, new material and progression of study. Prerequisite: Permission of instructor. (F, S)

**ART 13582 - Organization and Supervision of the Art Program (2)**

The organization of the total art program within the framework of the educational structure of the school; the functions, role and responsibilities of the supervisor, coordinator and/or single art teacher. Model programs in several school classifications will be examined. Prerequisites: ART 13180, ART 13382 and ART 13480. (SS, alt. years)

**ART 13584 - Art Activities in the Elementary School (2)**

Activities which develop personal sensitivity and refined consciousness with an emphasis on an active philosophy for creative growth which stresses the importance of art as a personal language. Prerequisite: ART 13382.

**ART 13588 - Art in the Senior High School (2)**

Studies designed to present the secondary art teacher with an expanded conceptual and practical framework for implementing curricular concerns in studio art, art appreciation, art history, and art criticism. Prerequisite: ART 13480.

**ART 13592 - Internship (2 to 6)**

To provide the student with an opportunity to work within a business context, so that the student can gain professional experience that would otherwise not be obtained in regular coursework. Prerequisite: Must be junior/senior level graphic design or IDM-VI major with a 3.00 GPA. Approval of work site

by your instructor is required. Repeatable, up to 6 credit hours, for additional experience, new material and progression of study. (F, S, SS)

**ART 13599 - Design Processes (2 to 6)**

Advanced professional level work in various techniques and directions in graphic design and/or fiber arts. Repeatable, up to 6 credit hours, for additional experience, new material and progression of study. Prerequisite: ART 13499 (graphic design) or ART 13495 (fiber arts), and permission of instructor. (F, S)

**ART 13600 - Special Offering (1 to 6)**

Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced.

**ART 13609 - Special Problems in Studio Art (1 to 6)**

Advanced, directed individual study in selected studio areas toward a particular objective or objectives. A statement of objective(s) is to be formulated prior to request for enrollment. May be repeated for a total of 6 semester hours. (F, S)

**ART 13682 - Issues in Art Education (2 to 4)**

The directed study of a particular issue or area of concern as it is related to art teachers within the educational structure. Issues will be selected as they meet the needs of the student. Course may be repeated for a total of 4 semester hours applicable toward a specific degree program. (F, S)

**ART 13689 - Development of Individual Art Curricula (1 to 4)**

An independent study program in which the student designs an art curriculum based upon the objectives, resources, student profiles, and community interest of the school situation in which the student is teaching. May be repeated for a maximum of 4 semester hours. (F, S)

**BIOL - Biological Sciences**

**BIOL 04510 - Current Topics in Biology (1 to 3)**

Each course is specifically designed to address a timely topic in biology. Repeatable for additional experience, new material and progression of study.

**BIOL 04511 - Techniques in Biotechnology (4)**

A studio course dedicated to hands-on experience with common techniques used in the field of biotechnology. Theory and practical experience will be provided for techniques in DNA isolation and manipulation, gene cloning, library screening, molecular detection, and protein expression, genomic analysis and bioinformatics. In addition, students will be exposed to current topics and ethical considerations in the biotechnology industry. Two three-hour studio sessions per week with additional independent laboratory work required. Prerequisite: BIOL 04350 with a minimum grade of C. Recommended prerequisite: BIOL 04140. (F)

**BIOL 04541 - Marine Botany (4)**

A survey based upon local examples of the principal groups of the marine algae and marine flowering plants, treating structure, reproduction, distribution, identification and ecology at Gulf Coast Research Laboratory. Prerequisite: 10 hours of botany. Upper-level undergraduate and graduate credit. (SS)

**BIOL 04549 - Marine Microbiology (5)**

Microbiology and advanced microbiology students are introduced to the role of the microorganisms in the overall ecology of oceans and estuaries at Gulf Coast Research Laboratory. Prerequisite: General microbiology and environmental microbiology or consent of instructor. Upper-level undergraduate and graduate credit. (SS)

**BIOL 04576 - Methods in Plant and Animal Ecology (3)**

A studio course that provides a balanced survey of a variety of field techniques involving data collection or simulation and analysis of plant and animal populations and communities. Laboratory and field exercises will focus on critical thinking and problem-solving. This course is NOT designed to emphasize ecological theory nor scientific writing although aspects of each are included. Six hours of studio course times per week. Prerequisite: BIOL 04376; MATH 17114 for science majors highly recommended. (F, first block)

**BIOL 04600 - Special Offering (1 to 4)****BIOL 04610 - Advanced Current Topics in Biology (1 to 3)**

Course content reflects a particular timely topic in biology

**BIOL 04612 - Vertebrate Histology (5)**

The study of vertebrate tissues and organs. Laboratory consists of a microscopic study of cells, tissues, organs and organ systems. Two hours of lecture and six hours of laboratory per week. (S)

**BIOL 04613 - Human Anatomy (4)**

The systematic study of human anatomy, including the skeletal, muscular, cardiovascular, digestive, respiratory, urinary, endocrine, reproductive and integumentary systems. Three hours of lecture and two hours of laboratory per week. Prerequisites: 12 hours of biology and 8 hours chemistry. (F, S)

**BIOL 04614 - Plant Physiology (4)**

A study of the chemical and physical processes involved in the growth and functioning of plants. Three hours of lecture and three hours of laboratory per week. Prerequisites: BIOL 04112 and BIOL 04113, CHEM 24114 and CHEM 24115 and CHEM 24342 and CHEM 24343. Highly recommended prerequisites: CHEM 24362 and CHEM 24363 or CHEM 24562 and CHEM 24563. (S, even years)

**BIOL 04615 - Human Physiology (4)**

The study of physiological processes of humans, including membranes, muscle, nervous, cardiovascular, respiratory, renal, gastrointestinal, endocrine and reproductive physiology. Three hours of lecture and three hours of laboratory per week. Prerequisites: 12 hours of biology and 8 hours of chemistry. (F, S)

**BIOL 04616 - Molecular Biology (4)**

An advanced course that explores the molecular structures, processes and regulatory mechanisms related to DNA, RNA, protein expression and function. Three hours of lecture and three hours of laboratory per week. Prerequisite: BIOL 04350. Recommended prerequisites: BIOL 04140, BIOL 04310, CHEM 24362 and CHEM 24363. (S, odd years)

**BIOL 04617 - Immunology (5)**

Principles of Immunology: to include antigen-antibody relationships, host-antigen interaction, immunocytology, humoral and cellular response mechanisms and serologic reactions. Two hours of lecture and six hours

of laboratory per week. Prerequisite: BIOL 04140. (S)

**BIOL 04618 - Herpetology (4)**

Anatomy, physiology, taxonomy, distribution, life history and ecology of amphibians and reptiles, emphasizing those in Missouri. One hour of lecture and two three-hour laboratories per week. Prerequisite: BIOL 04114 and BIOL 04115. (S)

**BIOL 04620 - History of Biology (2)**

A historical overview of the development of biology from Greek roots to the modern day.

**BIOL 04622 - Environmental Issues (4)**

An overview of the science, politics and sociology of current environmental issues, including pollution, wastes, ozone depletion, acidic precipitation, greenhouse effect, deforestation, water use, energy and population. In addition to the course requirements for undergraduates, graduate students will be required to propose a college-level laboratory exercise for ecology or environmental courses and to complete and report on an independent research project. Three one-hour lectures plus one two-hour lab per week. Recommended prerequisites: BIOL 04102 and BIOL 04103, CHEM 24114 and CHEM 24115, GEOL 27110 and GEOL 27111 or GEOL 27114 and GEOL 27115. (S)

**BIOL 04624 - Molecular Genetics (3)**

A discussion of the structure and function of genetic material at a molecular level. Consideration of both prokaryotic and eukaryotic systems, with an aim to describe genetics in terms of chemical principles. A significant portion of course is derived from current primary literature. Prerequisites: BIOL 04350 and BIOL 04440. (S)

**BIOL 04625 - Bioinformatics and Genomics (4)**

The study of whole organism genomes, their organization and regulation. Course will consider current tools and software designed to organize and extract information from the research in this field. Four hours of lecture and studio work per week. Prerequisites: BIOL 04350 or permission of instructor.

**BIOL 04635 - Comparative Anatomy (5)**

An advanced course designed to familiarize students with fundamental and in-depth aspects of anatomy, evolution, and function morphology in vertebrate animals. Laboratory includes hands-on dissection and

examination of all major body systems in selected vertebrates. Two hours of lecture and six hours of lab per week. Prerequisites: BIOL 04114 and BIOL 04115 with a minimum grade of C and PHYS 25110 and PHYS 25111 OR PHYS 25120 and PHYS 25121 or permission of instructor. (F)

**BIOL 04670 - Readings in Ecology (2)**

Directed reading in ecology. Designed to acquaint the student with both historical and current developments in animal and plant ecology. Two hours of discussion per week. Prerequisite: BIOL 04376 or equivalent.

**BIOL 04678 - Readings in Molecular Biology (2)**

Directed readings in molecular biology. Specific subjects will be researched in current periodicals. Written and/or oral reports will be required. Prerequisites: Graduate standing and permission of instructor.

**BIOL 04680 - Graduate Seminar in Biology (1)**

A course designed to study research in the Midwest, and to provide an opportunity for students and faculty to discuss their own current and published research. Prerequisite: Graduate standing or teaching experience in biology. (F, S)

**BIOL 04691 - Graduate Research in Biology (1 to 3)**

An independent research project and paper designed in conjunction with a faculty member, but not as part of the thesis research. Prerequisite: Permission of instructor. (F, S, SS)

**BIOL 04697 - Scholarly Paper in Biology (1 to 5)**

An approved independent study in an area of biology accumulating in a paper. The independent study may or may not involve laboratory work. The student must develop and carry out the problem with the approval and assistance of the advisor. A seminar covering the paper must be given during a trimester prior to graduation or in the trimester of graduation. The student must complete a written report in the style of a science journal appropriate for the area of study. Delayed grades will be given until the paper is accepted. It may be repeated for up to 5 hours. Prerequisite: Graduate standing and permission of instructor (F, S, SS)

**BIOL 04698 - Thesis Research in Biology (1 to 5)**

A committee directed research project preparatory to the writing of a master's thesis. Delayed grades will be given until the thesis is accepted. May be repeated for up to 8 hours. Prerequisites: Graduate standing and permission of graduate advisor. (F, S, SS)

**BIOL 04699 - Thesis (3)**

Required for the M.S. degree. (Option 1 only.) (F, S, SS)

**CHEM - Chemistry****CHEM 24520 - Protein Chemistry (4)**

A course dedicated to the study of advanced topics in protein chemistry and function. Topics related to determination of protein structure, protein folding, the connection of protein structure and function, enzymology, and protein purification will be investigated. Three hours of lecture and three hours of lab per week. Prerequisites: CHEM 24562 and CHEM 24563 with a minimum grade of C, or permission of instructor. (S, alt. years)

**CHEM 24522 - Instrumental Analysis (2)**

A study of modern techniques and theories of analysis including an introduction to basic instrumental analysis. Must be taken concurrently with CHEM 24523. Two hours of laboratory and recitation per week. Prerequisite: CHEM 24322 and CHEM 24323 with a minimum grade of C. (S, even years)

**CHEM 24523 - Instrumental Analysis Laboratory (2)**

Must be taken concurrently with CHEM 24522. Two three-hour laboratory periods per week. (S, even years)

**CHEM 24532 - Physical Chemistry I (3)**

The study of atomic and molecular phenomena through the scrutiny and interpretation of the physical laws that govern the structure and behavior of matter as it exchanges energy within and between itself and its surroundings in the atomic and molecular domains. Must be taken concurrently with CHEM 24533. Topics include the foundation of quantum chemistry, atomic and molecular structure, spectroscopy, and computational chemistry. It is strongly suggested that CHEM 24532 be taken prior to CHEM 24534. Prerequisites: CHEM 24116 and CHEM 24117 with a minimum grade of C, PHYS 25120 and MATH 17121.

**CHEM 24533 - Physical Chemistry I Laboratory (1)**

Laboratory course in physical chemistry that must be taken concurrently with CHEM 24532. Prerequisites: CHEM 24116 and CHEM 24117 with a minimum grade of C, and PHYS 25120 and MATH 17121. (F)

**CHEM 24534 - Physical Chemistry II (3)**

The study of thermodynamic systems and processes and the rates at which chemical reactions occur through the scrutiny and interpretation of the physical laws that govern the structure and behavior of matter as it exchanges energy within and between itself and its surroundings in the macroscopic domain. Must be taken concurrently with CHEM 24535. Topics include thermochemistry, thermodynamics, equilibrium, solutions, gases, chemical dynamics, and chemical kinetics. Prerequisites: CHEM 24532 and CHEM 24533 with a minimum grade of C, or permission of instructor. (S)

**CHEM 24535 - Physical Chemistry II Laboratory (1)**

Laboratory course in physical chemistry that must be taken concurrently with CHEM 24534. (S)

**CHEM 24552 - Advanced Inorganic Chemistry (3)**

Modern aspects of inorganic chemistry, includes coordination chemistry, molecular orbital theory, group theory and catalysis, magnetic properties of elements and compounds. Three hours of lecture and recitation per week. Prerequisite: CHEM 24532 with a minimum grade of C, or concurrently. (S, odd years)

**CHEM 24555 - Inorganic Synthesis Laboratory (1)**

An introduction to fundamental methods and techniques used in the synthesis and manipulation of inorganic compounds. The techniques used will include the synthesis, methods of purification and characterization of inorganic compounds. Prerequisite: CHEM 24116 and CHEM 24117 with a minimum grade of C in both. (S, odd years)

**CHEM 24562 - General Biochemistry (3)**

An introductory course in biochemistry which deals with selected topics in the field. The description and function of amino acids, proteins, fats, nucleic acids, and certain carbohydrates will be discussed. Enzymes

and their role in metabolic processes will be emphasized. Three hours of lecture and recitation per week. Corequisite: CHEM 24563. Prerequisite: CHEM 24342 with a minimum grade of C, or permission of instructor. (F)

**CHEM 24563 - General Biochemistry Laboratory (2)**

Experiments illustrating biochemical techniques and principles will be performed. Two three-hour laboratory periods per week. Prerequisite: CHEM 24562 or concurrently. (F)

**CHEM 24566 - Macromolecular Structures (4)**

Covers modern methods that have defined the molecular basis for macromolecular interactions and their function in biochemistry. Emphasis focuses on the physical principles of macromolecular structure and interactions, and will describe modern methods. Prerequisites: CHEM 24562 and CHEM 24563.

**CHEM 24580 - Special Topics (1 to 3)**

This is an in-depth study of special topics offered according to the student's needs and interests. Topics include: environmental chemistry, atomic and molecular structure, kinetics, industrial chemistry, polymer chemistry, computer applications in the laboratory, surface chemistry, and colloidal chemistry. Can be repeated with different topics. Prerequisites: CHEM 24342 and CHEM 24532 or permission.

**CHEM 24592 - Chemistry Seminar (1)**

Students will prepare written and oral reports on a literature search of a chemistry topic. Prerequisite: CHEM 24342. (F, S)

**CHEM 24600 - Special Offering (1 to 4)**

**COM - Communication**

**COM 29500 - Special Offering (1 to 4)**

Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced. Repeatable with topics changing.

**COM 29537 - Independent Study in Speech Science (1 to 2)**

Repeatable with topics changing.

**COM 29538 - Independent Study in Speech Education (1 to 2)**

Repeatable with topics changing.

**COM 29539 - Independent Study in Speech Media (1 to 2)**

Repeatable with topics changing.

**COM 29553 - Language, Speech, and Hearing of the Exceptional Child and Adult (3)**

A study for the special education teacher in the identification and referral of exceptional individuals with communication disorders. Topics include the development, characteristics and disorders of language, speech and hearing in the exceptional individual. Focus is on establishing interactions that are supportive of communicatively handicapped individuals in special education programs. (F, SS)

**COM 29566 - Special Topics in Speech Science (1 to 4)**

Repeatable with topics changing.

**COM 29567 - Special Topics in Contemporary Issues (1 to 4)**

Repeatable with topics changing.

**COM 29568 - Special Topics in Rhetoric (1 to 4)**

Repeatable with topics changing.

**COM 29569 - Special Topics in Speech Education (1 to 4)**

**COM 29581 - Philosophical Bases of Speech Education (3)**

An examination of the historical and philosophical bases for teaching speech in the secondary school.

**COM 29610 - Foundational Domain in Strategic Communication (3)**

This domain will introduce the student to the expectations of the graduate program and will orient the student to foundational concepts and skills that will permeate the core domains. It is a compulsory domain for each student.

**COM 29620 - Core Domain in Organizational Dynamics (6)**

This domain will address the areas of organizational culture, organizational communication, conflict resolution and management, and power dynamics. Students

will learn theories, concepts, and advanced techniques in these subdomains.  
Prerequisite: COM 29610.

**COM 29630 - Core Domain in Strategic Communication Management (6)**

This domain will address the areas of brand management, public relations, and crisis communication. Students will learn theories, concepts, and advanced techniques in these subdomains. Prerequisite: COM 29610.

**COM 29640 - Core Domain in Project Management (7)**

This domain will address the areas of data analysis, project management and decision-making/problem solving. Students will learn theories, concepts, and advanced techniques in these subdomains. Prerequisite: COM 29610.

**COM 29650 - Core Domain: Strategic Communication Skills and Techniques (7)**

This domain will address the areas, skills and techniques as they relate to written communication in strategic communication settings, oral communication with an emphasis in training, intercultural strategies, and negotiation. Students will learn theories, concepts, and advanced techniques in these subdomains. Prerequisite: COM 29610.

**COM 29660 - Capstone in Strategic Communication (3)**

This domain will consist of a project that utilizes competencies from all four major domain areas (Organizational Dynamics, Strategic Communication Management, Project Management, Strategic Communication Skills and Techniques). The student, with the assistance of their faculty mentor, will design a project that will provide solutions to a simulated or real organizational problem. Prerequisites: successful completion of the five other domains in the program.

**COM 29668 - Special Topics: Communication and Rhetorical Theories (1 to 3)**

An in-depth study of selected theories and supporting research findings of the communication and rhetorical theories.

**COM 29670 - Special Topics: Argumentation and Forensics (1 to 3)**

Advanced study in theory and methods of argumentation. The student will study the

ethical, logical, and evidential contributions of various authors to argumentation theory.

**CSIS - Computer Science Info Systems**

**CSIS 44500 - Special Offering (1 to 4)**

**CSIS 44510 - Coordination of Cooperative Education (3)**

Selection, development, and presentation of materials used in supervision of students in the work place. Includes methods, techniques, evaluation, current practices, and trends in teaching and supervising of COE. (S, SS)

**CSIS 44516 - Current Topics in Information Systems (1 to 3)**

Selected topics in information systems emphasizing current development in the field. May be repeated provided the content is different. Prerequisites: CSIS 44317 with a minimum grade of C and one high-level programming language with a minimum grade of C or consent of instructor.

**CSIS 44517 - Big Data (3)**

Course covers concepts, applications, and tools related to computation, storage, analysis, and manipulations of large data sets. This may include concepts such as Parallel Programming, Map-Reduce, Distributed Computing, Distributed File Systems, NoSQL, and Maching Learning. Tools used may include OpenMP, MPI, Hadoop, Spark, Mahout, HDFS, Pig, Hive, MLlib, etc. Prerequisites: MATH 17114 and CSIS 44242. (F)

**CSIS 44520 - Web Mining (3)**

The Web, the largest publicly accessible data source in the world, has grown at an unprecedented pace during the past decade. The rapidly changing news and events make the Internet a non-stationary environment, which in turn generates rapidly changing data. This course examines the unique characteristics of Web from a data mining perspective. It provides a review of data mining foundations and covers basic concepts of text mining, information retrieval, web search and data mining applications on social media. Prerequisites: MATH 17215, CSIS 44155, CSIS 44241, and CSIS 44460. (S)

**CSIS 44525 - Theory and Implementation of Programming Languages (3)**

Syntax and semantics of programming languages; the translation process; and features of object-oriented languages and functional programming. Undergraduate prerequisite: CSIS 44242, with a grade of C or better, or consent of instructor. Graduate prerequisite: CSIS 44542 with a grade of B or better, or concurrent enrollment in CSIS 44542, or consent of instructor. (F)

**CSIS 44542 - Object-Oriented Programming (3)**

Provides fast-paced coverage of object-oriented programming and data structures. Students will gain extensive programming experience. Prerequisites: Graduate standing and an undergraduate course in data structures with a grade of C or better; no previous experience with object-oriented programming is necessary. (F, S)

**CSIS 44550 - Operating Systems (3)**

Course covers concepts of operating systems, including process and storage management, protection, security and distributed systems. Undergraduate prerequisite: CSIS 44345, with a grade of C or better. Graduate prerequisite: CSIS 44542 with a grade of B or better, or concurrent enrollment in CSIS 44542, or consent of instructor. (F)

**CSIS 44555 - Network Security (3)**

A study of computer network security issues. Includes hands-on experience with server applications as well as some practice in client/server programming. Undergraduate prerequisite: CSIS 44356 with a grade of C or better. Graduate prerequisite: CSIS 44542 with a grade of B or better, or concurrent enrollment in CSIS 44542, or consent of instructor. (F, S)

**CSIS 44560 - Advanced Topics in Database Systems (3)**

Advanced topics in database systems, including database administration, distributed databases, and data warehousing and object-oriented databases. Hands-on experience using a DBMS in a client/server environment. Undergraduate prerequisites: CSIS 44241 and CSIS 44460, each with a grade of C or better. Graduate prerequisite: CSIS 44542 with a grade of B or better, or concurrent enrollment in CSIS 44542, or consent of instructor. (F, S)

**CSIS 44561 - Software Engineering Principles (3)**

The underlying principles of software engineering are covered in this course. Topics include software process models, requirements engineering, software design and architecture, implementation, testing, and user interface design. Prerequisites: CSIS 44242 and CSIS 44460 with a grade of C or better. (F)

**CSIS 44562 - Software Engineering Practice (3)**

A software development practicum in which students apply concepts learned throughout the curriculum in order to develop the real-world applications. Prerequisite: CSIS 44561 with a grade of C or better. (S)

**CSIS 44563 - Developing Web Applications and Services (3)**

Technologies and protocols supporting web applications and web services. Students gain experience in client-side and server-side programming. Undergraduate prerequisites: CSIS 44241 and CSIS 44460, each with a grade of C or better. Graduate prerequisite: CSIS 44542 with a grade of B or better, or concurrent enrollment in CSIS 44542, or consent of instructor. (F, S)

**CSIS 44564 - Design of Data Intensive Systems (3)**

An introduction to the design of data-intensive, reliable, scalable, and maintainable systems. Includes an introduction to current and relevant tools, technologies, design principles, and frameworks. Undergraduate prerequisite: CSIS 44460 with a grade of C or better. Graduate prerequisite: CSIS 44542 with a grade of B or better, or concurrent enrollment in CSIS 44542, or consent of instructor. (F, even years)

**CSIS 44566 - Applied Data Analytics (3)**

This course will introduce fundamental concepts and techniques of data mining, including data attributes, data pre-processing, association and correlation, classification methods, and cluster analysis. Big data and associated issues (e.g. graphs, graphical models, and data visualization) will be explored. The course will include a final project in an application domain of interest to the students. Students will be expected to apply early semester coursework throughout the course and will be able to use these tools outside the classroom. Undergraduate prerequisite: CSIS 44460 with a grade of C or better. Graduate prerequisite: CSIS 44542 with a grade of B or better, or concurrent

enrollment in CSIS 44542, or consent of instructor. (F, S)

**CSIS 44580 - Methods of Teaching Business and Marketing (1 to 3)**

The selection, development and presentation of the business, marketing, and cooperative education curriculum. Includes methods, techniques, assessment and current issues and trends in business education. Prerequisite: Admittance to Teacher Education. (F, S)

**CSIS 44584 - Implementing Business and Marketing Education Programs (3)**

Fundamental concepts in business, marketing, and cooperative education programs are studied for implementing effective business programs. The study includes organization and development of curriculum, student organizations, funding, advisory committees and program evaluation. (F, S, SS)

**CSIS 44590 - Current Topics in Computer Science (1 to 3)**

Courses emphasizing the current developments in computer science which are offered according to student need and interest, and have the content described in the title. May be repeated provided the content is different. (F, S)

**CSIS 44599 - Special Projects (1 to 6)**

Study of special topics as related to computer science. Prerequisites: 30 hours in the department and consent of instructor. Repeatable for additional experience, new material, and progression of study. (F, S)

**CSIS 44600 - Trends in Business Curriculum (1 to 2)**

**CSIS 44614 - Introduction to Online Teaching and Learning (3)**

An introduction to online teaching and learning. Various topics will be explored as they relate to online teaching and learning including types of virtual learning, online teaching methods and strategies, communication, student engagement/interactivity, digital citizenship (legal and ethical issues related to technology), and web-based technology tools. (F)

**CSIS 44617 - Information Systems Analysis and Design (3)**

This course develops the skills necessary to analyze, design and manage the development of information system solutions, incorporating contemporary methods and effective organizational and management practices. It focuses on technical business system analysis and design techniques, and covers agile and lean methodologies, estimation, requirements elicitation and analysis, modeling, system and software architecture, and design principles.

**CSIS 44618 - Project Management in Business and Technology (3)**

Course covers the skill set needed to lead an information system development team using the constraints of scope, time, cost and quality. Behavioral and technical tools of project management are presented and workgroups and teams will be utilized. (F, SS)

**CSIS 44623 - Information Technology Management (3)**

Covers foundational concepts of information systems and their relationship to and impact on organizations. Focus is on the component interrelationships between information technologies and organizations. (F)

**CSIS 44624 - E-Commerce and Data Management (3)**

A course in current e-commerce and data management strategies and technologies for e-commerce. (F)

**CSIS 44625 - Managerial Systems Analysis and Design (3)**

This course provides an understanding of how information systems are developed through the analysis, design, implementation, and support areas. It is intended to develop managerial skills in using tools to apply to projects and problems. (S)

**CSIS 44628 - Advanced Decision Support Systems (3)**

Covers decision support system implementation including decision modeling and quantitative analysis. The focus is on design and use of spreadsheet models to assist in user interaction and interpretation of results for more effective and efficient decision making. (S)

**CSIS 44632 - Business Intelligence and Analytics (3)**



This course will introduce students to various techniques available to extract suitable information (business intelligence, BI) from the large volume of data an organization can use to help managers make better business decisions.

**CSIS 44633 - Multimedia Systems and Applications (3)**

Multimedia applications, underlying standards and algorithms will be discussed. Topics include the use of computer programs that combine text, graphics, audio, animation, video and graphical user interfaces, overview of multimedia compression standards, digital image acquisition, some basic techniques in image/video processing, multimedia retrieval systems. Prerequisite: some multimedia development experience.

**CSIS 44638 - Financial Modeling and Decision Making for IT (3)**

This course focuses on IT product and service selection and evaluation based on financial considerations including return on investment, time cost of money, depreciation, and system life. It includes key measurements for software development and project management, and a methodology for selecting the best measurements. In addition, students will use Microsoft Excel extensively to build financial analysis models.

**CSIS 44641 - Developing Object-Oriented Systems with Java (3)**

This course introduces students to the key concepts of structured programming and object orientation using the Java programming language. The course will provide an in-depth presentation of the syntax and control structures of the Java language, while presenting basic object oriented concepts such as objects, classes, and inheritance. Good programming practices will be emphasized including the use of coding standards, structured coding, data abstraction, information hiding, and proper object oriented design. Effective algorithm development and refinement will also be promoted throughout the course.

**CSIS 44643 - Mobile Computing-iOS (3)**

Students will learn the intricacies of mobile computing development with an emphasis on the iOS platform. Prerequisite: CSIS 44242 with a grade of C or better, or CSIS 44542 with a grade of B or better.

**CSIS 44644 - Mobile Computing-Android (3)**

Students will learn the intricacies of mobile computing development with an emphasis on the Android platform. Prerequisite: CSIS 44242 with a grade of C or better, or CSIS 44542 with a grade of B or better.

**CSIS 44651 - Enterprise Networking and Internetworking (3)**

This course presents data communications and networking protocols, with practical application to enterprise networking and internetworking requirements. Topics include: role of various media and software components, local and wide area network protocols, network performance, internetworking and the internet, and emerging advanced commercial technologies.

**CSIS 44652 - Cybersecurity and Information Security Management (3)**

This course is designed to teach mid-level security practitioners how to engage all functional levels within the enterprise to deliver information system security. To this end, the course addresses a range of topics, each of which is vital to securing the modern enterprise. These topics include inter alia plans and policies, enterprise roles, security metrics, risk management, standards and regulations, physical security, and business continuity. Each piece of the puzzle must be in place for the enterprise to achieve its security goals; adversaries will invariably find and exploit weak links.

**CSIS 44654 - Professionalism in the Information Systems Environment (3)**

This course teaches students about information technology ethical issues they will face in their careers while also helping students to generate professional career materials and practicing proper business etiquette, writing, and speaking.

**CSIS 44656 - Current Issues in Instructional Technology (3)**

This course will examine the current issues and trends in the research area of instructional technology. The student will engage in literature to understand the theoretical foundation in this rapidly evolving field of study. (S, odd years)

**CSIS 44660 - Database Design and Implementation (3)**

An introduction to database systems, including design, organization and

implementation. Prerequisite: Previous experience using several computer application software packages in a Windows environment. A student who has credit for CSIS 44460 or the equivalent cannot receive credit for CSIS 44660.

### **CSIS 44662 - User Centered System Design and Evaluation (3)**

This course focuses on the design of effective human computer interactions. Students in the course will learn how the design, implementation, and evaluation of a human computer interface fit into a comprehensive software development life cycle. A portion of the course deals with selected aspects of human cognition and behavior as they apply to human computer interaction. The students will learn how to construct models of typical user interfaces, how to build and evaluate prototypes, and how to build and evaluate finished user interfaces for software systems. A significant portion of the course is a group project in which the students will design and implement a user interface for a software system. In addition, this course is designed to help the students improve their research skills, their oral and written communication skills, and their ability to work effectively as part of a software development team.

### **CSIS 44663 - Application Development in C#.NET (3)**

Development, deployment and versioning of software components using the Microsoft.NET framework. Emphasis on building sophisticated applications using component-based development and XML-based industry standards. Include hands-on experience in both server-side and client-side programming using a variety of Microsoft.NET technologies. Prerequisites: software engineering and programming proficiency in an object-oriented language.

### **CSIS 44664 - User Experience Design (3)**

Principles and practices for designing, implementing and evaluating user interfaces. Exploration of current user experience design technologies. Prerequisites: Proficiency in an object-oriented programming language such as Java, C++, or C# and coursework or experience in either software engineering or systems analysis and design. (F)

### **CSIS 44667 - Intelligent Systems (3)**

Development of expert systems and intelligent agents using the concepts of

knowledge representation, rule-based systems, probabilistic reasoning, learning and neural networks while incorporating problem-solving strategies using search, logic and inference. Prerequisites: Undergraduate courses in data structures and statistics. (F)

### **CSIS 44686 - Information Processing (1 to 2)**

Information processing concepts and usage will be researched and discussed. Study will include analysis and application of current software packages. (SS)

### **CSIS 44687 - Special Topics in Business Education (1 to 3)**

This course is designed to provide special offerings on various topics to area business education teachers. (F, S, SS)

### **CSIS 44689 - Problems in Business Education (1 to 4)**

Individual research projects in business and vocational education for those teaching at the secondary or junior college level. (F, S, SS)

### **CSIS 44690 - Office Systems Seminar (1 to 3)**

An intensive study of current concepts, philosophies, and theories of office systems. (Can be retaken for a maximum of 6 semester hours.) (Contact department chair.)

### **CSIS 44691 - Computer Science Graduate Directed Project I (3)**

The first of two software development practicum courses designed to integrate computer-related skills into an intensive project environment. Prerequisites: completion of 15 hours toward the M.S. in Applied Computer Science, including a B or better in CSIS 44542 and approval by graduate advisor. (F, S, SS)

### **CSIS 44692 - Computer Science Graduate Directed Project II (3)**

The second of two software development practicum courses designed to integrate computer-related skills into an intensive project environment. Prerequisites: CSIS 44691 with a grade of C or better. (F, S, SS)

### **CSIS 44693 - Information Systems Capstone Project (3)**

This course serves as the capstone experience for Master's program students in

Information Systems. It is essentially a project course that integrates the knowledge from the rest of the IS program and applies it to a real-world problem. The course covers the full spectrum of information systems development from conceptualization and analysis to design, prototyping, and development.

**CSIS 44695 - Current Topics in Computer Science/Information Systems (3)**

Selected topics in computer science and information systems emphasizing current developments in the field. May be repeated provided the content is different. Prerequisites will depend on the topic being covered. (contact dept. chair)

**CSIS 44696 - Graduate Directed Project (2 to 4)**

Profession-based project designed to integrate computer-related skills, current technologies and practices, and research. May be repeated for a maximum of six credit hours. (F,S, SS)

**CSIS 44698 - Advanced Independent Study (1 to 6)**

Advanced independent study in computer science. Prerequisites: 9 hours of graduate study and consent of instructor.

**CSIS 44699 - Graduate Internship in Information Technology (1 to 3)**

Supervised professional field experience in a business or other approved setting. Prerequisites: completion of 12 hours toward the M.S. in Applied Computer Science or the M.S. in Information Systems, and approval by the graduate advisor.

**ECON - Economics**

**ECON 52600 - Special Offering (1 to 2)**

**ECON 52651 - Macroeconomics for Business Managers (3)**

An analysis of aggregate economic variables and their relation to business management and decision making. Macroeconomic models, business fluctuations, and macroeconomic policies will be studied, available empirical data will be analyzed, and their relevance to business decision making will be examined.

**ECON 52654 - Managerial Economics (3)**

The use of economic tools in managerial decision making. Demand analysis and

forecasting, cost analysis, production function, market structures, and public sector analysis are covered.

**ECON 52655 - Independent Study in Economics Education (1 to 3)**

**EDCI-Education-Curriculum-Instr**

**EDCI 62504 - Creating Inclusive Classrooms (3)**

Designed to provide a framework for creating learning environments that support the learning and socialization of students who bring unique characteristics to the classroom. Teachers will develop effective techniques and methods for all students including: those who are at risk for success or who have disabilities; the gifted and talented; those whose diversity lies in their culture, language, race, gender, sexual orientation or family structure. Undergraduate prerequisites: admitted to Teacher Education and at least one special education methods course (EDCI 62384 or EDCI 62386); graduate prerequisite: Degree Audit Form on file or permission of instructor. (S)

**EDCI 62508 - Transition/Career Education for Students with Disabilities (2)**

Acquaints the student with an understanding of principles, methods, and procedures of career development and transition for students with disabilities. Undergraduate prerequisite: admitted to Teacher Education and at least one special education methods course (EDCI 62384 or EDCI 62386); graduate prerequisite: EDCI 62642 or permission of instructor. (S, SS)

**EDCI 62511 - Middle School Curriculum, Methods and Practicum (3)**

Methods and techniques of teaching, practicum experience, and curriculum construction for the middle school, with attention given to early adolescent development. (F, SS even years)

**EDCI 62519 - Problems in Elementary Education (1 to 4)**

A course designed to meet the individual student's educational needs. The studies may be either of a subjective or objective research nature. (F, S, SS)

**EDCI 62520 - Introduction to Teaching Students with Autism Spectrum Disorders (3)**

This course is intended to develop effective teachers of students with autism spectrum disorders. This course will cover a wide variety of topics regarding students with autism spectrum disorders: from characteristics, basic knowledge of assessment, to effective practices used to address their unique needs in school, family, and community. This course will provide an introduction and overview of issues surrounding the education of students with autism spectrum disorders. (F)

**EDCI 62521 - Teaching Students with Autism Spectrum Disorders (3)**

This course is intended to develop effective teachers of students with autism spectrum disorders (ASD). This course is a follow-up to the prerequisite Introduction to Teaching Students with Autism Spectrum Disorders and will go into more depth with methods and evidence-based practices used with students with ASD. Students will gain more specific knowledge of strategies and evidence-based practices as well as develop some supports to be used with students in special education or inclusion settings. Prerequisite: EDCI 62520.

**EDCI 62522 - Technology for Teaching and Learning (3)**

Students will learn about various technologies, applications, procedures and assessments to facilitate student learning. Using technology to meet the diverse needs of students including those with disabilities will be explored. Topics include assessment, levels of assistive technology devices and services, use of word processing, spreadsheet, and database software in the instructional process, student and teacher productivity applications, ethical and legal issues regarding technology in the classroom, and instructional software. Prerequisite for undergraduate students: Admittance to Teacher Education and at least one methods course or permission of instructor. (F)

**EDCI 62531 - Curriculum and Methods in Early Childhood (3)**

A gradual induction into planning, creating and integrating developmentally appropriate curriculum and materials for working with children birth through kindergarten. Prerequisite: EDCI 62340 and Admittance to Teacher Education. (F, S)

**EDCI 62532 - Family and Community Resources in Early Childhood (2)**

Study of family and community resources used in working with parents and children, birth through grade 3. Prerequisite: EDCI 62340 or permission of instructor. (F, S)

**EDCI 62540 - Behavior Management Techniques (3)**

This course is designed to provide teachers with both technical and functional understanding of applied behavior analysis, as well as strategies for the everyday applications of behavior management in classrooms and other educational settings. Undergraduate prerequisites: Admittance to Teacher Education and at least one special education methods course (EDCI 62384 or EDCI 62386); graduate prerequisite: Degree Audit form on file or permission of instructor. (F, SS)

**EDCI 62541 - Assessment and Early Intervention in Early Childhood (3)**

This course is designed to enable pre-service teachers or graduate students to develop a knowledge base of assessment principles so they are able to appropriately assess children's developmental characteristics and implement intervention strategies to maximize development in young children. Prerequisite: EDCI 62340 and EDCI 62531, and Admittance to Teacher Education, or permission of instructor. (F, SS)

**EDCI 62542 - Curriculum and Methods in Early Childhood Special Education (3)**

This course is designed to develop skills to enable the prospective teacher of the young child with special needs (birth to age five years) to: (1) plan and organize appropriate curriculum content and learning sequences; (2) identify and implement appropriate instructional strategies, techniques, and environments; and (3) work effectively with parents and families, as well as other professionals and caregivers. Prerequisites: EDCI 62340 or EDCI 62531, EDCI 62541, EDCI 62470. (F)

**EDCI 62543 - Practicum in Early Childhood (1 to 4)**

Supervised practice in evaluating and teaching children from birth through grade 3. Prerequisites: EDCI 62340 and EDCI 62531, and Admittance to Teacher Education, or permission of instructor. (F, S, SS)

**EDCI 62544 - Practicum in Early Childhood Special Education (3)**

Supervised practice in early childhood teaching, interpreting individualized tests and application of behavior management techniques with preschool children with disabilities. Prerequisite: EDCI 62542 and Admittance to Teacher Education. (S)

**EDCI 62553 - The Reading Program in the Secondary School (3)**

A course for specialized personnel in reading at the secondary level. Topics will focus on means for identifying students' basic and developmental skill needs, as well as materials and techniques for instruction. (S, SS)

**EDCI 62555 - Trends in Reading (1 to 3)**

This course is designed to update teachers in methods, techniques and innovations in teaching reading. Repeatable with change in topic. (F, S, SS)

**EDCI 62563 - Trends in Special Education (1 to 3)**

This course is designed to update teachers in methods, techniques and innovations in special education. Repeatable with a change in topic. (F, S, SS)

**EDCI 62574 - Teaching Math to Students with Disabilities (2)**

Methods and materials used in teaching remedial math to the exceptional learner. Prerequisite: Admittance to Teacher Education. (F)

**EDCI 62580 - Methods and Techniques for Teaching English Language Learners (ELL/ESOL) (3)**

Designed to introduce the student to the current methods and techniques used to instruct limited English proficient students regardless of their age group or goal. Special attention is given to application of the Missouri WIDA and TESOL Standards to the development of curriculum of the content of ELL class. Explores how current trends in developing second language competence is used to teach language in ESL and mainstream classrooms through a content-based approach. Required for an ESL endorsement. (F)

**EDCI 62582 - Linguistics for Teaching English Language Learners (ELL/ESOL) (3)**

Examines the nature of language through a study of pragmatics, semantics, syntax,

morphology and phonology. Explores language variation as it is shaped by society and culture. The concepts of first and second language acquisition, the neurological foundations of language, and the evolution of writing systems are introduced. (S)

**EDCI 62591 - Seminar in Education (1)**

Current Trends and Issues Seminar is a required component of the Professional Trimester experience and is taken in conjunction with the student teaching experience. It is designed to help students become reflective teachers by providing an opportunity to synthesize the student teaching experience and by providing a forum for collaborative, critical inquiry. This seminar is taken concurrently with the Directed Teaching courses (EDUC 61471, EDUC 61473 and/or EDUC 61472, EDUC 61474). (F, S)

**EDCI 62600 - Special Offering (1 to 4)****EDCI 62601 - Literacy-Based Assessment and Analysis (3)**

This course is designed to inform literacy leaders of best practices in literacy-based assessment, data analysis and decision-making, and effective communication of results to multiple stakeholders.

**EDCI 62602 - Supervision of Early Childhood Programs (3)**

An in-depth study of various early childhood programs geared toward preparing students to be skilled in all administrative responsibilities of an early childhood program. (SS)

**EDCI 62603 - Mathematics in the Elementary School (3)**

A study of methods and materials used in teaching elementary mathematics, including remedial mathematics. (SS odd years)

**EDCI 62604 - A Survey of Literacy Professionals and Practices (3)**

This course is designed to survey a broad range of literacy professionals to understand their instructional, curricular, and administrative roles and responsibilities in building and district-level environments. Candidates will examine literacy initiatives, programs, models, instructional strategies, and interventions and their impact on student learning.

**EDCI 62605 - Science in the Elementary School (3)**

A study of methods and materials used in teaching elementary science. (SS odd years)

**EDCI 62607 - Language Arts in the Elementary School (3)**

A study of methods and materials used in teaching elementary language arts. (S, SS)

**EDCI 62608 - Trans/Career Proc & Res (3)**

This course provides the student with an understanding of principles, methods, and procedures of transition and career education for students with disabilities. The course includes the process for organizing a program to assist youth in choosing, preparing for, entering upon, and making adjustments in transitioning across childhood and from school to post-secondary options with a focus on the linking of resources in the transitions from school to a wide-range of adult settings.

**EDCI 62610 - Social Studies in the Elementary School (3)**

A study of the methods and materials used in teaching elementary social studies. (S even years)

**EDCI 62611 - Introduction to Online Instruction and Portfolio Development (4)**

An orientation to the online course delivery system and offers suggested methods and organizational techniques for learning in the online environment. Provides guidelines for content, designing and developing an effective portfolio. Contact home institution for software and hardware development requirements. Prerequisite: must be admitted to the on-line M.S.Ed., Teaching and Learning: Elementary program.

**EDCI 62612 - Literacy in the Elementary School (3)**

This course is designed to examine literacy methodologies, instructional approaches, and resources in the elementary grades as it relates to theory, current research, and practice.

**EDCI 62613 - How Students Learn (3)**

A study of learning that is based on research and theory from different disciplines. Learn to use this research to increase students' learning through the study of the physical, emotional, social, cognitive and reflective learning systems in an effort to know and better understand the learning process itself using quantitative research practices.

Prerequisites: EDCI 62612 or may be taken concurrently.

**EDCI 62614 - Schools, Students and Society (3)**

Investigates the implications of factors affecting teaching and learning, such as culture, politics, ethnicity, language, class, wellness, race and gender. Discover and critique theoretical and practical arguments for improving teaching and learning. Examine multiple ways of knowing that the academic disciplines, students and teachers potentially bring to classrooms. Student will learn about and engage in qualitative research and practice. Prerequisites: EDCI 62613.

**EDCI 62615 - Designing and Assessing Teaching and Learning (3)**

Student will develop an action research project to attack a learning/instructional problem utilizing local school improvement goals and MAP assessment performance improvement using either quantitative, qualitative, or a mixed model design. Course is a culmination of building a knowledge base on research methodology in authentic school problems, applying learning theory and valuing the applied research process. Prerequisites: EDCI 62611, EDCI 62613, EDCI 62614, and EDCI 62616 or may be taken concurrently.

**EDCI 62616 - Inquiry into Practice (2)**

Teachers will engage in descriptive, analytical, and reflective activities, writing, and dialogue. Prerequisite: EDCI 62611 or may be taken concurrently.

**EDCI 62617 - Early Childhood Program Evaluation (3)**

An examination of assessment methods, strategies, and tools in the early childhood setting.

**EDCI 62618 - The Reflective Practitioner: Seminar and Practicum in Teaching Early Childhood (3)**

This is a performance-based course that guides students to critically reflect on teaching and assessment practices they implement in early childhood settings.

**EDCI 62619 - Literacy in the Secondary School (3)**

This course is designed to examine literacy methodologies, instructional approaches, and resources in the secondary grades as it

relates to theory, current research, and practice.

### **EDCI 62621 - Administration of Special Education (3)**

Procedures, responsibilities, and problems relating to the administration of special education programs. These experiences should include, but not be limited to, the following: administrative patterns, legal basis, financial aspects, placement conferences, managing the IEP, placement alternatives, program services, outcomes, and evaluation, inclusion, professional and ethical practices, and grant development.

### **EDCI 62622 - Internship in Special Education Administration (2 to 4)**

Involves a field experience in which the student spends periods of time observing and performing various functions associated with special education administration. These experiences should include, but not be limited to the following: administrative matters, a legal basis for special education, financial aspects, placement conferences, managing the IEP, placement alternatives, program evaluation, inclusion and grant development. Prerequisite: EDCI 62621. (S)

### **EDCI 62623 - Mathematical Leadership for Elementary Mathematics Specialists: Foundations (2)**

This introductory course provides opportunities for participants to develop knowledge and understanding of leadership principles and the process of continuous improvement as it relates to the roles and responsibilities of elementary mathematics specialists.

### **EDCI 62624 - Mathematical Leadership for Elementary Mathematics Spec.: Influencing and Facilitating Improvement (3)**

This second leadership course in the EMS program focuses on research and practice related to teamwork, interaction, communication, conflict resolution, and leadership in K-5 schools. Candidates will examine strategies for influencing and facilitating school/district improvement (e.g., mentoring and observing colleagues, conducting professional development, and making data-informed decisions to improve student learning) collaborating with colleagues and administration. Candidates will focus on mentoring and observing colleagues, conducting professional development, and making data-informed

decisions to improve student learning school- and district-wide. Prerequisite: EDCI 62623 Mathematical Leadership for Elementary Mathematics Specialists: Foundations.

### **EDCI 62625 - Seminar and Internship in Number and Operation (1)**

A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with a range of students and adult learners (parents and teachers) on number and operations concepts. Corequisite: MATH 17625 Number and Operation for Elementary Mathematics Specialists.

### **EDCI 62626 - Seminar and Internship in Rational Numbers and Proportional Thinking (1)**

A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with a range of students and adult learners (teachers and parents) on rational number and proportional thinking concepts. Co-requisite: MATH 17626 Rational Numbers and Ratio and Proportional Relationships for Elementary Mathematics Specialists

### **EDCI 62627 - Seminar and Internship in Algebraic Reasoning (1)**

A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with a range of students and adult learners (teachers and parents) on concepts related to algebraic reasoning appropriate for K-5 students. Co-requisite: MATH 17627 Algebraic Reasoning for Elementary Mathematics Specialists.

### **EDCI 62628 - Seminar and Internship in Geometry and Measurement (1)**

A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with a range of students and adult learners (teachers and parents) on geometry and measurement concepts. Co-requisite: MATH 17628 Geometry and Measurement for Elementary Mathematics Specialists.

### **EDCI 62630 - Field Experience in Early Childhood (3 to 4)**

Designed to bridge early childhood theory and practice, the graduate student will be placed in a field setting to gain needed insight and experience in a broad array of programs serving young children and their

families. The specific experience will be designed cooperatively by the student and the instructor to build the student's administrative and professional expertise. Prerequisite: EDCI 62602. (S)

**EDCI 62631 - Improvement of Teaching Reading: Inquiry and Research (3)**

Student learns to evaluate his/her own classroom performance in teaching of reading. Inquiry models and best practices research are explored to assist teacher in effective educational decision making. Prerequisite: EDCI 62636.

**EDCI 62632 - Assessment in Reading (3)**

Provides instruction and experience in evaluating abilities and achievement in literacy using formal and informal diagnostic procedures leading to prescriptive teaching instruction to encourage reading and writing as a means of personal growth, enjoyment and life-long learning. Prerequisite: EDCI 62636.

**EDCI 62633 - Practicum in Diagnosis and Intervention Strategies for Emergent Readers (3)**

Practice in administering, scoring, and interpretation of informal and formal reading assessment instruments in students at the emergent literacy stage. The roles and responsibilities of reading professionals will be addressed. Prerequisites: EDCI 62631, EDCI 62632, EDCI 62636.

**EDCI 62634 - Practicum in Diagnosis and Intervention Strategies for Post-Emergent Readers (3)**

Practice in administering, scoring, and interpretation of informal and formal reading assessment instruments in students at the post-emergent literacy stage. The roles and responsibilities of reading professionals will be addressed. Prerequisites: EDCI 62631, EDCI 62632, EDCI 62636.

**EDCI 62635 - Techniques for Conferencing and Collaboration (3)**

Discussion of strategies designed to foster effective collaborative consultation, conferencing, and communication skills. These skills will enhance partnerships between families of students with exceptional needs, general and special education teachers, para educators, and other support personnel.

**EDCI 62636 - Theoretical and Knowledge Base of Reading (3)**

Enables teachers to advance the understanding and application of the theoretical base supporting reading and writing as a multi-dimensional process, including the influential factors of interests and attitudes, cognitive and linguistic development, grapho-phonemic and metacognitive awareness. Learn to coordinate literacy learning by incorporation of materials, teaching strategies, and technology pertinent to effective reading instruction in areas of word recognition, comprehension, reference and study skills and applied research. Prerequisite: EDCI 62615.

**EDCI 62640 - Topics and Projects in Reading (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDCI 62641 - Educating the Exceptional Child (3)**

Provides participants with knowledge and understanding about the identification of exceptional children, methods of working with exceptional children, and sources of referral available to parents and teachers. (F, S, SS)

**EDCI 62642 - Introduction to Teaching Students with Mild to Moderate Disabilities (3)**

An introductory course designed to provide an initial understanding of K-12 students with mild to moderate disabilities, learning disabilities, intellectual disabilities, emotional disturbance, and physical and other health impairment.

**EDCI 62643 - Teaching Students with Mild to Moderate Disabilities (3)**

Methods and strategies, including numerous examples of curricular and instructional methodologies utilized in teaching K-12 students with mild to moderate disabilities such as learning disabilities, intellectual



disabilities, emotional disturbance, and physical and other health impairment.

**EDCI 62644 - Topics and Projects in Science: Elementary (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDCI 62645 - Theories and Techniques of Behavior Analysis and Intervention (3)**

This course is designed to provide teachers with both technical and functional understanding of applied behavior analysis, as well as strategies for the everyday applications of behavior management in classrooms and other educational settings. Evidence-based behavior intervention practices to assess, change, or modify behavior will be explored while exploring the concepts, assumptions, misconceptions, and historical foundations of behavior.

**EDCI 62646 - Topics and Projects in Classroom Management: Elementary (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDCI 62647 - Topics and Projects in Language Arts: Elementary (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDCI 62648 - Topics and Projects in Social Studies: Elementary (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDCI 62649 - Topics and Projects in Mathematics: Elementary (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDCI 62650 - Graduate Elementary Literacy Practicum (3)**

This course is designed to provide a literacy-based field experience with a focus learner in an elementary setting. Candidates will assess the focus learner, offer and implement instructional recommendations, evaluate learner growth, and communicate results with multiple stakeholders.

**EDCI 62651 - Graduate Secondary Literacy Practicum (3)**

This course is designed to provide a literacy-based field experience with a focus learner in a secondary setting. Candidates will assess the focus learner, offer and implement instructional recommendations, evaluate learner growth, and communicate results with multiple stakeholders.

**EDCI 62652 - Psych-Education Measurement (3)**

This course includes the administration and interpretation of the most commonly used individual tests of ability and achievement used to evaluate students and make data-based decisions with an emphasis in the areas of special education and reading.

**EDCI 62654 - Analysis and Correction of Reading Disabilities (3)**

A study of the causes of reading disabilities, diagnostic procedures, and methods for correction. Coursework in developmental reading required. Prerequisite for M.S.Ed. in Reading is EDCI 62655. (S, even years and SS, odd years)

**EDCI 62655 - Reading in the Elementary School (3)**

A study of methods and materials used in the teaching of literacy in the elementary grades. (F, SS)

**EDCI 62659 - Organization and Supervision of Reading Programs (2)**

Designed to inform administrators and reading specialists of the administrative aspects of reading programs. (SS)

**EDCI 62660 - Practicum 1: Diagnosis and Remediation of Reading Disabilities for Grades K-6 (3)**

Supervised practice in diagnosing and teaching students with reading disabilities in kindergarten through sixth grade. Prerequisites: EDCI 62652 and EDCI 62654. (F)

**EDCI 62661 - Practicum 2: Diagnosis and Remediation of Reading Disabilities for Grades 7-12 (3)**

Supervised practice in diagnosing and teaching students with reading disabilities in seventh through twelfth grade. Prerequisites: EDCI 62652 and EDCI 62654 or permission of instructor. Recommended prerequisite: EDCI 62653 (S)

**EDCI 62666 - Practicum in Mild to Moderate Disabilities: Elementary (1 to 4)**

Supervised practice in determining eligibility including interpretation of individual intelligence tests, planning research-based instruction, including specialized techniques, materials, and behavior management techniques for teaching and intervention with elementary children with disabilities. Prerequisites: EDCI 62642, EDCI 62643 and EDCI 62652. (S)

**EDCI 62667 - Practicum in Mild to Moderate Disabilities: Secondary (1 to 4)**

Supervised practice in determining eligibility including interpretation of individual intelligence tests and planning research-based instruction including specialized techniques, materials, and behavior management techniques for teaching and intervention for secondary youth with

disabilities. Prerequisites: EDCI 62642, EDCI 62643 and EDCI 62652. (S)

**EDCI 62680 - Theories of Language Acquisition (3)**

Introduction to theories of psychology, linguistics and teaching related to how people learn and acquire a second language through formal and informal instruction. Explores the interrelatedness of society, culture, psychology and linguistics as these impact the language acquisition process and relate to current teaching methodologies. (F)

**EDCI 62681 - Topics and Projects in Early Childhood Education (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDCI 62682 - Materials and Curriculum Design for Teaching English Language Learners (ELL/ESOL) (3)**

Focuses on critiquing, adapting and writing evaluation materials for teaching ELL, including assessment of students and planning assessment-based curriculum. Assessment instruments and results interpretation are studied. (S)

**EDCI 62684 - Topics and Projects in Mild and Moderate Disabilities: Elementary (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. These topics may also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting education research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose. (F, S, SS)

**EDCI 62686 - Practicum: Teaching English Language Learners (ELL/ESOL) (1 to 3)**

Students assess the needs of ELL students and plan a curriculum to critique, adapt, write lesson plans and tests in the areas of

reading, vocabulary, grammar, writing, speaking, listening and specific content areas. (SS)

### **EDCI 62687 - Sociolinguistics (3)**

This course investigates the relationship between language and society, the various functions of language and the linguistic implications of teaching English language learners. Topics investigated include: culture/gender differences, bilingualism, multilingualism, dialects, pidgins, creoles, ethnographics, code-switching, language and education.

### **EDCI 62688 - Topics and Projects in Mild and Moderate Disabilities: Secondary (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose. (F, S, SS)

### **EDCI 62690 - English for English Language Learners (3)**

English for English Language Learners will address the lexical, syntactical, and discourse needs of the English Language Learner student. Students will study, in an online format, all three aspects of the language and how second language learners perceive these aspects. This course will better equip students to teach the English language to English Language Learners, and meet the state certification requirements of ELL/ESOL certification English language elective requirements.

### **EDCI 62694 - Literacy-Focused Academic Inquiry (3)**

This course is designed to educate literacy professionals on action research, at the school and classroom-level. Candidates will write a literature review, develop research questions, identify data sources, and begin strategy/intervention implementation.

### **EDCI 62695 - Literacy Capstone (3)**

This course is designed to educate literacy professionals on action research at the school and classroom-level. Candidates will complete strategy/intervention implementation, analyze data, report

findings, consider implications, and offer recommendations to multiple stakeholders that can be utilized to inform policy and practice to benefit student learning.

### **EDCI 62699 - Seminar: Selected Topics in Special Education (3)**

This capstone course will provide an avenue for scholarly study of current professional literature on a variety of current issues and trends in the field of special education. Designed to complement and extend student's study of relevant topics. As a part of this course, students will complete the written assessment of competency mastery.

## **EDUC-Education-General-Leadership**

### **EDUC 61500 - Special Offering (1 to 4)**

### **EDUC 61511 - Instructional Materials and Equipment (2)**

Develops a basic pattern for the preparation of instructional materials, discusses the principles and practices and the utilization of these materials, and provides for instruction for the proper use of equipment in various types of school and educational programs.

### **EDUC 61520 - Techniques of Classroom Management and Discipline (2)**

This course is designed to assist prospective teachers in developing classroom and behavior management techniques. Must be taken concurrently with EDUC 61360, EDUC 61461 and Content Methods. Prerequisite: Admittance to Teacher Education. (F, S)

### **EDUC 61521 - Seminar in Classroom Management (1)**

Course is taken during the student teaching trimester and is a continuation of EDUC 61520 with many of those topics readdressed as students are actively engaged in student teaching experiences. The preparatory work done in the 2-hour credit course will serve as a foundation for discussion, for application, for reflection and for alteration. Must be taken concurrently with student teaching and EDUC 61462. (F, S)

### **EDUC 61528 - Teaching of the Gifted (3)**

Methods, techniques, and materials used in the teaching of the gifted. (S, even years)

### **EDUC 61530 - Problems of Adult Education (2)**

An overview of the growth and need for continuous education through adulthood; emphasis is placed on programs, surveying community needs and coordination of community agencies. (F, even years)

**EDUC 61549 - Trends in Continuous School Improvement (1 to 3)**

This course is designed to facilitate a continuous learning process throughout the educational system to positively impact student achievement.

**EDUC 61550 - Trends in Curriculum Development (1 to 3)**

This course is designed to assist teachers and/or administrators in general curriculum design, revision, and or evaluation. Repeatable with a change in topic. (F, S, SS)

**EDUC 61551 - Trends in Language Arts (1 to 3)**

This course is designed to update teachers in methods, techniques, and innovations in teaching language arts. Repeatable with a change in topic. (F, S, SS)

**EDUC 61552 - Trends in Social Studies (1 to 3)**

This course is designed to update teachers in methods, techniques, and innovations in teaching social studies. Repeatable with a change in topic. (F, S, SS)

**EDUC 61553 - Trends in Mathematics (1 to 3)**

This course is designed to update teachers in methods, techniques, and innovations in teaching mathematics. Repeatable with a change in topic. (F, S, SS)

**EDUC 61554 - Trends in Science (1 to 3)**

This course is designed to update teachers in methods, techniques, and innovations in teaching science. Repeatable with a change in topic. (F, S, SS)

**EDUC 61556 - Trends in Classroom Management (1 to 3)**

This course is designed to update teachers in methods, techniques, systems, and innovations in classroom management and discipline. Repeatable with a change in topic. (F, S, SS)

**EDUC 61557 - Trends in Computer Use in Education (1 to 3)**

This course is designed to update teachers in educational uses of computers. Repeatable with a change in topic. (F, S, SS)

**EDUC 61558 - Trends in Motivational Techniques (1 to 3)**

This course is designed to update teachers in methods, techniques, and innovations in classroom motivation of students. Repeatable with a change in topic. (F, S, SS)

**EDUC 61559 - Trends in Instructional Techniques (1 to 3)**

This course is designed to update teachers in general instructional methods and techniques for the classroom. Repeatable with a change in topic. (F, S, SS)

**EDUC 61569 - Multiculturalism in Education (3)**

This course is designed to impart a knowledge of and sensitivity to issues which foster potential prejudices and discrimination. These issues will include race, national origin, sexism, religion, handicaps (physical and mental), economic position and others. Methodology in humanizing the curriculum, sensitivity issues, historical perspectives, and means by which dehumanizing biases may be recognized in instructional materials shall also be included in the content of this course. Prerequisite: Junior classification. (F, S, SS)

**EDUC 61570 - The Middle School (3)**

Designed to acquaint prospective or experienced teachers and administrators with the functions, organization, curriculum, and personnel associated with the middle school; with concentration on the early adolescent/transescent learner. (S, SS)

**EDUC 61585 - Co-Curricular Activities in the Secondary School (3)**

The importance of co-curricular activity is studied through the philosophy, purpose, and practices of these activities in the modern secondary school. Also emphasized is the role of the teacher-sponsor in the program.

**EDUC 61598 - Problems-Secondary (1 to 4)**

Designed to meet individual student needs in independent study. The study topic must be approved by the instructor.

**EDUC 61600 - Special Offering (1 to 4)**

### **EDUC 61602 - Role and Practice of a Teacher Leader (3)**

This course is designed as an introduction to the multiple roles of a teacher leader and the National Board Certification process. Emphasis will be placed on an extensive review of the National Board Standards and how those contribute to the assessment and writing components. An introduction to videotaping and analysis of candidate videos will be completed. Defining the roles and practice of a teacher leader is part of Phase I, Architecture of Accomplished Teaching, allowing for reflection on the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course, however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

### **EDUC 61603 - The School Community: Examining Diversity and Bias (2)**

Changing and improving relationships with the school community and families through transformative experiences can result in improved academic performance in students. Examining our own biases in systematic ways can assist us in change within the school setting. The National Board Certification process is a rigorous, performance-based professional learning opportunity designed to improve impact on student learning and analysis and reflection on classroom teaching. As a future teacher leader, this course and process will contribute to the ability to reform education in the classroom, school, district, and community at large as part of Phase I, Architecture of Accomplished Teaching. There are no prerequisites for this course, however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

### **EDUC 61604 - Teacher Leader Action Research (2)**

This course is designed to learn how classroom action research can contribute to analysis of student learning and teacher instruction that best benefits students. During this course, candidates can expect to complete an action research project that will contribute to and inform the work completed for the National Board Certification process. Candidates will identify a classroom problem or question. Then, through a process of planning, acting, observing, and reflecting, qualitative action research will be completed and a paper will

be written. The action research process for classroom teachers improves teaching through systematic and informed decision-making and is part of Phase I, Architecture of Accomplished Teaching, allowing for reflection on the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course, however, the Teacher Leader Program is a cohort model. It is expected that the course will be taken in the required sequence.

### **EDUC 61605 - Differentiation through Instructional Strategies (3)**

This course is designed to provide a framework wherein candidates will review differentiation within the structure of research-based instructional strategies. Application will be made through videotapes and written commentary of current classroom practices. This includes providing evidence of student learning through the description, analysis, and reflection of the candidate's work. Emphasis will be given to Component 3 of the National Boards process. Examining differentiation and the instructional strategies that best target student learning is part of Phase I, Architecture of Accomplished Teaching, allowing for reflection on the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

### **EDUC 61606 - Culture & Student Engagement (3)**

An analysis of the influence of culture on student engagement and student performance. Includes current literature, trends, and issues in culture, engagement and performance.

### **EDUC 61608 - The School, Curriculum and Computer: K-12 (1)**

Introduction to computers, computer literacy curriculum, Logo, history of computing, sources of software, word processing, and BASIC programming language.

### **EDUC 61609 - Computers as a Teacher Aid (1)**

The use of test generator, data base and other teacher utility software. Prerequisite: EDUC 61608.

**EDUC 61610 - Specialized Topics and Projects in Educational Administration (1 to 6)**

The objective is to provide an opportunity for in-depth study of special selected topics in educational administration. (SS)

**EDUC 61611 - Specialized Topics and Projects in Educational Supervision (1 to 6)**

The objective is to provide an opportunity for in-depth study of special topics in educational supervision.

**EDUC 61612 - Specialized Topics and Projects in Curriculum Development (1 to 6)**

The objective is to provide an opportunity for in-depth study of selected topics in curriculum.

**EDUC 61613 - School Personnel Administration (3)**

Personnel practices in education are considered along with the implications of collective negotiations and professional accountability for personnel policies. Policies pertinent to the selection and placement, promotion, tenure, and retirement of both certified and noncertified personnel are included. (F, SS)

**EDUC 61614 - Introduction to Teaching (3)**

Specifically designed for candidates for the Alternative Certification and Post Bac certification. Provides instruction in the psychology of teaching and in the psychological development of the child/adolescent. Also, offers basic instructional skills for differentiated learning and an opportunity to prepare and practice the instructional techniques to be utilized in the first teaching experience. (A 30-hour field experience will be required for students in the Post Bac program.) (SS)

**EDUC 61615 - Organizing for Learning (3)**

This course is the first semester course for the first-year students in the Alternative Certification and Post Bac track. The course focuses on beginning instructional strategies including critical thinking and problem solving strategies, teaching models, classroom management strategies, etc. The purpose of this course is to help beginning teachers acquire and master a wide variety of teaching skills, strategies, and styles. Those enrolled in EDUC 61615 in the fall must enroll in EDUC 61617 in the following spring semester.

**EDUC 61616 - Teaching Strategies (5)**

Designed to assist Alternative Certification and Post Bac pre-service teachers to develop more sophisticated teaching strategies, to understand and use data from a variety of assessment strategies to monitor learner progress and to diagnose and address classroom learning programs and issues, to conduct action research, and to integrate technology into the classroom. Course is offered over a two-trimester period during fall and spring (A 45-hour field experience will be required for students in the Post Bac track.)

**EDUC 61617 - Organizing for Learning II (3)**

This course is the second semester course for the first-year students in the Alternative Certification and Post Bac track. The course continues to build the beginning teacher's repertoire of instructional strategies including critical thinking and problem solving strategies, teaching models, classroom management strategies, etc. The purpose of this course is to help beginning teachers continue to acquire and master a wide variety of teaching skills, strategies, and styles. Those enrolled in EDUC 61617 in the spring must have completed EDUC 61615 in the previous semester.

**EDUC 61618 - Educational Theory Applied to Practice (3)**

This course is designed to assist candidates in developing deeper understanding of learning theories that form the foundation for best practices in teaching and learning. Emphasis is placed on applying the theories to the improvement of instruction in the classroom. Candidates will continue to apply the knowledge gained about theories in the evidence of student learning and how it is described, analyzed and reflected upon in Component 3 of the National Boards process. This includes continued work on videotaping and refining the written commentary in Component 3. Increased understanding of learning theories is part of Phase II, Theory and Practice of Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

**EDUC 61619 - Content Knowledge: Competency through Assessment Resources (2)**

This course assists candidates in understanding the depth of content area knowledge expected in teacher leaders. The standards for the National Board content area certification are reviewed in detail and expansion of content knowledge in preparation for the assessment component is a focus. Candidates are also expected to examine resources available to them in their classroom, school, and district and to plan for utilization of those resources as they prepare components in the portfolio. Candidates will increase their content knowledge and understanding of resources to prepare for Component 1 of the National Boards process as part of Phase II, Theory and Practice of Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

**EDUC 61620 - Assessment and Data-Driven Decision Making (3)**

This course assists candidates in evaluating the use of assessments, what they measure, their impact on students (especially high-stakes testing), and appropriate use of assessment in making instructional decisions. A focus will be the teacher leader's role in data-driven discussions with students, families, colleagues, and administrators in making decisions that impact student learning. The content of this course plays a role in each candidate's writing for the content of Component 4. Candidates will increase their skills at examining assessment data and its role in teaching and learning to prepare for Component 4 of the National Boards process as part of Phase II, Theory and Practice of Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

**EDUC 61621 - Effective Teaching Practice (2)**

This course focuses on how teacher leaders use their combined knowledge and skills to plan effective lessons for their students based on assessment, prior knowledge of students, the need for differentiated instruction, and adjusting teaching based on student responses. These effective teaching practices all contribute to the work candidates complete for Component 2. Candidates will examine their current teaching practices, those of their peers and experts in the field, and how those may be expanded or improved upon to assist students in intended learning outcomes. Candidates will use what they have learned to write content for Component 4 of the National Boards process as part of Phase II, Theory and Practice of Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the course will be taken in the required sequence.

**EDUC 61622 - Visionary School Leadership (3)**

This course is designed to introduce the importance of school vision and mission statements as students investigate the process to developing these statements based on the district's improvement plan. Students will conduct an audit of the school's culture and develop an improvement plan that addresses one identified need based on student learning. The course is intended to help students work with core values, systems of support, and the school improvement process to bring about meaningful change that impacts the school's culture and student success.

**EDUC 61623 - Relational School Leadership (3)**

This course is designed to prepare school leaders for effective two-way communication with families and the community. In addition, school leaders will effectively engage families, community and school personnel in strengthening student learning in and out of school. This course will prepare school leaders to build and sustain productive partnerships with communities and public and private sectors to promote school improvement and student development. Finally, this course will prepare school leaders to advocate for the needs and priorities of the school, district, students, families, and the community.

**EDUC 61624 - Instructional School Leadership (3)**

This course is designed to introduce program completers to best instructional practices in curriculum, instruction, and assessment. Students will observe teachers in the P-12 classroom and provide meaningful feedback on instructional practices consistent with knowledge of learning theory, child development, and effective pedagogy.

**EDUC 61626 - Managerial School Leadership (3)**

School leaders must work well with their staff members in order to provide a school building that promotes the success and well-being of each student. School leaders provide the knowledge, skills, and commitments necessary for management and operation of the building. This course trains leaders to create a safe and functional school facility and grounds to support student learning, understand how routines and schedules support the school environment, and establish procedures that meet the needs of the building while managing a school budget.

**EDUC 61627 - Innovative School Leadership (3)**

School leaders must work well with their staff members in order to successfully lead their buildings. Effective leaders implement human resource functions, develop and sustain a professional culture of engagement and commitment to the education of the whole child, develop and support positive workplace conditions, and implement systems of supervision and evaluation. This course focuses on the systems that support the hiring and improvement of the school personnel that develop and sustain staff members' shared vision and goals, that promote staff member's leadership and professional growth, and that provide feedback to effectively improve student learning. Class members will be involved in evaluating existing systems and the creation and revision of systems to meet the needs of learners.

**EDUC 61630 - Foundations of Educational Administration (3)**

A study of the nature and functioning of effective school organization and administration, including the study of leadership theories. (F, SS)

**EDUC 61631 - School Supervision (3)**

The course prepares educational leaders for their roles in managing certified and classified personnel to effectively achieve the objectives of educational programs K-12. (F, SS)

**EDUC 61632 - Elementary School Administration (3)**

A study of the administration of the elementary school and how it relates to the goals and objectives of modern elementary education. Suggested prerequisite: EDUC 61630. (S, SS)

**EDUC 61633 - Curriculum Design (3)**

A survey of current educational thought as it relates to the general P-12 curriculum, its development and evaluation. Emphasis on using classroom curriculum to improve student learning. The goal is to help teachers to learn to think as a teacher leader about issues in P-12 education in a critical and insightful manner. (S, SS)

**EDUC 61634 - Elementary School Curriculum (3)**

A survey of current educational thought as it relates to the general elementary curriculum, its evolution, and development. (S, SS)

**EDUC 61635 - Leadership in Urban Settings (3)**

An elective course for the Masters and Ed Specialist degrees in Educational Leadership. Designed to invite the learner to examine the educational possibilities of schools located in cities and to address barriers to educational success in cities.

**EDUC 61636 - Role and Practice of the Teacher Leader in the School (3)**

An introduction to the teacher leader program, this course lays the foundation for learning the requisite knowledge and skills. Major concepts include conceptual frameworks, leadership skills, leadership capacity and leadership in learning communities.

**EDUC 61637 - Applied Classroom Learning: Best Practices (3)**

Teachers develop a basic understanding of various important learning theories forming the foundation for the development of best practices. Emphasis is placed on the application of the theories to the improvement of instruction in the classroom.



**EDUC 61638 - Improvement of Instruction through Assessment (3)**

Examines the research, theory and practice relevant to improving learning through instruction and assessment. Students evaluate assessments that are linked to classroom teaching and work to understand how students learn, developing knowledge and skills relevant to instruction and assessment.

**EDUC 61639 - Teacher Leader Professional Seminar (2)**

The purpose of the course is to enable the Teacher Leader to develop a basic understanding of the leadership role that teachers have within the public school and practices that enhance and support that role.

**EDUC 61640 - Quality Tools for Decision Making (3)**

Course designed for use in a variety of organizational settings. The student will participate in self-study, group processing and organizational application activities. The delivery system will be a blend of web enhanced and face to face group instruction.

**EDUC 61641 - Data Literacy and Assessment for Schools (3)**

This course will focus on the development of skills related to finding, evaluating, analyzing, prioritizing, and integrating data sources for the improvement of student learning. Students will retrieve data, develop an action plan for improvement, and create a project demonstrating proficiency in data literacy.

**EDUC 61642 - Multicultural Education for Diversity, Equity, and Inclusion (3)**

Students who complete this course understand and demonstrate the capability to promote the success and well-being of each student by applying the knowledge, skills, and commitments necessary for equitable protocols for student support, equitable access in a least restrictive environment, responsive practices for culturally responsive teaching and leadership, and a supportive school culture that ensures each student and family is treated fairly.

**EDUC 61646 - Topics and Projects in Classroom Management K-12 (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be

completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDUC 61647 - Topics and Projects in Administration and Supervision (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDUC 61648 - Using the Newspaper as an Effective Teaching Tool (1 to 6)**

This course provides an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum.

**EDUC 61649 - Issues in Education (3)**

This course is designed to assist experienced teachers in the public schools to become more aware of issues in education which have an impact upon them. Issues will be analyzed in terms of the historical and philosophical bases that have created the climate leading to these problems. Issues will be addressed in terms that help teachers cope in the teaching situation. (F, S, SS)

**EDUC 61650 - Improvement of Teaching (3)**

This is an advanced course in instructional methodology, designed for career teachers who are committed to improving their teaching performance. The purpose of the course is to help teachers broaden their repertoire of teaching skills, strategies, and styles. Simulated experiences in professional practice will be used extensively. (F, SS)

**EDUC 61651 - Seminar and Practicum in Teaching (3)**

In this course, teachers will apply in their own classes the skills, techniques, and teaching styles studied in EDUC 61650. Enrollees will meet with the instructor on a regular basis to follow up and evaluate teaching strategies and materials and analyze problems related to their own individual teaching situations. In addition,

those seeking initial secondary teaching certification will meet performance criteria including behavior management techniques, pupil measurement and evaluation, legal foundations of education, and microcomputer applications in the classroom. Prerequisite: EDUC 61650. (S, SS)

**EDUC 61652 - Leadership Issues in Higher Education (3)**

This course will provide an in-depth understanding of leadership and management issues as they relate to higher education organizations. Key concepts discussed in the course will include: management vs leadership theories and practice, political issues and implications for leadership in higher education, and cultural competence implications to leadership.

**EDUC 61653 - Trends and Issues in Curriculum and Instruction (3)**

This course will provide a student with the tools necessary to stay current on trends and issues in curriculum, instruction and assessment. Special topics in curricular design, instructional strategies, assessment and professional development will be explored. Professional ethics as it relates to the role of the curriculum leader will be analyzed and applied.

**EDUC 61654 - Higher Education Administration (3)**

This course will provide a historical overview of higher education administration and look in-depth at the future of higher education. Topics covered will be: four-year institutions, two-year colleges, technical institutions, private vs public institutions, union vs non-union institutions, and the influence of international students to higher education institutions.

**EDUC 61655 - Middle School Administration (3)**

A study of issues relevant to the middle school administrator. The focus of the course will be the development of a philosophical framework on the part of the student enabling them to identify, analyze, and implement responses to issues uniquely relevant to middle level schools, their students, patrons, staff, and administration. This course does not substitute for EDUC 61632 or EDUC 61685.

**EDUC 61656 - College Students in America (3)**

This course will provide a view of current college students in the United States, including such ideas as: cultural competence, adult learning theories, and brain research. These ideas will be illustrated through the lens of the various university structures to allow a holistic view of the current student and how the university structures are impacted by the student and conversely how the university can impact the students.

**EDUC 61657 - Topics and Projects in Computer Utilization Education (1 to 6)**

Topics and Projects courses provide an opportunity for students to participate in concentrated study and investigation in a selected area of the curriculum. May also be completed by students to demonstrate a research component. Projects must include various methods and procedures employed in conducting educational research, correct writing style, research instruments, and interpretation and analysis of data when completed for this purpose.

**EDUC 61658 - Law, Policy, and Finance in Higher Education (3)**

This course will provide the student with in-depth analysis of how federal and state laws impact decision making and policy creation at the university, thus creating a compliance loop. Additionally, analysis of how the university leaders can impact federal and state policy creation through partnerships, advocacy, and collaboration, human resources, politics, residential vs non-residential institutions, and union vs non-union institutions.

**EDUC 61659 - Introduction to Institutional Research (3)**

This course will provide an understanding of how various types of research and data can be used in decision making within the university structure and beyond toward higher education advocacy. Key ideas that will be interconnected within the course are: qualitative and quantitative data; creation, dissemination, and use of data; research as it relates to academic affairs, student affairs, human resources, financial planning, campus safety, and other structures on campus.

**EDUC 61661 - Technology & Instruction (3)**

This course is designed to assist teacher leaders in further defining and adding to

differentiation skills and utilizing technology in meaningful ways for the teacher and the students in the classroom. A critical element will be analyzing and reflecting on the current use of differentiation and technology and expanding how each can increase student success, motivation, and engagement. The work completed in this course will further contribute to effective instruction practices that candidates incorporate into Component 2. Candidates will use what they have learned as part of the final phase of the National Boards process, Phase III, Analysis of and Reflection on Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

### **EDUC 61662 - Effective and Reflective Practitioner (2)**

This course continues the focus on the teacher leader as an effective and reflective practitioner. Component 4 of the National Board Certification process focuses on the accomplishments and professional learning the teacher leader has demonstrated over their time in education, focusing on the most recent activity. As candidates write Component 4, they will examine their commitments to students, families, and colleagues, reflect deeply on what they learned in the process, and write about the significance of each. Candidates will reflect on their own effective practices as part of the final phase of the National Boards process, Phase III, Analysis of and Reflection on Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

### **EDUC 61663 - Partnering with Communities and Families (3)**

This course brings candidates full circle in examining their work with the families of their students and the school community. This project-based course allows candidates to focus on transformative ways of reaching the community and families while continuing to also reflect on their understanding of diversity, bias, and intercultural competency in their work. The assigned project is

designed to bridge the classroom and school with the community and families in meaningful ways. Continued examination of diversity and bias related to community and families as part of the final phase of the National Boards process, Phase III, Analysis of and Reflection on Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course; however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

### **EDUC 61664 - Retrospective and Accomplished Teaching (2)**

This course is designed to complete the reflective process that has been imbedded throughout the Master's degree Teacher Leader Program and completion of National Board Certification requirements. During this course, candidates can expect to complete writing of and preparation for the defense through presentations to peers and faculty. This is the final course in the Teacher Leader Program. It is designed to bring candidates full circle with a final opportunity to deeply analyze and reflect on the role of a teacher leader and accomplished teaching during Phase III, Analysis of and Reflection on Accomplished Teaching, providing for deeper examination of the candidate's current practice and how that practice may change through the certification process. There are no prerequisites for this course, however, the Teacher Leader Program is a cohort model. It is expected that the courses will be taken in the required sequence.

### **EDUC 61665 - School Law (3)**

It is the purpose of this course to prepare educators to consider the legal issues facing the schools in a society that is facing almost constant change through the decision of law-making bodies and law-interpreting courts. This course emphasizes the need to acquire the skills, attitudes, motivation, and communication abilities to meet the challenges of administration in a world of change. Knowledge of the law and ethics as it relates to public schools will be acquired.

### **EDUC 61667 - Practicum for a Guaranteed and Viable Curriculum (3)**

This course is designed through field experience to develop the coordination, articulation, and monitoring of a guaranteed and viable curriculum. Students will conduct an audit of curriculum to demonstrate an

understanding of the importance of how the designed curriculum is actually being taught in a school with fidelity.

**EDUC 61668 - Practicum in School Leadership: K-12 Capstone (3)**

During this course students will accumulate a minimum amount of hours of practicum experience under the direction of a university and site supervisor. Activities for the practicum are outlined in the practicum handbook. Candidates should provide coherent, authentic, experiences that provide opportunities to synthesize and apply the content knowledge, develop and refine the professional skills, and demonstrate their capabilities as articulated in each of the elements included in NELP Building-Level Program Standards.

**EDUC 61669 - Capstone in Higher Education Leadership (3)**

This course is designed to allow for practical application of the theories that are reviewed within the Masters of Higher Education Leadership program. As a portion of this course, students will complete a comprehensive final for the program.

**EDUC 61670 - School Buildings and Equipment (2)**

Responsibility of school administrators, supervisors, and other school personnel for construction, operation, and maintenance of school buildings and equipment. (S, SS)

**EDUC 61675 - School Finance (3)**

An introduction to public school finance. Fundamental principles and techniques of public finance are included with emphasis on budgeting procedures. Activity fund accounting and school bonding procedures are included. Prerequisite: permission of instructor or completion of a basic course in accounting or completion of an approved text. (F, SS)

**EDUC 61681 - School and Community Relations (3)**

Theoretical responsibilities of the school and community for the improvement of education. Stress is placed upon practical opportunities for increasing effectiveness of an educational institution through the promotion of a sound basis for school and community relationships. (F, S, SS)

**EDUC 61682 - Improvement of Instruction through Action Research (2)**

Familiarizes students with various methods and procedures employed in conducting educational research. (F, S, SS)

**EDUC 61683 - Action Research Paper (1)**

An individual project in educational research is required. Prerequisite: EDUC 61682 or concurrent enrollment. (F, S, SS)

**EDUC 61684 - Secondary School Curriculum (3)**

Emphasis is placed on trends in the various subject matter areas of secondary school curriculum. Contemporary social issues of potential impact on the school curriculum are included. Curriculum implementation, development, and evaluation are considered. (S, SS)

**EDUC 61685 - Secondary School Administration (3)**

Administrative philosophies, methods, and techniques are included. Special emphasis is placed on the administrative problems of the high school principal. (S, SS)

**EDUC 61686 - The Principalship (3)**

Students taking this course should become familiar with specific leadership skills that are basic to performing in the principalship. The school administrator must be able to demonstrate effective knowledge and application of leadership behavior, communication skills, group processes, curriculum development, instructional leadership, assessment, organization management, fiscal management, and political management.

**EDUC 61687 - Feedback and Goal Setting (3)**

This course will begin with a review of current research on the role of quality feedback in the improvement of achievement and performance. Students will analyze student work and performance feedback. The role of performance feedback in the improvement of instructional practice will be reviewed and students will practice providing feedback through peer review. Finally, students will review literature on the development of effective goal setting resulting in the creation of goals that align with the feedback provided on student work and peer review.

**EDUC 61689 - Leading In The Digital Age (3)**

This course focuses on the leadership qualities necessary to create a digital culture in schools. Instructional leaders must focus on ways to connect and collaborate to achieve the hallmarks of 21st century learning. Students will explore a framework for digital leadership which will promote a culture that harnesses the power of technology within the school environment.

**EDUC 61690 - Internship in Secondary Teaching (8)**

A supervised teaching internship in a secondary school for graduate students seeking secondary certification. Prerequisites: EDUC 61650 and EDUC 61651, appropriate special methods course or courses, and permission of the Director of Educational Field Experiences. (F, S, SS)

**EDUC 61691 - Change Management In Education (3)**

In this course students will investigate organizational frameworks designed to best facilitate change and apply these structures to today's schools. Students will understand the dynamics of change and how to optimize the potential to sustain change that has a positive impact on student success.

**EDUC 61692 - Administrative Practicum (3)**

The practicum permits the student preparing for a position in P-12 school leadership to gain a realistic view of the principalship. Prerequisites: Permission of the Director of Educational Field Experiences, completion of EDUC 61630, EDUC 61631, EDUC 61633 and EDUC 61685. (F, S)

**EDUC 61693 - Practicum in School Administration and Supervision (1 to 4)**

The practicum permits the student preparing for a position in school administration and supervision to enter into a supervised internship. Prerequisites: Permission of Director of Educational Field Experiences, EDUC 61685, EDUC 61630, EDUC 61631 and EDUC 61684. (F, S)

**EDUC 61694 - Practicum in Elementary School Administration and Supervision (1 to 4)**

Supervised internship with a practicing elementary school principal. Prerequisites: Permission of the Director of Educational Field Experiences and EDUC 61630, EDUC 61631, EDUC 61632, and EDUC 61634. (F, S)

**EDUC 61695 - Philosophy of Education (3)**

Philosophy is studied in its application to current educational problems for determining the nature of the educative processes, the ends and objectives of education, and the means of attaining educational ends. A basis for philosophy of life and of education. (F, SS)

**EDUC 61696 - Administration and Supervision of Field Experiences (1 to 3)**

Focuses upon structure and function of field experiences including pre-student teaching, student teaching, and graduate practicums/internships. Special attention is given to roles of the participating students, cooperating teachers, administrative and supervisory personnel of the cooperating schools, college coordinators and supervisors, and the director of educational field experiences.

**EDUC 61697 - Academic Inquiry (3)**

This course is designed to learn how classroom- or school-level action research can contribute to analysis of student learning and teacher instruction that best benefits students. During this course, candidates can expect to complete an action research project that will contribute to and inform their work as a leader in curriculum and instruction in their setting. Candidates will identify a classroom/school problem or question. Then, through a process of planning, acting, observing, and reflecting, an action research topic will be identified, the research setting and participants will be described, a literature review will be conducted, action research questions identified, and a strategy will be implemented. The academic inquiry through action research will be completed during the candidate's capstone and final course requirement for the Curriculum and Instruction degree.

**EDUC 61698 - Independent Study in Educational Administration and Supervision (1 to 4)**

This allows the student who is preparing for a position in school administration and supervision to do field study in an area of particular concern. Prerequisite: EDUC 61682 or permission of chairperson. (F, S, SS)

**EDUC 61699 - Capstone Seminar (3)**

This capstone course is designed to complete the action research project, reflect on the impact and changes that result, and inform others about what has been learned. As a part of this course, students will complete

the written assessment of competency mastery.

**EDUC 61721 - Seminar in Problems, Trends, and Issues in Educational Administration and Supervision (1)**

The seminar content will be designed to provide an interchange of ideas between professors, students, and practicing administrators on problems, trends and issues in school administration. All candidates should participate during summer enrollment. Students may repeat seminar for maximum of 3 semester hours. Prerequisite: Ed.S. students only. (F, S, SS)

**EDUC 61723 - Writing and Interpreting Educational Literature and Statistics (3)**

Having a two-fold focus, this course treats (1) basic methods of developing and reporting educational research and literature and (2) techniques of interpreting and evaluating educational research and literature. Basic statistical methods are utilized in each of the components. Prerequisite: Ed.S. students only. (F, S, SS)

**EDUC 61724 - Field Study in Administration and Supervision (1-6)**

This course involves the writing of a study based upon completion of a field project conducted in cooperation with a school district or appropriate agency. Requires a detailed investigation and survey of issues pertinent to the selected institution or in-depth, independent research relevant to current practices in any facet of the educational process. The subject for investigation is selected by the student, subject to committee approval. An oral review of the completed project will be presented to the Faculty Advisory Committee and two additional persons selected by the advisor. The field study may be repeated by the student, but total credit shall not exceed 6 semester hours. Prerequisites: ED 61723 and permission of student's committee or concurrent enrollment.

Students must complete 61-724 in same trimester of course enrollment or continuously enroll in one credit hour until 61-724 is satisfactorily completed.

Continuous Enrollment Policy. Students must continue to register for one hour of the 61-724 class each trimester until 61-724 is satisfactorily completed. Failure to maintain continuous enrollment in 61-724 may require enrollment in additional hours of Field Study

before the Educational Specialist degree is granted.

**EDUC 61725 - Thesis in School Administration and Supervision (2-6)**

The thesis topic will be selected by the student, subject to committee approval. An oral review of the completed thesis will be presented to the Faculty Advisory Committee and two additional persons selected by the advisor. Prerequisites: EDCI 61723 and permission of student's committee. (F, S, SS)

**EDUC 61738 - Internship in School Administration and Supervision (1-4)**

Involves a field experience in which the student spends periods of time observing and performing various functions associated with school administration and supervision. These experiences should include but not be limited to the following: finance, public relations, educational planning, personnel functions, and federal programs in education. Prerequisites: permission of student's advisory committee and Director of Educational Field Experiences. (F, S, SS)

**EDUC 61739 - Internship in Elementary Administration (2-4)**

Field Experience in which the student spends time performing various functions associated with elementary school leadership. These experiences should include but not be limited to the following: finance, public relations, educational planning, personnel functions, data analysis, and federal programs in education. Prerequisites: Permission of the Director of Education Field Experiences. (F, S)

**EDUC 61740 - The Superintendency (3)**

This course is designed to acquaint students with the various functions of the school district superintendency. It is included in the programs of most students completing the Specialist in Education degree. (F, S, SS)

**EDUC 61741 - Internship in Secondary Administration (2-4)**

Field Experience in which the student spends time performing various functions associated with secondary school leadership. These experiences should include but not be limited to the following: finance, public relations, educational planning, personnel functions, data analysis, and federal programs in education.

Prerequisites: Permission of the Director of Education Field Experiences. (F, S)

**EDUC 61800 - Leadership Theory and Application (1)**

**EDUC 61801 - Leadership Theory and Practice (3)**

**EDUC 61802 - Qualitative Tools for Applied Research in Educational Leadership (3)**

This is an introductory qualitative research methods course designed to develop skills in collecting, organizing, and analyzing a variety of data. The philosophical traditions and theoretical underpinnings for qualitative research will also be explored. This course is only open to students in the Ed.D. Program in Educational Leadership.

**EDUC 61803 - Educational Leadership Inquiry II: Research Ethics and Institutional Review Board (1)**

The course focuses on MU Graduate School policies related to doctoral research, human subjects review process, and research ethics. The course is only open to students in the Ed.D. Program in Educational Leadership.

**EDUC 61804 - Content and Context of Learning (3)**

**EDUC 61805 - Educational Leadership Inquiry III (1)**

**EDUC 61806 - Leadership Inquiry (1)**

**EDUC 61807 - Educational Planning and Evaluation (3)**

**EDUC 61808 - Educational Leadership Inquiry IV (1)**

**ENGL - English**

**ENGL 10501 - Writing, Language, and Pedagogy (3)**

A study of composition theory, rhetoric, and/or the pedagogy of writing. The specific subject matter and emphasis will change each trimester. Possible topics include, Theories of Teaching Composition, Digital Rhetoric, and Writing is a Process, Now What? Students may take this course multiple times with a change in topic.

**ENGL 10504 - Language and Linguistics (3)**

A sociocultural linguistic study of the history of the English language, its grammars, and/or dialects, addressing historical and/or current

language theories. The specific subject matter and emphasis will change each trimester. Possible topics include The History of the English Language, Dialects and Diversity, and Do You Speak Midwestern? Students may take this course multiples times with a change in topic.

**ENGL 10512 - Publication Skills (3)**

This course covers major skills required in publishing, provides an overview of the publishing industry, and prepares students for work in areas of technical writing, magazine editing and freelance copyediting. Prerequisites: Junior or graduate student standing, or instructor permission.

**ENGL 10515 - Advanced Writing for the Professions (3)**

Advanced Professional Writing engages students in the conscious study and practice of professional writing towards a more complex understanding of writing as an essential workplace function. Students will study writing in a workplace, generate a series of workplace-oriented communications, and research issues related to workplace communications. Prerequisite: ENGL 10315: Writing for the Professions, or instructor approval. (S)

**ENGL 10520 - Studies in Early British Literature (3)**

A study of genres, figures, and/or issues from British literature of the Medieval and Renaissance periods. Specific subject matter and emphasis of course will change each trimester. Possible topics include Middle English Literature, which would include Medieval writers such as Chaucer, Margery Kempe, and Sir Thomas Malory; Renaissance Drama, examining the works of authors such as Christopher Marlowe, Elizabeth Cary, and Shakespeare; or intensive focus on the works of a specific writer such as the Pearl Poet, Edmund Spenser, or John Milton. Students may repeat the course with a change in topic.

**ENGL 10530 - Studies in British Literature, 18th Century-Present (3)**

A study of genres, figures, and/or issues from British literature of the past 300 years. Specific subject matter and emphasis will change each trimester. Possible topics include Literature of the Romantic Movement, examining works by authors such as Emily Bronte, William Wordsworth, Mary Shelley, and Lord Byron; The Victorian Age, featuring writers such as Charles

Dickens, Elizabeth Barrett Browning, and Rudyard Kipling; or Twentieth-Century British Fiction, including writers such as Joseph Conrad, Virginia Woolf, James Joyce, and Anthony Burgess. Students may repeat the course with a change in topic.

**ENGL 10540 - Studies in Multiculturalism and World Literature (3)**

An intensive study of World Literature or Multicultural Literature. Specific subject matter and emphasis of course will change each trimester. Possible topics might include Literature of the Harlem Renaissance, with works by authors such as Hughes, Toomer, McKay, Hurston, and Bontemps; The Development of the Modern Novel, examining novels by authors such as Petronius, Boccaccio, Cervantes, Voltaire, Austen, Dostoevsky, Woolf, Beckett, Robbe-Grillet, Morrison, and Achebe; or Anglophone Literature: Fiction of the Post-Colonial World, including works by Rushdie, Naipaul, Gordimer, Lessing, Coetzee, White, Atwood, Munro, and Achebe. Students may repeat the course with a change in topic.

**ENGL 10550 - Studies in American Literature (3)**

An intensive study of topics in American Literature. Specific subject matter and emphasis will change each trimester. Sample topics include American Romanticism, with such authors as Emerson, Thoreau, Fuller, Whitman, and Dickinson; The Small Town in American Literature, with works by Hawthorne, Twain, Anderson, Lewis, Gaines, Lee, King, Morrison, and Faulkner; American Modernism and the Long Poem, examining the long works of Whitman, Eliot, Williams, H.D. Stevens, Seamus Heaney, and Rita Dove. Students may repeat the course with a change in topic.

**ENGL 10560 - Advanced Creative Writing (3)**

An advanced course in the study and writing of original poetry, fiction, or creative non-fiction. Specific subject matter and emphasis will change each trimester. Students may repeat the course with a change in topic. Prerequisite: A 300- or 400-level creative writing class or consent of instructor.

**ENGL 10580 - Methods in Secondary School English (3)**

Study and practice in strategies for effective teaching of the English language arts in secondary schools. Includes materials, methods, planning, assessment and

evaluation, and current issues and trends in teaching the English language arts. Prerequisite: Admittance to Teacher Education. (F)

**ENGL 10590 - Young Adult Literature (3)**

A study of literature for grades 7 through 12 and the ways that literature can be taught in the classroom. The course teaches students to judge young adult literature by accepted and respected critical standards and to understand what makes the literature suitable for students. (S)

**ENGL 10610 - Introduction to Practical and Theoretical Criticism (3)**

Intensive practice in the close reading of texts and in the writing of literary criticism with focused attention on the application of such theories as Bahktinian Dialogism, Reader Response Theory, Deconstruction, Feminism, Gender Studies, and New Historicism and on the development of research writing skills. All English graduate students must take this course during their first fall term unless the graduate advisor defers the requirement to a later trimester. (F)

**ENGL 10619 - Special Projects (1 to 3)**

English 619 should be used to explore areas of special interest or to fill gaps in the student's program caused by scheduling difficulties. Special arrangements must be made with a professor who is qualified in the area or topics to be explored and with the graduate advisor. A maximum of 3 hours may be applied to a master's degree.

**ENGL 10620 - Pedagogy of College Composition (4)**

A practicum course consisting of a mixture of theory and practice. The course covers theories of teaching composition and discussions of methodology in a seminar setting. It includes extensive hands-on experience in a Composition classroom. Students will be carefully mentored by the teacher of record in the assigned course. Prerequisite: 12 hours of English graduate credit with a minimum 3.00 GPA.

**ENGL 10631 - Figures and Groups (3)**

A seminar with intense concentration on a single literary figure or a group identified by historical, stylistic, or philosophic commonalities. Designed to build an area of expertise and provide experience of highly focused study. Specific subject matter and emphasis changes each trimester. Sample



topics include: Spencer and Milton; The Unmannerly Heroines of Jane Austen and Edith Wharton; Whitman, Stevens, and Ammons; American Visionary Poetry; and J.R.R. Tolkien. Course may be repeated multiple times with change of content.

### **ENGL 10640 - Studies in Genre (3)**

A graduate seminar concentrating on a particular literary genre that changes each trimester. Possible topics include Modern Irish Drama; Epics; Scripting the Self; The Development of Autobiography; and The American Comic Novel. Course may be repeated with change of content.

### **ENGL 10650 - Studies in Themes and Theories (3)**

A seminar-style class focusing on given literary theory or a theoretical or thematic approach to specific literary texts. Specific content varies each trimester; may be repeated with change in topic. Topics may include Shakespeare in Context; From Dialogism to Decreation: The Shift Towards Silence in the Modern Novel; and American Literary Religion and the Natural World.

### **ENGL 10698 - Problems in Teaching Literature and Composition (3)**

A concentrated study of selected issues in teaching literature and composition at the secondary school level. Topics may change each term. Among the topics that may be covered are assessment, multiculturalism, using media, literary forms and authors, the research paper, and grammar.

### **ENGL 10699 - Thesis (1 to 5)**

Registration requires approval of graduate advisor and department chairperson.

## **FIN - Finance**

### **FIN 53324 - Fundamentals of Business Finance (3)**

A study of the financial structure of corporations, principles and techniques used in financial analysis and decision making. Prerequisites: ACCT 51-202 and MATH 17-118 or consent of instructor.

### **FIN 53600 - Trends in Business Curriculum (1 to 2)**

### **FIN 53608 - Employment Law (3)**

This course examines federal and state employment laws. Emphasis is on how federal laws influence most state and local employment laws and impact private sector

employees. The course focuses on how workers' rights in reference to recruitment, selection, placement and retention are protected by federal and state laws.

### **FIN 53621 - Financial Management (3)**

The course includes financial statement analysis, financial planning, capital budgeting, and valuation.

### **FIN 53625 - Investments (3)**

A practical course which should enable the student to understand why people invest and how they make their investment decisions. Analysis of individual investment instruments will be the primary focus.

## **GEOG - Geography**

### **GEOG 32510 - Geographic Education: Themes and Materials (2)**

Designed for elementary or secondary teachers wishing to incorporate an instructional unit in geography in either the social science or science curriculum. (SS)

### **GEOG 32511 - Special Topics (1 to 3)**

Will be offered according to student needs and interest. Each offering will be designed to apply the latest information or techniques pertaining to a timely topic in geography/GIS. Prerequisites: 12 hours of geography and permission of instructor. Repeatable for new area of study to earn no more than six credits total. (F, S, SS)

### **GEOG 32520 - Military Geography (3)**

An advanced course in geography that applies both physical and human spatial approaches to the study of military issues across the spectrum of conflict. (F, odd years)

### **GEOG 32521 - Geopolitics (3)**

An advanced course in geopolitics with emphasis on fundamental principles and their application to the major regions and nations of the world today. Prerequisite: Junior standing or permission of instructor. (F, even years)

### **GEOG 32522 - Cities and Urban Design (3)**

An advanced course offering an in-depth study of characteristics of cities and problems faced in urban environments. The course emphasizes how historical, social, and cultural factors shape cities. Prerequisite: Junior standing or permission of the instructor. (S)

**GEOG 32543 - Applications of Remotely Sensed Data (3)**

This course integrates the use of remotely sensed information into a Geographic Information System (GIS) environment. Emphases are placed on understandings of image formats, sources on the Internet, composite color display scheme, visual interpretation, and getting data out of images. (online, F, SS)

**GEOG 32545 - Principles of GIS (3)**

GIS is a powerful technology for managing and analyzing geographic data. This course provides students with the conceptual background including a rigorous study of fundamental geographic information systems principles, including the nature of spatial data, vector and raster data models, and key GIS analysis operations. It provides a strong foundation for advanced courses or work in GIS. (online, F, S)

**GEOG 32565 - Advanced Geographic Information Systems (3)**

Builds on the techniques and concepts learned in Geographic Information Systems (GEOG 32365). Stresses research and project design strategies and advanced analytical techniques using geographic information systems to solve spatial problems. Prerequisites: GEOG 32365. (S)

**GEOG 32580 - Spatial Analysis and Geostatistics (3)**

Designed to make the student familiar with the analysis and statistical tools used by geographers. Covers the fundamental aspects of geostatistics that are used in research and business environments. (online, F)

**GEOG 32582 - Cartographic Design and Visualization (3)**

A cartography course that introduces fundamental cartographic theory and emphasizes effective visual thinking and visual communication with Geographic Information Systems. Advanced techniques used for geographic visualization, animation, and web publishing are also introduced. (Online, S)

**GEOG 32601 - GIScience Research Seminar (3)**

A research writing seminar for new GIScience graduate students to develop awareness of various research methods, as well as their own GIScience research interests. Students

become familiar with writing, thinking and criticizing at the graduate level. (online, F, S)

**GEOG 32611 - Special Topics in Geographic Information Science (1 to 3)**

Special topics including new areas outside the current GIScience curriculum, or further study in more detail of other coursework. Individual course offerings and descriptions will vary. May be repeated once with different topics. (online)

**GEOG 32620 - GIS Theory and Research (3)**

A study of advanced vector data models and analytical methods using vector data. Prerequisite: GEOG 32545 or equivalent. (online, alt. trimesters)

**GEOG 32630 - Raster-based GIS and Modeling (3)**

Covers advanced topics in GIS using the raster data structure. Emphasis is placed on the use of raster-based data for spatial modeling applications. Prerequisite: GEOG 32545 or equivalent. (online, alt. trimesters)

**GEOG 32641 - Geoprocessing with Python (3)**

An introductory course for developing programming skills for geoprocessing in ArcGIS using the Python scripting language. Python fundamentals and the use of ArcGIS geoprocessing functions and methods will be the primary focus of this course. A brief overview of Model Builder for developing geoprocesses will also be discussed. No previous programming experience is required. Prerequisite: GEOG 32545 with a minimum grade of C or equivalent. (online, alt. trimesters)

**GEOG 32642 - Internet GIS (3)**

This course provides concepts and hands-on experiences with state-of-the-art technologies for delivering GIS service and applications on the Internet. Students will learn how to author and publish effective GIS services using ArcGIS Server and Google Map API, use GIS services directly, and develop web applications. Experience in web programming is helpful but not required. Straightforward examples will be provided throughout this course. Prerequisite: GEOG 32545 with minimum grade of C, or equivalent. (online, alt. trimesters)

**GEOG 32650 - GIS Database Design (3)**

A comprehensive study of the process of GIS database design, including user needs assessment and conceptual, logical, and

physical database design. Emphasizes design of the spatial component of GIS data.  
Prerequisite: GEOG 32545 or equivalent.  
(online, alt. trimesters)

**GEOG 32655 - GIS Project Management (3)**

A study of GIS project management at several levels, from organization planning for GIS implementation to the management of individual GIS projects. Prerequisite: GEOG 32545 or equivalent. (online, alt. trimesters)

**GEOG 32660 - Trends in GIS (3)**

A virtual seminar addressing the history, applications, and latest trends in Geographic Information Systems and Science.  
Prerequisite: GEOG 32545 or equivalent.  
(online, alt. trimesters)

**GEOG 32663 - Digital Image Processing (3)**

An advanced remote sensing course focusing on image processing techniques. In this class, we will further the understanding of the concepts learned in the introductory remote sensing class (GEOG 32543) and explore various image processing techniques to extract information out of remotely sensed images. Prerequisite: GEOG 32543 with a minimum grade of C or permission of instructor. (Online, SS)

**GEOG 32698 - GIS Research Paper (1)**

Required for the non-thesis option of the M.S. degree. Student completes a GIScience research paper for the non-thesis option's research component. Registration for this course requires approval of the course instructor. (F, S, SS)

**GEOG 32699 - GIS Thesis (1 to 3)**

Required for the thesis option of the M.S. degree. Registration for thesis credit requires the approval of the graduate advisor and department chairperson. (F, S, SS)

**GEOL - Geology**

**GEOL 27500 - Special Offering (1 to 4)**

One-time course offering in a timely area of geology or earth science. Repeatable for additional experience, new material and progression of study.

**GEOL 27501 - Special Topics in Geology (1 to 4)**

Will be offered according to student needs and interest. Each offering will be designed to incorporate the latest information pertaining to a timely topic in geology. Topics may include: rock and mineral origins and

classifications, groundwater, energy, age of dinosaurs, fossils and the history of life, volcanoes and earthquakes, and glacial geology. Prerequisite: One year of college-level science or permission of the instructor. Repeatable for new area of study.

**GEOL 27510 - Geomorphology (3)**

A study of landforms, focusing on the description, recognition, classification and formation processes. Topics investigated include the origin and nature of geomorphologic processes shaping different landforms, along with the influence of geologic controls, climate and other factors impacting these processes. Two lecture hours and one two-hour laboratory session per week. Prerequisite: GEOL 27110 and GEOL 27111 or GEOL 27114 and GEOL 27115. (S, even years)

**GEOL 27515 - Environmental Regulations (2)**

An introduction to federal and state regulations and major issues associated with the environment including air quality, ground water quality and the disposal of hazardous waste. Two lecture hours each week.  
Prerequisites: GEOL 27360 or BIOL 04420 or GEOG 32401 or permission of instructor. (S, odd years)

**GEOL 27520 - Geology Field Trip (Advanced Level) (2)**

An advanced version of the introductory field course, GEOL 27520 combines basic field investigation with a short project that focuses on a feature of interest from the field trip area. Potential projects include thin section petrography and optical mineralogy, written descriptions of features of interest, reflective essays, or other projects as approved by the course instructor.  
Prerequisite: GEOL 27212. Repeatable for new area of study. (F)

**GEOL 27530 - Sedimentology (4)**

A study of the production, transportation, deposition, and lithification of sediments. Includes comparison of classifications, techniques of using sediments in environmental interpretations and laboratory techniques in sediment study. Three one-hour lectures and one two-hour laboratory per week. Prerequisites: GEOL 27212. (F, odd years)

**GEOL 27540 - Paleontology (4)**

A general study of fossils, including classification of plants and animals,

development and evolution of prehistoric life, paleontological techniques, and use of fossils as time and ecological guides. Lab includes study and identification of the major fossil groups. Emphasis is on invertebrate animals, with a general review also of microfossils, plants, and vertebrates. Three one-hour lectures and one two-hour laboratory. Prerequisites: GEOL 27212 or permission of instructor. (S)

### **GEOL 27555 - X-Ray Analysis (3)**

Theory and application of x-ray diffraction. Consideration will be given to sample preparation, laboratory procedures and analysis of data. Prerequisite: GEOL 27220 or permission of instructor. (S, alt. years)

### **GEOL 27560 - Optical Mineralogy (3)**

A study of the optical properties of non-opaque minerals through use of the petrographic (polarizing) microscope utilizing both oil immersion and thin section methods. Prerequisite: GEOL 27220. (F, even years)

### **GEOL 27590 - Seminar in the Earth Sciences (2)**

Seminar and studies of advanced topics in selected fields in geology and other earth sciences. Two hours per week in lecture, seminar or lab appropriate to the topics. Prerequisites: GEOL 27110 and GEOL 27111.

### **GEOL 27599 - Special Investigations in the Earth Sciences (1 to 3)**

Independent studies in the earth sciences including but not limited to research and library studies. Enroll only with consent of department chairperson. Requires written proposal at time of registration. Repeatable for additional experience, new material and progression of study. (F, S)

### **GEOL 27600 - Special Offering (1 to 4)**

One-time course offering in a timely area of earth science. Includes special short courses for earth science teachers. Prerequisites: GEOL 27110 and GEOL 27111.

### **GEOL 27696 - Problems of Teaching Earth Science (3)**

A study of the curriculum in earth science: content, materials, laboratory investigations, field trips and field work, resources such as museums, planetariums, and government agencies, and other aspects of laboratory-centered earth science teaching. For elementary or secondary teachers.

Prerequisites: GEOL 27110 and GEOL 27111 or GEOL 27114 and GEOL 27115 or equivalent.

## **HIST - History**

### **HIST 33503 - The Middle Ages (3)**

A survey of the political and cultural history of Europe from the fall of the Roman Empire to the Renaissance. (S, alt. years)

### **HIST 33506 - The Renaissance and Reformation (3)**

An advanced course which presents an in-depth study of the eras of the Renaissance and Reformation in Western Europe. (S, alt. years)

### **HIST 33510 - History of Russia (3)**

An advanced course dealing with the political, social, economic, and cultural history of Russia and the Soviet Union from the earliest times to present. (F, alt. years)

### **HIST 33517 - England: From Stonehenge to Versailles (3)**

Course is designed as a survey of English history from the earliest inhabitants to the Treaty of Versailles. (F)

### **HIST 33521 - History of Germany Since 1648 (3)**

An advanced course dealing with the history of modern Germany. (S, alt. years)

### **HIST 33522 - The American Colonies (3)**

Provides an in-depth look at colonial development in North America, with an emphasis on the English colonies, how and why they were founded, and how they grew and developed through the revolutionary period. Additional themes may include racial, gender, and religious relationships and conflict, imperial rivalries, and the slow emergence of a more unified colonial identity. (S, alt. years)

### **HIST 33524 - The Early American Republic (3)**

This course examines how the American Revolution transformed thirteen colonies into an independent nation and how the Articles of Confederation and the Constitution laid the foundation for the new country. Emphasis is placed on the culture and society of the period and the era's tumultuous political and economic events. (S, alt. years)

### **HIST 33525 - United States Since 1945 (3)**

An advanced course which will look at the development of the contemporary United States through an examination of foreign affairs as well as selected social movements within the country. (S, alt. years)

**HIST 33534 - The Civil War and Reconstruction (3)**

An advanced course in American history which analyzes the conflicting theories and issues of the antebellum period, interprets the coming of the Civil War, the conduct of government, military operations and foreign relations during the war, and problems of the Reconstruction Period. (F)

**HIST 33542 - American Ideas (3)**

A study of political, religious, social, and other aspects of American life. Among the issues to be emphasized are: Puritanism, the Enlightenment, the Federalist/Anti-Federalist controversy, 19th century democratic ideas, Social Darwinism, the progressive era, Humanism, New Deal thought, the New Conservatism of the Fifties, and the New Left movement. (S, alt. years)

**HIST 33556 - The Gilded Age and Progressive Era (3)**

An advanced course in the era of the United States between the Civil War and World War I, leading to new understandings of modern America. This course will investigate key issues of this era including industrialization, populism, progressivism, migration, race, gender, and identity. (F, alt. years)

**HIST 33562 - The History of Missouri (3)**

A brief survey of the Spanish and French rule, followed by a study of the history and development of Missouri from the acquisition of the territory by the United States to the present day. Special emphasis is on its historical significance, important figures, government, constitution, current problems, and local history. (F, alt. years)

**HIST 33565 - The History of American Foreign Relations (3)**

An introduction to the history of U.S. and foreign policy. This course will concentrate on the key episodes in U.S. foreign policy with an emphasis on the assumptions that formed the context for power relationships in the European, Asian and American worlds from the time of American independence to the present. (S, alt years)

**HIST 33582 - The American West (3)**

A study of America's territorial expansion from the colonial period to the close of the 19th century, including the impact on the nation's people, institutions, policies and ideas. Special emphasis will be devoted to the conflict between settlers and native people. (S, alt. years)

**HIST 33589 - Europe in the Age of Nationalism (3)**

An examination of the impact of nationalism upon Europe since the French Revolution. (S, alt. years)

**HIST 33590 - Historical Resource Internship (1 to 5)**

On-site activity in libraries, museums, and historic sites and parks. Credit will vary according to the time spent and type of activity. Instructor's permission and prearrangement are required. Maximum credit to be earned is five semester hours. Repeatable for new experiences.

**HIST 33591 - Research Seminar in History (3)**

A capstone course for majors in History and Social Science Education in which students demonstrate mastery of historical theory and methods, including source interpretation and historical argumentation. The historical content of this course will vary when offered. Repeatable for new experiences up to six credit hours. Prerequisite: HIST 33301 or by permission of instructor. (F, S)

**HIST 33600 - Special Offering (1 to 4)**

Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced.

**HIST 33601 - Research Methods and Historiography (3)**

A seminar in the professional techniques of the historian. Stress is placed on the leading schools of historical thought, methods of investigation, and the preparation of research papers. This course should be taken early in the student's career. (F)

**HIST 33610 - Seminar in Central and East European History (3)**

The content of this course will vary when offered. Selected areas of history and historical problems will be given. May be repeated once with permission of advisor for a maximum credit of 6 semester hours. (SS, alt. years)

**HIST 33620 - Seminar in American History (3)**

The content of this course will vary when offered. Selected areas of history and historical problems will be given. May be repeated once with permission of advisor for a maximum of 6 semester hours.

**HIST 33621 - Seminar in Modern American History (3)**

The content of this course will vary when offered. Selected areas of history and historical problems will be given. May be repeated once with permission of advisor for a maximum of 6 semester hours.

**HIST 33630 - Seminar in European and Areas Studies (3)**

The content of this course will vary when offered. Selected areas of history and historical problems will be given. May be repeated once with permission of advisor for a maximum of 6 semester hours.

**HIST 33631 - Seminar in Modern Europe (3)**

The content of this course will vary when offered. Selected areas of history and historical problems will be given. May be repeated once with permission of advisor for a maximum of 6 semester hours.

**HIST 33690 - Independent Study in History (1 to 6)**

Offered by special arrangement and petition approved by the student's advisor, the instructor involved and the department chairperson.

**HIST 33691 - Advanced Historical Writing (3)**

This course is an advanced course in writing for the historical profession which includes the writing of proposals for major research projects. It is a required course for M.A. students in History. (F, S, SS)

**HIST 33699 - Thesis (1 to 6)**

Registration for thesis credit requires the approval of the graduate advisor and department chairperson. (F, S, SS)

**HIST 33545 - History of Terrorism (3)**

A historical overview of the practice of terrorism with its known applications in the ancient world through the present. Special attention will be placed on terrorism since the French Revolution, including the anarchist movement of the nineteenth century, the Holocaust, and the events of the

late twentieth and early twenty-first centuries. (S, alt. years)

**HPER-Health-PE-Rec-and-Dance****HPER 22500 - Special Offering (1 to 4)****HPER 22510 - Special Topics (1 to 3)**

Designed for special workshops. Repeatable for new experience and further mastery. (F, S, SS)

**HPER 22512 - Socio-Psychological Aspects of Human Performance (3)**

Analysis of sociological and psychological aspects which influence human performance. Prerequisites: Upper-division standing or permission of instructor. (F, S)

**HPER 22515 - Issues in Sport (3)**

An analysis of contemporary trends and issues in sport. Prerequisites: MGMT 54345 or graduate student status or permission of instructor.

**HPER 22520 - Classroom Management and Motivation in Physical Education (3)**

This course presents appropriate use of current techniques used to motivate and manage student behavior. Emphasis is placed on the physical education setting. Suggested for Outreach graduate program; see advisor before enrolling. (SS)

**HPER 22523 - Motor Development (3)**

This course is designed to focus on normal and abnormal motor development of school-age individuals. Emphasis is placed on the study of the interaction between environmental and biological factors which affect changes in motor performance, motor development assessment techniques, and designing and implementing an individualized program for a school-age student. (F, S, SS)

**HPER 22529 - Theory and Fundamentals of Strength and Conditioning/Personal Training (3)**

Provides the basic skills, program design, and teaching techniques for strength training and personal conditioning. (S)

**HPER 22532 - Exercise Testing, Prescription, and Analysis of Cardiac Function (3)**

Designed to provide special emphasis to testing individuals with several exercise

protocols and modes. Emphasis will be placed upon cardiovascular functions at rest, during exercise and recovery. The format is practical and laboratory based in nature. Prerequisite: HPER 22254 and HPER 22332 with a grade of B or better. (S)

**HPER 22536 - Mechanical Analysis of Sports Skills (3)**

Designed to improve the student's ability to teach physical education or coach by analyzing a variety of activities in terms of the fundamental principles of mechanics. Prerequisites: HPER 22254, HPER 22336. (SS)

**HPER 22537 - Assessment in Physical Education (3)**

A study of the evaluation procedures in physical education, the administration of such procedures, and the interpretation of the results by fundamental statistical methods. (F, S)

**HPER 22550 - Community Health (3)**

Historical, physical, biological, and socio-cultural factors that influence the magnitude and character of health problems, goals, and solutions. (F, S)

**HPER 22552 - Health Promotion (3)**

The study of the organization and implementation of a comprehensive health promotion program. Practical applied experiences are included. (F)

**HPER 22554 - Human Sexuality (3)**

A study of the historical, biological, psychological, and socio-cultural aspects of sexuality in relation to modern life. (F)

**HPER 22555 - Intervention and Strategies for Health Behavior Change (3)**

An applied approach of behavior change. Models to investigate health behavior modification. (S, SS)

**HPER 22556 - Health in the Later Years (3)**

This course considers aging from three perspectives: physical aspect of an aging body, health care of the elderly, and current health issues for aging Americans. The course begins by investigating theories of aging, changes in the body with age, mental health and wellness, chronic health conditions, and prevention and health promotion. It concludes with lessons addressing the upcoming Age Wave and what it means for health care services and providers. (F)

**HPER 22580 - Methods in Secondary Physical Education (3)**

A survey of teaching styles and pedagogy. Special emphasis is given to daily teaching methodology with practical experiences. The relationship of methods of teaching to curriculum is also covered. (Must be taken prior to directed teaching.) Prerequisites: HPER 22239, HPER 22332, HPER 22430 and HPER 22431 or equivalent, and Admittance to Teacher Education. (F, S)

**HPER 22600 - Special Offering (1 to 4)**

**HPER 22610 - Introduction to Criticism (3)**

**HPER 22630 - Curriculum in Health and Physical Education (3)**

Principles and procedures in the development of curriculum in health and physical education with emphasis on the teaching situation. (S, SS)

**HPER 22632 - Exercise Physiology (3)**

A study of the role of physiology in exercise, including exercise testing and the writing of exercise prescriptions. Prerequisites: HPER 22254, HPER 22332 or equivalent. (F)

**HPER 22635 - Adaptive Physical Education (3)**

Analysis of general and specific problems pertaining to the handicapped student; emphasis on current research and use of therapeutic measures. (F, S, SS)

**HPER 22636 - Research Methods in Health, Physical Education and Recreation (3)**

An introduction to present-day methods and techniques of research, applicable to the fields of health, physical education and recreation. (S, SS)

**HPER 22637 - Sports and Exercise Nutrition (3)**

Emphasis on the bioenergetics and nutrition for human performance and health. Addresses the role of diet and nutrition in health and diseases, and ergogenic aids. (S)

**HPER 22638 - Physical Education in the Elementary School (3)**

A course designed to provide students with an opportunity to develop a program of activities for K-8 physical education as well as acquire skills in supervision and methodology in K-8 physical education. Prerequisite: HPER 22238 or permission of instructor. (F, S, SS)

**HPER 22639 - Independent Study in Physical Education (1 to 3)**

An advanced course designed to pursue a given content area. Advisor's consent is required. (F, S, SS)

**HPER 22640 - Improving Instruction through Systematic Observation (3)**

Considers techniques and strategies for instructional improvement for a variety of settings, including formal school settings and other educational and informational settings. Students will become familiar with systematic observation analysis instruments, procedures and techniques. (S)

**HPER 22649 - Independent Study in Recreation (1 to 3)**

An advanced course designed to pursue a given content area. Advisor's consent is required. (F, S, SS)

**HPER 22659 - Independent Study in Health (1 to 3)**

An advanced course designed to pursue a given content area. Advisor's consent is required. (F, S, SS)

**HPER 22665 - Qualitative and Quantitative Analysis of Data (3)**

Basic foundation of data analysis covering descriptive and inferential statistics and how to use these to improve practice, research and appropriately assess findings. Covers both parametric and nonparametric applications to the health, physical education, recreation and dance fields. (F, SS)

**HPER 22679 - Independent Study in Safety (1 to 3)**

An advanced course designed to pursue a given content area. Advisor's consent is required. (F, S, SS)

**HPER 22680 - Health Sciences Field Experience (1 to 3)**

A required practical experience that includes opportunities to apply practical skills in the varied fitness/wellness/health or educational setting. (F, S, SS)

**HPER 22681 - Administration of Health, Physical Education and Sport (3)**

Organization and management of interscholastic and intercollegiate athletics. Problem solving approaches are used. (S)

**HPER 22682 - Care and Prevention of Athletic Injuries (3)**

Practical and theoretical study of the care of athletic injuries. Prerequisite: HPER 22382 or permission of instructor. (SS, even years)

**HPER 22683 - Secondary School Health Methods (3)**

Organizing health instruction, development and appraisal of materials, and use of active/authentic instructional strategies for grades 9-12. Provides a framework for the development and implementation of a Comprehensive School Health Program. (F, SS)

**HPER 22690 - Research Project (1 to 4)**

Selected individual project, with in-depth research in an area of the student's interest. Project will include: critical review of literature, data analysis and/or visualization, and presentation of final product in advisor approved format. Should be taken during the final trimesters of the student's program. Prerequisite: HPER 22636. (F, S, SS)

**HPER 22699 - Thesis (2 to 4)**

Allows the student to explore the potential of physical education as an area of research and scholarly effort. Demands in-depth and breadth of background review. Should be taken during the final trimesters of the student's program. Prerequisite: HPER 22636. (F, S, SS)

**HPER 22541 - Human Pathophysiology (3)**

This course explores the physiological processes and mechanisms that characterize the pathology of diseases associated with lifestyle choices and behaviors. Prerequisites: HPER 22254 OR BIOL 04236. (F)

**HUM - Humanities****INST - International Study****INST 80699 - Study Abroad (3 to 15)**

Students studying abroad in a recognized program enroll in this course for the period of their stay. This maintains the student's enrollment during the period of international study and upon return facilitates the translation of coursework taken into Northwest credit.

**LANG - Languages****LANG 14500 - Special Offering (1 to 4)**



Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced. Repeatable with topics changing.

**LANG 14541 - Independent Study in Spanish (1 to 4)**

Provides individualized, in-depth study in the area of Spanish. Study will be conducted in Spanish and will be designed to meet the needs of the student(s). May be repeated. Credit and prerequisites as announced.

**LANG 14582 - International Heroes: France, Spain, and England (3)**

Literary selections in French, Spanish, and English will trace the development of the histories and legends of Sir Lancelot, Roland, and El Cid in and out of their home countries, from the 12th through the 17th centuries. French and Spanish majors will read the appropriate selections in their original languages; other readings will be in English. Non-language majors will read in English translations. For graduate or undergraduate credit. Graduate credit will require an additional research paper. Prerequisite: LANG 14448 or LANG 14400 level literature course in appropriate language.

**LANG 14600 - Special Offering (1 to 3)**

Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced.

**LANG 14630 - Independent Study in Francophone Culture (1 to 4)**

Provides individualized, in-depth study in francophone culture(s). Study will be conducted in French and will be designed to meet the needs of the student(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**LANG 14631 - Independent Study in French History (1 to 4)**

Provides individualized, in-depth study in French history. Study will be conducted in French and will be designed to meet the needs of the student(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**LANG 14632 - Independent Study in French Literature (1 to 4)**

Provides individualized, in-depth study in French literature. Study will be conducted in

French and will be designed to meet the needs of the student(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**LANG 14633 - Independent Study in French Media (1 to 4)**

Provides individualized, in-depth study in French-language film, radio, journalism, theatre, etc. Study will be conducted in French and will be designed to meet the needs of the student(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**LANG 14640 - Independent Study in Hispanic Culture (1 to 4)**

Provides individualized, in-depth study in Hispanic culture(s). Study will be conducted in Spanish and will be designed to meet the needs of the student(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**LANG 14641 - Independent Study in Spanish History (1 to 4)**

Provides individualized, in-depth study in Spanish history. Study will be conducted in Spanish and will be designed to meet the needs of the student(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**LANG 14642 - Independent Study in Spanish-Language Literature (1 to 4)**

Provides individualized, in-depth study in Spanish-language literature. Study will be conducted in Spanish and will be designed to meet the needs of the student(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**LANG 14643 - Independent Study in Spanish-Language Media (1 to 4)**

Provides individualized, in-depth study of Spanish-language film, radio, television, journalism, theatre, etc. Study will be conducted in Spanish and will be designed to meet the needs of the students(s). May be repeated up to a total of 8 hours. Credit and prerequisites as announced.

**MATH - Mathematics and Statistics**

**MATH 17511 - Applied Linear Algebra (3)**

The course focuses on how linear algebra is used for nonlinear representation via splines and wavelets. It includes applications in

signal processing, image analysis and financial analysis. Prerequisite: A minimum grade of C in MATH 17311, or consent of instructor. (S, even years)

### **MATH 17518 - Number Theory (3)**

Topics include divisibility, congruences, theory of quadratic residues, Diophantine analysis. Prerequisite: A minimum grade of C in MATH 17390 or consent of instructor. (F, odd years)

### **MATH 17520 - Applied Analysis (3)**

An advanced course in analysis which may include vector analysis, differentials, integration theory, elementary and analytic functions of a complex variable. Prerequisites: A minimum grade of C in both MATH 17121 and MATH 17390, or consent of instructor. (S, odd years)

### **MATH 17531 - Applied Time Series (2)**

A course in forecasting and some of the statistical techniques that can be used to produce forecasts. Prerequisites: MATH 17114 or MATH 17230 or consent of instructor.

### **MATH 17535 - Probability Theory (3)**

A mathematical development of probability with emphasis on continuous random variables. Prerequisites: MATH 17121 and MATH 17230, or MATH 17610 or consent of instructor. (F, odd years)

### **MATH 17536 - Statistical Inference (3)**

A mathematical development of statistics with emphasis on continuous random variables. Prerequisite: MATH 17535. (S, even years)

### **MATH 17575 - Workshop in Mathematics Education (1 to 6)**

Prerequisite: consent of instructor. May be repeated with different topics.

### **MATH 17580 - Methods in Secondary School Mathematics (3)**

A study of teaching procedures and current literature useful in teaching secondary school mathematics. Prerequisite: MATH 17280 with a grade of C or better, and Admittance to Teacher Education or consent of instructor. (S)

### **MATH 17582 - Mathematical Methods for Middle School Teachers (3)**

A study of current literature and techniques useful in teaching middle school mathematics. Prerequisite: MATH 17280 and

MATH 17371 with grades of C or better, and Admittance to Teacher Education, or consent of instructor.

### **MATH 17599 - Special Projects (1 to 6)**

Prerequisites: 30 hours in mathematics or computer science and consent of instructor. May be repeated with different topics.

### **MATH 17602 - Introduction to Higher Mathematics (3)**

This course is a survey of topics designed to review concepts that include series, differentiation, integration, functions of several variables, maximum and minimum problems, logic, induction, probability, and matrices. Prerequisite: 18 hours of undergraduate mathematics or consent of instructor. (Summer, odd)

### **MATH 17610 - Elementary Statistical Concepts (3)**

A study of frequency distributions, measures of central tendency, variation, correlation and regression, application and interpretation of estimation procedures using normal, t, chi-square distributions and hypothesis testing. (F, S, SS)

### **MATH 17611 - Data Mining with Applications to Business and Sciences (3)**

This course is an introduction to the basic core concepts of knowledge discovery and the more useful techniques and standard algorithms with a focus on the hands-on start-to-finish process for learning from data and turning data into actions. Students will learn how to convert big data into usable information and further discover valuable knowledge via modeling. Prerequisite: MATH 17114 or MATH 17230 or consent of instructor. (S, even years)

### **MATH 17617 - Combinatorics (3)**

Introduction to sets and their properties, functions, finite and infinite sets. Introduction to fundamental techniques in enumeration, discrete structures, and algorithms and optimization. Prerequisite: 18 hours of undergraduate mathematics or consent of instructor. (Summer, Even year)

### **MATH 17618 - Number Theory with Applications (3)**

This is a standard course in classical number theory. Topics include divisibility, an in-depth study of congruences, with applications to calendar arithmetic; theory of quadratic residues, including quadratic reciprocity; and

Diophantine analysis, including nonlinear equations such as Pell's equation. A student who has graduate credit for MATH 17518 or the equivalent cannot receive credit for MATH 17618. (Fall, even year)

**MATH 17622 - Introduction to Research Methods for the Social Sciences (1)**

The course will focus on an introduction to various research designs including experimental and non-experimental, as well as quantitative and qualitative research methods. In addition, the course will focus on providing a practical understanding of several statistical tools used in research in the social sciences. The emphasis will be on knowing when to use the various tests, what they measure, and how to interpret results. The course will provide a foundation for the completion of a research project.

Prerequisites: MATH 17114, MATH 17230, MATH 17610 or MATH 17623 or consent of instructor. (Online/blended)

**MATH 17623 - Data and Probability for Elementary Mathematics Specialists (3)**

The course is designed to develop understanding of probabilistic reasoning and the collection, exploration, and analysis of data. Emphasis will be given to how children think and learn about these concepts and how they fit into the elementary school curriculum. (Summer, even year)

**MATH 17624 - Research Project (1)**

A supervised graduate-level research project required of all graduate students in the department. Prerequisite: 10 credit hours of 600-level mathematics.

**MATH 17625 - Number and Operation for Elementary Mathematics Specialists (3)**

The course is designed to develop an understanding of the learning and teaching of pre-number concepts, counting and cardinality, and numbers and operations in base ten. Emphasis will be given to how children think about and learn these concepts and how they fit into the elementary school curriculum. Co-requisite: EDCI 62625 Seminar and Internship in Numbers and Operations. (F, odd year)

**MATH 17626 - Rational Numbers and Ratio and Proportional Relationships for Elementary Mathematics Specialists (3)**

The course is designed to develop an understanding of the learning and teaching of rational numbers and ratio and

proportional relationships. Emphasis will be given to how children think about and learn these concepts and how they fit into the elementary school curriculum. Co-Requisite: EDCI 62626 Seminar and Internship in Rational Numbers and Proportional Thinking. (S, even year)

**MATH 17627 - Algebraic Reasoning for Elementary Mathematics Specialists (3)**

This course will focus on the content and complexities of teaching and assessing algebraic reasoning in grade 1-6 settings. Course content will include examination of representation and analysis of mathematical situations and structures. Attention will be given to patterns, functions, and the transition from arithmetic to algebra. Co-requisite: EDCI 62627 Seminar and Internship in Algebraic Reasoning. (F, even year)

**MATH 17628 - Geometry and Measurement for Elementary Mathematics Specialists (3)**

This course is designed to develop an understanding of the teaching and learning of geometry and measurement. Emphasis will be given to how children think and learn these concepts and how they fit into an elementary mathematics education. Co-requisite: EDCI 62628 Seminar and Internship in Geometry and Measurement. (S, odd year)

**MATH 17635 - Computer Methods in Statistics I (3)**

A study of analysis of variance, co-variance and regression. Use of SAS statistical package and interpretation of results. Prerequisite: MATH 17610 or consent of instructor. (F)

**MATH 17637 - Computer Methods in Statistics II (3)**

A course covering many of the statistical designs and techniques widely used in research and applications. Prerequisite MATH 17316. (S)

**MATH 17639 - Data Analysis (4)**

This course provides an applied overview of modern data analysis methods, including Statistical Machine Learning (SML). Applications of SML may include science, marketing, finance, and other business and industrial disciplines. Under the supervision of the instructor, students will accomplish both lab activities and application-specific projects using modern SML or similar methods. The labs provide practical applications to enhance understanding and

appreciation of each method. This course satisfies the Graduate Catalog research requirement. Prerequisite: MATH 17114 or MATH 17230 or MATH 17610 or consent of instructor. (S, odd years)

### **MATH 17643 - Principles of Mathematical Analysis and Applications (4)**

Topics include sequence and series, continuity, differentiability, integration of functions of one real variable and functions of one complex variable. Applications to engineering and modeling problems will be presented. Prerequisite: MATH 17321 or consent of instructor. (Spring, even year)

### **MATH 17652 - Analytic Geometry (4)**

This is a content course where students will deepen their knowledge and appreciation of geometry. Topics may include transformation geometry, taxicab geometry, parametric equations, polar coordinates, conic sections, and famous theorems in geometry. Prerequisites: MATH 17390, 18 hours of undergraduate mathematics, or consent of instructor. (Fall, odd year)

### **MATH 17667 - Workshop on Connections and Modeling (1)**

An exploration of the connections between mathematical domains and between mathematics and other disciplines. Differentiated strategies to embed the connective process and infuse multiple representations in instruction will be examined. Prerequisite: 18 hours of undergraduate mathematics or consent of instructor.

### **MATH 17668 - Workshop in Reasoning and Sense Making (1)**

An exploration of curriculum and differentiated instructional approaches to help all students make reasoning and sense-making foundational to the content that is being taught. Prerequisite: 18 hours of undergraduate mathematics or consent of instructor.

### **MATH 17669 - Workshop in Proof and Justification (1)**

An exploration of the nature and role of proof and proving in mathematics including an understanding of the forms of proof and the nature of argumentation and justification. Strategies to help all students create viable justifications will be examined. Prerequisite: 18 hours of undergraduate mathematics or consent of instructor.

### **MATH 17681 - Curriculum Construction in Mathematics (3)**

A survey of curriculum proposals and influence of learning theory on curriculum. Analysis of current textbook series for elementary and secondary mathematics. Prerequisite: MATH 17471 or MATH 17580 or MATH 17582 or consent of instructor. (Alt. years)

### **MATH 17685 - Seminar in Problem Solving in Mathematics (3)**

A study of problem-solving techniques with special emphasis on Polya's heuristics. Prerequisite: MATH 17471 or MATH 17580 or MATH 17582 or consent of instructor. (Alt. years)

### **MATH 17698 - Advanced Independent Study (1 to 6)**

Prerequisite: 9 hours of graduate study or consent of department chairperson.

### **MATH 17699 - Advanced Special Topics (1 to 4)**

Will be offered according to student needs and interests. Each offering will be designed to incorporate the latest information pertaining to a timely topic in Mathematics or Statistics. Repeatable for additional experience, new material, or progression of study.

## **MGMT - Management**

### **MGMT 54201 - MBA Business Foundation (3)**

This course provides the requisite knowledge in accounting, economics, finance, management, and marketing to prepare an entering MBA student with the foundation in general business necessary for successful graduate faculty study. This course does not fulfill any requirement for any undergraduate business major or minor.

### **MGMT 54313 - Principles of Management (3)**

An introduction to the field of management designed to give a basic understanding of the principles, concepts and functions of management within that social system called the information era. Successful management is dependent on fostering responsible and autonomous behavior, as authoritarian structures are being replaced by democratic processes evolving within modern organizations. Thus, successful management is studied as the processes and behavior of

participative management. Prerequisite: Completion of a minimum of 30 academic hours.

**MGMT 54600 - Trends in Business Curriculum (1 to 2)**

**MGMT 54610 - Advanced Management Theory (3)**

**MGMT 54611 - Business Decision Analysis Tools (3)**

The application of mathematical and statistical methods to business decision-making in the various fields of business. Topics cover a number of subjects including quality management, linear programming and queuing problems.

**MGMT 54612 - Strategic Management of Technology and Innovation (3)**

**MGMT 54616 - Organizational Behavior in Administration (3)**

A consideration of various behavioral concepts which are found in organizational settings and which have implications for management personnel. Emphasis is on practical application of various topics such as teamwork, leadership, motivation, organizational change and development.

**MGMT 54618 - Executive Seminar (3)**

An examination of contemporary business practices utilized by successful organizations. Emphasis is placed on understanding current issues faced by senior management. Can be taken only during the last trimester of enrollment.

**MGMT 54619 - Problems in Business (3 to 6)**

Contemporary topics regarding issues and challenges facing managers and executives in today's global society. Contact MBA Coordinator.

**MGMT 54620 - Advanced Human Resource Management (3)**

An overview of human resource management with concentration on areas of special interest to managers, including recruitment, selection, training/development and compensation. Special emphasis on legal and ethical concerns.

**MGMT 54628 - Innovation and Entrepreneurship (3)**

This course examines the process of entrepreneurship from identification and

evaluation of opportunities to methods for exploiting these opportunities. General approaches to developing and commercializing innovative opportunities are presented in conjunction with the feasibility of these opportunities. Special attention is provided to the pursuit of funding for the exploitation of these opportunities and exit strategies for the venture.

**MGMT 54641 - Quality Systems (3)**

Students study and understand the criteria for the Baldrige National Quality Program (MBNQA), International Organization for Standardization (ISO), and the Shingo Prize for Excellence in Manufacturing. Criteria are applied to selected organizations.

**MGMT 54642 - Quality Improvement Techniques (3)**

Student masters the techniques and concepts used in industry to improve processes in manufacturing, service and administration. Explores concepts of six sigma, cause and effect diagrams, scatter diagrams, process flow mapping, failure mode analysis, control charts, Pareto charts, histograms, tolerance control, Kaizen, and process capability study.

**MGMT 54643 - Evolution of Quality Management (3)**

Focuses on current theories and quality strategies used by leaders in industry. Nomenclature and quality expert views will be examined and analyzed. Explores concepts of history of quality management, various quality experts' views of quality, theories of quality, TQM, quality in the supply chain, contemporary perspectives of quality, effective large group behavior and group dynamics.

**MGMT 54644 - Quality Management Project (3)**

Student will apply knowledge of quality management in an organizational setting by helping develop and/or implement quality principles such as continuous improvement processes, applying for a state, regional or national quality award or engaging in a significant quality endeavor in an organization. This course may only be taken by official MBA with Quality Emphasis candidates during their last trimester or MS in Quality candidates during their last two trimesters. (Contact School Director)

**MGMT 54652 - Managing Compensation and Benefits (3)**

In the 21st century global economy, managers are challenged to rethink traditional approaches to designing compensation packages to attract suitable employees. This course examines the design of compensation and benefit plans intended to appeal to qualified and suitable employees. Emphasis is on how successful compensation packages can enhance recruitment, quality of employee work life, higher productivity, higher morale, and reduce employee absenteeism and turnover.

### **MGMT 54654 - Organizational Training and Development (3)**

This course provides a solid background on the fundamentals of training and development for complex organizations in the 21st century. The course focuses on needs assessment, transfer of training, learning environment design, methods, and evaluation. This course examines the models that enhance best training and development practices suitable for the rapidly changing environments.

### **MGMT 54660 - Data Mining for Business Applications (3)**

This course will examine the fundamental principles of data mining and how data mining techniques can enhance management decision making. Understanding data mining will change the way business leaders think of data and its influence in business decisions. The increasing volume and speed of data generation require business leaders to methodically analyze data. This course will apply data mining techniques on industry cases to develop data-analytic thinking.

### **MGMT 54662 - Business Decision Support Modeling (3)**

This course emphasizes formulation of business models widely used in industries and interpretation of results. The course will introduce how to use important analytic methods such as spreadsheet modeling, optimization, and Monte-Carlo simulation. These basic principles and techniques of applied mathematical modeling for managerial decision-making will allow the manager to recognize their assumptions and limitation, and to employ them in decision making.

### **MGMT 54664 - Data Management for Business Analytics (3)**

This course examines and manages data to improve business processes that enhance organizational productivity. The course

introduces market-leading techniques to better manage key data from business processes. The course focuses on the value of understanding data management and analysis methods which can influence the business decision makers' performance.

### **MGMT 54667 - Business Analytics and Decision Making (3)**

This course focuses on the processes and practices of transforming business data into business intelligence. An understanding of data storage and retrieval is an integral component to building useful information to support business decision making. The course provides a framework for quantitative decision making, effective budgetary allocation and economic efficiency.

### **MGMT 54699 - Graduate Internship in MBA (1 to 6)**

Supervised professional industry experience in a business or other approved setting. Prerequisites: completion of 12 hours toward the MBA and approval by the MBA Coordinator.

## **MKTG - Marketing**

### **MKTG 55330 - Principles of Marketing (3)**

The study of determination and satisfaction of consumer wants or needs from a managerial perspective. Elements of this process include market research, demand analysis, product development, pricing, promotion, and distribution.

### **MKTG 55600 - Trends in Business Curriculum (1 to 2)**

### **MKTG 55630 - Strategic Marketing (3)**

An examination of contemporary marketing practices built around the strategic marketing process. The central focus is on becoming a customer-focused organization. Areas such as understanding customer satisfaction and customer value, as well as delivery and applied measurement issues, are explored.

### **MKTG 55631 - International Business (3)**

A study of current problems and theory relating to the structure and operations of international business, structured around the overarching themes of globalization, privatization and liberalization. Course material ranges from historical background to strategic choices made by international managers.

### **MKTG 55635 - Advanced Marketing Communications (3)**

Advanced Marketing Communication covers one of the four components of a traditional marketing mix that is a critical component of marketing strategy. Otherwise known as promotion, this course focuses on how marketers inform, persuade, and remind potential buyers of a product in order to influence an opinion or elicit responses that are essential for its long-term viability. Students will be exposed to basic components of marketing communications, such as personal selling, sales promotion, advertising and public relations. Topics of customer relationship management (CRM), integrated marketing communications (IMC), social media marketing, and other contemporary strategies and tactics in marketing communications will also be examined.

### **MKTG 55636 - Global Marketing Management (3)**

The course examines marketing practices in the global context, specifically focusing on global environment analysis, development of competitive strategy, development of global marketing strategy, global marketing strategy execution, and global marketing ethics.

### **MMED - Mass Media**

#### **MMED 20500 - Special Offering (1 to 4)**

Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced. This course is repeatable for a new, advanced or expanded experience.

#### **MMED 20600 - Special Offering (1 to 3)**

Courses which are offered on only once occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced.

#### **MMED 20621 - Special Topics: Mass Communication, Analysis and Criticism (1 to 3)**

The analysis of various aspects of the media, media consumers, and messages. Topics will consider the influences of society on the media. The topics will also look at the major theoretical constructs in mass media and their attended research findings.

### **MUS - Music**

#### **MUS 19501 - Elementary Music Education: Special Topics (1 to 3)**

A study of selected materials and/or methods for music instruction in the elementary school with particular attention being given to recent developments and current issues. Repeatable for additional experience, new material, and progression of study.

#### **MUS 19502 - Junior High Music Education: Special Topics (1 to 3)**

A study of selected methods and/or materials for music instruction in the junior high or middle school with particular attention being given to recent developments and current issues. Repeatable for additional experience, new material and progression of study. (SS)

#### **MUS 19503 - Senior High Music Education: Special Topics (1 to 3)**

A study of selected materials and/or methods for music instruction in the senior high school with particular attention being given to recent developments and current issues. Repeatable for additional experience, new material, and progression of study.

#### **MUS 19520 - Secondary Applied Study (1 to 2)**

Students may enroll in one or two hours of private lessons in the areas of vocal, instrumental, composition and keyboard study which are outside the student's primary area of applied accomplishment. Repeatable, with the permission of the instructor. Prerequisite: consent of instructor

#### **MUS 19523 - Applied Trumpet (1 to 2)**

#### **MUS 19524 - Applied Horn (1 to 2)**

#### **MUS 19525 - Applied Trombone (1 to 2)**

#### **MUS 19526 - Applied Baritone (1 to 2)**

#### **MUS 19527 - Applied Tuba (1 to 2)**

#### **MUS 19528 - Applied Percussion (1 to 2)**

#### **MUS 19530 - Applied Piano (1 to 2)**

#### **MUS 19535 - Applied Organ (1 to 2)**

#### **MUS 19537 - Applied Harpsichord (1 to 2)**

#### **MUS 19545 - Applied Violin (1 or 2)**

#### **MUS 19546 - Applied Viola (1 to 2)**

#### **MUS 19547 - Applied Cello (1 to 2)**

#### **MUS 19548 - Applied String Bass (1 to 2)**

**MUS 19551 - Principles of Singing (2)**

Exploration of historical and contemporary theories of vocal pedagogy, including practical application and examination of current sources on related topics, such as interpretation and vocal diction.

**MUS 19555 - Applied Voice (1 to 2)****MUS 19564 - Applied Flute (1 to 2)****MUS 19565 - Applied Oboe (1 to 2)****MUS 19566 - Applied Clarinet (1 to 2)****MUS 19567 - Applied Saxophone (1 to 2)****MUS 19568 - Applied Bassoon (1 to 2)****MUS 19582 - Advanced Instrumental Conducting (2)**

An application of conducting practices in interpretation, style, and performance through the study of representative works for concert band, wind ensemble, and orchestra. Prerequisite: Admittance to Teacher Education.

**MUS 19583 - Advanced Choral Conducting (2)**

Study of representative large works through conducting practices in interpretation, style, and performance.

**MUS 19587 - Literature for Elementary and Middle Schools (2)**

A study of current course materials and methods for elementary and middle school music classrooms.

**MUS 19590 - Early Childhood Music (2)**

Designed to assist the early childhood teacher in developing techniques for teaching music in pre-school and early elementary levels.

**MUS 19591 - Marching Band Techniques (2)**

A study of the fundamentals of marching maneuvers, parade routines, computer-assisted drill design, and the administration and organization of a successful marching band program.

**MUS 19592 - Secondary General Music Methods (2)**

A study of methods and materials for teaching general music in middle school and high school. Music majors or minors only. Prerequisite: MUS 19481.

**MUS 19593 - Choral Literature for Secondary Schools (2)**

A survey of choral literature including the music of all periods, both sacred and secular, and a study of the style and interpretation of music from each period.

**MUS 19594 - Instrumental Literature for Secondary Schools (2)**

A historical and stylistic survey of music for the wind band with particular emphasis on compositions appropriate for secondary school ensembles.

**MUS 19595 - Contemporary Issues in Instrumental Music (2)**

A study of current trends, standards, materials and practices in administering, organizing and maintaining a successful instrumental music program. (S)

**MUS 19596 - Contemporary Issues in Vocal Music (2)**

Current practices in administration and organization of school vocal programs. (S)

**MUS 19597 - Comparative Methods in Elementary Music (2)**

A survey of today's methods (Orff, Kodaly, Dalcroze, Gordon, ETM, etc.) for teaching music in the elementary school.

**MUS 19600 - Special Offering (1 to 4)**

Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced.

**MUS 19602 - Music Practicum (1 to 2)**

Supervised classroom/rehearsal observation and teaching in various music activities. Enrollment by faculty selection. May be repeated.

**MUS 19673 - Comprehensive Analysis and Performance Practice (2)**

A study of theoretical, harmonic, and performance practices of the various style periods with emphasis on practical application to instrumental and vocal performing groups.

**MUS 19680 - Ethnomusicology (2)**

Ethnomusicology surveys the music of cultures outside the Western art tradition, with an emphasis on understanding the music in the context of the culture. Students will study both traditional and modern



musical examples. Areas of focus include Africa, Latin America, Native America, India, Japan, Indonesia, ethnic North America, and others. Prerequisite: admission to the graduate program.

**MUS 19689 - Musical Research and Bibliography (2)**

Provides the music student with information regarding musical research and bibliographical sources. It is recommended that this course precede EDUC 61682.

**MUS 19690 - Principles of Music Education (2)**

A study of the philosophical, historical, and sociological backgrounds for the school music program.

**MUS 19691 - MME Project (2)**

This course provides an opportunity to conduct original research (including action research) in music education and/or complete an individualized and specific, research-based professional development project. Prerequisite: MME coursework completed or final trimester in progress.

**MUS 19698 - Special Topics (1 to 3)**

Provides concentrated study in special areas within music. Topics vary trimester to trimester. Pre-requisites as announced. Repeatable with topics changing.

**Applied Music**

Prerequisites: An audition showing readiness for graduate-level study. If an undergraduate senior recital was performed, a copy of the program should be submitted. Enrollment only with permission of instructor.

**Individual Instruction**

Students may enroll in two hours of private lessons per trimester. This will require a one-hour lesson per week in a trimester and requires a minimum of five hours of practice per week. Courses may be repeated for additional credit.

**MUS 19623 - Applied Trumpet (2)**

**MUS 19624 - Applied French Horn (2)**

**MUS 19625 - Applied Trombone (2)**

**MUS 19626 - Applied Baritone (2)**

**MUS 19627 - Applied Tuba (2)**

**MUS 19628 - Applied Percussion (2)**

**MUS 19630 - Applied Piano (2)**

**MUS 19635 - Applied Organ (2)**

**MUS 19637 - Applied Harpsichord (2)**

**MUS 19645 - Applied Violin (2)**

**MUS 19646 - Applied Viola (2)**

**MUS 19647 - Applied Cello (2)**

**MUS 19648 - Applied Bass (2)**

**MUS 19655 - Applied Voice (2)**

**MUS 19664 - Applied Flute (2)**

**MUS 19665 - Applied Oboe (2)**

**MUS 19666 - Applied Clarinet (2)**

**MUS 19667 - Applied Saxophone (2)**

**MUS 19668 - Applied Bassoon (2)**

**PHIL - Philosophy**

**PHIL 39570 - Metaphysics (3)**

A study of the nature of reality, including a consideration of questions concerning what constitutes the unity of a thing, the nature of causation, the relationship between mind and matter and the nature of God. Prerequisite: PHIL 39171 or consent of instructor. (S, alt. years)

**PHIL 39571 - Epistemology (3)**

An inquiry into the nature and function of knowledge claims, the validity of induction and deduction, theories of justification and truth. Prerequisite: PHIL 39171 or consent of instructor. (S, alt. years)

**PHIL 39579 - Independent Study in Philosophy (1 to 3)**

Investigation into special problems in philosophy. Offered only by special arrangement. For majors and minors only. Repeatable for new topics. Prerequisite: PHIL 39171.

**PHIL 39590 - Advanced Topics (1 to 3)**

This course covers a specialized topic in the history of philosophy or current issues and trends in philosophy as announced. Course may be repeated for a total of six hours provided that the topics are not the same. Prerequisites: PHIL 39171 and 15 hours in philosophy or consent of instructor.

## PHSC - Physical Science

### PHSC 40600 - Special Offering (1 to 4)

One-time special offering in physical science. Includes Saturday short courses for physical science teachers. Prerequisite: College-level physics and chemistry.

### PHSC 40682 - Problems of Teaching Physical Science in Secondary Schools (3)

A study of the content included in physical science curricula for secondary schools and the problems involved in teaching this content. Prerequisite: College-level physics and chemistry.

## PHYS - Physics

### PHYS 25500 - Special Offering (1 to 4)

Repeatable for additional experience, new material and progression of study.

### PHYS 25599 - Selected Advanced Topics (1 to 4)

Special investigations of experimental or theoretical areas which are not included in the regular courses. May be elected in successive trimesters. Can be repeated with different topics. Prerequisite: Permission of instructor. (F, S, SS)

### PHYS 25600 - Special Offering (1 to 4)

### PHYS 25609 - Problems and Readings in Physics (2)

Selected problems and readings in physics for graduate students. May be repeated in different areas of physics for a maximum total of six semester hours of credit. Prerequisite: Permission of instructor. (SS)

## POLS - Political Science

### POLS 34500 - Special Offering (1 to 4)

### POLS 34502 - Public Policy (3)

An intensive advanced course in American policy-making processes and problems of policy development at the national level. The focus is on the analysis of current public policies and their consequences. (S)

### POLS 34511 - Special Topics (1 to 3)

A variable topics course designed to meet curricular and student needs not fulfilled by the rest of the political science curriculum. Content of the course will be described in the title. The course may be repeated for new topics to earn no more than six credit hours

in total, subject to the approval of the instructor.

### POLS 34515 - Revolution and Social Movements (3)

The course is a comparative study of the causes and outcomes of world socio-political movements and revolutions affecting governmental change and development since 1500. Emphasis is placed on roles played by elites and masses in specific actions and society's evolving place in government formation. Cases examined include English, American, French, Latin American, Russian, and Chinese Revolutions, as well as current developments in national regimes. (F alt. years)

### POLS 34524 - Minority, Gender, and Sexual Politics (3)

This course is an examination of the history and present status of minority and gender politics in a global perspective, with comparative emphasis on the political development of American minorities, women, and sexual politics. The course will encompass a seminar format, with emphasis on reading, presentation, discussion and critical thinking assignments. (S, alt. years)

### POLS 34545 - Terrorism (3)

This course provides an overview of terrorism, its societal and technological developments, and its associations with groups and violence. Special attention will be placed on government action and policies concerning prevention and responses to attacks. (S, alt. years)

## PSYC - Psychology

### PSYC 08500 - Special Offering (1 to 4)

Prerequisites: PSYC 08103 and consent of instructor and department chairperson. Repeatable with topic change.

### PSYC 08524 - Independent Living for Special Populations (3)

A lifespan approach to the principles involved in developing independent living skills for those who have disabilities. The course will be designed to provide training and experience in working with the handicapped and the elderly. Prerequisite: PSYC 08335 or by permission.

### PSYC 08526 - Psychology of Leadership (3)

Course is designed for individuals who wish to pursue leadership positions, using research supported psychological principles

and theory, in community service, education, business management, and/or the helping professions. Focuses on the application and utilization of basic psychological concepts and principles related to the career area of interest. Prerequisite: Senior or graduate standing. (SS)

**PSYC 08600 - Special Offering (1 to 2)**

**PSYC 08602 - Personality Assessment: Projective Techniques (3)**

An introduction to the administration, evaluations, and interpretation of projective test data. Procedures for the Rorschach, Bender-Gestalt, and other major projective instruments are discussed.

**PSYC 08603 - Advanced Educational Psychology (3)**

Studies theories of development, cognition and learning, motivation and intelligence. The primary emphasis is upon the application of psychological principles and issues to classroom situations in elementary and secondary schools. (SS)

**PSYC 08605 - Social and Cultural Foundations of Counseling (3)**

The impact of a variety of social forces and realities which influence the person in society is explored. Topics include but are not limited to: the roles of men and women, urban and rural lifestyles, environmental factors, divorce, and cross-cultural issues in counseling. (S)

**PSYC 08616 - Psychodiagnosis of Pathology (3)**

A systematic study of the diagnostic process in determining the proper classification of psychological dysfunctions and their treatment. Prerequisite: SCGD 68610 (F)

**PSYC 08619 - Advanced Independent Study (1 to 3)**

An advanced course designed to pursue a given content area. Advisor's consent is required. (F, S, SS)

**PSYC 08627 - Advanced Child and Adolescent Psychology (3)**

Surveys the comprehensive theoretical and applied areas of development related to the physical-neurological, intellectual, learning, cognitive, and social-emotional growth patterns of the child from conception through late childhood. (SS)

**PSYC 08638 - Special Topics in Psychology (1 to 3)**

A sub-title will be used for each class in schedule. The sub-title description will vary depending upon the particular topic covered, (i.e. PSYC 08638 Special Topics: Crisis Intervention 2 hours). See advisor for schedule and sub-title listing. (F, S, SS)

**REC - Recreation**

**REC 45510 - Special Topics in Recreation (1 to 3)**

Designed for graduate/advanced level special workshops, special topics, new initiatives and developing courses in recreation. Repeatable for new experience and further mastery. (F, S, SS)

**REC 45511 - Golf Course Maintenance and Management (2)**

Designed to familiarize students with the aspects of golf course maintenance and management. Covers the design and maintenance of greens, tees, fairways, roughs, and bunkers. Concepts of staffing, budgeting, and equipment selection and maintenance will be covered. (S)

**REC 45512 - Aquatic Facility Maintenance and Management (2)**

Emphasizes the development of technical knowledge and skills needed to operate a safe aquatic environment, staff development and management, and aquatics program development. (S)

**REC 45513 - Outdoor Recreation Facilities Maintenance and Management (2)**

Designed to help students develop a knowledge base related to the maintenance and management of outdoor recreation resource areas. Specific areas of study will include shooting sports areas, climbing walls and towers, trails, marinas, camp grounds, and RV operations. (F)

**REC 45520 - Challenge Course Facilitator Training (3)**

Course emphasizes assessing, planning, implementing, processing and evaluating challenge course programs in the recreation services industry. Programs are designed to promote communication, cooperation, trust, goal setting, problem solving, self-concept and interpersonal interactions. Repeatable for new experience or further mastery. (F, S, SS)

**REC 45525 - Commercial Recreation (3)**

An introduction to the scope, characteristics, development, management aspects and trends within the commercial recreation industry including the delivery of goods, services, amenities, facilities, and entrepreneurship. (S)

**REC 45533 - Recreation Sports Management (3)**

A study of the objectives and principles of administering an intramural program at the high school or college level. Application of principles to practical situations with field experience. Prerequisite: REC 45340 and REC 45443, or HPER 22239 and HPER 22333. (F)

**REC 45540 - Group Dynamics (3)**

An introduction to the dynamics of group work including different models of group development, types of groups, stages of development, selective processes and intervention strategies. Students will observe, participate in and evaluate group activities. Group leadership and facilitation skills will be presented. (F)

**REC 45542 - Trends and Issues in Therapeutic Recreation (3)**

This course is designed to familiarize students with existing trends in therapeutic recreation programming, to discuss current legal issues, current societal attitudes toward individuals with disabilities, trends within the health care delivery system, and other current trends and issues related to therapeutic recreation. Prerequisites: REC 45243 or REC 45345 or permission of instructor. (S)

**REC 45545 - Risk Management (3)**

Designed to give students a basic understanding of their legal responsibilities as teachers, coaches, trainers and recreation professionals to provide a safe environment for those they serve, and to develop an understanding of the law and how it may apply to the rights of students, special populations, women and co-workers. (S, SS)

**REC 45546 - Administration of Recreation (3)**

Organization and administration of recreation on the federal, state, and local levels. Special attention is given to community organization for recreation; budgeting and personnel management; and the place of physical activities, pageants, and special events in the recreation program. Prerequisites: REC 45240, REC 45245, REC

45340, REC 45440, REC 45443, and REC 45450 with a grade of C or better or Program Coordinator approval. (F, S)

**REC 45547 - Grantsmanship (3)**

Acquaints students with the vocabulary, concept and practices in the study of grants administration and management. Enables practicing the skills necessary in obtaining outside funding and provides awareness of the individual roles and agencies within public funding. (F)

**REC 45562 - Assessments, Diagnostics, and Treatment Planning in Therapeutic Recreation (3)**

Course will provide an overview of (1) the basic concepts associated with psychometric assessment, (2) a variety of individual client assessments used in practice and (3) the use of therapeutic recreation assessments in the development of individualized treatment/program plans. Prerequisites: REC 45243 or REC 45345 or permission of instructor. (F)

**REC 45630 - History and Philosophical Concepts of Parks and Recreation (3)**

A study of the basic philosophical and historical developments in leisure and recreation emphasizing the historical significance of leisure in society. An overview of the evolution of the philosophical understanding and explanation of leisure in society. A critical review of major writings and research in the field will be utilized. (F)

**REC 45633 - Research Report Writing (1)**

The purpose of this course is to provide students with basic knowledge and skills necessary to interpret and write research reports. Specific attention is given to developing research manuscripts appropriate for journal article publication.

**REC 45635 - Trends and Issues in Recreation/Leisure (3)**

A review of the significant social, demographic, behavioral, environmental, developmental, and technological issues that influence the provision of recreation services. Explores how these issues impact the individual and the service provider. (F, SS)

**REC 45640 - Sociological and Psychological Aspects of Recreation (3)**

A look at how psychological, social and developmental factors influence individual

and group perceptions of the role recreation/leisure has on people and how these factors influence recreation/leisure participation. Theoretical and applied perspectives will be addressed. (S, even years)

**REC 45645 - Assessment and Evaluation of Recreation/Leisure Services (3)**

Familiarizes the student with appropriate assessment/evaluation techniques as they are utilized in various leisure service settings. Techniques related to the delivery of recreation programs, park and recreation resources, and personnel are reviewed. Emphasis is placed on those assessment/evaluation skills used by leisure professionals to determine the extent to which programmatic and organizational goals and objectives have been achieved. (F, SS)

**REC 45648 - Human Resources and Ethics (3)**

Designed to familiarize students with tasks common to mid-level managers in the field. Offers opportunities to confront ethical issues and discuss possible solutions in the context of information learned in the course. (F, SS)

**REC 45650 - Finance and Marketing Recreation (3)**

Application of economic and marketing principles to leisure service delivery systems and the analysis of institutional factors affecting the allocation of resources for recreational purposes. Fundraising principles and practices for public and private nonprofit leisure service organizations are studied. (S)

**REC 45655 - Natural Resource History and Interpretation (3)**

An exploration of federal and state natural resource agencies, focusing on the history, philosophies, uses, and management practices of wild lands, historic resources, and natural areas. Explore the communication processes between managers and publics that help interpret the special characteristics of natural, cultural, and historic resources. (F)

**REC 45660 - Recreation Facility Design and Management (3)**

A study of the types of facilities utilized in recreation settings including the aspects of the planning process, design, financing,

needs assessment, facility management and maintenance. (S, SS)

**REC 45665 - Leisure and Aging (3)**

Explores the role of leisure in adult development with focus on the aging process, leisure needs, and leisure services. Basic concepts associated with leisure, aging, targeting leisure services, research, and public policy are presented based on forecasting leisure demand in the 21st century. Further examines contemporary issues related to older adults and their leisure behavior, including constraints, legislation, lifestyle factors, and research related to quality of life. (SS)

**REC 45680 - Graduate Recreation Internship (1 to 3)**

Supervised off-campus professional field experience in appropriate agencies or other approved settings. Available in emphasis areas: park/recreation administration, recreational sports administration, therapeutic recreation, campus recreation, armed forces recreation, outdoor recreation, and resource management. (F, S, SS)

**REC 45699 - Thesis in Recreation (1 to 3)**

Serves as the primary measure of the student's ability to conduct, conceptualize and apply research to their area of recreation specialization. (F, S, SS)

**SCED - Science Education**

**SCED 28550 - History of Science and Technology (3)**

This course will develop a conceptual framework for scientific and technological literacy. The goals of the course will be related to the acquisition of knowledge, the development of learning skills and the development of values and ideas. Characteristics of science, technology and society instruction will be stressed. Prerequisite: Science majors (15 hours in science recommended). (S)

**SCED 28580 - Methods in Secondary School Science (3)**

This course is designed to acquaint prospective science teachers with the methods and materials needed in teaching science at the secondary level. The course provides individualized experiences related to the teaching of the subject fields each student has elected for his or her major or minor area. Prerequisite: Science major or minors admitted to Teacher Education. (F)

**SCED 28582 - Methods in Middle School Science (3)**

A course to assist prospective middle school science teachers with the methods and materials needed in teaching science at the middle school level. Prerequisite: Science majors or minors (EDUC 61570, 15 hours of science), and Admittance to Teacher Education. (F)

**SCED 28600 - Special Offering (1 to 4)**  
Special Offering**SCED 28605 - History, Nature, and Social Perspectives of Science (3)**

Course seeks to promote higher standards of knowledge and performance in science, based on the National Standards and State Frameworks. Focuses on the effect of various educational theories on children's scientific learning process, and the impact of scientific literacy on people's daily life. Deals with the unifying themes of science and the changing nature of science throughout history. Prerequisite: EDCL 62615.

**SCED 28610 - Field-based Inquiry and Problem Solving (3)**

Designed to help students identify various global and local issues. Students choose one issue, formulate an authentic research question and carry out the investigation using various scientific processes. Results will be communicated through either poster sessions or an on-line bulletin board. Prerequisite: SCED 28605.

**SCED 28620 - Teaching Science to Elementary Students (3)**

Focus is on teaching different domains of science based on Missouri State Frameworks. Prepares teachers to teach elementary science concepts using inquiry methods. Various teaching strategies to support student understanding and nurture a community of future science learners. Facilitate students to develop lesson plans contextualizing the information to create a meaningful learning environment. Prerequisite: SCED 28605.

**SCED 28630 - Capstone: Curriculum, Instruction and Assessment in Science Education (3)**

Focus is on the elements of planning, implementing and assessing science instruction based on the National Science Education Standards and Missouri Frameworks. Students will design curriculum,

implement and assess instruction based on national as well as state standards in science education. Learn and use various authentic/alternative assessment procedures to measure the student learning outcomes to promote inquiry-oriented science learning process. Prerequisites: SCED 28605, SCED 28610, and SCED 28620.

**SCED 28680 - Special Offerings in Science Education (1 to 3)**

A study of current topics to meet the needs of students for updating concepts and skills in science. Includes summer and Saturday short courses for elementary, middle school, or secondary teachers.

**SCED 28682 - Seminar in Science Education (1)**

Reports and discussions on current research topics in science education. Course may be repeated for a maximum of three semester hours. (SS)

**SCED 28684 - Science Assessment and Evaluation (2)**

A study of the current methods of test construction, evaluation, statistical analysis and alternative assessment. Each student will develop tests, including performance assessment activities. (SS, odd years)

**SCED 28686 - Curriculum Development in Science (2)**

A study of science curricula, trends in curriculum development, and problems and procedures related to science curriculum development. Curriculum development projects will be developed. (SS, even years)

**SCED 28690 - Research Problem in Science Education (1 to 4)**

Selected research problem in teaching science. The student must develop and carry out the problem with the approval and assistance of the advisor. The student must complete a written report in the style of a science education journal. (F, S, SS)

**SCGD - School Counseling****SCGD 68520 - Drug Prevention and Education in Schools (3)**

Prepares the classroom teacher to become an effective drug-education facilitator. The emphasis is on methods and techniques useful in helping youth develop a positive self-concept, improve communication skills, clarify value issues and assimilate

information regarding drug issues.  
Prerequisite: Senior or graduate standing. (S, even years)

**SCGD 68570 - Principles and Practices of the K-12 School Counseling Program (3)**

Provides a general orientation to the roles and functions of the K-12 school counselor. Developmental school counseling is examined. Prerequisites: Senior or graduate standing and consent of advisor. (SS)

**SCGD 68610 - Counseling Theory and Techniques (3)**

This course examines several major counseling theories in terms of their goals, basic concepts, and philosophical underpinnings. Practical applications as well as contemporary issues related to counseling are presented.

**SCGD 68625 - Sport and Exercise Psychology (3)**

This course will examine psychological principles and techniques applied to sport performance and exercise participation. Special attention will be given to psychological skills training techniques, psychological aspects of injury and rehabilitation, burnout, exercise adherence and motivation, and athletic career termination issues.

**SCGD 68628 - Supervised Practice in Elementary/Secondary School Counseling (3)**

This course is designed to help the student develop counseling skills prior to participating in a final practicum at a school. Students will prepare audio and/or video tapes of actual and simulated counseling sessions. The practicum will include experience in both individual and group counseling. This course should be taken as close to the end of the student's program as possible, and yet may not be taken the same trimester as the actual final field practicum. Prerequisites: SCGD 68570, SCGD 68610, SCGD 68640 and permission of advisor. (F)

**SCGD 68629 - Practicum in Elementary School Counseling (3 to 6)**

Must be taken singularly and as last course in program. Provides a supervised school counseling experience in an elementary school, secondary school, or related setting. The school experience provides students an opportunity to practice, develop, demonstrate, and refine counselor skills and

competencies. Students are placed at grade levels which are compatible with their intended level of certification. Prerequisites: SCGD 68628, field practicum application and consent of advisor. (F, S)

**SCGD 68630 - Practicum in Secondary School Counseling (3 to 6)**

Must be taken singularly and as last course in program. Provides a supervised school counseling experience in an elementary school, secondary school, or related setting. The school experience provides students an opportunity to practice, develop, demonstrate, and refine counselor skills and competencies. Students are placed at grade levels which are compatible with their intended level of certification. Prerequisites: SCGD 68628, field practicum application and consent of advisor. (F, S)

**SCGD 68635 - Advanced Sport and Exercise Psychology (3)**

This course builds on the psychological principles and techniques applied to sport performance and exercise participation covered in SCGD 68625. Students will put theory knowledge into practice as they work with athletes and exercisers in various sport, fitness, and wellness settings. Prerequisite: SCGD 68625

**SCGD 68636 - Methods in Counseling Research (3)**

An examination of methods used by school counselors to conduct research. Students will be required to use these methods to evaluate published research and to design a research component for the degree. (S)

**SCGD 68639 - Research Project (3)**

Students meet weekly in the research lab with department graduate faculty to propose and complete a results based research project related to Comprehensive School Counseling program evaluation. Prerequisite: SCGD 63636 (F)

**SCGD 68640 - Group Counseling Techniques (3)**

Studies the rationale and methodology of guidance and counseling groups. Group processes and techniques appropriate for elementary and secondary school settings are demonstrated. Prerequisite: SCGD 68610. (S)

**SCGD 68645 - Professional and Ethical Issues in Sport and Exercise Psychology (3)**

This course is designed to expose students to a broad understanding of professional roles and functions, professional goals and objectives, and professional organizations and associations. This course also examines ethical and legal standards, risk management, professional credentialing, and standards for professional counselors.

**SCGD 68652 - Group Appraisal (3)**

An introduction for school counselors covering the broad area of measurement, including an examination of psychoeducational appraisal methods. Selection, administration, scoring, interpretation, and avoidance of bias in the use of group appraisals are studied. Prerequisite: SCGD 68570. (F)

**SCGD 68654 - Occupational and Educational Information (3)**

Reviews current trends in career development. Studies theoretical approaches to educational and career planning and integrates these with career counseling and school counseling program practices. Prerequisites: SCGD 68570 and PSYC 08603. (SS)

**SCGD 68655 - Topics and Projects in School Counseling (1 to 4)**

Designed for individualized exploration and study of various areas in school counseling programs and to build additional skills and accumulate knowledge which advisors and students feel is needed. Requires consent of program coordinator. (F, S, SS)

**SCGD 68660 - Organization and Administration of School Counseling Programs (3)**

A study of the models and processes fundamental to the establishment and management of comprehensive school counseling programs. Prerequisites: SCGD 68570, SCGD 68610, SCGD 68640. (SS)

**SCGD 68671 - Student Appraisal and Intervention (3)**

Covers the basic psychometric criteria for appropriate appraisal, reading and interpreting psychological reports, the principles of selection of cognitive and non-cognitive appraisal instruments, and the federal and state regulations for placement in special education. Prerequisites: PSYC 08652 and PSYC 08603. (SS)

**SCGD 68675 - Practicum in Sport and Exercise Psychology (3)**

This course provides a supervised sport and exercise psychology consultation experience in an athletic setting. This experience provides students an opportunity to practice, develop, demonstrate and refine sport and exercise psychology consultation skills and related competencies. It should also enhance a student's desire for lifelong learning, for it addresses various pragmatic issues that will be experienced for years to come such as: consultation, coordination of program duties, counseling in an athletic/exercise setting, and acting as an agent of change. Prerequisites: SCGD 68635 and SCGD 68640.

**SOC - Sociology**

**SOC 35500 - Special Offering (1 to 4)**

**SOSC - Social Science**

**SOSC 36680 - Problems of Teaching Secondary Social Science (2)**

An advanced professional course designed for teachers with experience, in which study and discussion are focused on selected problems peculiar to the social sciences. Emphasis is placed on the teaching of controversial issues. Laboratory experience and the carrying out of a study project in an actual classroom situation will be required.

**THEA - Theatre**

**THEA 43501 - Special Topics (1 to 3)**

Provides concentrated study in special areas within theatre. Topics vary trimester to trimester. Pre-requisites as announced. Repeatable with topics changing.

**THEA 43509 - Advanced Theatre Production (1 to 3)**

Involves a practical approach to the art of producing a play. Specialized elements in mounting a play for production are discussed, relating to the specific needs of the students enrolled. The course culminates in a public performance. Repeatable for further mastery. (SS)

**THEA 43572 - Independent Study in Acting (1 to 2)**

Provides individualized, in-depth study in acting. This study is intended to develop and theoretically apply various principles of theatre arts to educational and professional



theatre depending on the needs of the students. Repeatable with topics changing.

**THEA 43573 - Independent Study in Directing (1 to 2)**

Provides individualized, in-depth study in directing. This study is intended to develop and theoretically apply various principles of theatre arts to educational and professional theatre depending on the needs of the students. Repeatable with topics changing.

**THEA 43574 - Independent Study in Dramaturgy (1 to 2)**

Provides individualized, in-depth study in dramaturgy. This study is intended to develop and theoretically apply various principles of theatre arts to educational and professional theatre depending on the needs of the students. Repeatable with topics changing.

**THEA 43575 - Independent Study in Technical Theatre (1 to 2)**

Provides individualized, in-depth study in technical theatre. This study is intended to develop and theoretically apply various principles of theatre arts to educational and professional theatre depending on the needs of the students. Repeatable with topics changing.

**VOED - Career Education**

**VOED 02500 - Special Offering (1 to 4)**

Courses which are offered on only one occasion or variable issue-oriented courses which have the content described in the title. Credit and prerequisites as announced. (F, S, SS)

**VOED 02501 - History and Philosophy of Career Education (2)**

The philosophy, evolution of, and principles of career education. Practices and trends related to legislation and the relationship of career education to the total plan of public education.

**VOED 02503 - Implementing Career Education (2)**

The establishment and operation of career education programs including organization, administration, supervision, curricula and evaluation.

**VOED 02505 - Assessment in Career Education (2)**

Beginning with the end in mind, investigate what students should know and be able to do when leaving their course of study. Examine and design usable summative and formative assessments.

**VOED 02506 - Career Education Curriculum (2)**

Designed to provide career education teachers with knowledge of the problems, techniques and procedures in the selection and organization of career education subject matter for instructional purposes in day, part-time, and evening schools and classes. (S)

**VOED 02508 - Guidance in Career Education (2)**

Designed to acquaint the student with an understanding of principles, methods and procedures of career education guidance. Describes plans for developing a program to assist youth in preparation for entering upon and making adjustments in career choices.

**VOED 02510 - Coordination of Cooperative Education (2 to 3)**

Selection, development, and presentation of materials used in supervision of students in the work place. Includes methods, techniques, evaluation, current practices, and trends in teaching and supervising of COE.

**VOED 02511 - Coordination of Career Education Practicum (1)**

Supervised practicum experience in cooperative education program that supports a cooperative/work internship program for its students. Includes job placement strategies, curriculum development, and supervision of students in supervised work experiences.

**VOED 02515 - Instructional Methods for Career Education (3)**

An introduction and modeling of successful teaching assessments and data to improve instruction and classroom management.

**VOED 02520 - Special Investigations in Career Education (1 to 3)**

Independent study in career education where the selected problems to investigate could include topics such as methods, control, publicity, finance and equipment in the varied disciplines in career education. This course may be repeated with a change in topic. (F, SS)

**VOED 02540 - The Adult Learner (3)**

Organization and administration of programs for adults. A study of teaching procedures, recent trends in subject matter, materials, techniques and evaluation as applied to adult education. This course provides opportunity for observation and participation in adult programs.

# Appendix



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