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GRADUATE BULLETIN
2025-2026

GRADUATE COORDINATORS

Graduate Coordinators are responsible for implementing the policies and facilitating the procedures of graduate study at Southeast Missouri State University within their respective units. They serve as an information resource for prospective and current graduate students with program specific questions and coordinate college graduate programs relative to the policies and procedures set forth by Graduate Studies. The most current listing of Graduate Coordinators may be found at https://semo.edu/grad/coordinators.html

STUDENT RESPONSIBILITY

Graduate students are responsible for knowing and complying with the policies and procedures contained herein which govern all graduate students.

APPEALS PROCESS

Students who, for cause, seek relief from institutional policies may appeal to the Graduate Council. A letter of petition clearly stating the reason for the appeal should be addressed to the Graduate Council. For issues which relate to the graduate program, the first level of appeal is the faculty member followed by the department chairperson.

NONDISCRIMINATION

Admission decisions are made without regard to race, ethnicity, creed, gender, marital status, veteran status, disability, or national origin.

CIVIL OR COLLEGE DISCIPLINE

Applicants for admission are asked to disclose details of previous civil or college discipline. The Office of Admissions and the Office of the Dean of Students will review information provided by the applicant and may request additional information and a personal interview with the applicant prior to reaching an admission decision. The University reserves the right to deny admission to an applicant or admit with restrictions based upon the review. Individuals with a felony/criminal background (pending charges and SIS included) are not allowed to live in campus housing facilities. Misrepresentation of the facts or failure to provide requested information could be cause for refusal of admission, cancellation of admission or suspension from the University.

ADMISSION REQUIREMENTS FOR GRADUATE PROGRAMS

A student will be admitted to graduate study when the following admission requirements are satisfied:

1. Holds a baccalaureate degree from a U.S. Department of Education-recognized institution, regionally accredited institution or recognized non-U.S. institution.
2. Has an undergraduate cumulative GPA of at least 2.5 on a 4.0 scale (except when superseded by specific program requirements which require a higher GPA).
3. Has met other specific requirements for applicable program (see Program Admission Policies)

ADMISSION CLASSIFICATIONS

Students will be admitted to graduate study in one of seven admission categories:

1. Regular Admission-The student meets both the Graduate Studies and departmental standards for admission.
2. Provisional Admission-The student holds a baccalaureate degree but does not meet the course prerequisites for the program or is a senior in her/his last semester who is seeking admission for a subsequent semester. Provisional admission will normally be granted for only one semester. Upon recommendation of the student's advisor, the provisional period may be extended. Students admitted provisionally to graduate studies who have undergraduate prerequisite courses to complete will be charged graduate fees for their coursework. If students have undergraduate coursework to complete prior to formal admission to a graduate program, they may wish to apply for admission as a second degree-seeking undergraduate student to complete prerequisites at the undergraduate fee rate. After completion of the coursework, students can apply for graduate admission.
3. Academic Probationary Admission-Students with at least a 2.25 undergraduate cumulative GPA and a 2.75 in the last 60 hours may be admitted on a probationary basis pending completion of 9 hours of 600-level work with a grade of 'B' or better. (See specific program requirements which may supersede these minimum standards.)
4. Conditional Admission - International students who need additional English language training may be conditionally admitted to participating graduate programs through the Intensive English Program (IEP). Applicants must meet all admission requirements except for test scores (i.e., TOEFL or IELTS, GRE, GMAT). Conditionally admitted students may not enroll in graduate-level classes until they satisfy all remaining graduate program admission criteria.
5. Non-degree-seeking Admission - Students who do not wish to pursue a degree but who are eligible for graduate study may take courses for graduate credit as non-degree-seeking students. This includes international students who participate in approved exchange programs at Southeast Missouri State University, and whose educational levels in their respective countries of origin are commensurate with graduate students at this institution. Non-degree-seeking students are not eligible for financial aid. Departmental approval is required to apply credits earned as a non-degree-seeking student to a degree program.
   A domestic applicant must submit an Application for Graduate Admission as a non-degree-seeking student and proof of U.S. citizenship, permanent residency or lawful presence in the U.S.
   An international applicant must submit an Application for International Student Admission as a graduate non-degree-seeking student, passport copy, proof of finances, English proficiency verification, college or university transcripts and degree certificates and may be required to pay a $60 non-refundable application fee.
6. Senior Admission - Senior Admission/Dual Enrollment - A degree-seeking undergraduate senior in his/her last semester at Southeast Missouri State University, not counting the student teaching or internship semester, may be admitted to pursue graduate studies if:
   - The student has a minimum 2.75 cumulative GPA.
   - The student meets both the Graduate Studies and departmental standards for admission.
   - The student will complete a bachelor's degree at the end of the semester, or the following semester if it is the student teaching/internship semester.

   Students may not enroll in more than 6 graduate credit hours during the semester of dual enrollment.

7. Accelerated Programs – Southeast Missouri State University offers its eligible degree-seeking undergraduate students the opportunity to get both undergraduate and graduate credit for some 500-level courses. Please contact the department to ascertain what courses are acceptable for the Accelerated Program. Students can apply for the Accelerated Program upon the completion of 60 credit hours. The requirements for admission to this program are:
   - Have completed 75 credit hours prior to the semester in which a course is taken in the Accelerated Program.
   - Meet GPA requirements specified by the department.
   - Complete Accelerated Program Application with department chair signature.

   All application documents must be submitted directly to the department for approval. The deadline for receipt of all materials by the department is the last working day prior to the beginning of each semester. Students who qualify for the accelerated program are limited to 12 credit hours of graduate-level coursework, and departments may set lower limits. No more than 6 credit hours of graduate-level coursework can be completed each semester. Courses will be initially recorded as undergraduate credit. Once final grades are available, graduate credit will be recorded.

ADMISSION PROCEDURES – REGULAR ADMISSION

The prospective student must submit an Application for Graduate Admission to the Office of Admissions. All transcripts and other required documentation must be sent directly to the Office of Admissions no later than May 1 for the summer semester, August 1 for the fall semester, December 1 for the spring semester (see specific program requirements which may supersede these deadlines). The applicant must also complete the following steps and meet the following requirements:

1. Request that an official transcript showing graduation from an accredited college and complete individual transcripts from all colleges attended be sent directly to the Office of Admissions (Southeast Missouri State University transcripts do not need to be sent).
2. Submit proof of U.S. citizenship, permanent residency, or lawful presence in the U.S. This is required to maintain compliance with Missouri House Bill 390. Acceptable documents include valid driver's license, state-issued non-driver's identification card, U.S. birth certificate, U.S. military identification card, U.S. passport, I-551 card (resident alien card), passport stamped "Approved I-551" or "Processed for I-551."
4. Comply with Graduate Studies and departmental standards for admission.

ADMISSION OF INTERNATIONAL STUDENTS

Applicants who are not citizens, asylees or permanent residents of the United States must apply through the Office of International Education and Services. The application process is outlined at https://semo.edu/international/admissions/grad.html

The IEP assists multilingual learners at Southeast through coursework and services that help them understand and express academic ideas in English. Graduate applicants may request conditional admission and use IEP coursework to meet Southeast's English proficiency admission standards for participating departments. Please visit https://semo.edu/international/english-programs/index.html for further details. Any multilingual learner may request a consultation for language support at international@semo.edu.

APPLICATIONS

The application for admission can be completed on the Graduate Studies web site at https://semo.edu/academics/grad or obtained by contacting the appropriate office:

Domestic Students:

Office of Admissions
MS 3550
One University Plaza
Cape Girardeau, MO 63701
(573) 651-2590
admissions@semo.edu

International Students:

International Education and Services
MS 2000
One University Plaza
Cape Girardeau, MO 63701
(573) 986-6863
international@semo.edu

ACADEMIC STANDARDS

A grade point average of 3.0 or higher on a scale of 4.0 in all graduate work taken and a grade point average of 3.0 or higher on a scale of 4.0 in all graduate work taken at Southeast Missouri State University is required for a degree, unless otherwise required by a degree program.

- A student who accumulates a graduate grade point average below 3.0 will be placed on academic probation subject to the following provisions.
    a. A student who has a cumulative GPA of less than 3.0 will be placed on beginning probation the first semester their GPA is below a 3.0. The student may continue in the program for one additional semester. During that semester, a student must raise their GPA to 3.0 or above or they will be placed on academic suspension and may not continue in a graduate degree program until obtaining the written approval from the appropriate college/department/program official(s) and the Dean of Graduate Studies. Failure to follow this procedure will result in academic suspension from the graduate school. To be removed from academic suspension status, the student must repeat or take additional coursework to achieve a cumulative grade point average of 3.0 or higher.
    b. A student who receives a failing grade (F) in a graduate course may not continue in a graduate program until obtaining the written approval from the appropriate college/department/program official(s) and the Dean of Graduate Studies. Failure to follow this procedure will result in academic suspension from the graduate school. To be removed from academic suspension status, the student must successfully retake the failed course and have a cumulative grade point average of 3.0 or higher.
- Non-degree-seeking students are expected to meet the same standards as degree students with respect to maintaining a 3.0 or higher grade point average.
- Graduate courses are graded 'A,' 'B,' 'C,' and 'F.' There is no 'D' grade at the graduate level. Some courses may be graded on a credit/no credit (CR or F) basis.
- A grade of 'Incomplete' (I) must be removed during the next academic year, exclusive of the summer semester, or a grade of 'F' will be recorded, and the student will be placed on academic

probation. For a final research project with a grade of 'I' assigned, that grade will remain on the permanent record for up to six years until the research project is completed. When completed, upon receipt of a signed grade change card in the Registrar's Office, the final grade will be recorded in place of the grade of 'I'. If, after six years, the grade of 'I' in the research project is not replaced, a grade of 'F' will be recorded in place of the 'I' grade.

GENERAL PROVISIONS

- All requirements for the master's degree must be completed within a six-year period.
- For the fall and spring semesters, a maximum of nine credit hours constitutes a full load. Students wishing to take additional hours will need to be in good academic standing and have approval from their advisor. The maximum number of graduate credit hours that a student may schedule during a summer semester is 9 hours. Students wishing to take additional hours will need to be in good academic standing and have approval from their advisor. Such requests are considered on an individual basis, and the total number of hours allowed will be dependent on the length of the session in which they are taking those hours. Students will not be able to take over 6 hours in one 4-week session.
- One half of the hours required for the degree must be in courses numbered 600 or above. Workshop credit may not be used to fulfill this requirement.
- Dual-enrollment courses cannot be repeated for graduate credit if they appear on the student's undergraduate transcript. No coursework, including 500-level courses, applied to the undergraduate degree can count toward a graduate degree except those 500-level courses taken in approved accelerated degree programs.
- Students taking credit/no-credit courses must demonstrate "B" level work to receive "credit" for a graduate course.
- For each master's degree program, the student must produce a significant capstone work (e.g., thesis, non-thesis paper, internship paper, or creative work).
- Seniors in their last semester may apply for a special status that allows them to take a 600-level course.

ACADEMIC HONESTY

Academic honesty is one of the most important qualities influencing the character and vitality of an educational institution. Academic misconduct or dishonesty is inconsistent with membership in an academic community and cannot be accepted. Violations of academic honesty represent a serious breach of discipline and may be considered grounds for disciplinary action, including dismissal from the University.

Academic dishonesty is defined to include those acts which would deceive, cheat, or defraud so as to promote or enhance one's scholastic record. Knowingly or actively assisting any person in the commission of an above-mentioned act is also academic dishonesty.

Students are responsible for upholding the principles of academic honesty in accordance with "The University Statement of Student Rights" found in the Student Handbook and in accordance with "Academic Policy and Procedures" found in the Undergraduate or Graduate Bulletin. The University requires that all assignments submitted to faculty members by students be the work of the individual student submitting the work. An exception would be group projects assigned by the instructor; in this situation, the work must be that of the group. Academic dishonesty includes:

Plagiarism:

In speaking or writing, plagiarism is the act of passing someone else's work off as one's own. In addition, plagiarism is defined as using the essential style and manner of expression of a source as if it were one's own. If there is any doubt, the student should consult his/her instructor or any manual of term paper or report writing. Violations of academic honesty include:

1. Presenting the exact words of a source without quotation marks;
2. Using another student's computer source code or algorithm, or copying a laboratory report; or
3. Presenting information, images, judgments, ideas, or facts summarized from a source without giving credit.

Cheating:

Cheating includes using or relying on the work of someone else in an inappropriate manner. It includes, but is not limited to, those activities where a student:

1. Obtains or attempts to obtain unauthorized knowledge of an examination's contents prior to the time of that examination.
2. Copies another student's work or intentionally allows others to copy assignments, examinations, source codes, or designs;
3. Works in a group when she/he has been told to work individually;
4. Uses unauthorized reference material during an examination; or
5. Have someone else take an examination or takes the examination for another.

General Responsibilities for Academic Honesty:

It is the University's responsibility to inform both students and faculty of their rights and responsibilities regarding such important matters as cheating and plagiarism. Most of what is considered unethical or dishonest behavior can be avoided if faculty and students clearly understand what constitutes such practices and their consequences. The University community should also be aware of the procedures to be followed should a breach of academic honesty occur.

The faculty member is responsible for clarification to his/her class of those standards of honesty for class assignments or functions where such standards may be unclear or when such standards vary from the accepted norm. Further, some faculty may choose to utilize preventive measures (multiple exams, alternate seating, etc.) to help insure the maintenance of academic honesty. However, the use of such measures is the prerogative of the individual faculty member and is not a responsibility or requirement of faculty in general.

The fundamental responsibility for the maintenance of honesty standards rests upon the student. It is the student's responsibility to be familiar with the University policy on academic honesty and to uphold standards of academic honesty at all times in all situations.

Procedure for Adjudicating Alleged Violations of Academic Honesty:

Faculty members who discover evidence of academic dishonesty should contact the student within five business days of discovering the alleged dishonesty to arrange to meet and discuss the allegation. Prior to this meeting the faculty member may consult with the Department Chairperson, the appropriate Dean, and the Office of Student Conduct. The following sections describe the procedures to be adhered to in each of the listed instances: the student acknowledges the violation, the student denies the

violation, and the appeals process. If the faculty member is the Department Chairperson, a departmental designee will assume the Department Chairperson's role in this protocol and references to the Department Chairperson should be read as departmental designee. The procedures below should be followed with online, ITV or face-to-face classes.

Informal Resolution When Student Acknowledges the Violation:

1. The faculty member will meet with the student suspected of engaging in academic dishonesty. Faculty for online courses will contact students via email with copies of the assignment under review attached.
2. If the student acknowledges the act of academic dishonesty, the faculty member will resolve the issue informally or move to the first step of the Procedure for Formal Resolution. Students enrolled in ITV or online courses who fail to respond to electronic correspondence from the faculty within five (5) business days will either receive academic sanctions or be referred for a formal hearing.
3. The faculty member has the discretion to determine the course of action after conferring with the student and may either excuse the student based on the facts or impose an appropriate sanction. If the faculty member considers the student's actions not to be an egregious violation of the academic honesty policy or his/her action resolves the matter, then the matter is resolved.
4. In imposing a sanction or sanctions, faculty members must adhere to the grade sanction policy, if any, as described in the faculty member's course syllabus. A faculty member's grade sanction policy may not include permanent removal of the student from the course or suspension or expulsion from the University.
5. If a faculty member's course syllabus does not include a grade sanction policy, a faculty member may impose one or more of the following sanctions: require the student to redo the work, fail the student on the work, or require the student to receive additional instruction as provided by the University Library, Writing Center, or other University resources.

Informal Resolution When the Student Does Not Acknowledge the Violation or Does Not Accept Faculty's Sanctions:

1. If the student does not acknowledge the violation or believes the faculty's sanctions are excessive, he/she can request a formal hearing.
2. Upon requesting formal hearing the student will follow Procedure for Formal Resolution.

Formal Resolution When Student Acknowledges the Violation & Faculty Refers for Judicial Action:

1. Faculty member determines whether the violation warrants referral to the Department Chairperson for judicial action.
2. If the faculty member believes that the violation warrants judicial action, notification should be provided to the student and the faculty member's chairperson within five (5) business days following the initial faculty-student discussion.
3. The Department Chairperson shall submit written notification (utilizing the approved form) to the appropriate Dean and the Office of Student Conduct with a copy to the student, within five (5) business days of receiving the faculty notification.
4. Within five (5) business days after receiving notification from the Department Chairperson, the Office of Student Conduct will schedule a judicial conference to address the charge (assign sanctions) of academic dishonesty. The Office of Student Conduct will immediately

initiate written contact with the student enrolled in online or ITV courses per electronic correspondence.

5. In addition to being required to complete the sanction or sanctions imposed by the faculty member in accordance with the guidelines in the Procedure for Informal Resolution When Student Acknowledges the Violation, the student will be placed on Disciplinary Probation at least through the next semester in which the student is enrolled at Southeast Missouri State University. If the student is not in good disciplinary standing, the Office of Student Conduct will follow the Code of Student Conduct to determine the appropriate disciplinary sanction.
6. In addition to the original faculty sanctions, the Chair can impose additional sanctions in accordance with the guidelines in the Procedure for Informal Resolution When Student Acknowledges the Violation.
7. The Department Chair may recommend failing the course, suspension or expulsion if he/she believes the incident warrants more severe action than Disciplinary Probation. These recommendations, along with supporting documentation, will be shared in writing with the appropriate Dean and Office of Student Conduct (with a copy to the Dean of Students).
8. The Office of Student Conduct will review documentation, meet with the student, and impose sanctions as warranted.

Formal Resolution When the Student Denies the Violation

In cases of alleged academic dishonesty where facts are disputed or denied by the student, the following procedures will be completed.

1. The faculty member will forward a written summary within five (5) business days of the initial discussion with the student to the Department Chairperson. This summary must contain copies of all relevant materials and the names of any witnesses. Student access to information about the alleged incident will be determined in accordance with the guidelines published in the "Code of Student Conduct" found in the Student Handbook.
2. Within five (5) business days after receiving the written summary of the incident from the faculty member, the Department Chairperson will contact the faculty member and the student to arrange a formal hearing. The formal hearing will be conducted within two weeks of notification. The Department Chairperson will also notify the Office of Student Conduct of the formal hearing as soon as it is scheduled.
3. For online or ITV courses, the Department Chairperson will notify the student of the formal hearing via email. The student will be given five (5) business days to respond to the Department Chairperson's notification.
4. The Office of Student Conduct will immediately initiate written contact with the student to review the student's rights in the judicial process, the allegations against the student, and the hearing procedures. The Office of Student Conduct will inform the student that he or she may select a person of the student's choosing to accompany him or her to the formal hearing. Such a person may act only in an advisory capacity during the formal hearing. Students in online or ITV courses may have this advisory person review the evidence and the student's response.
5. The Department Chairperson shall consult with the Office of Student Conduct or the Dean of Students regarding the student's due process rights before proceeding with the formal hearing.
6. The hearing will be conducted by the Department Chairperson in accordance with the standards provided in the University's "Code of Student Conduct" found in the Student Handbook. For students enrolled in online or ITV courses, the Department Chair will send the evidence to the student electronically. The student will be given five (5) business days to respond to the email. The Department Chair will review the evidence presented by the faculty and the student's

response.

7. After the hearing (or review of evidence and online student response), the Department Chairperson will submit written notification of the result of the formal hearing to the appropriate Dean and the Office of Student Conduct with a copy to the student within five business days.
8. If the student is found not in violation of the academic honesty policy, then the case will be dismissed.
9. If the student is found in violation of the academic honesty policy, then the student will be required to complete the sanction or sanctions imposed by the faculty member in accordance with the guidelines in the Procedure for Informal Resolution When Student Acknowledges the Violation.
10. The Department Chair will refer the student to the Office of Student Conduct who will place the student on disciplinary probation at least through the next semester in which the student is enrolled at Southeast Missouri State University. If the student is not in good disciplinary standing, the Office of Student Conduct will follow the Code of Student Conduct to determine the appropriate disciplinary sanction.
11. In addition to the original faculty sanctions, the Chair can impose additional sanctions in accordance with the guidelines in the Procedure for Informal Resolution When Student Acknowledges the Violation.
12. The Department Chair may recommend failing the course, suspension, dismissal or expulsion if he or she believes the incident warrants more severe action than disciplinary probation. These recommendations, along with supporting documentation, will be shared in writing with the appropriate Dean and Office of Student Conduct (with a copy to Dean of Students).
13. The Office of Student Conduct will review documentation, meet with the student, and impose sanctions as warranted.

Appeals:

Either the student or the faculty member may appeal the result of the formal hearing.

1. An appeal must be made within five (5) business days after the decision is rendered.
2. Appeals must be in writing through e-mail, local mail or personal delivery.
3. There are two levels of the appeals process. The All University Judicial Board is the first level and the Provost is the second and final level of appeal.

The appeals process is not for retrying or rehearing a case. At each level, an appealed case merits being heard based on the following conditions.

1. An excessive sanction when compared with previous sanctions for similar violations under similar circumstances. *
2. The discovery of significant new information relevant to the case.
3. Procedural error regarding the student's rights involving error in the administration of judicial procedures by the faculty, Department Chair or Office of Student Conduct.

Decisions made during the appeals process can result in one of the following.

1. The sanction being altered based on a finding that the sanction is not consistent with past practice.
2. A new hearing being granted based on new information.
3. A new hearing being granted because the Protocol for Adjudicating Alleged Violations of Academic Honesty was not applied appropriately.

No grade penalty should be assigned by the faculty member until the judicial process determines that an act of academic dishonesty has occurred. If the charges cannot be resolved prior to the end of the current semester, a grade of 'I' should be assigned pending the outcome of the hearing. The 'I' will remain on the student's transcript until the charges are resolved. If the charges are still not resolved before the time frame for the 'I' expires, the faculty member will request from the Registrar's Office an extension of the grade of 'I'. The faculty member and the Department Chair will be notified of the outcome of the disciplinary case in order to assign a grade for the course. If the student is found not to be in violation of the Academic Honesty Policy, neither the faculty member nor any other member of the University community may take any other action against the student.

*Specific sanctions in syllabus are not subject to appeal.

ADVISING

Each student admitted to a degree program is assigned an advisor by the department in which the student plans to major. Once the major is declared, the student may refer to their Degree Works audit at any time to evaluate progress toward the degree. It is recommended that students review their audits with their advisors at least once per semester.

Students should not assume that courses taken at Southeast or elsewhere without advisor approval will apply to the degree. With advisor approval, a maximum of 12 semester hours of graduate level course work completed prior to admission may be applied to a degree program unless prohibited by program regulations. In some departments, students may need to choose electives approved by the advisor. The advisor will notify the Registrar's Office of such choices so that the approved electives will appear on the student's degree audit.

CORRESPONDENCE COURSES

No correspondence work will be accepted for graduate credit.

COURSE NUMBERING

500-level classes are advanced undergraduate classes. Most are open to graduate students. To earn graduate credit, additional course requirements must be met.
600-level courses are open to graduate students only.
700-level classes are reserved for Ed.S. students.
900-level classes are reserved for Ed.D. students.
Workshops numbered 834-866 are open to both graduate and undergraduate students. Those numbered 867-899 are open to graduate students only. Workshop credit may not be used to satisfy the 600-level course requirement.
To accommodate the needs of students, 600 and 400 level courses maybe simultaneously delivered in a classroom. There are, however, differences in requirements, expectations and evaluation of graduate students.

ENROLLMENT/CANCELLATION/WITHDRAWAL

Enrollment:

Registration/Enrollment. All currently enrolled students register for classes using the web registration system located at my.semo.edu. Web registration instructions can be accessed on the Registrar's website, https://semo.edu/student-support/academic-support/registrar/

Controlled Classes: Controlled classes are not available for enrollment through the web. Students should contact the department to enroll in controlled classes.
Change of Schedule. Students may add or drop classes until the deadlines listed on the Semester Calendar which can be accessed on the Registrar's website, https://semo.edu/student-support/academic-support/registrar/
Late Enrollment. Students are expected to enroll prior to the start of classes. They may enroll during the first week of the fall or spring semester. Late enrollment dates for the summer semester can be accessed on the Registrar's website, www.semo.edu/registrar. A fee may be charged for late enrollment.

Cancellation/Withdrawal from the University:

Students can cancel their enrollment prior to the start of classes using the web registration system to drop all classes or by notifying the Office of the Registrar in writing. Such notification must be RECEIVED by the first day of the semester. Students can withdraw from the University until the "Last Day to Drop a Class," listed on the Registrar's website, https://semo.edu/student-support/academic-support/registrar/ , using the web registration system or by notifying the Office of the Registrar in writing. After that date and until the official withdrawal date which is listed on the Registrar's website, students must contact the Office of the Registrar to complete the withdrawal process. All financial obligations to the University must be fulfilled. Grades of 'F' are recorded for students who do not withdraw officially from the University.
Deadline for Refund. Students who cancel enrollment before the semester begins are eligible for a refund of 100 percent of any incidental fees that they have paid. Students who withdraw from classes after the semester begins are eligible for a refund of incidental fees based on the sliding scale available through Student Financial Services, Academic Hall, 1st level.
Deadline for Withdrawing Without Penalty. Students may not withdraw during the three weeks preceding final examinations without the approval of the Registrar. The time period for withdrawing is reduced proportionately for terms of fewer than 15 weeks.

FEES

Student Financial Services (SFS) administers all fees, billing, and financial aid. SFS operates as a single service center for all your financial needs. The SFS website (www.semo.edu/sfs) provides extensive information for most of your general questions. All fees and policies are established by the Board of Governors and available through Student Financial Services website (https://semo.edu/student-support/financial-services/cost/). Fees are set annually by the Board of Regents and are subject to change without written notice.

Application Fee

International applicants for regular admission must submit a nonrefundable application fee of $60. There is no domestic application fee.

Graduation Fee

Degree candidates are required to pay a $50 non-refundable fee during the semester in which they plan to complete their degree requirements.

Late Enrollment Fee

Students enrolling on or after the first day of classes for the semester are subject to a $15 late enrollment fee.

Special Course Fees

Special course fees are assessed for certain courses to cover the costs of consumable supplies, specialized equipment, and/or other expenses unique to the course. These fees are published and

available online at https://semo.edu/student-support/financial-services/cost/. Please note that all fees are subject to change by the Board of Regents without prior written notice.
Enrollment in GR698, GR699, or GR799 requires a $100 fee.

FINAL MASTER'S EXAMINATION

Departments may offer thesis or non-thesis degree options. Each candidate who elects the thesis option will be required to pass an oral examination in either GR699 or GR799 during the final semester. Each candidate who elects the non-thesis option will be required during the final semester to satisfactorily complete a course-embedded capstone or summative requirement and may also be required to pass a written comprehensive examination in GR698. Incomplete grades are not allowed in GR698, GR699 or GR799.
The following courses (GR) are common to all departments:
GR698. Master's Final Comprehensive Examination. Written comprehensive examination over the degree program. Students must enroll in GR698 during the final semester. $100 fee applied. (0)
GR699. Master's Oral Examination. The oral examination will be conducted for students writing a thesis or internship paper in lieu of the comprehensive examination. $100 fee applied. (0)
GR799. Education Specialist Oral Examination. $100 fee applied. (0)

FINANCIAL AID

Graduate students enrolled at least half-time are eligible to borrow through the Federal Direct Unsubsidized Loan Program. Graduate students who are borrowing for a loan period beginning after July 1, 2012 are not eligible for a subsidized loan. There are a limited number of endowed scholarships available to graduate students. All students are automatically reviewed for endowed scholarships. There is no general scholarship application. If a student meets the minimum requirements for an endowed scholarship which requires supplemental information, information will be emailed to the Southeast email address.

GRADUATE ASSISTANTSHIPS

Teaching, research, and administrative assistantships are available for qualified students in most areas in which degrees are offered. To be eligible for an assistantship, students must meet one of the following criteria:

- cumulative undergraduate GPA of at least 2.7
- a previous master's degree
- 9 hours of completed graduate level coursework in his/her degree program with at least a 3.5 graduate GPA

The assistantship provides a stipend plus a fee waiver for approved degree plan courses. Graduate Assistant fee waivers are available for up to 9 credits of graduate level coursework in both the fall and spring semesters and up to 6 credits during the summer semester. Students having an assistantship must be enrolled in a minimum of six credit hours per semester (Fall and Spring). However, in order to meet full-time graduate enrollment for FAFSA, SEVIS, or other purposes, a minimum of nine (9) hours is required. In most instances, the time limit for a student to hold an assistantship is two years. Interested persons should apply to the chairperson of the department providing the degree they wish to pursue. Additional information related to the assistantship can be found in the Graduate Assistant Handbook at the Graduate Studies web site.

GRADUATION

Students who plan to complete all graduation requirements should enroll for their final classes, internships, oral and/or comps, and apply for graduation immediately. The deadline to apply is the last day of finals week in the semester preceding the student's last semester of enrollment.
Students normally participate in commencement in the semester in which they plan to graduate. Since there is no commencement during the summer semester, students graduating in the summer may choose to participate in the preceding spring commencement provided they are enrolled in all requirements, or in the fall commencement following their graduation. Specific dates and information are available on the commencement website: https://semo.edu/student-support/academic-support/registrar/graduation/

Students are solely responsible for knowing and meeting degree requirements. Students cannot graduate with any incomplete classes, including elective courses which may or may not be required for the completion of the degree, on their record.

INCOMPLETE GRADES

An incomplete ("I") may be given when the graduate student is doing passing work but is unable to complete all requirements because of unusual or unique circumstances acceptable to the instructor. In no case may an "I" be agreed to by an instructor prior to the drop date. An "I" may not be used to permit a student to repeat a course or to improve a grade. **An 'I' is never awarded because of poor work.** The 'I' must be removed by a date agreed to by the faculty member and student. At the time the 'I' is awarded, the faculty member will complete a form indicating the reason for awarding the incomplete, the work that must be completed and the deadline for completing the work. Copies of the form will be retained by the student, faculty member and department. In all cases, the 'I' must be removed within one year unless an extension has been granted by the faculty member with the concurrence of the Dean of the appropriate college. Incompletes not removed within one year will be converted to a grade of 'F.' All incompletes must be satisfied four weeks prior to the student's intended graduation date. This policy does not apply to research and experiential work such as thesis, internship, and practicum, which may be in progress more than one semester.

INDEPENDENT STUDY

Independent study offers the student an opportunity for study in an area not addressed by the curriculum of a department. The student wishing to pursue an independent study is responsible for identifying and obtaining the approval of the faculty member under whom the study is to be done and, for degree-seeking students, the approval of the major advisor. To gain approval, the student should prepare an outline of the proposed study. When the outline is approved by the faculty member, an Independent Study Approval form must be presented to the department chairperson. Except in unusual circumstances, the content of an independent study may not duplicate that of an existing course. Independent study may never be used to grant graduate credit for completion of an undergraduate course. No more than 12 credit hours may be applied to a degree program.

REQUEST FOR EXTENSION TO COMPLETE A GRADUATE PROGRAM

All requirements for the master's degree must be completed within a six-year period. If an extension is requested:

1. Student must address the request to the Dean of Graduate Studies (letter or email attachment) in which they give the reason for failure to complete on time, projected plan to complete, and projected semester to finish.

2. Advisor or Graduate Program Coordinator must endorse the request by submitting a letter or email of support to the Dean of Graduate Studies t.
3. Dean of Graduate Studies must approve the request, including the anticipated timeline for completion.
4. Dean of Graduate Studies submits information to Registrar for final approval and notation of extension in student record.

RESEARCH REQUIREMENT

A course in research methods or its equivalent is required on all degree programs. The student should plan to take the appropriate course within the first 12 hours.

RESIDENCE REQUIREMENT/TRANSFER CREDIT

In all cases, over one-half of the coursework required in a degree program must be completed at the Cape Girardeau campus, the university's Regional Campuses and Center, or through Southeast Online. Students must work carefully with their advisor to insure that the residence requirement is met. Transfer courses and credit awarded for prior learning do not count toward meeting the residence requirements.

No more than 12 hours of transfer credit or credit older than 6 years may be applied to a graduate program. Transfer credit must be accepted by the major advisor and is applied to a program at candidacy. Before enrolling for credit at another institution, prior approval must be obtained from the major advisor. Only credit in which a 'B' or better was earned will be accepted for transfer. Credit for transfer is only acceptable if earned from a regionally accredited institution. For programs in education, off-campus credit earned from a non-NCATE accredited institution will not be accepted.

SECOND MASTER'S DEGREE

With approval of the advisor and the Dean of Graduate Studies, 12 hours from the first master's degree may be applied to a second degree. Prior credit is subject to the six year time limit.

THESIS OPTIONS

Thesis

The student who elects the thesis plan must complete the following steps:

1. Achieve candidacy status for the program if required.
2. The student should prepare a brief outline (some departments require a more extensive proposal) which serves as a preliminary document for approval.
3. The student must obtain the Topic Approval Sheet from the Graduate Studies website.
4. The student will identify a chair and an additional committee member from the major area to serve on the thesis committee. The student will work with their committee chair to identify a third committee member from outside of their specific discipline. The third member can be from the same department but must have a different primary discipline. in the major area to serve on the thesis committee. Signing of the Topic Approval Sheet by these members will signal preliminary approval of the concept. (The M.N.S. has slightly different procedures; students should check with their advisors.)
5. Upon appointment of the third member, the student should arrange a meeting of the committee to discuss and approve the proposal. It is after this meeting that the Topic Approval Sheet is signed by the department chairperson, third member of the committee and emailed to

the Office of Graduate Studies at graduatestudies@semo.edu for approval by the Dean of Graduate Studies.

6. The student may at this point enroll for three hours of thesis credit. If deemed appropriate by the student's committee, the student may enroll for additional hours in a subsequent semester. A minimum of 3 hours credit is required in thesis with a maximum of six hours credit earned in no less than two semesters.
7. The student must be enrolled in GR699 Master's Oral Examination during the final semester.
8. The thesis examining committee usually consists of the thesis committee and is normally scheduled for not more than two hours.
9. The oral examination should be scheduled by the thesis advisor in accordance with the deadlines announced in the class schedule for the appropriate term.
10. At the successful conclusion of the oral examination, all members of the committee and the department chairperson sign the Acceptance Sheet for Graduate Thesis. Copies of the form and thesis guidelines are available on the Graduate Studies website.
11. The student must submit an electronic copy of the thesis and signed Acceptance Sheet to the Office of Graduate Studies via email by the deadline posted on the Graduate Studies website (at least 4 weeks before graduation). The thesis should be submitted in portable document format (pdf). A thesis reader will examine the thesis for proper English usage, format, and readability, and suggest any changes to the student within three weeks. The student then has 7-10 days to make suggested corrections or changes and submit the final copy of the thesis in portable document format (pdf) to the Office of Graduate Studies. The student will then receive instructions on uploading the electronic thesis in pdf format to ProQuest.
12. Students may request bound copies of their thesis for personal or departmental/programmatic use through ProQuest. The thesis is available to the professional community via the ProQuest service, and an electronic copy will be stored and publicly viewable through the Kent Library online catalog.
13. The student must assume the binding costs as per ProQuest requirements. The thesis must follow the style sheet appropriate to the discipline in which it is written as well as the requirements of Graduate Studies.

Creative Project in Lieu of Thesis

Some students may choose a significant creative project as a demonstration of personal artistic accomplishment. The creative project is particularly useful as a vehicle for students in the humanities. Such theses may include production of original literary or musical compositions, paintings, film, sculpture or other art forms. The creative project is created and executed under the supervision of a two or three person committee as determined by the department, similar to that used in the thesis model. The creative project is a credit-bearing project that follows the steps outlined for the thesis, with a main-body structure devised by each department. The creative project shall include a researched introduction by the student to the student's work, the length and medium of which is determined by each department. The introduction may be, for example, an exploration of an influence or influences on the student work, a theme inherent in the work, a pedagogical focus for which the work was developed, or the treatment of an historical period(s) to which the work relates.

Non-Thesis Option

Instead of a thesis, a student may elect to produce another significant capstone work (e.g., non-thesis paper, internship paper, or creative work). NO CREDIT IS ALLOWED FOR SUCH WORK. Students electing this option MAY be required to take a comprehensive examination.

1. The student obtains approval from his/her advisor and the instructor for whom the paper or other capstone work will be written prior to beginning work on the paper.
2. Non-thesis paper or other capstone work may only be completed under the direction of a regular member of the graduate faculty. Associate or adjunct graduate faculty may direct non-thesis or capstone work if granted approval by the department chair, dean of the college, and dean of Graduate Studies.
3. The supervising instructor and advisor will be responsible for certifying the completion of each paper or other capstone work by submitting via email, a pdf copy of the acceptance sheet with Graduate Studies no later than the deadline specified in the semester class schedule.
4. In all cases, the paper or other capstone work must be approved and the acceptance sheet filed with Graduate Studies prior to taking the comprehensive examination.
5. Any paper submitted as a capstone work must follow the style guide appropriate to the discipline in which it is written.

WORKSHOPS, INSTITUTES, PROBLEM COURSES AND INDEPENDENT STUDY

A maximum of 12 semester hours earned through workshops, institutes, problem courses, and independent study may be applied on a degree program providing the work is approved by the advisor. Only six hours of "credit-no credit" work may be applied to a degree. (Exceptions are made for students in Community Counseling.) Workshop credit may not be used to satisfy the 600-level requirement.

GENERAL INFORMATION

CAREER SERVICES

The mission of Career Services is to help students become independent, career-ready professionals, with the tools they need to thrive. Mock interviews, resume and cover letter writing assistance, graduate school preparation, and career/major exploration, are offered in addition to other services, to empower students and alumni.

HOUSING

Residence Life at Southeast provides supportive living and learning accommodations for students in a variety of residence halls. Each residence hall is staffed by a Hall Director who works with the student staff members to assist residents in addressing problems, present programs, and assist in a student's success at Southeast. The Residence Life Central Office provides full services for students who have questions about their meal plans, rooms, or other living arrangement concerns.

After a student has been admitted to the University, they may submit a Contract for University Housing online through their student portal. A $150 deposit is required to complete the contract. Students are strongly encouraged to complete their contracts quickly to ensure early access to the room selection process. Hall, room, and roommate assignments are generally confirmed in early July.

For more information about on-campus housing, visit the Office of Residence Life website or contact them at:
Office of Residence Life
Tower Complex Room 102, MS 0055
Cape Girardeau, MO 63701
(573) 651-2274

e-mail: residencelife@semo.edu

MILITARY-AFFILIATED STUDENT INFORMATION

A student who has served in the U.S. Armed Forces, or is a direct family member, to include spouse, child, or legal dependent of, is considered a military-affiliated student.

Admission of Military-Affiliated Students

Military-affiliated students must meet the institution's admission requirements to be eligible for enrollment. See information on admission criteria here.

Evaluation of Military Transfer Credit

Because student veterans received specialized training and education during their service, applicants will be encouraged to submit their Joint Services Transcript (JST) for review. Community College of the Air Force (CCAF) transcripts will be required to be submitted as part of the admissions packet. JST credits will be reviewed/awarded using ACE guidelines; CCAF transcripts will be reviewed in the same manner as other two- or four-year accredited institutions. Registrar's Office personnel will award credit as appropriate. For transfer credit appeals, see the section titled Transfer Credit Appeals under the Admission of Transfer Students section on the website noted above. Or the student may work directly with the Office of Military and Veteran Services (OMVS) on a military transfer credit appeal.

Military Education Benefits/Entitlements

Southeast is a Department of Defense (DoD) Memorandum of Understanding (MOU) signatory, as well as a Principles of Excellence signatory, so students are eligible to use Tuition Assistance and/or Department of Veterans Affairs (VA) educational benefits/entitlements (i.e., GI Bill®, DEA, VR&E). Each program/credential must be approved by either the DoD or the VA, in order for benefits to pay out toward that program. * In addition, each semester a student wants to use these types of financial assistance, the student must complete the proper process. For information or assistance completing the proper process and documentation for either military education benefit/entitlement, contact the Office of Military and Veteran Services.

* The B.S. in Professional Pilot program is not currently eligible for VA approval/funding.

Military-Affiliated Specific Financial Policies

Southeast offers the Domestic Tuition rate that is equivalent to the "in-state" rate for all American citizens, U.S. naturalized citizens, permanent residents, refugees, or asylees. The same rate is also charged for online students and military-affiliated students, to include their spouses and dependents. This Domestic Tuition rate is in compliance with the requirements of PL 113-146 the Veteran Access, Choice and Accountability Act of 2014, Section 702, which waives all non-resident rates to uniformed service veterans and their qualified dependents covered under Section 702, as well as Public Law 117-68, which amends Title 38 USC 3679(c)(2)(A) by adding Chapter 35: Dependents Education Assistance (DEA) recipients to the definitions of covered individuals to be charged in-state tuition.

Southeast is in compliance with the requirements of PL 113-146 the Veteran Access, Choice and Accountability Act of 2014, Section 702. Southeast will waive all non-resident rates to uniformed service veterans and their qualified dependents covered under Section 702.

Also, in accordance with Section 103 of the Veterans Benefits and Transition Act of 2018, if a student has an outstanding balance that will be fully covered by delayed disbursement of a payment under Chapter 33: Post 9/11/Fry Scholarship or Chapter 31: Vocational Readiness and Employment from the U.S. Department of Veteran Affairs, SFS will not assess any penalty for that semester, such as charging late fees, adding holds, canceling classes, or restricting access to campus facilities and services for students. Students receiving military benefits can be subject to those consequences, should they have balances that will not be fully covered by any delayed disbursement of a payment by the U.S. Department of

Veteran Affairs, to include Chapter 1606: Montgomery GI Bill® Selected Reserve, Chapter 30: Montgomery GI Bill® Active Duty, or Chapter 35: Dependents Education Assistance.

Attendance and Withdrawal

Students are expected to adhere to the university's attendance and completion of course work policies. In accordance with Public Law 116-315, Section 1018, Southeast accommodates service members (to include Reserve/Guard) to be readmitted to a program if they are temporarily unavailable to attend class, or suspend their studies, due to service requirements. Students called to or returning from a military service obligation have enrollment options as stated below.

Students returning from active duty may petition instructors to start a course up to 2 weeks after the beginning of the full (16-week) semester, or 1 week for an 8-week course. Due to the compressed nature of six-week and four-week terms, late-start petitions for such classes will not be considered if more than two class sessions must be missed. The request for a late start must be submitted to instructors no later than one week prior to start of the affected term.

Students must submit verification of the return date to instructors via a copy of their official military/reservation orders or their Discharge from Active-Duty Paperwork (DD214). Instructors may contact the OMVS for assistance interpreting any documentation provided by the student.

Instructors, in consultation with their department chair, will determine whether a late start is feasible for their respective courses.

If approved, instructors will set up a written academic agreement with the student detailing the timeline of submission for any missed assignments, projects, or exams. Failure to adhere to this timeline will result in no credit being given for those items.

If a student's return is delayed beyond the originally requested start date, the student should apply for a military withdrawal. Students should contact the OMVS for assistance with this process.

Students called to serve on active-duty orders during a semester and who must leave any time after the midpoint of the term may request one of the following options:

Continued enrollment: The student may complete the course early or, if deemed feasible by the instructor, switch to an alternate course delivery mode. The instructor will establish an academic agreement detailing the timeline for required or alternate assignments, projects, and exams.

Receive an Incomplete (I): Students may pursue an Incomplete with permission from the instructor. Students will work with the instructor to compile a list of assignments, projects, and exams needed to complete the course. Students will have up to one full 16-week semester following the release from active duty to complete the course, or the incomplete will revert to a failing grade. If the orders span into or beyond the full term subsequent to that in which the incomplete is issued, the student may either request an extension of up to one additional semester or request a late drop of the course.

Withdrawal due to military obligations: In compliance with PL117-328-Section 3691A, if a student is called to military service, to include Active Duty, inactive-duty training (i.e., annual training), or State Emergency Duty, said student may withdraw without financial or academic penalty, granted the student provides official military documentation to verify their military service obligation. Students who need to withdraw due to military obligations should contact the OMVS for assistance with this process.

TESTING SERVICES

Testing Services offers standardized examinations on campus. Graduate students needing information about various entrance and aptitude exams should contact the Testing Services office or visit its web site.

TEXTBOOKS

Textbooks are available for purchase through Southeast Bookstore in the University Center. Graduate students purchase all books necessary for courses numbered 600 and above. Graduate Students enrolled in 500 level courses and 600 level courses that are cross-listed with 400 level courses, will be allowed to rent their primary textbook found in Textbook Rental. If you would like to see if there is a rental textbook for your class, log into my.semo.edu and, using the search feature, search for Textbook Rental Book Lookup.

VEHICLE REGISTRATION

All persons who wish to park on the campus must purchase a parking permit.

PROGRAM ADMISSION POLICES – CERTIFICATE PROGRAMS

ADMISSION TO GRADUATE CERTIFICATE IN AUTISM SPECTRUM DISORDER

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

- An undergraduate GPA of 2.75 or higher on a 4.0 scale

ADMISSION TO GRADUATE CERTIFICATE IN CLOUD COMPUTING

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

- An undergraduate GPA of 2.5 or higher on a 4.0 scale

ADMISSION TO GRADUATE CERTIFICATE IN CYBERSECURITY

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

- An undergraduate GPA of 2.5 or higher on a 4.0 scale

ADMISSION TO GRADUATE CERTIFICATE IN HEALTHCARE MANAGEMENT

In addition to the criteria established for general admission to graduate studies, there are departmental criteria. Applicants are eligible for admission if they qualify under one of the following scenarios:

- Bachelor's degree* with a GPA of ≥ 3.0 on a 4.0 scale
- Graduate degree*
- Bachelor's degree* with a GPA of 2.5 to 2.99 on a 4.0 scale
    - Regular Admission with documentation** of one of the following:
        - 5 years of managerial work experience
        - an active healthcare provider license
        - recognized professional certification
    - Probationary Admission otherwise. They will need to complete the first 9 graduate credit hours with grades of B or better.
- Individuals with a bachelor's degree* and GPA under 2.5 on a 4.0 scale may be considered for probationary admission with additional documentation** demonstrating the applicant's preparation for graduate school.

*Degrees earned from a U.S.A. regionally accredited institution or foreign equivalent.

**Decisions about admission based upon the evaluation of a resume, a healthcare provider license, professional certification, or additional documentation would be made at the discretion of the Director – Graduate Business Studies. The healthcare provider license should be something like nursing, pharmacist, etc. that has recognized standards and requires continuing education. Examples of professional certification include PMI Project Management, Six Sigma Green Belt, SHRM Certified Professional, Charter Financial Analyst, Certified Financial Planner, Certified Scrum Master, etc.

Students without an undergraduate degree in business may need to document experience in or demonstrate proficiency in the required foundation coursework* prior to taking courses for which there are prerequisites. The foundation knowledge/coursework includes the following:

- MG 301 Principles of Management
- QM 257 Business Analytics I or BA 601 Graduate Business Statistics Essentials
- The Informatics option also requires MI 375 Management Information Systems or BA 605 Graduate Business Information Systems Essentials

Students must earn a sufficient grade in all of the above classes. ["CR" for Graduate Business Essentials courses. "C" or better for other courses listed.]

*Proficiency in these areas may be demonstrated through any of the following alternatives:

1. Completion of BA601 and/or BA605 Business Essentials coursework.
2. A CLEP or DANTES exam if available. Credit will not be given for these courses with a passing grade on the exam, but a passing score will indicate proof of course knowledge.
3. Applied knowledge of a given domain in the work environment. Three or more years of managerial work experience with significant level of responsibility may be accepted towards MG 301. The extent to which relevant work experience demonstrates proficiency will be determined by the program director. Applicants who would like their work experience to be considered must submit a detailed current resume with their application.

ADMISSION TO GRADUATE CERTIFICATE IN SCHOOL PSYCHOLOGICAL EXAMINER

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

- A master's degree from a college or university meeting approval of the department in one of the following areas: Counseling Psychology; Educational Psychology; School Counseling; or Education
- Evidence of a minimum GPA of 3.5 on a 4.0 scale
- Four letters of recommendation (submitted directly to department after admission)

Probationary Admission

Students with a cumulative GPA below a 3.5 on a 4.0 scale may be admitted on a probationary basis pending completion of up to 9 credit hours in the program area their first semester. Students must complete the 9 credit hours with a GPA of 3.66 with a minimum grade of "B" in each course.

ADMISSION TO GRADUATE CERTIFICATE IN SPECIAL READING K-12 LICENSURE

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 3.0 or higher on a 4.0 scale
2. A valid professional teaching certificate
3. 2 years of teaching experience (this can be completed while in the program under provisional admission)

ADMISSION TO GRADUATE CERTIFICATE IN TRAUMA AND RESILIENCY STUDIES

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.50 or higher on a 4.0 scale

PROGRAM ADMISSION POLICES – MASTER'S DEGREES

ADMISSION TO AGRIBUSINESS (Master of Science)

In addition to the criteria established for general admission to graduate studies, applicants must also have the following:

1. An undergraduate GPA of 2.75 or higher on a 4.0 scale
2. A grade of C or better in a college statistics course is recommended
3. Background in an agriculture-related field (through experience or coursework) is recommended

ADMISSION TO APPLIED BEHAVIOR ANALYSIS (Master of Arts)

Admission is considered only for the summer and fall semesters. In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 3.25 or higher on a 4.0 scale or 6 hours of graduate-level coursework with a 3.0 equivalent in each course
2. Letter of intent addressing preparation for graduate study, ability to succeed at the graduate level and professional goals and objectives. The letter should address what the applicant expects to achieve through graduate level study. The letter of intent should be typed and a maximum of 750 words in length.
3. Two letters of recommendation
4. Identification of potential site to obtain supervised experience

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

ADMISSION TO APPLIED COMPUTER SCIENCE (Master of Science)

The deadline for submission of all application materials for international applicants is March 1 for fall the fall semester and October 1 for the spring semester. Domestic applicants follow the general graduate studies deadlines.

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. A bachelor's degree in computer science, computer information systems or a related field*

* Students with a bachelor's degree from other fields will be required to take up to two prerequisites related to Fundamentals of Computing and Programming (provisional admission)

2. An undergraduate GPA of 3.0 or higher on a 4.0 scale
3. Six completed hours of science and six completed hours of mathematics in the undergraduate degree

Probationary Admission

Applicants who do not meet the general and/or program's admission requirements may be considered for probationary admission upon approval by the graduate program coordinator. Students admitted on probation must complete nine credit hours that count towards the degree with a grade of "B" or better to continue in the program.

ADMISSION TO APPLIED NUTRITION (Master of Science)

Admission is considered for summer semesters only.
Applicants are required to submit application materials through DICAS according to the application deadlines. For more information about DICAS and the application process, view the MSAN Applicant Handbook, which can be found on the program webpage at
https://semo.edu/academics/programs/online/graduate-online/applied-nutrition-online.html

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

- Bachelor's or advanced degree from a regionally accredited college or university or a foreign degree evaluated as equivalent to a U.S. bachelor's degree
- Evidence of a minimum cumulative grade point average of 3.0 on a 4.0 scale
- Verification statement from a Didactic Program in Dietetics (DPD) accredited by Accreditation Council for Education in Nutrition and Dietetics (ACEND) or completed list of approved program pre-requisites approved by the program director
- Completed application requirements (instructions found on the MSAN website at https://semo.edu/academics/programs/online/graduate-online/applied-nutrition-online.html)

ADMISSION TO ATHLETIC TRAINING (Master of Science)

Additional information regarding the application process and deadlines can be found at
https://semo.edu/academics/programs/education-health/graduate/ms-athletic-training.html

Traditional Admission Method (Bachelor's Degree + 2 Program)
In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. A bachelor's degree from a regionally accredited college or university
2. An undergraduate GPA of 3.0 or higher on a 4.0 scale
3. Completed each of the following prerequisite courses with a grade of "C" or better:
    - Human Anatomy with Lab (4 Credit Hours)
    - Human Physiology with Lab (4 Credit Hours)
    - General Biology with Lab (4 Credit Hours)
    - General Chemistry with Lab (4 Credit Hours)
    - General Physics with Lab (4 Credit Hours)
    - General Psychology (3 Credit Hours)
    - Exercise Physiology (3 Credit Hours)

- Biomechanics or Kinesiology (3 Credit Hours)
- Precalculus or Equivalent (3 Credit Hours)

If a student completed a pre-requisite course at a different institution, they should contact the Program Director (kschneider@semo.edu) to either ensure that the course will match the Southeast Missouri State University equivalent by visiting www.semo.edu/transfercredit or be accepted toward the pre-requisite requirement.

4. A minimum of 25 hours of direct observation under the direction of a certified athletic trainer. These experiences must be documented and submitted with the application materials.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Accelerated Admission Method (3 + 2 Program)

Applicants under this method may apply to the MSAT during their third year of study to be considered for conditional/provisional admission. Once all required pre-requisite courses are complete, they can gain full/regular admission.

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. Enrolled at Southeast Missouri State University in the Bachelor of Sciences: Health Sciences program, or through another institution with a signed articulation agreement.
2. An undergraduate GPA of 3.0 or higher on a 4.0 scale
3. Completed 108 credit hours in the BS: Health Sciences program
4. Completed each of the following prerequisite courses with a grade of "C" or better:
    - Human Anatomy with Lab (4 Credit Hours – SEMO Equivalent BS113/013)
    - Human Physiology with Lab (4 Credit Hours – SEMO Equivalent BS114/014)
    - General Biology with Lab (4 Credit Hours – SEMO Equivalent BI163/063)
    - General Chemistry with Lab (4 Credit Hours – SEMO Equivalent CH184/185)
    - General Physics with Lab (4 Credit Hours – SEMO Equivalent PH120/020)
    - General Psychology (3 Credit Hours – SEMO Equivalent PY101)
    - Exercise Physiology (3 Credit Hours – SEMO Equivalent HL331/031)
    - Biomechanics or Kinesiology (3 Credit Hours – SEMO Equivalent PE464)
    - Precalculus or Equivalent (3 Credit Hours – SEMO Equivalent MA116)

    If a student completed a pre-requisite course at a different institution, they should contact the Program Director (kschneider@semo.edu) to either ensure that the course will match the Southeast Missouri State University equivalent by visiting www.semo.edu/transfercredit or be accepted toward the pre-requisite requirement.
5. Accumulated a minimum of 25 hours of direct observation under the direction of a certified athletic trainer. These experiences must be documented and submitted with the application materials.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of*

countries, visit https://semo.edu/international/admissions/policies.html.

Probationary Admission

Students with a 2.75 to a 2.99 undergraduate cumulative GPA can be considered for probationary admission by the department. Probationary admission is reviewed on a case-by-case basis (varied credentials). Students admitted on probation must complete nine credit hours that count toward the degree with a grade of "B" or better to continue in the program.

ADMISSION TO BIOLOGY (Master of Science)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.75 or higher on a 4.0 scale
2. Minimum GPA of 2.75 on a 4.0 scale for the last 30 semester hours of undergraduate science and math courses
3. Faculty Sponsor Agreement
4. Two letters of recommendation addressing the applicant's potential for academic success. Letters should be addressed to the Director of Admissions. Letters are waived if a completed Faculty Sponsor Agreement for Curriculum A/Thesis is submitted.

ADMISSION TO COMMUNICATION DISORDERS (Master of Arts)

All applications for admission will be reviewed by a departmental admissions committee. The deadline for submission of all application materials to the Office of Admissions is January 15 of the year in which admission is desired. Admission is considered only for the summer semester. Applicants should be aware that the number of admissions may be limited. The number of students admitted each year is subject to the committee's discretion based on an assessment of available programmatic resources.

The application procedures are detailed on the departmental website at https://semo.edu/colleges-departments/education-health/communication-disorders/graduate-info/index.html.
Domestic applicants must submit their application materials to the Communication Sciences and Disorders Computerized Application System (CSDCAS). International applicants must submit an international student application, in addition to completing the CSDCAS application.

In addition to the criteria established for general admission to graduate studies, all candidates for admission to the graduate program in Communication Disorders must meet the following:

1. Hold an undergraduate degree in communication disorders (or equivalent area) from a regionally accredited college or university.
2. Have a minimum overall undergraduate GPA of 3.0 OR a minimum average GPA of 3.0 across all communication disorders courses.

Applicants must also submit the following documents via CSDCAS: two letters of recommendation; resume; personal statement

Applicants with undergraduate majors in disciplines other than communication disorders must meet the same criteria for all graduate students indicated above and demonstrate that they will have completed the required core of undergraduate courses prior to the start date for the program.
This core coursework includes foundational coursework in:

- biological sciences related to human or animal sciences
- chemistry or physics

- social/behavioral sciences
- statistics

The following communication disorders courses or their equivalents must also be completed or in progress at time of the application:

- Anatomy and Physiology of the Speech Mechanism
- Phonetics
- Introduction to Communication Disorders
- Normal Speech and Language Development
- Anatomy and Physiology of the Hearing Mechanism
- Service Delivery in Communication Disorders
- Hearing Disorders: Audiologic Assessment
- Speech and Hearing Science

Applicants with undergraduate majors in disciplines other than communication disorders should contact the department for a meeting with a graduate advisor.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Denial of Admission

Students denied admission may not enroll in coursework applicable to the degree program until permission, along with any stipulations, is granted by the program admissions committee. Meeting minimum requirements for admission does not guarantee admission to the program when there are more applicants than spots available in the cohort.

Appeals Process

Applicants who are denied admission will have the opportunity to appeal to the Communication Disorders Graduate Admissions Committee. Appeals must be in writing directly from the applicant and should address any extenuating circumstances. Appeal letters or emails should be addressed to the Chairperson of the Department of Communication Disorders. Only the applicant is allowed to send appeal letters or emails of inquiry to the Graduate Admissions Committee or the Chairperson of the department, as needed. Appeal letters on behalf of the applicant from any other party will not be acknowledged.

ADMISSION TO CRIMINAL JUSTICE (Master of Science)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.5 or higher on a 4.0 scale

ADMISSION TO CYBERSECURITY (Master of Science)

The deadline for submission of all application materials for international applicants is March 1 for fall the fall semester and October 1 for the spring semester. Domestic applicants follow the general graduate studies deadlines. In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. A bachelor's degree in cybersecurity or related field*
   *Students with bachelor's degrees from other fields will be required to take up to two prerequisites related to Fundamentals of Computing and Programming (provisional admission).
2. An undergraduate GPA of 3.0 or higher on a 4.0 scale
3. Six completed hours of science and six completed hours of mathematics in the undergraduate degree

Probationary Admission

Applicants who do not meet the general and/or program's admission requirements may be considered for probationary admission upon approval by the graduate program coordinator. While under probation, students must complete nine credit hours that count toward the degree with a grade of "B" or better to continue in the program.

ADMISSION TO DATA SCIENCE (Master of Science)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. A bachelor's degree in mathematics, statistics, computer science, software engineering, engineering, physics, or equivalent discipline or substantial work experience in information technology or applied mathematics or statistics.
2. An undergraduate GPA of 2.75 or higher on a 4.0 scale
3. Passed at least one statistics course at the introductory level or above.

ADMISSION TO EDUCATIONAL LEADERSHIP (Master of Arts)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.75 or higher on a 4.0 scale
2. A valid professional teaching certificate
3. A resume showing one year of classroom teaching experience

An applicant having the prerequisite GPA of 2.75 may be given provisional admission prior to completion of all steps in the admissions process.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Probationary Admission

Probationary admission will be considered by an admissions committee in a program area under the following conditions:

If the applicant presents a GPA that is 2.5 to 2.74, or, if the applicant has achieved a GPA of 3.0 during the last 60 hours of undergraduate work, the admissions committee may permit the student to take up to nine hours in the program area. The student will be required to achieve a grade of no less than 'B' in these nine hours of coursework to continue in the program.

Appeals Process

Applicants who are denied admission have the option to appeal to the College of Education, Health, and Human Studies Admission Appeals Committee, which is composed of one representative from each

program area offering a graduate program.

Graduation Requirement

The student must attain an overall GPA of 3.25 to graduate from the program.

ADMISSION TO ELEMENTARY EDUCATION (Master of Arts)

Note: This program is for individuals with an undergraduate degree in education who already possess teaching certification.

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.75 or higher on a 4.0 scale
2. A valid professional teaching certificate OR a qualifying score on the state content exam appropriate for that certificate OR be in the 50th percentile verbal and analytic components of the Graduate Record Examination (GRE). Please note this program will not lead to an initial teacher license.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Applicants with an undergraduate GPA of 2.50-2.74 on a 4.0 scale can be reviewed for probationary admission. Probationary admits must complete 6 credit hours of graduate course work in their core or emphasis area of study with a grade of "B" or better.

An applicant having the prerequisite GPA may be given provisional admission prior to completion of all steps in the admission process. The program admission process must be completed within one calendar year. Failure to do so will result in reclassification as a non-degree student. Reinstatement to degree-seeking status will require a new application for admission. Courses taken prior to full admission will not necessarily be accepted toward meeting degree requirements.

Graduation Requirement

Students must attain an overall GPA of 3.0 to graduate from this program.

ADMISSION TO EMERGENCY MANAGEMENT & PREPAREDNESS (Master of Science)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.5 or higher on a 4.0 scale

ADMISSION TO ENGLISH (Master of Arts)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

2. An undergraduate GPA of 2.5 or higher on a 4.0 scale
3. Have at least 24 semester hours of undergraduate credit in English, linguistics, literature, rhetoric, or creative and professional writing.

ADMISSION TO ENVIRONMENTAL SCIENCE (Master of Science)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.5 or higher on a 4.0 scale
2. 20 credit hours in science with a 3.0 GPA
3. Letter of intent addressing preparation for graduate study, ability to succeed at the graduate level and professional goals and objectives. The letter should address what the applicant expects to achieve through graduate level study. The letter of intent should be typed and a maximum of 750 words in length.
4. Two letters of recommendation

Letters should be addressed to the Director of Admissions. All documents must be submitted directly to the Office of Admissions.

ADMISSION TO EXCEPTIONAL CHILD (Master of Arts)

Note: This program is for individuals with an undergraduate degree in education who already possess teaching certification

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.75 or higher on a 4.0 scale

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

An applicant having the prerequisite GPA of 2.75 may be given provisional admission prior to completion of all steps in the admission process. The program admission process must be completed within one calendar year. Failure to do so will result in reclassification as a non-degree student. Reinstatement to degree-seeking status will require a new application for admission. Courses taken prior to full admission will not necessarily be accepted toward meeting degree requirements.

Graduation Requirement

Students must attain an overall GPA of 3.0 to graduate from this program.

ADMISSION TO HEALTHCARE MANAGEMENT (Master of Science)

In addition to the criteria established for general admission to graduate studies, there are departmental criteria. Applicants are eligible for admission if they qualify under one of the following scenarios:

- Bachelor's degree* with a GPA of ≥ 3.0 on a 4.0 scale
- Graduate degree*
- Bachelor's degree* with a GPA of 2.5 to 2.99 on a 4.0 scale
    - Regular Admission with documentation** of one of the following:
        - 5 years of managerial work experience
        - an active healthcare provider license
        - recognized professional certification
    - Probationary Admission otherwise. They will need to complete the first 9 graduate credit hours with grades of B or better.

- Individuals with a bachelor's degree* and GPA under 2.5 on a 4.0 scale may be considered for probationary admission with additional documentation** demonstrating the applicant's preparation for graduate school.

*Degrees earned from a U.S.A. regionally accredited institution or foreign equivalent.

**Decisions about admission based upon the evaluation of a resume, a healthcare provider license, professional certification, or additional documentation would be made at the discretion of the Director – Graduate Business Studies. The healthcare provider license should be something like nursing, pharmacist, etc. that has recognized standards and requires continuing education. Examples of professional certification include PMI Project Management, Six Sigma Green Belt, SHRM Certified Professional, Charter Financial Analyst, Certified Financial Planner, Certified Scrum Master, etc.

Students without an undergraduate degree in business may need to document experience in or demonstrate proficiency in the required foundation coursework* prior to taking courses for which there are prerequisites. The foundation knowledge/coursework includes the following:

- MG 301 Principles of Management
- QM 257 Business Analytics I or BA 601 Graduate Business Statistics Essentials
- The Informatics option also requires MI 375 Management Information Systems or BA 605 Graduate Business Information Systems Essentials

Students must earn a sufficient grade in all of the above classes. ["CR" for Graduate Business Essentials courses. "C" or better for other courses listed.]

*Proficiency in these areas may be demonstrated through any of the following alternatives:

4. Completion of BA601 and/or BA605 Business Essentials coursework.
5. A CLEP or DANTES exam if available. Credit will not be given for these courses with a passing grade on the exam, but a passing score will indicate proof of course knowledge.
6. Applied knowledge of a given domain in the work environment. Three or more years of managerial work experience with significant level of responsibility may be accepted towards MG 301. The extent to which relevant work experience demonstrates proficiency will be determined by the program director. Applicants who would like their work experience to be considered must submit a detailed current resume with their application.

All documents should be submitted directly to the Office of Admissions.

ADMISSION TO HIGHER EDUCATION ADMINISTRATION (Master of Arts)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

- An undergraduate GPA of 2.75 or higher on a 4.0 scale

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Probationary Admission

Probationary admission will be considered by under the following conditions:
The applicant presents a GPA that is 2.5 to 2.74 or the applicant has achieved a GPA of 3.0 during the last 60 hours of undergraduate work. If granted probationary admission, the student may take up to nine hours in the program area. The applicant will be required to achieve a grade of no less than "B" in the nine hours of work to continue in the program.

Appeals Process

Applicants who are denied admission will have the opportunity to appeal to the College of Education, Health, and Human Studies Admission Appeals Committee, which will be comprised of one representative from each program area offering a graduate program.

ADMISSION TO INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (Master of Arts)

Fall and spring semester admission only. In addition to the criteria established for general admission to graduate studies, applicants with the following characteristics will be given the highest consideration:

1. An undergraduate GPA of 3.0 or higher on a 4.0 scale
2. Letter of intent addressing preparation for graduate study, ability to succeed at the graduate level and professional goals and objectives. The letter should address what the applicant expects to achieve through graduate level study. The letter of intent should be typed and a maximum of 750 words in length.
3. Three letters of recommendation

Applicants who do not meet one or more of these criteria are encouraged to apply as they will still be considered on a case-by-case basis.

ADMISSION TO MANAGEMENT (Master of Science)

In addition to the criteria established for general admission to graduate studies there are departmental criteria. Applicants are eligible for admission if they qualify under one of the following scenarios:

- Bachelor's degree* with a GPA of ≥ 2.75
- Graduate degree*
- Bachelor's degree* with a GPA of 2.5 to 2.74
    - Regular Admission with documentation** of one of the following:
        - 5 years of managerial work experience
        - an active healthcare provider license
        - recognized professional certification
    - Probationary Admission otherwise. Students admitted with probationary status will need to complete the first 9 graduate credit hours with grades of B or better.
- Individuals with a Bachelor's degree* and GPA under 2.5 may be considered for Probationary Admission with additional documentation** demonstrating the applicant's preparation for graduate school.

*Degrees earned from a U.S.A. regionally accredited institution or foreign equivalent.

**Decisions about admission based upon the evaluation of a resume, a healthcare provider license, professional certification, or additional documentation would be made at the discretion of the Director – Graduate Business Studies. The healthcare provider license should be something like nursing, pharmacist, etc. that has recognized standards and requires continuing

education. Examples of professional certification include PMI Project Management, Six Sigma Green Belt, SHRM Certified Professional, Charter Financial Analyst, Certified Financial Planner, Certified Scrum Master, etc.

Students without an undergraduate degree in business may need to document experience in or demonstrate proficiency in the required foundation coursework* prior to taking courses for which there are prerequisites. The foundation knowledge/coursework includes the following:

- MG 301 Principles of Management
- QM 257 Business Analytics I or BA 601 Graduate Business Statistics Essentials
- MI 375 Management Information Systems or BA 605 Graduate Business Information Systems Essentials

Students must earn a sufficient grade in all of the above classes. ["CR" for Graduate Business Essentials courses. "C" or better for other courses listed.]

*Proficiency in these areas may be demonstrated through any of the following alternatives:

1. Completion of BA601 and/or BA605 Business Essentials coursework.
2. A CLEP or DANTES exam if available. Credit will not be given for these courses with a passing grade on the exam, but a passing score will indicate proof of course knowledge.
3. Applied knowledge of a given domain in the work environment. Three or more years of managerial work experience with significant level of responsibility may be accepted towards MG 301. The extent to which relevant work experience demonstrates proficiency will be determined by the program director. Applicants who would like their work experience to be considered must submit a detailed current resume with their application.

All documents should be submitted directly to the Office of Admissions.

ADMISSION TO MASTER OF BUSINESS ADMINISTRATION (MBA)

Individuals admitted to the MBA program must have an undergraduate degree from an AACSB accredited business program or have satisfactorily completed the equivalent course work from an accredited institution. Students without the foundation knowledge base in business and economics, yet meeting other admission requirements, may receive provisional admission to the MBA program. Regular admission status may be granted upon completion of prerequisite coursework.

In addition to the criteria established for general admission to graduate studies there are departmental criteria. Applicants are eligible for admission if they qualify under one of the following scenarios:

- Bachelor's degree* with a GPA of ≥ 3.0
- Graduate degree*
- Bachelor's degree* with a GPA of 2.5 to 2.99
    - Regular Admission with documentation** of one of the following:
        - 5 years of managerial work experience
        - an active healthcare provider license
        - recognized professional certification
    - Probationary Admission otherwise. Students admitted with probationary status will need to complete the first 9 graduate credit hours with grades of B or better.
- Individuals with a Bachelor's degree* and GPA under 2.5 may be considered for probationary admission with additional documentation** demonstrating the applicant's preparation for graduate school.

*Degrees earned from a U.S.A. regionally accredited institution or foreign equivalent.

**Decisions about admission based upon the evaluation of a detailed resume, a healthcare provider license, professional certification, or additional documentation would be made at the discretion of the Director – Graduate Business Studies. The healthcare provider license should be something like nursing, pharmacist, etc. that has recognized standards and requires continuing education. Examples of professional certification include PMI Project Management, Six Sigma Green Belt, SHRM Certified Professional, Charter Financial Analyst, Certified Financial Planner, Certified Scrum Master, etc.

International students applying with a three-year degree must have their transcripts evaluated by an outside agency endorsed by AICE (www.aice-eval.org) or that is a member of NACES (www.naces.org).

Students without an undergraduate degree in business may need to complete or demonstrate proficiency in the following required foundation coursework* prior to taking courses for which there are prerequisites. The foundation knowledge/coursework includes:

- Principles of Accounting I or Graduate Business Accounting Essentials
- Microeconomics or Graduate Business Microeconomics Essentials
- Financial Management or Graduate Business Finance Essentials
- Management Information Systems or Graduate Business Information Systems Essentials
- Business Analytics or Introductory Behavioral Statistics or Graduate Business Statistics Essentials

Additional foundation coursework for Accounting option:

- Principles of Accounting II
- Financial Accounting and Reporting I
- Financial Accounting and Reporting II

Additional foundation coursework for Finance Management option:

- Investments Planning

Students must earn a sufficient grade in all of the above classes. ["CR" for Graduate Business Essentials courses. "C" or better for other courses listed.]

*Proficiency in these areas may be demonstrated through any of the following alternatives:

1. Completion of BA601-605 Business Essentials coursework, as needed. (Up to 3 hours may count in the elective section of certain MBA options.)
2. A CLEP or DANTES exam if available. Credit will not be given for these courses with a passing grade on the exam, but a passing score will indicate proof of course knowledge.
3. Applied knowledge of a given domain in the work environment. The extent to which relevant work experience demonstrates proficiency will be determined by the program director. Applicants who would like their work experience to be considered must submit a detailed resume with their application.

Students wishing to enter the accounting track should have completed an undergraduate degree in accounting at a regionally accredited institution or have satisfactorily completed two intermediate accounting courses from a program that teaches these courses with USA GAAP standards.

All documents should be submitted directly to the Office of Admissions.

ADMISSION TO MENTAL HEALTH COUNSELING & SCHOOL COUNSELING (Master of Arts)

The process of admission to the Counseling Program does not begin until a student has made application and been accepted into graduate studies.

Mental Health Counseling applications are considered for summer and fall semesters only. The preferred application date to submit all application materials is February 1.

School Counseling applications are considered for summer, fall and spring semesters. The preferred application date to submit all application materials is February 1 for summer and fall and October 1 for spring.

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 3.0 or higher on a 4.0 scale
2. One letter of recommendation submitted directly to the Office of Admissions prior to admission. The letter should be addressed to the Director of Admissions.
3. Mental health counseling applicants must also have 9 total credit hours in the social sciences, including, psychology, counseling, sociology or appropriately focused university studies courses.
4. For the areas of emphasis in Elementary School Counseling and Secondary School Counseling, applicants must either hold a valid professional teaching certification at the appropriate level or provide evidence of competency in the Missouri Department of Elementary and Secondary Education's required areas of teaching methods, teaching practices, classroom management, and psychology of the exceptional child by completing two specific education courses.
5. For the post master's emphasis for School Psychological Examiner students must have a master's degree approved by the Missouri Department of Elementary and Secondary Education and have teacher's certification.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Provisional and Regular Admission

A one-semester provisional admission will be considered for applicants with the appropriate prerequisite coursework and a 3.0 or higher undergraduate GPA.

In addition to the above requirements, applicants for admission into the Counseling Programs must complete the following procedures to become fully admitted:

1. The class CP610 Counseling Orientation and Ethics must be taken during the first semester in the counseling program. During this class the student will be exposed to a variety of experiences that will assist both the student and the faculty in determining if this is the program for the student. During the first semester, students are strongly encouraged to limit their efforts to no more than 9 credit hours.
2. Submit two additional letters of recommendation directly to their advisor.
3. An interview with members of the Counseling Program Faculty will be arranged prior to admission into the program.
4. Students must complete a Personal Statement Essay describing their decision to pursue counseling as a career prior to the scheduled interview with Counseling Program Faculty (submit directly to the Department of Psychology and Counseling).
5. In making its admission decision, the faculty uses multiple factors including undergraduate GPA, progress in CP610, the Personal Statement Essay, and the interview. Following the interview, the faculty will either offer provisional admission, probationary admission, or deny admission.

6. If admission is offered, students will be required to complete a Counseling Program Commitment Form to retain a position in the cohort for which they applied.
7. Following the offer of admission and completion of the Program Commitment Form, an advisor will assist the applicant in planning a program of courses to be taken (detailed Initial Study Plan); this complete plan will be filed with the student's advisor and the applicant may commence taking courses as outlined in the plan.

Probationary Admission

Probationary admission will be considered by the program admissions committee if the applicant has a 2.75 to 2.99 undergraduate GPA or if the applicant has achieved a GPA of 3.25 during the last 60 hours of undergraduate work. Students admitted to the counseling program on probation must attain a 3.5 GPA for the first 9 hours of graduate work. Unless authorized by the advisor, probationary students must include the following courses in the first 9 hours of coursework: CP610 Counseling Orientation and Ethics, CP 612 Counseling Theories, and CP691 Research Methods and Program Evaluation in Counseling. A student earning any grade less than a "B" in any of the first nine hours, but still maintaining a 3.0 GPA, will be allowed to repeat the course one time and must earn a grade of "B" or better.

Appeals Process

Applicants who are denied admission can appeal to the Counseling Program Admission Committee.

Program Retention

The counseling faculty reserves the right to review students at any stage of the student's coursework. A review process will automatically be triggered by any grade less than a 'B' or equivalent in any of the following courses: CP610 Counseling Orientation and Ethics, CP614 Counseling Skills, CP616 Group Counseling, and all practica and internships. This review has the potential to terminate the student's degree program.

ADMISSION TO MIDDLE OR SECONDARY TEACHING CERTIFICATE (Master of Arts in Teaching)

Note: program for individuals with an undergraduate degree in non-education major, seeking an initial teaching certificate

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. For certification grades 9-12: BA or BS degree in the content area or closely related field that meets the required core competencies for the license.
   Licensure areas include agriculture, art, biology, business, chemistry, English, family and consumer sciences, mathematics, instrumental and vocal music, physical education, physics, social studies, technology and engineering, world languages
   OR
   For certification grades 5-9: BA or BS degree in the content area or 24 credit hours of completed courses that meet the required content competences for that license.
   Licensure areas include language arts, mathematics, science, social studies.
2. An undergraduate GPA of 2.5 or higher on a 4.0 scale and specific content GPA of 3.0

3. Passage of the Missouri Content Assessment in an appropriate area as defined by the Department of Elementary and Secondary Education. Must pass before recommendation for certification.
4. Completion of PY222 Adolescent Development or similar to the Child and Adolescent Psychology
5. Completion of EX390/635 Psychology and Education of Children with Exceptionalities or similar course

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Provisional Admission:
Provisional admission will be considered if prerequisites are partially filled and GPA and testing criteria are met.

ADMISSION TO NURSING (Master of Science in Nursing)

This program includes only a family nurse practitioner track.

Applications are evaluated as received, and admission continues until all seats are filled.

In addition to the criteria established for general admission to graduate studies, applicants must submit an application to the Department of Nursing found at https://semo.edu/academics/programs/education-health/nursing/_pdfs/msn-application.pdf. The application may be mailed to the department at the address provided or may be submitted via email at nursinggradstudies@semo.edu. Applicants must also have the following:

Regular Admission Requirements

1. Bachelor of Science in Nursing (BSN) degree from a program accredited by the Accreditation Commission for Education in Nursing (ACEN) or the Commission on Collegiate Nursing Education (CCNE)
2. Minimum GPA of 3.25 on a 4.0 scale
3. Current unencumbered RN license that allows practice within the state of Missouri (MO license or multistate)
4. Undergraduate or graduate statistics course with a grade of B or higher
5. Current BLS certification (professional level)
6. Statement of academic goals and objectives for graduate study/advanced practice

ADMISSION TO NUTRITION AND EXERCISE SCIENCE (Master of Science)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 3.0 or higher on a 4.0 scale
2. A 3.0 average in the following college-level classes 1.) nutrition science 2.) exercise physiology with a laboratory 3.) anatomy and physiology and 4.) chemistry

ADMISSION TO PUBLIC ADMINISTRATION (Master of Public Administration)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.7 or higher on a 4.0 scale
2. Resume
3. A letter of intent addressing professional goals and objectives. The letter should address what the applicant expects to achieve through graduate level study. The letter should be typed and a maximum of 750 words in length.

Application materials must demonstrate the student's commitment to a career in governmental or nonprofit organizations.

GRE, LSAT or GMAT scores are not required but may be submitted to strengthen application.

Letters should be addressed to the Director of Admissions. All documents should be submitted directly to the Office of Admissions.

ADMISSION TO PUBLIC HISTORY (Master of Arts)

Admission is considered for fall and spring semesters only.

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.75 or higher on a 4.0 scale.
2. A letter of intent which indicates how the applicant's past experiences have prepared them for a graduate degree in Public History and to succeed at the graduate level.
3. An academic or professional writing sample

All documents should be submitted directly to the Office of Admissions.

Provisional and Probationary Admission

An applicant lacking any of the above requirements may, under certain circumstances, be admitted provisionally or on probation.

ADMISSION TO SECONDARY EDUCATION EDUCATIONAL LEADERSHIP AND EDUCATIONAL STUDIES (Master of Arts)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

- An undergraduate GPA of 2.75 or higher on a 4.0 scale

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Probationary Admission

Probationary admission will be considered by the Office of Admissions if the applicant presents a GPA that is 2.5 to 2.74. The applicant must complete six hours of graduate level course work in the core area of study with a grade of 'B' or higher to continue in the program.

Appeals Process

Applicants who are denied admission can appeal to the College of Education, Health, and Human Studies Admission Appeals Committee, which is composed of one representative from each program offering a

graduate program.

Graduation Requirement
Students must attain an overall GPA of 3.25 to graduate from the program.

ADMISSION TO TEACHER LEADERSHIP (Master of Arts)
In addition to the criteria established for general admission to graduate studies, applicants must have the following:
1. An undergraduate GPA of 2.75 or higher on a 4.0 scale
2. A valid professional teaching certificate

An applicant having the prerequisite GPA of 2.75 may be given provisional admission prior to completion of all steps in the admissions process.
International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Probationary Admission
Probationary admission will be considered by an admissions committee in a program area under the following conditions:
If the applicant presents a GPA that is 2.5 to 2.74, or, if the applicant has achieved a GPA of 3.0 or higher during the last 60 hours of undergraduate work, the admissions committee may permit the student to take up to 9 hours in the program area. The student will be required to achieve a grade of no less than 'B' in this 9 hours of work to continue in the program.

Appeals Process
Applicants who are denied admission have the option to appeal to the College of Education, Health, and Human Studies Admission Appeals Committee, which is composed of one representative from each program area offering a graduate program.

Graduation Requirement
The student must attain an overall GPA of 3.25 to graduate from the program.

ADMISSION TO TECHNOLOGY MANAGEMENT (Master of Science)
In addition to the criteria established for general admission to graduate studies, applicants must have the following:
1. A bachelor's degree in engineering, technology or closely related field
2. An undergraduate GPA of 3.0 or higher on a 4.0 scale and few repeated courses

Probationary Admission
Applicants must have an undergraduate GPA of 2.5 on a 4.0 scale and submit official GRE scores. While under probation, students may enroll in nine credit hours of course work in their program area. The nine hours must be completed with 3.0 GPA or higher.

ADMISSION TO TESOL (Master of Arts)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.5 or higher on a 4.0 scale

PROGRAM ADMISSION POLICES – SPECIALIST DEGREES

ADMISSION TO COUNSELING (Specialist in Education)

In addition to the criteria established for general admission to graduate studies are the following departmental criteria:

Minimum Admission Criteria

1. A graduate GPA of 3.5 or higher on a 4.0 scale
2. A master's degree in counseling or related field from a regionally accredited institution of higher education. If not, the student will be required to take additional graduate work (admission under provisional status) before regular admission is granted.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Probationary Admission

Probationary admission will be considered when the applicant presents a GPA that is less than 3.5 on a 4.0 scale. The admissions committee may permit the student to take nine hours in the program area. The student will be required to achieve a 3.66 GPA with a minimum grade of 'B' in each course.

Full Admission

Applicants who possess the requisite GPA will be admitted to graduate study and allowed to complete a maximum of six semester hours of prerequisite coursework, if applicable. If no prerequisite courses are needed, the student may complete a maximum of six semester hours applicable to program requirements prior to admission to the program by the Counseling Admissions Committee. The Committee will act only on applications that are complete. The admissions process may require an interview with the program coordinator and faculty. In addition, two letters of recommendation must be submitted directly to the Specialist Program Coordinator.

Denial of Admission

Applicants denied admission to graduate study based on a GPA of less than 3.5 on a 4.0 scale may apply for probationary admission. A letter of request, along with the three letters of recommendation and GRE or MAT scores should be sent to the Coordinator of the Specialist Program. Students denied admission may not enroll for coursework applicable to the degree program until such time as explicit permission, along with any stipulations, is granted by the Counseling Admissions Committee.

Appeals Process

Applicants who are denied admission will have the opportunity to appeal to the Counseling Program Admission Committee. Appeals must be in writing and should address any extenuating circumstances. Appeal letters should be addressed to the Counseling Program Coordinator.

ADMISSION TO EDUCATIONAL ADMINISTRATION (Specialist in Education)

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. A graduate GPA of 3.5 or higher on a 4.0 scale
2. A master's degree from a regionally accredited institution of higher education. The master's degree must be appropriate to the student's educational objective. If an applicant has a related degree other than school administration, the applicant may be required to complete additional coursework for certification purposes.
3. A valid professional teaching certificate
4. A resume showing two years of classroom teaching experience.

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*
Applicants who are in the process of completing a master's degree may be admitted to graduate study on a provisional basis and be allowed to complete a maximum of six semester hours of prerequisite coursework, if applicable, prior to graduation. If no prerequisite courses are needed, the student may complete a maximum of six semester hours applicable to program requirements prior to full admission to the program.

Probationary Admission

Probationary admission will be considered when the applicant presents a GPA that is less than 3.5 on a 4.0 scale. The admissions committee may permit the student to take nine hours in the program area. The student will be required to achieve a 3.66 GPA with a minimum grade of 'B' in each course.

Denial of Admission

Applicants denied admission to graduate study based on a GPA of less than 3.5 may apply for probationary admission. A letter of request should be sent to the Coordinator, Specialist Program. Students denied admission may not enroll for coursework applicable to the degree program until such time as explicit permission, along with any stipulations, is granted by the program admissions committee.

Appeals Process

Applicants who are denied admission will have the opportunity to appeal to the College of Education, Health, and Human Studies Admission Appeals Committee. Appeals must be in writing and should address any extenuating circumstances. Appeal letters should be addressed to Chairperson, Department of Leadership, Middle and Secondary Education.

ADMISSION TO TEACHER LEADERSHIP (Specialist in Education)

This program does not lead to a DESE certification.

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. A graduate GPA of 3.5 or higher on a 4.0 scale
2. A master's degree from a regionally accredited institution of higher education. The master's degree must be appropriate to the student's educational objective. If not, the student will be required to take additional graduate work before regular admission is granted.
3. A valid professional teaching certificate

International applicants must also have a minimum IELTS Academic score of 7.0, TOEFL iBT score of 95, PTE Academic score of 64 or Duolingo English score of 125. *This requirement is for non-United States citizens who are not native English speakers. Students from countries where English is known to be the official language of education are exempt from English proficiency verification. For a complete list of countries, visit https://semo.edu/international/admissions/policies.html.*

Applicants who are in the process of completing a master's degree may be admitted to graduate study on a provisional basis and be allowed to complete a maximum of six semester hours of prerequisite coursework, if applicable, prior to graduation. If no prerequisite courses are needed, the student may complete a maximum of six semester hours applicable to program requirements prior to full admission to the program.

Probationary Admission

Probationary admission will be considered when the applicant presents a GPA that is less than 3.5 on a 4.0 scale. The admissions committee may permit the student to take nine hours in the program area. The student will be required to achieve a 3.66 GPA with a minimum grade of 'B' in each course.

Denial of Admission

Applicants denied admission to graduate study based on a GPA of less than 3.5 may apply for probationary admission. A letter of request should be sent to the Coordinator, Specialist Program. Students denied admission may not enroll for coursework applicable to the degree program until such time as explicit permission, along with any stipulations, is granted by the program admissions committee.

Appeals Process

Applicants who are denied admission will have the opportunity to appeal to the College of Education, Health, and Human Studies Admission Appeals Committee. Appeals must be in writing and should address any extenuating circumstances. Appeal letters should be addressed to Chairperson of the Department of Leadership, Middle and Secondary Education.

NOTE: The graduate coordinator (as of June 1, 2025) for each major/program is listed with the major requirements. The most current listing of Graduate Coordinators may be found at https://semo.edu/grad/coordinators.html

MASTER'S DEGREES

MASTER OF ARTS

APPLIED BEHAVIOR ANALYSIS (MA)

Department of Psychology and Counseling
Dr. Eric Billington, Graduate Coordinator
E-mail: ebillington@semo.edu
(573) 651-2414

42 Hours Required
AB531 Basic Principles in Applied Behavior Analysis (3)
AB532 Methods for Studying the Behavior of Individuals (3)
AB533 Applied Behavior Analysis I: Assessment and Skill Acquisition (3)
AB534 Applied Behavior Analysis II: Functional Assessment and Behavior Reduction (3)
AB535 Principles in Psychopharmacology (3)
AB537 Behavioral Consultation & Management (3)
AB601 Conceptual Topics in Behavior Analysis (3)
AB603 Ethics, Disciplinary Systems, and Professionalism in Applied Behavior Analysis (3)
AB605 Research & Practice in Applied Behavior Analysis – I (6)
AB607 Research & Practice in Applied Behavior Analysis – II (6)
AB608 Research & Practice in Applied Behavior Analysis – III (3)
GR698 Master's Final Comprehensive Examination (0)
Choose one course:
CE614 Family/School Partnerships in Early Childhood (3)
CF520 Professional Ethics and Practice (3)
CF602 Trauma-Informed Care (3)
DS618 Environmental Design for Human Services (3)
ED535 The Trauma-Informed Professional (3)
EX507 Family and Child with Exceptionalities (3)
EX555 Introduction to Autism Spectrum Disorder (3)
EX601 Educational Assessment Techniques (3)
EX693 Special Education and the Law (3)
PY555 Health Psychology (3)

COMMUNICATION DISORDERS (MA)

Department of Communication Disorders
(573) 651-2155

59 Hours Required
Required Courses:

CD603 Advanced Communication Disorders Clinical Practicum (3 enrollments) (9)*
CD608 Clinical Methods in Speech Language Pathology (2)
CD616 Literacy Essentials for Speech Language Pathologists (3)
CD620 Developmental Articulatory & Phonological Disorders (3)
CD625 Research Methodology in Communication Disorders (3)
CD628 Cognitive Communication Disorders and Their Functional Implications (2)
CD630 Language Disorders and Their Functional Implications (3)
CD634 Language and Cognitive Disorders in Early Childhood (2)
CD635 Language, Cognitive and Social Communication Disorders in School-Aged Children (3)
CD641 Voice Disorders (2)
CD642 Stuttering and Cluttering (2)
CD643 Augmentative, Alternative, and Assistive Communication Modalities (2)
CD651 Neurogenic Speech Disorders (2)
CD652 Swallowing Disorders (3)
CD653 Pediatric Feeding and Swallowing (1)
CD656 Craniofacial Anomalies and Resonance Disorders (2)
CD659 Speech and Language Services for Special Populations (2)
CD669 Externship in Communication Disorders (2 enrollments) (6)
CD670 Diversity, Equity, and Inclusion in Communication Disorders (2)
CD685 Professionals Topics in Communication Disorders (2)
Choose One of the Following Areas:
NON-THESIS AREA
CD683 Research in Communication Disorders (2 enrollments) (1-3)
GR698 Master's Final Comprehensive Examination (0)
THESIS AREA
CD695 Thesis in Communication Disorders (2 enrollments) (1-3)
GR699 Master's Oral Examination (0)
Additional requirement: **
CD399 Speech & Hearing Science (3)
CD525 Aural Rehabilitation (3)

*CD570 The Practice of Speech-Language Pathology Abroad (3) is offered for substitution of CD603 in the summer session.
**If the student did not have CD399 and/or CD525 or equivalent as an undergraduate, the student must take this course as a graduate student.

EDUCATIONAL LEADERSHIP (MA)

Department of Leadership, Middle and Secondary Education
Dr. Lisa Bertrand, Graduate Coordinator
E-mail: lbertrand@semo.edu
(573) 651-2137

30 Hours Required
3.25 GPA Required
EA610 Diversity and Equity in Schools (3)
EA625 Foundations of Educational Leadership (3)
EA634 School Supervision (3)

EA651 School Law (3)
EA653 Curriculum for Leaders in Education (3)
EA654 The Principalship (3)
EA655 Leadership for Effective School Operations (3)
EA660 Leadership in Special Education (3)
EA663 Internship I: Leadership for Research in Action (3)
EA664 Internship II: Leadership for Experiential Learning (3)
GR698 Master's Final Comprehensive Examination (0)

ELEMENTARY EDUCATION (MA)

Department of Elementary, Early and Special Education
Dr. Brandy Hepler, Graduate Coordinator:
E-mail: bhepler@semo.edu
(573) 651-2122

30 Hours – 3.25 GPA Required
Required core courses:
EL615 Research in Action (3)
EX601 Educational Assessment Techniques (3)
GR698 Master's Final Comprehensive Examination (0)
Choose one emphasis area:
Early Childhood Emphasis
CE605 Issues and Trends in Early Childhood Education (3)
CE610 Curriculum, Methods, & Program Management in Early Childhood Education (3)
CE634 Assessing Young Children's Learning and Development (3)
EL606 Curriculum Construction (Elementary) (3)
Electives: 6 hours (Suggested electives related to young children)
Choose one course:
EX556 Communication Intervention and Strategies for Individuals with Autism Spectrum Disorder (3)
EX602 Language Acquisition for the Child with Exceptionalities (3)
Choose one course:
CE614 Family/School Partnerships in Early Childhood (3)
EX507 Family and Child with Exceptionalities (3)
Math/Science Emphasis
EL603 Teaching Elementary School Mathematics (3)
EL604 Techniques of Teaching Science & Mathematics in the Elementary School (3)
EL606 Curriculum Construction (Elementary) (3)
EL608 Diagnosis and Remediation of Difficulties in Learning Mathematics (3)
Electives: 9 hours (Suggested electives in math/science)
Choose one course:
CE614 Family/School Partnerships in Early Childhood (3)
EX507 Family and Child with Exceptionalities (3)
Math Specialist Emphasis
EL667 Mathematical Leadership for Elementary Mathematics Specialists: Foundations (2)
EL668 Mathematical Leadership for Elementary Mathematics Specialists: Influencing and Facilitating Improvement (3)
MD611 Internship in Numbers and Operations (1)

MD612 Internship in Rational Numbers and Proportional Thinking (1)
MD616 Internship in Geometry and Measurement (1)
MD617 Internship in Algebraic Reasoning (1)
MD621 Numbers and Operations (3)
MD622 Rational Numbers and Proportional Thinking (3)
MD624 Data and Probability (3)
MD626 Geometry and Measurement (3)
MD627 Algebraic Reasoning (3)
Reading Emphasis
EL611 Emergent Literacy Learners Practicum (3)
EL615 Action Research (3)
EL623 Intermediate and Upper-Level Literacy Learners Practicum (3)
EL624 Literacy Leadership (3)
EL644 Creating and Fostering Literate Environments (3)
EL647 Diagnosis and Correction of Reading Difficulties (3)
EL648 Dyslexia and Reading Disabilities (3)
SE602 Effective Literacy Instruction at the Middle and Secondary Level (3)
EX601 Educational Assessment Techniques (3)
Choose one course:
EL629 Advance Studies in Children's Literature (3)
EL646 Aspects of Literacy Development and Acquisition (3)

ENGLISH (MA)

Department of English
E-mail: english@semo.edu
(573) 651-2156

30 Hours Required
CORE: One course from each category
Category I: Literature, Linguistics, Rhetoric, Pedagogy
EN606 Topics, Issues, and Trends in English (3)
EN623 Visual Rhetoric (3)
EN686 Sociolinguistics (3)
LI605 Anglophone Literature/Contemporary Theory (3)
LI542 Literature for the Young Adult (3)
LI565 Southern Literature (3)
LI568 Masculinities in the 19th Century American Novel (3)
LI570 Modern and Contemporary Novel (3)
LI576 American Fiction of the 21st Century (3)
LI577 Studies in Early English Literature (3)
LI578 Studies in Later British & Postcolonial Literature (3)
LI582 Topics in Literature (3)
LI625 Focus on the Author (3)
LI673 Studies in English Renaissance Literature (3)
LI674 Studies in Modern American Literature (3)
LI676 Early Twentieth Century British Literature (3)
TL585 Methods and Techniques for TESOL (3)

TL620 Approaches to the Teaching of Grammar (3)
TL625 Materials Development and Assessment Tools for TESOL (3)
TL648 Foundations in Linguistics (3)
TL650 Approaches to Second Language Literacy Instruction (3)
Category II: Broadened and Contemporary Perspectives in English Studies
LI612 Native American Literature (3)
LI617 Writing Race and Gender in the South (3)
LI626 Gender and Sexuality in Literary Studies (3)
LI634 African-American Literature before 1900 (3)
LI636 African-American Literature after 1900 (3)
LI670 Immigration in Literature and Film (3)
TL525 ESL/EFL Learning and Teaching (3)
TL610 Developing Intercultural Awareness and Competence (3)
Category III: Professionalization and Career Readiness (3)
EN600 Orientation Seminar for Teaching Assistants (3)
EN601 Research in English Studies (3)
EN535 Rhetorical Theory and Written Discourse (3)
EN550 Style in Writing (3)
EN572 Creative Nonfiction (3)
EN624 Editing and Research in Professional Writing (3)
EN6xx Internship (3)
EN645 Advanced Literary Publishing (3)
EN657 Composition Theory and Pedagogy (3)
EN670 Advanced Creative Writing: Poetry (3)
EN678 Advanced Creative Writing: Fiction (3)
TL601 Research Methods in TESOL (3)
Electives: Choose 21 hours
EN, LI, TL 5xx-6xx
EN694 Thesis (may be taken for 3 credit hours only for those opting to write a thesis)
Capstone – choose one:
Thesis w/ Critical Introduction, including reflection
Comprehensive Exam including reflection question
Portfolio (qualifying paper including reflection essay)
Teaching Portfolio including reflection essay

EXCEPTIONAL CHILD EDUCATION (MA)

Department of Elementary, Early and Special Education
Dr. Dixie McCollum, Graduate Coordinator
E-mail: dgmccollum@semo.edu
(573) 651-2122

30 Hours Required
Core Requirements:
EL615 Research in Action (3)
EX601 Educational Assessment Techniques (3)
EX635 Psychology & Education of Students with Special Needs (3)
EX693 Special Education and the Law (3)

GR691 Methods of Research: Qualitative and Quantitative Designs (3)
GR698 Master's Final Comprehensive Examination (0)
Choose One Area of Emphasis:
AUTISM EMPHASIS
EX555 Introduction to Autism Spectrum Disorder (3)
EX556 Communication Interventions and Strategies for Individuals with Autism Spectrum Disorder (3)
EX557 Behavior Management and Interventions for Individuals with Autism Spectrum Disorder (3)
EX558 Research Autism Spectrum Disorders (3)
EX691 Transition Planning for Individuals with Exceptional Learning Needs (3)
DIAGNOSIS & CORRECTION MATHEMATICS EMPHASIS
EL603 Teaching Elementary School Mathematics (3)
EL608 Diagnosis and Remediation of Difficulties in Learning Mathematics (3)
EX616 Behavior Management (3)
EX652 Techniques of Teaching the Mild/Moderate Cross-Categorical (3)
EX691 Transition Planning for Individuals with Exceptional Learning Needs (3)
EARLY CHILDHOOD SPECIAL EDUCATION EMPHASIS
CE530 Foundation of Early Childhood and Special Education (3)
CE634 Assessing Young Children's Learning and Development (3)
EX507 Family and Child with Exceptionalities (3)
EX602 Language Acquisition for the Child with Exceptionalities (3)
EX616 Behavior Management (3)
ELEMENTARY LITERACY EMPHASIS
EX616 Behavior Management (3)
Choose 3 hours:
EL630 The Science of Reading I: Foundations of Literacy (3)
EL646 Aspects of Literacy Development and Acquisition (3)
Choose 3 hours:
EL631 The Science of Reading II: Assessing and Correcting Emergent Literacy Learners (3)
EL647 Reading Assessment (3)
Choose 3 hours:
EL 648 Dyslexia and Reading Disabilities (3)
EL 681 The Science of Reading IV: Developing Research Driven Instruction in Reading Comprehension & Writing (3)
Choose 3 hours:
EL680 The Science of Reading III: Evidence–Based Literacy Instruction in the Area of Language and Reading (3)
SE602 Effective Literacy Instruction at the Middle and Secondary Levels (3)
MILD/MODERATE CROSS-CATEGORICAL EMPHASIS
EX507 Family and Child with Exceptionalities (3)
EX602 Language Acquisition for the Child with Exceptionalities (3)
EX616 Behavior Management (3)
EX652 Techniques of Teaching the Mild/Moderate Cross-Categorical (3)
EX691 Transition Planning for Individuals with Exceptional Learning Needs (3)
TECHNOLOGY EMPHASIS
EX616 Behavior Management (30
EX691 Transition Planning for Individuals with Exceptional Learning Needs (3)
SE600 Multimedia in Education (3)
SE617 Foundations of Educational Technology (3)

SE501 AI in Education (3)
TRAUMA & RESILIENCY STUDIES EMPHASIS
CF602 Trauma-Informed Care (3)
ED535 The Trauma Informed Professional (3)
EX602 Language Acquisition of Children with Exceptionalities (3)
EX616 Behavior Management (3)
EX691 Transition Planning for Individuals with Exceptional Learning Needs (3)
SECONDARY LITERACY EMPHASIS
EX616 Behavior Management (3)
EX691 Transition Planning for Individuals with Exceptional Learning Needs (3)
SE602 Effective Literacy Instruction at the Middle and Secondary Levels (3)
SE612 Responsive Literacy Interventions for Middle & High School Students with Academic Challenges (3)
SE638 Improvement of Instruction & Assessment (3)

HIGHER EDUCATION ADMINISTRATION (MA)

Department of Leadership, Middle and Secondary Education
Dr. Brooke Hildebrand-Clubbs, Graduate Coordinator
E-mail: bclubbs@semo.edu
(573) 651-2137

36 Hours Required
2.75 GPA
Core Requirements:
EA617 Communication in Higher Education (3)
EA620 Foundations of Higher Education I (3)
EA623 Principles and Practices in Higher Education (3)
EA624 Theories of Collegiate Student Development (3)
EA626 Introduction to Student Affairs (3)
EA629 Internship in Higher Education (3+3)
GR691 Methods of Research (3)
Choose 3 hours:
EA622 Leadership in Higher Education (3)
SM570 Management and Leadership in Sport Organization (3)
Choose 3 hours:
EA633 Legal Aspects in Higher Education (3)
SM540 Legal Aspects of Sport and Physical Activity (3)
Choose 6 hours:
EA507 School and Campus Safety (3)
EA615 Wellness Issues in Higher Education (3)
EA616 Enrollment Management in Higher Education (3)
EA638 Equity & Access in Higher Education (3)
EA643 Current Issues in Higher Education (3)
EA670 Higher Education Capstone (3)
ED535 The Trauma-Informed Professional (3)
PY571 Introductory Behavioral Statistics (3)
SM610 Principles and Practice of Sport Management (3)
SM612 Topics, Issues, and Trends in Sport (3)

SM655 Design and Operation of Sport Related Facilities (3)

INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (MA)

Department of Psychology and Counseling
Dr. George Yancey, Graduate Coordinator
E-mail: gyancey@semo.edu
(573) 651-2448

42 Hours Required
PY540 Personnel Psychology (3)
PY556 Organizational Psychology (3)
PY557 Psychometrics (3)
PY561 Advanced Social Psychology (3)
PY571 Introductory Behavioral Statistics (3)
PY575 Theories of Leadership (3)
PY591 Motivation & Incentive (3)
PY657 Psychology of Stereotyping and Prejudice (3)
PY670 Job Analysis and Compensation (3)
PY671 Design and Analysis II (3)
PY675 Legal and Ethical Considerations in Industrial-Organizational Psychology (3)
PY681 Program Design and Evaluation (3)
Choose one six hour area:
PY696 Thesis Research (3)
AND
PY697 Thesis Writing (3)
OR
PY699 Internship in Industrial-Organizational Psychology (6)

MENTAL HEALTH COUNSELING (MA)

Department of Psychology and Counseling
Dr. Andrew Siebert, Graduate Coordinator
E-mail: asiebert@semo.edu
(573) 651-2138

60 Hours Required
3.00 GPA Required
Core Requirements:
CP610 Counseling Orientation and Ethics (3)
CP611 Developmental Theories (3)
CP612 Counseling Theories (3)
CP613 Social and Cultural Counseling (3)
CP614 Counseling Skills (3)
CP615 Career Development (3)
CP616 Group Counseling (3)
CP617 Assessment in Counseling (3)
CP631 Crisis Intervention and Consultation (3)
CP640 Foundations of Mental Health Counseling (3)

CP641 Mental Health Systems (3)
CP643 Psychodiagnostics and Treatment (3)
CP645 Marriage and Family Counseling (3)
CP661 Addictions Counseling (3)
CP680 Counseling Practicum (3)
CP686 Internship – Mental Health (3)
CP687 Internship – Mental Health (3)
CP688 Internship - Mental Health (3)
CP691 Research Methods and Program Evaluation in Counseling (3)
3 Hours of Electives

PUBLIC HISTORY (MA)

Department of History and Anthropology
Dr. Adam Criblez Graduate Coordinator
E-mail: acriblez@semo.edu

36 Hours Required
Required Courses:
GH600 Introduction to Public History (3)
GH610 Methods of Research in History (3)
US635 American Material Culture (3)
GH695-697 Thesis (6)
OR
HP640 Internship (3)
AND
HP645 Advanced Project in Applied History (3)
GR698 Master's Final Comprehensive Examination (0)
Choose One of the Following Option Areas:

DIGITAL HERITAGE OPTION

GG563 Advanced Topics in Geography (3)
GH550 Heritage Outreach (3)
HP575 Collections Management (3)
Choose one 12-hour track:
Computer Science track – 12 hours
CS500 Fundamentals of Programming (3)
CS533 Mobile Computing (3)
CS630 Current Topics in Human Computer Interaction (3)
3 hours of departmentally approved electives (3)
Educational Technology track – 12 hours
SE600 Multimedia in Education (3)
SE617 Foundations of Educational Technology (3)
SE683 Instructional Design & Technology (3)
3 hours of departmentally approved electives (3)
Multidisciplinary track – 12 hours
Select 3-9 hours from list of approved CS prefix or SE prefix courses
Select 3-9 hours from list of departmentally approved electives
Departmentally Approved Electives:

GH520 Techniques of Oral History (3)
GH550 Heritage Outreach (3)
HP525 Living History (3)
HP540 Topics in Historic Preservation (3)
HP552 Historic Preservation Field School (3)
HP575 Collections Management (3)
HP580 History of American Building Materials and Techniques (3)
HP585 History of American Architecture (3)
HP588 Legal and Economic Principles of Historic Preservation (3)
HP589 Hist Preservation Based Econ Revitalization (3)
HP630 Issues in HP: Archives, Museums, Hist Site Admin (3)
HP640 Internship (3)
HP645 Advanced Project in Applied History (3)
HP650 Problems in Historic Preservation (3)
EH620/US620/WH630 Seminar in History (3)

HISTORIC PRESERVATION OPTION

HP585 History of American Architecture (3)
HP588 Legal and Economic Principles of Historic Preservation (3)
EH620/US620/WH630 Seminar in History (3)
Choose 12 hours from departmentally approved electives:
Departmentally Approved Electives:
GH520 Techniques of Oral History (3)
GH550 Heritage Outreach (3)
HP525 Living History (3)
HP540 Topics in Historic Preservation (3)
HP552 Historic Preservation Field School (3)
HP575 Collections Management (3)
HP580 History of American Building Materials and Techniques (3)
HP589 Hist Preservation Based Econ Revitalization (3)
HP630 Issues in HP: Archives, Museums, Hist Site Admin (3)
HP640 Internship (3)
HP645 Advanced Project in Applied History (3)
HP650 Problems in Historic Preservation (3)
EH620/US620/WH630 Seminar in History (3)

SCHOOL COUNSELING (MA)

Department of Psychology and Counseling
Dr. Janice Ward, Graduate Coordinator
E-mail: jward@semo.edu
(573) 651-2402

60 Hours Required
3.00 GPA Required
Required Courses:
CP610 Counseling Orientation and Ethics (3)
CP611 Developmental Theories (3)
CP612 Counseling Theories (3)

CP613 Social & Cultural Aspects of Counseling (3)
CP614 Counseling Skills (3)
CP615 Career Development (3)
CP616 Group Counseling (3)
CP617 Assessment in Counseling (3)
CP630 Foundations of School Counseling (3)
CP631 Crisis Intervention and Consultation (3)
CP632 Applications of School Counseling (3)
CP643 Psychodiagnostics and Treatment (3)
CP652 Introduction to Play Therapy (3)
CP658 Advanced Play Therapy (3)
CP661 Addictions Counseling (3)
CP680 Counseling Practicum (3)
CP682 Internship Elementary (3)
CP683 Internship Secondary (3)
CP684 Internship School Counseling (3)
CP691 Research Methods and Program Evaluation in Counseling (3)

SECONDARY EDUCATION (MA)

Department of Leadership, Middle and Secondary Education
Dr. Robin L. Smith, Graduate Coordinator
E-mail: rlsmith@semo.edu
(573) 651-2137

30 Hours Required
3.25 GPA Required
Core Requirements – 15 hours:
GR691 Methods of Research (3)
GR698 Master's Final Comprehensive Examination (0)
SE600 Multimedia in Education (3)
SE638 Improvement of Instruction and Assessment (3)
SE641 Multicultural Education (3)
SE642 Secondary Curriculum Development (3)
Choose One of the Following Options
EDUCATIONAL STUDIES OPTION – 15 hours
15 hours in subject specialty area – Art, Autism, Educational Studies, English, or Science
EDUCATIONAL TECHNOLOGY OPTION – 15 hours
SE500 Technology in Instruction (3)
SE617 Foundations of Educational Technology (3)
SE618 Assessment Using Technology (3)
SE683 Instructional Design and Technology (3)
SE685 Planning for Tech in the School District/Organization (3)

TEACHER LEADERSHIP (MA)

Department of Leadership, Middle and Secondary Education
E-mail: dlmse@semo.edu
(573) 651-2137

30 Hours Required
3.0 GPA Required
Required Courses:
EA610 Diversity and Equity in Schools (3)
EA634 School Supervision (3)
EA651 School Law (3)
EA653 Curriculum for Leaders in Education (3)
EA655 Leadership for Effective School Operations (3)
EA660 Leadership in Special Education (3)
GR691 Methods of Research (3)
Choose 9 hours, with approval of advisor:
EA, ED, EL, EX, or SE prefix - 5xx-6xx level

TESOL (MA)

Department of English
Dr. Irina Ustinova, Graduate Coordinator
E-mail: iustinova@semo.edu
(573) 986-6872

30 Hours Required
Core Requirements:
EN686 Sociolinguistics (3)
TL525 Theories of ESL/EFL Learning (3)
TL530 Practicum in TESOL (3)
TL585 Methods of Techniques of TESOL (3)
TL601 Research Methods in TESOL (3)
TL610 Developing Intercultural Awareness and Competence (3)
TL620 Approaches to the Teaching of Grammar (3)
TL625 Materials Dev & Assess Tools for TESOL (3)
TL648 Foundations in Linguistics (3)
Choose 6 Hours From the Following:
EN606 Topics, Issues and Trends in English (3)
TL650 Strat/Tech Teaching Acad Lang Skills to ELLs (3)
TL652 Computer Asstd Language Learning (3)
XXxxx Appropriate course in field of interest, chosen with advisor approval
Capstone – choose one:
Thesis w/ Critical Introduction, including reflection essay and GR699 Master's Oral Exam (0)
Comprehensive Exam including reflection essay and GR698 Master's Final Comprehensive Exam (0)
Portfolio/qualifying paper including reflection essay and GR698 Master's Final Comprehensive Exam (0)
Teaching Portfolio including reflection essay and GR698 Master's Final Comprehensive Exam (0)

MASTER OF ARTS IN TEACHING

MIDDLE OR SECONDARY TEACHER CERTIFICATION (MAT)

Department of Leadership, Middle and Secondary Education

Dr. William Bratberg, Graduate Coordinator
E-mail: wbratberg@semo.edu
(573) 651-2137

33 Hours Required
SE602 Effective Literacy Instruction at the Middle and Secondary Level (3)
SE612 Responsive Literacy Intervention for Middle and High School with Academic Challenges (3)
SE650 Introduction to Teaching Methods in Middle and Secondary Schools (3)
SE651 Introductory Practicum 1 in Middle and Secondary Schools (3)
SE654 Advanced Methods of Teaching in Middle and Secondary (3)
SE656 Techniques of Teaching Middle or Secondary Content (3)
SE660 Intermediate Practicum 2 in Middle and Secondary Schools (3)
SE670 Internship in Middle and Secondary Schools (8)
Choose 4 hours:
SE652 Intermediate Methods of Teaching in Middle Schools (4)
SE653 Intermediate Methods of Teaching in Secondary Schools (4)
Accelerated option – 500 level courses may be taken as part of the undergraduate program and student can apply for accelerated credit.
SE 550 Introduction to Teaching Methods MSE (3)
SE 551 Introductory Practicum 1 (3)
SE 502 Effective Literacy (3)
SE 612 Responsive Literacy for Middle and Secondary Students (3)
SE 654 Advanced Methods (3)
SE 656 Techniques of Teaching Middle and Secondary Content (3)
SE 660 Intermediate Practicum 2 (3)
SE 670 Internship in Middle and Secondary Schools (8)
Choose 4 hours:
SE 552 Intermediate Methods MS (4)
SE 553 Intermediate Methods HS (4)

MASTER OF BUSINESS ADMINISTRATION

MASTER OF BUSINESS ADMINISTRATION (MBA)

Harrison College of Business and Computing
Director of Graduate Programs in Business
Dr. Gillian Nicholls
E-mail: mba@semo.edu
(573) 651-5116

33 Hours Required
Common Course Requirements:
BA600 Organizational Behavior in Practice (3)
BA620 Quantitative & Qualitative Research Methods (3)
BA630 Integrated Decision Information Systems (3)
BA650 Strategic Decision Making (3)*
BA651 Strategic Marketing (3)

BA660 Strategic Cost Analysis & Financial Applications (3)**
BA668 The Financial Environment (3)
*Must complete 18 hours of graduate credit prior to completing the capstone course
**May choose an alternative course taught using USA GAAP standards from among the electives with advice of advisor if undergraduate Accounting major was completed.
Choose One of the Following Options:

ACCOUNTING OPTION

Choose 3 hours from:
AC534 Advanced Financial Accounting (3)
AC537 Advanced Auditing/Assurance Services (3)
AC545 Taxation of Business Entities (3)
Choose 9 hours from:
AC534 Advanced Financial Accounting (3)
AC537 Advanced Auditing/Assurance Services (3)
AC540 International Perspectives Accounting (3)
AC545 Taxation of Business Entities (3)
AC548 Government & Not-for-Profit Accounting (3)
AC550 Fraud Exam & Forensic Accounting (3)
AC555 Forensic Accounting Analytics (3)
BA657 Applied Research Project (3)[#]
AC5xx Course not chosen above (3)
[#]Must be in the accounting area

ENTREPRENEURSHIP & CORPORATE INNOVATION OPTION

Choose 12 hours from:
BA601-605 Business Essentials prerequisite courses – up to 3 hours may count in elective area
BA657 Applied Research Project (3)[@]
ER521 Topics in Entrepreneurship (3)
ER531 Creative Problem Solving in Business (3)
ER541 Managing the Family Business (3)
ER551 Managing Family and Small Businesses (3)
ER561 Business Planning for New Ventures (3)
ER562 New Product Development & Innovation Management (3)
ER581 Entrepreneurship Practicum: Venture Creation (3)
ER593 Independent Study in Entrepreneurship (1-3)
[@]Must be in the entrepreneurship area

ENVIRONMENTAL MANAGEMENT OPTION

EV661 Business Strategies for Corporate Environmental Management (3)
Choose 9 hours from:
BA657 Applied Research Project (3)[%]
EV551 Hazardous Material Assessments (3)
EV554 Risk Assessment Applications (3)
EV653 Occupational Health (3)
EV655 Industrial Hygiene (3)
EV660 Introduction to Toxicology (3)
[%]Must be in the environmental management area

FINANCIAL MANAGEMENT OPTION

Required courses:

FI540 International Finance (3)
FI565 Financial Institutions, Credit Markets, and Regulatory Policy (3)
FI568 Portfolio Seminar (3)
Choose 3 hours:
BA657 Applied Research Project (3)^
EC561 Managerial Economics (3)
^Must be in the financial management area

GENERAL MANAGEMENT OPTION

Choose 12 Hours From:
XXxxx Any AC, BA, BL, EC, ER, FI, IM, MG, MI, MK, QM course at the 500-600 level* **
*Minimum of 18 hours in degree program must be at 600 level
**BA601-605 Business Essentials prerequisite courses – up to 3 hours may count in elective area

HEALTH ADMINISTRATION OPTION

Choose 12 hours from:
BA601-605 Business Essentials prerequisite courses – up to 3 hours may count in elective area
EC585 Healthcare Economics (3)
HA510 Healthcare Performance Improvement (3)
HA520 Healthcare Quality & Value (3)
HA540 Healthcare Informatics (3)
HA545 Healthcare Database Systems (3)
HA555 Fundamentals of Medical Practice Management (3)
HA556 Topics in Healthcare Administration (3)
HA557 Healthcare Law & Regulatory Compliance (3)
HA560 International Healthcare Administration (3)
HA582 Healthcare Budgeting and Reimbursement (3)
HA586 Healthcare Strategy & Marketing (3)
HA593 Independent Study in Healthcare (1-6)
HA657 Applied Research Project (3)[+]
HA658 Graduate Internship in Healthcare (3)
HA681 Health Administration Policy (3)
HA693 Independent Study in Healthcare (3)
[+]Must be in the health administration area

HUMAN RESOURCE MANAGEMENT OPTION

Required courses:
MG566 Legal and Union Issues in Human Resources (3)
MG586 Human Resource Strategy and Analytics (3)
Choose 6 hours:
BA656 Applied Human Resource Management (3)
BA657 Applied Research Project (3)^
MG516 Acquiring Talent (3)
MG536 Compensating Talent (3)
^Must be in the Human Resource Management area
**BA601-605 Business Essentials prerequisite courses – up to 3 hours may count in elective area

INTERNATIONAL BUSINESS OPTION

Choose 6 hours from:
AC540 International Perspectives in Accounting (3)
EC580 International Economics (3)

FI540 International Finance (3)
BA657 Applied Research Project (3)<
Choose 6 hours from:
BA657 Applied Research Project (3)<
BA663 International Business Strategies (3)
BL560 International Business Law (3)
HA560 International Healthcare Administration (3)
MG560 International Management (3)
MK560 International Marketing (3)
NOTE: BA657 may only be counted in one elective area
<Must be in the international business area

MASTER OF PUBLIC ADMINISTRATION

MASTER OF PUBLIC ADMINISTRATION (MPA)

Department of Political Science, Philosophy and Religion
Dr. Jeremy Walling, Graduate Coordinator
E-mail: jwalling@semo.edu
(573) 651-2691

36 Hours Required
Core Requirements:
PS502 Fundamentals of Public Administration (3)
PS505 Organizational Theory and Behavior (3)
PS518 Public Policy Analysis (3)
PS545 Research Methods (3)
PS603 Public Personnel Administration (3)
PS615 Government Budgeting Process (3)
PS655 Federalism (3)
PS697 Internship (3)
OR
3 Hours Thesis
Choose one 12-hour track:
Nonprofit:
PS631 Nonprofit Management (3)
PS632 Nonprofit Marketing (3)
PS636 Grants and Fundraising (3)
PS691-696 Topics in Political Science (3)
State & Local Governance:
PS621 Social Media and Politics (3)
PS691-696 Topics in Political Science (3)
PY571 Introductory Behavioral Statistics (3)
SC560 Organizational Communication (3)

MASTER OF SCIENCE

AGRIBUSINESS (MS)

Department of Agriculture
(573) 651-2168

30 Hours Required
AG515 Agribusiness Communication (3)
AG525 Agribusiness Seminar (3)
AG550 Personnel and Operations Management in Agribusiness (3)
AG580 Research Methods in Agriculture (3)
AG608 Liability & Agribusiness Risk (3)
AG633 Agribusiness Policy (3)
AG647 Advanced Agribusiness Marketing (3)
MA580 Experimental Design & Analysis of Variance (3)
Choose 3 hours:
AG601 Current & Emerging Topics in Agribusiness (3)
AG610 International Agriculture (3)
Choose 3 hours:
AG600 Thesis (3)
AG603 Externship Related Project (3)
Choose one with advice of program coordinator:
GR698 Master's Final Comprehensive Examination (0)
GR699 Master's Oral Examination (0)

APPLIED COMPUTER SCIENCE (MS)

Department of Computer Science
(573) 651-2244

30 Hours Required
Core Requirements
CY501 Introduction to Cybersecurity (3)
CS506 Distributed Cloud Computing (3)
CS591 Advanced Artificial Intelligence (3)
CS605 Research Methods (3)
CS609 Advanced Programming Languages (3)
CS630 Current Topics in Human Computer Interaction (3)
Choose one thesis area:
THESIS AREA - 12 hours
Electives - Choose courses with advisor
CS/CY5xx-6xx – choose 6 hours*
CS697 Thesis Research I (3)
CS698 Thesis Research II (3)
GR699 Master's Oral Examination (0)
NON-THESIS AREA - 12 hours
CS/CY5xx-6xx – choose 12 hours*
CS690 Graduate Project (0)

GR698 Master's Final Comprehensive Examination (0)
Electives may be chosen from the following with the advice of advisor:
CS505 Data Mining (3)
CS533 Mobile Computing (3)
CS560 Computer Architecture (3)
CS575 Advanced Web Development (3)
CS580 Advanced Robotics (3)
CS581 Advanced Network Programming (3)
CS585 Formal Systems and Modeling (3)
CS603 Introduction to Data Analytics (3)
CS612 Simulation and Modeling for Computing (3)
CS631 Advanced Software Engineering (3)
CS632 Emerging and Converging Technologies and Computing (3)
CS633 Digital Signal and Image Processing (3)
CS634 Machine Learning (3)
CS640 Advanced Database Systems (3)
CS645 Internet of Things (3)
CS650 Theory of Computation (3)
CS653 Special Topics (3)
CS693 Independent Study (3)
CS699 Internship (3)
CY510 Info Security and Assurance (3)
CY520 Info Security in System Admin (3)
CY610 Web Application Security (3)
CY620 Advanced Computer Forensics (3)
XX5xx/6xx Any relevant course from other departments and listed as electives – up to 6 hours

APPLIED NUTRITION (MS)

Department of Allied Health, Kinesiology, & Sport Sciences
Dr. Joel Ramdial, Graduate Coordinator
E-mail: jramdial@semo.edu
(573) 651-2919

36 Hours Required
FN600 Advanced Application of Medical Nutrition Therapy (3)
FN607 Food Science and Technology (3)
FN610 Strategic Management of Nutrition and Food Services for the Dietitian (3)
FN611 Foundations in Dietetics Practice (3)
FN615 Culinary Nutrition (3)
FN617 Applied Statistics in Health Sciences (3)
FN619 Metabolic Considerations in Performance and Wellness Nutrition (3)
FN620 Community Nutrition Programming: Advanced Concepts and Application (3)
FN622 Nutrition Counseling and Education: Advanced Concepts and Application (3)
FN624 Research Methods for the Registered Dietician (3)
FN628 Applied Nutrition Field Experience I (1)
FN629 Applied Nutrition Field Experience II (1)
FN645 Capstone Project in Applied Nutrition (1)
FN650 Professional Skills and Emerging Trends in Dietetics Practice (3)

ATHLETIC TRAINING (MS)

Department of Allied Health, Kinesiology, & Sport Sciences
Dr. Kyle Schneider, Program Director
E-mail: kschneider@semo.edu
(573)651-5193

50 Hours Required
FN637 Research Design and Evaluation (3)
PY571 Introductory Behavioral Statistics (3)
TX521 Foundations in Athletic Training (2)
TX522 Musculoskeletal Assessment Techniques I (3)
TX530 Current Research in Athletic Training (1)
TX535 Principles of Injury Prevention (1)
TX550 Principles of Emergency Care (2)
TX551 Procedures in Athletic Training (2)
TX552General Medical Concerns in the Physically Active (3)
TX580 Clinical Experience in Athletic Training 1 (1)
TX581 Clinical Experience in Athletic Training (2)
TX622 Musculoskeletal Assessment II (3)
TX650 Therapeutic Interventions I (3)
TX651 Therapeutic Interventions II (3)
TX660 Administration & Professional Responsibility in Athletic Training (3)
TX670 Applied Clinical Research in Athletic Training (2)
TX680 Clinical Experience in Athletic Training III (1)
TX681 Immersive Clinical Experience (3)
TX682 Clinical Experience in Athletic Training IV (3)
TX683 Clinical Experience in Athletic Training V (4)
TX699 Seminar in Athletic Training (2)

BIOLOGY (MS)

Department of Biology
Dr. Timothy Judd, Department Chairperson
E-mail: tjudd@semo.edu
(573) 651-2170

30 Hours Required
Required Courses:
BY666 Experimental Design in Biology (3)
Biology electives – choose 18 hours from BY515-600 level courses
Electives – choose 6 hours of graduate level courses (500-600 level)
Choose One of the Following Areas
THESIS AREA:
BY699 Thesis (3)
GR699 Master's Oral Examination (0)
NON-THESIS AREA:
GR699 Master's Oral Examination (0)

Choose 3 hours:
BY583 Internship (1-3)
BY591 Research in Biology (1-3)
BY695 Literature Review in Biology (3)

CRIMINAL JUSTICE (MS)

Department of Criminal Justice, Social Work, and Sociology
E-mail: cjsws@semo.edu
(573) 651-2541

30 Hours Required
Core Requirements
CJ600 Administration of Justice (3)
CJ601 Applied Research (3)
CJ615 Theories of Crime (3)
CJ626 Applied Analytics (3)
Choose 18 hours from the following; at least 3 must be at the 600 level:
CJ505 Social Inequality (3)
CJ510 Comparative Criminal Justice Systems (3)
CJ519 Restorative Justice (3)
CJ520 Law & Social Control (3)
CJ522 Critical Analysis of Gangs in America (3)
CJ540 Professional Standards (3)
CJ541 Death Penalty in America (3)
CJ602 Professional Development Planning (3)
CJ610 Seminar in Law Enforcement (3)
CJ630 Contemporary Juvenile Justice (3)
CJ635 Civil Law and Liability (3)
CJ645 Criminal Justice Policy Analysis and Evaluation (3)
CJ650 Criminal Justice Leadership & Practice (3)
CJ651 Special Topics in Criminal Justice (3)
CJ680 Travel Study (3)
CJ690 Professional Praxis (9)
CJ691 Independent Study in Criminal Justice (1-3)
CJ699 Criminal Justice Internship (3-6)

CYBERSECURITY (MS)

Department of Computer Science
(573) 651-2244

30 Hours Required
Core Requirements
CY501 Introduction to Cybersecurity (3)
CY510 Information Security and Assurance (3)
CY520 Info Security in System Admin (3)
CY530 Computer Network Security and Defense (3)
CY620 Advanced Computer Forensics (3)

Choose one area:
THESIS AREA
CY655 Research Methods in Cybersecurity (3)
CY691 Thesis Research I (3)
CY692 Thesis Research II (3)
GR699 Master's Oral Examination (0)
Choose 6 hours of electives from the list below; at least 3 hours must be at the 600 level (6)
NON-THESIS AREA
CY690 Graduate Project (0)
GR698 Master's Final Comprehensive Examination (0)
Choose 15 hours of electives from the list below; at least 12 hours must be at the 600 level (15)
Electives may be chosen from the following:
CS506 Distributed Cloud Computing (3)
CS6xx Computer Science 600 level course (except CS605 and CS690)
CY610 Web Application Security (3)
CY643 Independent Study (3)*
CY650 Legal, Risk and Compliance for Security (3)
CY653 Special Topics in Cybersecurity (3)*
CY660 Cyber Operations (3)
CY662 Ethical Hacking (3)
CY670 Secure Operating Environments (3)
CY699 Internship (3)*
MA510 Mathematical Foundations (3)
MA664 Computational Cryptography (3)
TN562 Introduction to Networks (3)
TN564 Routing and Switching Essentials (3)
*May be taken once for credit on program

DATA SCIENCE (MS)

Department of Mathematics
Dr. Emmanuel Thompson, Program Coordinator
E-mail: ethompson@semo.edu
(573) 651-2721

30 Hours Required
Required Courses:
CS505 Data Mining (3)
CS640 Advanced Database Systems (3)
MA530 Statistical Learning (3)
MA544 Numerical Methods (3)
MA625 Applied Regression Analysis (3)
MA675 Multivariate Methods (3)
MA610 Introduction to Data Science (3)
MA685 Projects and Practice of Data Science (3)
GR699 Master’s Oral Examination (0)
Electives – 6 hours
Select one CS prefix course and one MA prefix course from the following:
CS506 Distributed Cloud Computing (3)

CS603 Introduction to Data Analytics (3)
CS631 Advance Software Engineering (3)
CS634 Machine Learning (3)
MA545 Linear Algebra and Matrices (3)
MA549 Graph Theory (3)
MA550 Differential Equations II (3)
MA575 Time Series and Forecasting (3)
MA664 Computational Cryptography (3)

EMERGENCY MANAGEMENT & PREPAREDNESS (MS)

Department of Biology
Dr. Seong Nam Hwang, Graduate Coordinator
E-mail: shwang@semo.edu
(573) 651-2927

Required Courses:
EV547 Fundamentals of Disaster/Emergency Management and Planning (3)
EV548 Disaster/Emergency Planning and Response (3)
EV549 Vulnerability, Risk Reduction, and Critical Incident Management (3)
EV554 Risk Assessment Applications (3)
GT645 Advanced Geographic Information Science (3)
GT625 GIS Planning for Emergency Management (3)
Choose 6 hours; at least 3 hours must be at the 600 level
BY636 Wildlife Disease (3)
BY666 Experimental Design (3)
EA507 School and Campus Safety (3)
ED535 The Trauma Informed Professional (3)
EV556 Fundamental Risk Communication in Emergency Management (3)
PS502 Fundamentals of Public Administration (3)
PS505 Organization Theory and Behavior (3)
PS615 Government Budgeting (3)
PS631 Nonprofit Management (3)
Choose 6 hours:
EV691-693 Environmental Science Research (1-3)
EV681-683 Environmental Science Internship (1-3)

ENVIRONMENTAL SCIENCE (MS)

College of Science, Technology, Engineering, & Mathematics
Environmental Science Program
Dr. John C. Kraemer, Graduate Coordinator
Email: jkraemer@semo.edu
(573) 651-2355

32 Hours Required
COURSE REQUIREMENTS
EV500-699 Environmental Science Electives (12)
XX500-699 Electives (14)

Choose One of the Following Areas:
THESIS RESEARCH AREA
EV697-EV699 Thesis (6)
GR699 Master's Oral Examination (0)
NON-THESIS AREA
EV681-EV683 Environ Science Internship (6)
GR698 Master's Final Comprehensive Examination (0)
RESEARCH AREA
EV691-EV693 Environ Science Research (6)
GR698 Master's Final Comprehensive Examination (0)

HEALTHCARE MANAGEMENT (MS)

Harrison College of Business and Computing
Dr. Gillian Nicholls, Director of Graduate Programs in Business
E-Mail: mshcm@semo.edu
(573) 651-5116

30 Hours Required
Core Requirements:
BA600 Organizational Behavior in Practice (3)
BA620 Quantitative & Qualitative Research Methods (3)
BA656 Applied Human Resource Management (3)
EC585 Healthcare Economics (3)
HA681 Health Admin Policy (3)
Choose 3 hours:
HA657 Applied Research Project in Healthcare (3)
HA658 Internship in Healthcare (3)
Choose One of the Following Options:

ADMINISTRATION

Choose 12 hours:
HA510 Healthcare Performance Improvement (3)
HA555 Fundamentals of Medical Practice Management (3)
HA556 Topics in Healthcare Administration
HA557 Healthcare Law & Regulatory Compliance (3)
HA582 Healthcare Budgeting and Reimbursement (3)
HA586 Healthcare Strategy & Marketing (3)

INFORMATICS

BA630 Integrated Decision Information Systems (3)
HA520 Healthcare Quality & Value (3)
HA540 Healthcare Informatics (3)
HA545 Healthcare Database Systems (3)

MANAGEMENT (MS)

Harrison College of Business and Computing
Dr. Gillian Nicholls, Director of Graduate Programs in Business
msm@semo.edu
(573) 651-5116

30 Hours Required
Required courses:
BA600 Organizational Behavior in Practice (3)
BA620 Quantitative and Qualitative Research Methods (3)
BA630 Integrated Decision Information Systems (3)
BA656 Applied Human Resource Management (3)
BA664 Organizational Leadership (3)
MG562 Organizational Theory and Design (3)
Choose 12 hours:
BA657 Applied Research Project (3)
BA658 Business Internship (3)
BA661 External Environment of Business (3)
BA662 Contemporary Issues in Business (3)
BA667 Liability Risks in Products and Services (3)
BA671 Business Topics Seminar (1-3)
ER521 Topics in Entrepreneurship (3)
ER531 Creative Problem Solving in Business (3)
ER551 Managing Family and Small Businesses (3)
ER562 New Product Development and Innovation Management (3)
MG5xx Management 500 level course (3)

NUTRITION AND EXERCISE SCIENCE (MS)

Department of Allied Health, Kinesiology, & Sport Sciences
Dr. Francis Tayie, Graduate Coordinator
E-mail: ftayie@semo.edu
(573) 651-2890

39 Hours Required
Core Requirements:
FN530 Pathophysiology: Implications for Nutrition and Exercise Science (3)
FN550 Vitamin Metabolism (3)
FN637 Research Design and Evaluation (3)
FN/HL690 Seminar in Nutrition and Exercise Science (3)
HL601 Physiology of Exercise (3)
HL603 Cardiovascular Exercise Physiology (3)
HL621 Exercise in Health and Disease (3)
PY571 Introductory Behavioral Statistics (3)
3 Hours of HL/FN Electives
Choose either thesis or non-thesis area:
THESIS AREA:
HL694 Thesis I (3)
HL695 Thesis II (3)
6 hours of electives
NON-THESIS AREA:
FN/HL699 Internship in Nutrition and Exercise Science (3)
9 Hours of Electives

TECHNOLOGY MANAGEMENT (MS)

Department of Engineering and Technology
Dr. Brad Deken, Chairperson and Graduate Coordinator
E-mail: bdeken@semo.edu
(573) 651-2104

30 Hours Required
FM504 Facilities Management (3)
IM506 Projects in Industrial & Engineering Technology (3)
IM600 Managing Technology Innovation (3)
IM602 Advanced Quality Concepts (3)
IM603 Technology Supervision in a Diverse Workplace (3)
IM605 Innovation for a Lean Enterprise (3)
IM606 Knowledge Management (3)
IM691 Understanding Graduate Research (3)
GR698 Master's Final Comprehensive Examination (0)
Choose 6 hours:
IM516 Documenting & Presenting Technical Instructions and Proposals (3)
IM520 Technical Training & Development (3)
IM597 Technology Management Internship (3)
IM601 Industrial Safety & Ergonomics (3)

MASTER OF SCIENCE IN NURSING

MASTER OF SCIENCE IN NURSING (MSN)

Department of Nursing
(573) 651-2585

43 Hours Required
Core Requirements:
NS601 Informatics for Advanced Nursing Roles (3)
NS603 Advanced Diagnostics & Reasoning for Primary Care (3)
NS610 Public Policy & Issues in Health Care (3)
NS614 Evidence Based Practice & Quality Improvement for the Advanced Practice Nurse (3)
NS625 Advanced Pharmacology (3)*
NS627 Advanced Health Assessment Practicum (0.5)^
NS628 Advanced Health Assessment (3.5)*
NS636 Advanced Pathophysiology (3)*
NS637 Primary Care I Practicum (4)^
NS638 Primary Care I (3)*
NS646 Role of the APRN (3)
NS647 Primary Care II Practicum (4)^
NS648 Primary Care II (3)*
NS654 Primary Care for the Pediatric Client (2)
NS656 Women’s Health in Primary Care (2)

*Requires an exam average of 80% or higher
^Requires a minimum grade of B in NS627, NS637, and NS647

SPECIALIST DEGREES

SPECIALIST IN COUNSELING (Ed.S.)

Department of Psychology and Counseling
Dr. Kristen LaMantia, Graduate Coordinator
E-mail: klamantia@semo.edu
(573) 651-2138

Requirements for a Specialist Degree
Counseling Core Required Prerequisites:
CP610 Counseling Orientation & Ethics (3)
CP611 Developmental Theories (3)
CP612 Counseling Theories (3)
CP613 Social & Cultural Aspects of Counseling (3)
CP614 Counseling Skills (3)
CP615 Career Development (3)
CP616 Group Counseling (3)
CP617 Assessment in Counseling (3)
CP631 Crisis Intervention and Consultation (3)
CP643 Psychodiagnostics and Treatment (3)
CP680 Counseling Practicum (3)
CP68X Internship (6)
Choose one course:
CP691 Research Methods and Program Evaluation in Counseling (3)
GR691 Methods of Research (3)
Education Specialist Core
CP733 Advanced Educational Processes (3)
CP771 Counselor Supervision (3)
CP788 Advanced Internship (6)
GR799 Specialist Oral Examination (0)
Electives:
CP630 Foundations of School Counseling (3)
CP640 Foundations of Mental Health Counseling (3)
CP 641 Mental Health Systems (3)
CP645 Marriage & Family Counseling (3)*
CP652 Introduction to Play Therapy (3)*
CP 661 Addictions Counseling (3)
CP664 Religion & Spirituality in Counseling (3)*
CP735 Intelligence Testing (3)
CP739 Testing Practicum (3)
EA625 Foundations of Educational Leadership (3)
EA651 School Law (3)
EX601 Educational Assessment Techniques (3)

EX635 Psychology & Education of Students with Special Needs (3)
**Recommended electives*

Specialist Students also must have the completed the requirements of a counseling major-school, community, or an acceptable counseling major from another master's program.
All students must have a minimum, including the Master's, of 72 credit hours to graduate from the Educational Specialist program.
TRANSFER OF CREDITS
A student with regular admission status may transfer up to 48 of the 72 semester hours required for the specialist's degree from other regionally-accredited institutions if the courses are a) appropriate, b) part of master's level work, c) on-campus courses, and d) approved by the student's advisor.
If the student earned his/her master's degree from Southeast Missouri State University, up to nine semester hours of such work may be transferred from regionally accredited institutions. Transfer, workshop, and independent study credit may not exceed nine semester hours. The last 16 hours toward the specialist degree must be taken from Southeast or receive prior permission from the advisor. This is required in order for Southeast to act as certifying agency or endorse the student for certification or licensure.
GRADUATION REQUIREMENTS
1. Has satisfactorily completed the program of study (a minimum of 72 hours of graduate credit including the master's degree with a GPA of at least 3.25),
2. Has passed a final comprehensive oral examination administered by the specialist's degree faculty, and
3. Has been approved for graduation by his/her advisor, Coordinator of the Specialist Program, and the Office of the Registrar.

SPECIALIST IN EDUCATIONAL ADMINISTRATION (Ed.S.)

Department of Leadership, Middle and Secondary Education
Dr. Sam Duncan, Graduate Program Coordinator
E-mail: sdduncan@semo.edu
(573) 651-2137

30 Hours Required
3.25 GPA Required
Choose One of the Following Specialty Areas:
SUPERINTENDENCY:
EA707 Personnel Management in Education (3)
EA709 Leadership and Communications (3)
EA710 Leading District Improvement (3)
EA737 Administration of Curriculum (3)
EA743 Data for Continuous Improvement (3)
EA755 Ethics, Law, and Policy (3)
EA756 Financial Management and Leadership (3)
EA760 Internship I: Specialist Level (3)
EA761 Internship II: Specialist Level (3)
EA785 School Plant Planning and Operation (3)
ADVANCED PRINCIPALSHIP:
Required Courses:
EA707 Personnel Management and Leadership (3)

EA709 Leadership & Communications (3)
EA710 Leading District Improvement (3)
EA737 Administration of Curriculum (3)
EA743 Data for Continuous Improvement (3)
EA755 Ethics, Law, and Policy (3)
EA756 Financial Management & Leadership (3)
EA785 School Plant Planning and Operation (3)
Choose 6 hours from the following:
EA718 Instructional Leadership Strategies (3)
EA722 Equity in Educational Leadership Practices (3)
EA727 Curriculum Development & Alignment (3)

SPECIALIST IN TEACHER LEADERSHIP (Ed.S.)

Department of Leadership, Middle and Secondary Education
Dr. Sherry Copeland, Graduate Coordinator
E-mail: slcopeland@semo.edu
(573) 651-2137

30 Hours Required
Required Courses:
EA709 Leadership & Communications (3)
EA710 Leading District Improvement (3)
EA718 Instructional Leadership Strategies II (3)
EA722 Equity in Educ Leadership Practices (3)
EA727 Curriculum Develop & Alignment (3)
EA730 Internship for Teacher Leadership I (3)
EA731 Internship for Teacher Leadership II (3)
EA737 Administration of Curriculum (3)
EA743 Data for Continuous Improvement (3)
EA755 Ethics, Law & Policy (3)
NOTE: This program does not lead to administrative certification.

CERTIFICATE PROGRAMS

AUTISM SPECTRUM DISORDER

Department of Elementary, Early and Special Education
Linda Schaffner, Program Coordinator
E-mail: lschaffner@semo.edu
(573) 651-2122

12 Hours Required
EX555 Introduction to Autism Spectrum Disorder (3)
EX556 Communication Interventions and Strategies for Individuals with Autism Spectrum Disorder (3)
EX557 Behavior Management and Interventions for Individuals with Autism Spectrum Disorder (3)
EX558 Research Autism Spectrum Disorders (3)

CLOUD COMPUTING CERTIFICATE

Department of Computer Science
(573) 651-2244

12 Hours Required
Required Courses:
CS500 Fundamentals of Programming (3)
CS503 Fundamentals of Computing (3)
CS506 Distributed Cloud Computing (3)
Choose one of the following
CS533 Mobile Computing (3)
CS603 Introduction to Data Analytics (3)

CYBERSECURITY CERTIFICATE

Department of Computer Science
(573) 651-2244

12 Hours Required
Required Courses:
CS500 Fundamentals of Programming (3)
CS503 Fundamentals of Computing (3)
CY501 Introduction to Cybersecurity (3)
CY520 Information Security in Systems Administration (3)

HEALTHCARE MANAGEMENT: ADMINISTRATION OPTION CERTIFICATE

Harrison College of Business and Computing
Dr. Gillian Nicholls, Director of Graduate Programs in Business
mshcm@semo.edu
(573) 651-5116

12 Hours Required
Required Courses:
EC585 Healthcare Economics (3)
HA510 Healthcare Performance Improvement (3)
HA582 Healthcare Budgeting and Reimbursement (3)
HA586 Healthcare Strategy & Marketing (3)

HEALTHCARE MANAGEMENT: INFORMATICS OPTION CERTIFICATE

Harrison College of Business and Computing
Dr. Gillian Nicholls, Director of Graduate Programs in Business
mshcm@semo.edu
(573) 651-5116

12 Hours Required
Required Courses:
BA630 Integrated Decision Information Systems (3)

HA520 Healthcare Quality & Value (3)
HA540 Healthcare Informatics (3)
HA545 Healthcare Database Systems (3)

SCHOOL PSYCHOLOGICAL EXAMINER CERTIFICATE

Department of Psychology and Counseling
Dr. Janice Ward, Graduate Coordinator
E-mail: jward@semo.edu
(573) 651-2402

24 Hours Required
Required Courses:
CP611 Developmental Theories (3)
CP617 Assessment in Counseling (3)
CP643 Psychodiagnostics & Treatment (3)
CP733 Adv Educational Processes (3)
CP735 Intelligence Testing (3)
CP739 Testing Practicum (3)
EX601 Educational Assessment Techniques (3)
PY571 Introductory Behavioral Statistics (3)

SPECIAL READING K-12 LICENSURE CERTIFICATE

Department of Elementary, Early and Special Education
Dr. Dixie McCollum, Program Coordinator
E-mail: dgmccollum@semo.edu
(573) 651-2122

36 Hours Required
Required Courses:
EL623 Practicum II-Older Literacy Learners (3)
EL624 Literacy Leadership (3)
EL644 Creating and Fostering Literate Environments (3)
EL647 Diagnosis and Correction of Reading Difficulties (3)
EL648 Dyslexia and Reading Disabilities (3)
EX304 Classroom & Behavior Management (3)
EX601 Educational Assessment Techniques (3)
SE602 Effective Literacy Instruction at the Middle and Secondary Level (3)
Choose one course:
EX390 Psych/Educ of Child w/ Exceptionalities (3)
EX635 Psych/Educ of Students w/ Special Needs (3)
Choose one course:
EL646 Aspects of Literacy Development and Acquisition (3)
EL680 The Science of Reading III: Evidence–Based Literacy Instruction in the Area of Language and Reading (3)
EL681 The Science of Reading IV: Developing Research Driven Instruction in Reading Comprehension & Writing (3)
Choose one course:

EX302 Lang Development of Children w/ Exceptionalities (3)
CE370 Language Acquisition of the Young Child (3)
EX602 Language Acquisition for the Child with Exceptionalities (3)
Choose from the following:
EL611 Emergent Literacy Learners Practicum (3)
OR
EL630 The Science of Reading I: Foundations of Literacy (3)
AND
EL631 The Science of Reading II: Assessing and Correcting Emergent Literacy Learners (3)

Prerequisites
To be fully admitted to the program the following prerequisite requirements must be met:

- 2 years of teaching experience
- Valid MO Teaching Certificate
- 3.0 GPA
- PY120 Psychological Development of the Child or PY222 Development of the Adolescent
- EX602 Language Acquisition for the Child with Exceptionalities or EX302 Language Development of Children with Exceptionalities or CE370 Language Acquisition of the Young Child
- EX390 Psychology and Education Children with Exceptionalities

TRAUMA AND RESILIENCY STUDIES CERTIFICATE

Department of Child and Family Studies
Dr. Tony Faber, Program Coordinator
E-mail: afaber@semo.edu
(573) 986-6814

9 Hours Required
Required Courses:
CF602 Trauma-Informed Care (3)
ED535 The Trauma-Informed Professional (3)
Choose 3 hours:
AB534 Applied Behavior Analysis II: Functional Assessment and Behavior Reduction (3)
CF645 Advanced Trauma Studies Seminar (3)
CF555 Responding to the Survivor of Child Abuse (3)
CJ630 Contemporary Juvenile Justice (3)
CP631 Crisis Intervention & Consultation (3)
EA610 Diversity and Equity in Schools (3)
EA615 Wellness Issues in Higher Education (3)
EA709 Leadership & Communication (3)
EX557 Behavior Management and Interventions for Individuals with Autism Spectrum Disorder (3)

COURSE DESCRIPTIONS

ACCOUNTING (AC)
AC534. Advanced Financial Accounting. Business combinations, consolidated statements, partnerships, and not-for-profit accounting. Prerequisite: AC332 with minimum grade of C. (3)
AC537. Advanced Auditing & Assurance Services. An in-depth examination of auditor legal liability, ethics, audit procedures, statistical sampling, & audit research using electronic databases & the Internet. Prerequisite: AC437 with minimum grade of C or consent of instructor. (3)
AC540. International Perspectives in Accounting. An examination of accounting rules & practices of multinational enterprises throughout the world with special emphasis on harmonization, standardization, & disclosure requirements. Prerequisite: AC222 with a minimum grade of C. (3)
AC545. Taxation of Business Entities. An examination of federal tax laws with emphasis on corporate taxpayers, partnerships, and fiduciaries. Prerequisite: Minimum grade of C in AC435 or consent of instructor. (3)
AC548. Governmental and Not-for-Profit-Accounting. An introduction to the accounting principles and reporting practices of governments and not-for-profit organizations. Prerequisite: Minimum grade of C in AC222 (3)
AC550. Fraud Examination and Forensic Accounting. In-depth study of fraud examination with focus on causes of fraud, controls to prevent fraud, company management and the accountant's role in deterring and detecting fraud. Prerequisites: AC 222 and AC 321 with minimum grade of C. (3)
AC555. Forensic Accounting Analytics. Study of data analytics, with a focus on organizational data, to detect fraud and errors. Prerequisites: AC 222; MI 101; QM 257; with minimum grades of C. (3)
AC631. Advanced Cost Analysis. Introduction & application of strategic cost/managerial accounting concepts & procedures. Prerequisites: AC331 with a minimum grade of C; BA660; or consent of instructor. (3)
AC647. Emerging Issues in Accounting. Study and application of accounting theory to current and emerging issues in accounting practice. Prerequisite: AC331 with minimum grade of C. (3)

AGRICULTURE (AG)
AG515. Agribusiness Communication. Use of multimedia and emerging technology to engage customers and producers. Prerequisite: Admission to the MS Agribusiness program or consent of instructor. (3)
AG525. Agribusiness Seminar. Literature review, presentation, discussion topics related to current agricultural issues, agricultural research advancements, and student-interest items related to professional development. Prerequisite: Admission to the MS Agribusiness program or consent of instructor. (3)
AG550. Personnel and Operations Management in Agribusiness. Organizational appraisal methods for maximization of human resource potential and operational efficiency. Prerequisite: Admission to the MS Agribusiness program or consent of instructor. (3)
AG551. Water Management. Soil, Water, and Plant Relationships. Design and layout of farm drainage and irrigation systems. Prerequisite: AO215. (3)
AG580. Research Methods in Agriculture. Applying the principles, practices, and strategies for conducting research in the agricultural and natural sciences. Prerequisite: Admission to the MS Agribusiness program or consent of instructor. (3)
AG600. Agribusiness Thesis. This course covers proposal development leading to thesis as directed by advisor and/or chair of thesis committee. Prerequisite: Admission to the MS Agribusiness program. (3)
AG601. Contemporary and Emerging Issues in Agriculture. Examination of current and emerging issues in Agribusiness. Prerequisite: Admission to the MS Agribusiness program. (3)

AG603. Agribusiness Externship. Application of experiential learning through hands-on collaboration with agriculture businesses or industry. Prerequisite: Admission to the MS Agribusiness program. (3)
AG608. Liability and Agribusiness Risk. Course provides an in-depth examination of the various risks faced by agribusinesses and analyzes different risk management tools available to US farms. Prerequisite: Admission to the MS Agribusiness program. (3)
AG610. International Agriculture. Global perspective of production and markets, identifying challenges and differences, possible collaborations and opportunities in the developed and developing environments. Prerequisite: Admission to the MS Agribusiness program. (3)
AG633. Agricultural and Food Policy. Results and outcomes of policies and regulations related to farm, food quality and processing, natural resources trade and development. Prerequisites: admission to the MS Agribusiness program or consent of instructor. (3)
AG647. Agribusiness Marketing. Examination of margins, derived demand applied to processing wholesale and retail; analysis, coordination, elasticity; forecasting and competition policies. Prerequisite: Admission to the MS Agribusiness program. (3)

AGRONOMY (AO)
AO555. Soil Classification and Resource Management. Classification of soils in terms of their physical, chemical and mineralogical composition. Interpretation of soils in terms of proper land use, with special attention to soil erosion. Two lectures; two-hour lab. Prerequisites: AO215 or GO110; CH181 or CH185. (3)
AO627. Soil Fertility and Plant Nutrition. Fundamentals and concepts of soil fertility and its evaluation related to soil management, plant nutrition, and maintenance. Two lectures; two-hour laboratory. Prerequisites: 1 year of general chemistry and concurrent enrollment in equivalent course. (3)
AO640. Agroecosystems Analysis Field Course. Whole-system approach to agriculture production, ecology, economics and food systems applied in a real-world field course experience. (3)

APPLIED BEHAVIOR ANALYSIS (AB)
AB531. Basic Principles in Applied Behavior Analysis. Survey of the concepts and principles of operant and respondent conditioning, and applications and research from the science of Applied Behavior Analysis. Prerequisite: Junior standing (60 undergraduate hours) or consent of instructor. (3)
AB532. Methods for Studying the Behavior of Individuals. Introduction to the fundamentals of single-case and behavior analytic research methods, including designing, conducting, and evaluating Applied Behavior Analysis research. Pre- or co-requisite: AB531. (3)
AB533. Applied Behavior Analysis I: Assessment and Skill Acquisition. ABA intervention course that reviews assessment and intervention methods used to select appropriate behavioral goals, define targets, and teach new skills. Corequisite: AB534. Prerequisite: AB531; AB532. (3)
AB534. Applied Behavior Analysis II: Functional Assessment and Behavior Reduction. ABA intervention course that reviews functional assessment and intervention methods for reducing behaviors when treating individuals with developmental disabilities. Corequisite: AB533. Prerequisite: AB531; AB532. (3)
AB535. Principles in Psychopharmacology. Survey of psychopharmacology principles and applications as it pertains to drug abuse and addiction as well as psychiatric disorders. (3)
AB537. Behavioral Consultation and Management. Principles and procedures for implementation and supervision of behavior analytic procedures at the individual and systems levels. (Required for BCBA certification). Prerequisites: AB 533; AB 534. (4)
AB601. Conceptual Topics in Behavior Analysis. Exploration of Skinner's writings and the foundations of radical behaviorism while considering issues of broad scientific, philosophic, and social significance. Prerequisite: AB531. May be repeated for up to 6 hours of credit. (3)

AB603 Ethics, Disciplinary Systems, and Professionalism in Applied Behavior Analysis. Introduction to the Professional and Ethical Compliance Code for Behavior Analysts, resolving ethical dilemmas, and professionalism in the workplace. Prerequisites: AB531; AB532; AB533; AB534; AB535; AB601. (3)
AB605. Research and Practice in Applied Behavior Analysis I. Principles, practices, and procedures for professional practice as a behavior analyst with an emphasis on critical thinking and synthesis of the behavior analytic literature. Corequisite: AB603. Prerequisites: AB533; AB534; AB535; AB601. (6)
AB607. Research and Practice in Applied Behavior Analysis II. Principles, practices, and procedures for professional practice as a behavior analyst with an emphasis on independent professional practice. Prerequisites: AB603; AB605. (6)
AB608. Research and Practice in Applied Behavior Analysis III. Principles, practices, and procedures for professional practice as a behavior analyst with an emphasis on independent professional practice. Prerequisite: AB607. (3)

ART (AR, AW)
AR501. Intaglio Printmaking. Introduction to basic yet diverse intaglio techniques and the development of a portfolio of prints using built, hand-drawn and photo plates. May be repeated for up to 9 hours of credit. (3)
AR502. Lithography. Techniques of stone and plate lithography and development of personal expression. (3)
AR504. Special Topics in Art and Design. Exploration of mediums beyond typical studio/lab courses with a focus on cross-disciplinary practice on a centralized special topic or theme. May be repeated for up to 9 hours of credit. (3)
AR505. Social Practice Printmaking and Fibers. Exploration of generative social practice art through experiential learning and collaboration in printmaking and fibers techniques at the intermediate level. Prerequisite: AR302 or AR303 or AR330 or AR501 or AR502 or consent of instructor. (3)
AR541. Ceramics V. Preparation for a career as a ceramic artist: personal research and development of techniques, historical relevance, and concepts are emphasized. May be repeated for up to 9 hours of credit. Prerequisite: AR443 or consent of instructor. (3)
AW841. Welded Sculpture Workshop. Introduction to arc welding of metal as a sculptural medium and the design and production of sculpture. May be repeated for up to 9 hours of credit. (3)
AW845. Computer Art. Explores creative digitally based art works using Adobe Photoshop, Adobe Illustrator and various scanning software. Use of Macintosh computer desirable, but not required. Basic skills and interest in creating art mandatory. May be repeated for up to 6 hours of credit. (3)
AW851. Painting Workshop. Investigation of painting mediums, techniques, and varying surfaces for pictorial creation. Imagery derived from a variety of themes including but not limited to: still life, plein air, portraiture, and found imagery. May be repeated for up to 6 hours of credit. (3)

ART HISTORY (AH)
AH510. Non-Western Art. Survey of historical and contemporary culture in Central Africa, India, Japan, China, the Middle East and Meso-America. (3)
AH511. American Art. Study of the major contributions of artists living in the U.S. from the time of the Native Americans to the present. (3)
AH512. Issues in Contemporary Art and Culture. Movements in painting, sculpture and architecture as developed in Europe and America beginning with the Armory Show of 1913 and including present trends. (3)
AH513. Northern Renaissance Art. Survey of the history of Northern Renaissance Art from 1350-1575. (3)

AH517. Special Topics in Art History. Special topics courses in art history are developed to cover emerging issues or specialized content not represented in the main curriculum. Repeatable up to 9 hours of credit. (3)

ATHLETIC TRAINING (TX)

TX521. Foundations in Athletic Training. Introduction into the history and profession of athletic training. Emphasis on becoming familiar with roles, functions, and professional preparation of Athletic Trainers. Prerequisite: Admission into MSAT program. (2)

TX522. Musculoskeletal Assessment Techniques I. Instruction on proper methods of musculoskeletal examination techniques. Emphasis on pathomechanics, recognition, and evaluation of lower extremity injuries. Prerequisite: Admission to the MSAT Program. (3)

TX530. Current Research in Athletic Training. In-depth analysis into current research topics in athletic training. Emphasis on evaluating research utilizing evidence-based principles. Prerequisite: Admission into MSAT program. (1)

TX535. Principles of Injury Prevention. Concepts of delivering and implementing injury prevention principles with emphasis on taping, bracing and other prevention programs. Prerequisite: Admission into the MSAT program. (1)

TX550. Principles of Emergency Care. Concepts of treating and managing emergency conditions relating to physically active individuals. Concepts of referral, legal/ethical considerations will be discussed. Prerequisite: Admission into the MSAT program. (2)

TX551. Procedures in Athletic Training. Concepts relating to performing and applying standard medical procedures commonly required in various health care populations and settings. Prerequisite: Admission into the MSAT program. (2)

TX552. General Medical Concerns in the Physically Active. Exploring the epidemiology, pathophysiology, clinical evaluation, and treatment of general medical conditions commonly seen in the physically active. Corequisite: TX551. Prerequisite: Admission into the MSAT program. (3)

TX580. Clinical Experience in Athletic Training I. First of five clinical experience courses designed to provide students with experiential learning in athletic training. Focus on emergency care and injury prevention techniques. Prerequisites: TX535; TX550. (1)

TX581. Clinical Experience in Athletic Training II. Second of five clinical experience courses designed to provide students with experiential learning in athletic training. Focus on lower extremity evaluation. Prerequisite: TX580. (2)

TX622. Musculoskeletal Assessment Technique II. Instruction on proper methods of musculoskeletal examination techniques. Emphasis on pathomechanics, recognition, and evaluation of upper extremity injuries. Prerequisite: TX522. (3)

TX650. Therapeutic Interventions in Athletic Training I. The underlying theories and application regarding the use of therapeutic modalities in athletic training practice. Prerequisite: TX522. (3)

TX651. Therapeutic Interventions in Athletic Training II. The underlying theories and application of the use of therapeutic exercise in athletic training practice. Prerequisite: TX650. (3)

TX660. Administration & Leadership in Athletic Training. Application of leadership techniques in professional responsibility, facility management, human resources, and resource management. Prerequisite: TX640. (3)

TX670. Applied Clinical Research in Athletic Training. Collection, interpretation, and dissemination of a clinically relevant research topic related to patient care in an athletic training setting. Prerequisite: PY571. (2)

TX671. Applied Research in Athletic Training II. The collection of data and information culminating in the submission of a clinically relevant athletic training research topic. Prerequisite: TX670. (1)

TX680. Clinical Experience in athletic Training III. Third of five clinical experience courses designed to provide students with experiential learning in athletic training. Focus on lower general medical evaluation. Prerequisite: TX581. (1)
TX681. Immersive Clinical Experience in Athletic Training. An immersive clinical experience designed to provide students with full-time experiential learning in athletic training. Prerequisite: TX581. (3)
TX682. Clinical Experience in Athletic Training IV. Fourth of five clinical experience courses designed to provide students with experiential learning in athletic training. Focus on upper and lower extremity evaluation. Prerequisite: TX581. (3)
TX683. Clinical Experience in Athletic Training V. Fifth of five clinical experience courses designed to provide students with experiential learning in athletic training. Focus on therapeutic interventions. Prerequisite: TX581. (4)
TX699. Seminar in Athletic Training. Capstone course to prepare students for professional practice through implementation of case studies and preparation for Board of Certification Exam. Prerequisite: TX671. (2)

BIOLOGY (BY)
BY500. Fundamental Concepts of Bioenergetics. Fundamental principles of cell structure/function and metabolism as demonstrated in prokaryotic and eukaryotic microbes. Does not count toward completion of a graduate degree. Prerequisites: Admission to Graduate Study in Department of Biology; 30 semester hours of acceptable undergraduate credit in science and mathematics. Three hours lecture; one 2-hour lab. (3)
BY501. Fundamental Concepts of Genetics. Intermediate-level survey of modern genetics. Topics covered include enzymology of gene expression; introduction to gene regulation in prokaryotes and eukaryotes; techniques of DNA manipulation; cytogenetics; quantitative and population genetics. Does not count toward completion of a graduate degree. Prerequisites: Admission to Graduate Study in Department of Biology; 30 semester hours of acceptable undergraduate credit in science and mathematics. Three hours lecture; one 2-hour lab. (3)
BY502. Fundamental Concepts of Ecology. An introduction to the fundamental principles of ecology. Field trips outside of class time may be required. Does not count toward completion of a graduate degree. Prerequisites: Admission to Graduate Study in Department of Biology; 30 semester hours of acceptable undergraduate credit in science and mathematics. Two hours lecture; one 2-hour lab. (3)
BY503. Fundamental Concepts of Evolution. An introduction to historical biology, incorporating principles of ecology, systematics, biogeography, and basic principles of evolutionary biology. Does not count toward completion of a graduate degree. Prerequisites: Admission to Graduate Study in Department of Biology; 30 semester hours of acceptable undergraduate credit in science and mathematics. Three hours lecture. (3)
BY504. Fundamental Concepts of Botany. Survey of the structure, function, and evolution of plants, plus relevant introduction to cyanobacteria, and photosynthetic protistans. Does not count toward completion of a graduate degree. Prerequisite: Admission to Graduate Study in Department of Biology. Thirty semester hours of acceptable undergraduate credit in science and mathematics. Three hours lecture/discussion; one 2-hour lab. (3)
BY505. Fundamental Concepts of Zoology. Diversity of animal life with emphasis on invertebrates. Comparison of the major animal phyla emphasizing integration of function and form. Does not count toward completion of a graduate degree. Prerequisite: Admission to Graduate Study in Department of Biology; 30 semester hours of acceptable undergraduate credit in science and mathematics. Two hours lecture; one 2-hour lab. (3)
BY520. Engaging Learners in Science. Interested in teaching science? Try your hand at engaging peers in lab and classroom guided by research on learning. Two lectures and one two-hour lab. Open to

graduate students in the sciences. Prerequisites: Declared major in biology, chemistry or physics (course is not available for Physics minors); sophomore standing; completion of 100 level courses in the science major/interest in teaching. (3)
BY539. Prescribed Fire Management. Introduction to the planning and management of prescribed fires focusing on historical context, practical applications, and safety protocols. Prerequisite: BI332 or graduate standing. (3)
BY543/043. Pathogenic Microbiology. The study of the significant microorganisms with an emphasis on molecular mechanisms and treatments of disease. Three one-hour lectures; one two-hour lab. Prerequisite: BY310 or BS240. Co-requisite: BY043. (4)
BY565. Plant Diversity Collections. Skill-building course focused on building a plant diversity collection useful in courses and research labs in biological sciences. Prerequisite: BY360; or permission of instructor. (3)
BY580. The Development of Instructional Materials for Courses in the Biological Sciences. Independent study. Explore a topic of interest while under supervision of a biology faculty member. Students will design and develop instructional materials for a departmental course or other biological science educational application. Repeatable up to 6 hours. Prerequisite: BY283 with a minimum grade of C or graduate standing. (1-3)
BY582 Internship in Biology. Supervised learning and work experience in biology that enhances a student's ability to apply biological knowledge and skills. May be repeated for a maximum of 6 credit hours. Prerequisites: completion of 45 hours, with at least 16 hours in BY prefix courses; a minimum 2.5 cumulative gpa; or acceptance into the MS in Biology program; approval of faculty supervisor. (1-3)
BY585. Biology Field Studies. Field course involving the study of ecosystems and habitats not normally within the range of Southeast Missouri (e.g., grasslands, deserts, estuarine, and montane systems). Prerequisite: approval of instructor. (1-6)
BY587. Experience in Museum Curation. Working in a biological museum collection with emphasis on identification, preservation and curation of biological museum specimens. Prerequisite: Consent of museum curator. Repeatable up to 6 hours. (1-3)
BY591. Biological Research. Investigation of a research project with emphasis on development of controls, evaluation of results and relation to current literature. A summarizing paper may be required. Students are limited to a total of 6 credit hours of research during their program. Prerequisite: instructor approval. (1-6)
BY592. Experiential Learning in Marine Biology. Consideration of in-depth of marine biology subject matter that is not part of the established departmental curriculum that includes extensive an extensive experiential learning component. Pre- or corequisite: as determined by topic. (1-3)
BY593. Special Topics in Marine Science. Consideration of in-depth of marine biology subject matter that is not a part of the established departmental curriculum. Pre- or corequisite: as determined by topic. (1-6)
BY602. Molecular Genetics. Advanced-level genetics. Topics include regulation of gene expression in prokaryotes and eukaryotes, techniques of DNA manipulation, and chromosome biology. Prerequisites: BY283; CH341. Three lectures. (3)
BY603. Medical Genetics. Critical reading of scientific literature examining molecular basis of human genetic disorders and the importance of model organisms for studying disease. Prerequisites: BY283; CH341
BY604. Cell Biology. Course discusses fundamental components of cellular organization and signaling, their functions, and how they work together to form tissues and organisms. Prerequisites: graduate standing. (4)
BY605. Bacterial Genetics. Introduction to the genetics of bacteria and archaea. Examination of both traditional and modern methods. Three one-hour lectures and one two-hour lab. (4)

BY606. Genomics. Introduction to contemporary genomics, including conceptual frameworks for genome analysis and methods for whole genome analysis. Prerequisite: Graduate standing. (4)
BY610. Biological Microscopy. Introduction to microscopy focusing on the use of light microscopes and techniques used to fix, embed, mount, stain and analyze specimens. (4)
BY611. Analytical Bioinformatics for Biology and Medicine. Analysis of large-scale molecular biology data. Databases and queries. Gene annotation. Sequence similarities and alignments. Protein structure/function prediction. Genomics, transcriptomics, proteomics. Prerequisite: permission of instructor. (3)
BY612. Investigative Molecular Biology and Biotechnology. Gene cloning and analysis in an investigative environment. DNA isolation, sequence analysis, recombinant construction, hybridization, library screening, PCR. One-hour lecture; two 2-hour labs. (3)
BY620. Biogeography. Geographical distribution of biological diversity. Application of theories and methods to explore spatial and temporal patterns of variation and biodiversity. (3)
BY621. Phylogenetic Systematics. Introduction to species concepts and models of speciation, methods for determining and inferring species boundaries, construction, and evaluation of phylogenies, and testing phylogenetic hypotheses. Two-hours lecture; one two-hour lab. Prerequisite: graduate standing. (4)
BY629. Nature Journaling. Introduction to app-based identification of plants and animals. Development and exploration of the skills needed to engage in traditional naturalist activities, observant, idea synthesis, descriptive wording, and field sketching. Prerequisite: Graduate Standing. (3)
BY630. Management of Wildlife Habitat. Principles and practices of habitat management for wildlife in North America. Particular emphasis placed on habitat evaluations procedures. Prerequisite: graduate standing. Two hours lecture; one 2-hour lab. (3)
BY631. Management of Wildlife Populations. Introduction to theoretical principles and empirical bases for population management of wildlife, and applications of these principles. Basic concepts of population dynamics, estimation of population parameters, and population management. Examples emphasize North American species. Weekend field trip may be required. (3)
BY632. Ecology and Management of Wetlands. General introduction to structure, function, classification, delineation, and biota of wetlands. Emphasis will be on the application of principles of wetland ecology to wetland management, with particular attention given to wetland types occurring in the Midwest. One weekend field trip is required. Two hours lecture; one 2-hour lab. (3)
BY633 Wildlife Management Techniques. Course introduces students to the modern techniques and methodologies used in wildlife management in North America. Students will explore various survey methods employed to study and monitor wildlife populations, their habitats, and conservation needs. The course will emphasize hands-on field experience to provide a comprehensive understanding of wildlife techniques and their applications. Prerequisite: graduate standing. (3)
BY634. Marine Ecology and Conservation. Integration of advanced ecological processes and conservation principles that affect marine community structure, function, and services. (3)
BY635. Conservation Biology. Discussion of ecological principles relating to conservation of biodiversity, with a review of social, political, and economic constraints. One weekend field trip is required. (3)
BY636. Wildlife Disease. Introduction to the principles of evolutionary parasitology and disease ecology and discussion of the literature on parasites on wildlife, with an emphasis on regional vertebrate species of management concern. Prerequisite: graduate standing. (3)
BY637. Freshwater Ecology. A comparative approach to the ecological study of freshwater systems, including the chemical, physical, and biological components of springs, streams, impoundments, and swamps. One lecture; two 2-hour labs. (3)

BY640. Introduction to Toxicology. Introduction to the fundamental principles of toxicology, toxic agents, toxicity testing, mechanisms of toxicity, toxic effects, sources of exposure, and applications of toxicology. (3)
BY641. Virology. A course to acquaint students with the viruses, prions and viroids of animals, plants and bacteria with emphasis on their biochemical characteristics, techniques of study and medical and economical importance. (3)
BY642/042. Immunology. An introduction to modern immunology with an emphasis on the underlying biochemical mechanisms. Prerequisite: graduate standing. (3)
BY643. Epidemiology. Concepts, methods and applications of infectious disease, chronic disease and environmental epidemiology focused on epidemiological reasoning processes. (3)
BY644. Cellular Mechanisms of Disease. Introduction cellular mechanisms that underlie infectious and non-infectious disease and how these mechanisms scale-up causing emergent properties that characterize illness. (3)
BY645. Microbial Physiology. A detailed consideration of prokaryotic structure and function, encompassing morphology, metabolism, genetics, and growth. Two hours lecture; one 2-hour lab. (3)
BY646/046. Developmental Biology. The differentiation of germ layers into tissues and organs with an emphasis on genetic processes and morphological patterns. Corequisite: BY046. Three hours lecture; one two-hour lab. (4)
BY647. Vertebrate Histology. Vertebrate tissue preparation, tissue composition, and tissue identification. Two lectures and one two-hour lab. (3)
BY660. Ethnobotany. The history and traditional methods of plant use by ethnic groups and potential or current applications to modern human needs, such as pharmacy, nutrition, human habitat, clothing, and industry. (3)
BY661. Plant Physiology. Physiological processes and responses of plants to the environment with emphasis on metabolism, development and transport. Two hours lecture; one 2-hour lab. (3)
BY662. Field Botany-Fall Flora. Study of plan communities, emphasizing natural history and field identification of local species during late summer and fall. (2)
BY663. Field Botany-Spring Flora. Study of plant communities in a variety of habitats, emphasizing the natural history and field identification of local species. One, 2-hour lecture/discussion per week during first 8-week period and two, 4-hour labs per week during 2nd 8-week period. (3)
BY664. Native Aquatic Plants. Classification, identification, and natural history of freshwater algae and aquatic vascular plants, with emphases on the local flora. One-hour lecture; two 2-hour labs. (3)
BY666. Experimental Design. Introduction to the topic of research, the planning of research proposals, and the nature of quantitative biological principles (biometrics). (3)
BY670. Animal Behavior. An evolutionary approach to the study of behavior of the individual and group. Topics include proximate and ultimate explanations of behavior. (3)
BY671. Invertebrate Zoology. Invertebrate biology, diversity, phylogeny, structure, life history, development, and additional selected topics in invertebrate zoology. Studio style course: three 2-hour periods. (4)
BY672. Parasitology. Introduction to the symbiotic association known as parasitism, with special emphasis on animal parasites. Protozoa, platyhelminths, and nematodes are stressed, particularly host-parasite relationships and life cycles. One-hour lecture; two 2-hour labs. (3)
BY673. Entomology. Insect biology, diversity, structure, physiology, behavior, control and additional selected topics in entomology. Two hours lecture; one 2-hour lab. (3)
BY674. Aquatic Entomology. Introduces students to the biology, ecology, and taxonomy of aquatic insects that live in streams, lakes, and wetlands. Emphasis on taxonomic identification of the regionally common aquatic insects. Studio-style course in which two two-hour class periods will involve both lecture and lab activities. (3)

BY675. Ichthyology. An introduction to the evolution, zoogeography, taxonomy, and ecology of fishes with particular reference to Missouri fishes. Two hours lecture; one 2-hour lab. One Saturday and one week-end field trip may be required. (3)
BY676. Herpetology. The biology of amphibians and reptiles. (3)
BY677. Mammalogy. An introduction to the ecology, zoogeography, structure/function, evolution, and behavior of mammals. One-hour lecture; two 2-hour labs. (3)
BY678. Ornithology. The physical structure, habits, ecology, geographical distribution, physiology, evolution, and conservation of birds are discussed. The emphasis will be on current topics in the scientific literature. Two hours lecture; one 2-hour lab. (3)
BY681. Vertebrate Adaptations. A survey of vertebrate adaptations to aerial, arboreal, aquatic, and terrestrial environments. Mechanistic and morphological adaptations for feeding, thermoregulation, locomotion, reproduction and sensory systems are among the topics included for study. One-hour lecture; two 2-hour labs. (3)
BY685. Topics in Biology. Consideration in depth of subject matter that is not a part of the established departmental curriculum. Repeatable up to 12 hours. Prerequisite: graduate standing. (1-4)
BY686. Laboratory Topics in Biology. Consideration of in-depth subject matter that is not part of the established departmental curriculum. Course maybe stand-alone or complimentary to Topics in Biology course (BY685). Prerequisite: graduate standing. Repeatable up to 20 hours. (1-4)
BY691. Readings in Biology. Consideration in depth of subject matter ordinarily unavailable in the departmental curriculum through reading and discussion of assigned material. Students are limited to a total of 6 credit hours of readings during their program. Prerequisite: graduate standing or consent of instructor. (1-3)
BY695. Literature Review in Biology. Guided analysis in a specific topic in biology and professional presentation preparation. (3)
BY699. Thesis. A written report based on independent investigation or the completion of a creative project. See Thesis Plan in the Graduate Bulletin for additional information. A minimum of 3 hours credit for thesis is required with a maximum of 6 hours of credit allowed. Prerequisite: Admission to the graduate program in the Department of Biology; consent of the student's Thesis Committee. May be repeated for up to 6 hours of credit. (1-6)

BUSINESS ADMINISTRATION (BA)
BA550. Global Logistics. A study of logistics functions from an international perspective that involves sourcing, production, and distribution of products and services in the global marketplace including emerging issues of resilience, sustainability, & security. Prerequisites: MG301; MK301; with minimum grades of C; or admission to a graduate program in business. (3)
BA556. Topics in Business Administration. Seminar in contemporary business administration covering an emerging topic, trend, concept, practice/strategy or methodology in business administration. Repeatable up to 9 credit hours. Prerequisite: admission to a college of business graduate program or instructor approval. (3)
BA560. Topics in International Business. Provides a comprehensive theoretical overview of international business, along with an intensive overseas study tour of business and institutions. This course involves additional travel and accommodation expenses. Prerequisite: MK301 and MG301; minimum grade of C in each course. (3)
BA600. Organizational Behavior in Practice. Explores challenges in managing and leading employees in a dynamic environment. Covers multiple contexts and usage of leading human resource practices. Prerequisite: Admission to a graduate program in the Harrison College of Business and Computing. (3)
BA601. Graduate Business Statistics Essentials. Graduate review of fundamental business content in Business Math and Statistics. (1)

BA602. Graduate Business Accounting Essentials. Graduate review of fundamental business content in Financial Accounting. (1)
BA603. Graduate Business Microeconomics Essentials. Graduate Review of fundamental business content in Microeconomics. (1)
BA604. Graduate Business Finance Essentials. Graduate review of fundamental business content in Corporate Finance. (1)
BA605. Graduate Business Information Systems Essentials. Graduate review of fundamental business content in Management Information Systems. (1)
BA606. Graduate Business Student Onboarding. Review of Graduate Business Studies' policies, procedures, and available resources. (0)
BA607. Graduate Business Management Essentials. Graduate review of fundamental business content in Management Principles – the processing of planning, organizing, leading, and controlling to accomplish business goals. Prerequisite: admission to a graduate program in business. (1)
BA620. Quantitative and Qualitative Research Methods. The course provides an analysis of the types, sources, methods, philosophy of business research and completion of a research project. Prerequisite: QM257 or equivalent and admission to a graduate program in the Harrison College of Business and Computing. (3)
BA630. Integrated Decision Information Systems. Use of information system technologies to support decision making. Topics include management information systems, decision support systems, and expert systems. Prerequisites: MI375 with a minimum grade of C or BA 605; admission to a graduate program in the HCBC. (3)
BA640. Integrative Management. Utilizing applied projects, six organizational components–leadership, strategic planning, customer focus, information, human resources, processes--are analyzed as parts of an overall system. Prerequisite: Admission to a graduate program in the Harrison College of Business and Computing. (3)
BA650. Strategic Decision Making. Strategic business behavior especially in relation to the external environment of business. Interdisciplinary and integrative perspectives are emphasized using cases, projects and team teaching. Prerequisites: Admission to the MBA Program; successful completion of 18 hours in the MBA program. (3)
BA651. Strategic Marketing. The advanced analysis of marketing case problems utilizing marketing and related business concepts and strategy. Prerequisite: Admission to the MBA Program. (3)
BA656. Applied Human Resource Management. Study of applied human resource management in the field of equal employment law, diversity, recruitment process, training and development, performance appraisals, and employee rights. Prerequisite: Admission to a graduate program in the Harrison College of Business and Computing. (3)
BA657. Applied Research Project. Designed to understand the process by which business leaders respond to business problems. Integrates research skills and professional business practices, and provides an opportunity to apply current research to a business problem. Prerequisites: successful completion of 21 hours in the MBA program; or admission to a graduate program in the Harrison College of Business and Computing; consent of the director of Graduate Business Studies and faculty supervisor of paper. (3)
BA658. Business Internship. A supervised field experience in business involving at least 150 supervised contract hours. Credit/no credit. Prerequisites: Successful completion of 18 hours in a graduate program in the Harrison College of Business and Computing; consent from the MBA director. (3)
BA660. Strategic Cost Analysis and Financial Application. Interpretation and analysis of financial information, internal and external reporting, planning and control for decision-making, and analysis of the current manufacturing environment. Prerequisites: AC222 and FI361 with a minimum grade of C; admission to the MBA. (3)

BA661. External Environment of Business. Study of the competitive, economic, legal, regulatory, political, technological, international and socio-cultural environments in which American businesses operate. Prerequisite: Admission to a graduate program in the Harrison College of Business and Computing. (3)
BA662. Contemporary Issues in Business. Intended to introduce students in current research on contemporary business issues and questions. Students will be expected to read, understand, and critically evaluate research and analysis on contemporary issues and demonstrate an understanding of how research and analysis affect proposed solutions or responses to these issues or questions. Prerequisite: Admission to a graduate program in the Harrison College of Business and Computing. (3)
BA663. International Business Strategies. Comprehensive theoretical and practical discussion of international business strategies with specific emphasis on current case analysis. Prerequisite: Admission to the MBA program or consent of Graduate Business Studies Program Director. (3)
BA664. Organizational Leadership. An investigation of organizational leadership styles and the types of behavior necessary to implement these styles. Prerequisites: BA600; Admission to a graduate program in the Harrison College of Business and Computing; 18 hours completed for the Master of Science/Management major degree-seeking students. (3)
BA667. Liability Risks in Products and Services. This course examines liability laws and how those laws impact American businesses in the production of goods and services. Prerequisite: Admission to a graduate program in the Harrison College of Business and Computing. (3)
BA668. The Financial Environment. The course will cover the two dominant points of view that comprise the financial environment. Managers "inside the firm looking out" to the investment community raise capital, acquire assets and then deploy company assets in a manner that they believe maximizes the market value of the firm for a given risk level. In contrast, the investment community "on the outside looking in" is the final arbiter of whether or not managerial decision making is consistent with the wealth maximization of stockholders and creditors. The investment community is comprised of individuals, mutual funds, public and private pension funds, insurance companies, credit unions, university endowments, etc. Prerequisite: Admission into the MBA Program. (3)
BA671. Business Topics Seminar. Special business topics typically unavailable in the graduate business curriculum. May be taken only once. Prerequisite: Admission to a graduate program in the Harrison College of Business and Computing. (1-3)
BA678. Operations Management. A problem solving and decision-making approach to Operations Management in a case setting. Emphasis is placed on developing the student's ability to apply quantitative techniques presented in the course to real-life problems. Prerequisite: Admission to MBA program or consent of the director of Graduate Business Studies Program Director. (3)
BA691. Independent Study. Independent Study, A supervised field experience in an area of business, such as accounting, finance, management, marketing, etc. (1)
BA692. Independent Study. (2)
BA693. Independent Study. (3)

BUSINESS LAW (BL)
BL560. International Business Law. International business law topics: international transactions, trade law, marketplace regulation, intellectual property, contracting, financing, environmental responsibility, and criminal/civil liability. Prerequisite: BL255 with a minimum grade of C. (3)
BL563. Advanced Business Law. A study of legal issues confronting business decision-makers, including debtor-creditor relationships, securities regulation & business organizations. Prerequisite: BL255 or its equivalent with minimum grade of C or consent of instructor. (3)

BL573. Internship in Business Law. A supervised learning and work experience in law which enhances traditional business law courses. Prerequisites: 60 hours of course credit with a minimum 2.75 cumulative GPA; BL255 or its equivalent with a minimum grade of B. (3)

CHEMISTRY (CH)

CH531. Foundations of Biochemistry. Structure and function of amino acids, proteins, and carbohydrates. Generation and storage of metabolic energy. Three lecture hours. Fall only. Prerequisite: CH341 or graduate standing. (3)

CH532. Advanced Biochemistry. Metabolism and biosynthesis of lipids, amino acids, and nucleic acids. Transmission and expression of genetic information. Two lecture hours. Spring only. Prerequisite: CH531. (2)

CH533. Biochemistry Laboratory. Laboratory course dealing with selected biochemical techniques. Major areas of study include amino acids, proteins, carbohydrates, lipids, and nucleic acids. Four lab hours. Spring only. Prerequisite or Corequisite. CH531. (2)

CH563/063. Advanced Inorganic Chemistry. A course dealing with theoretical and descriptive inorganic and organic metallic chemistry. Includes an introduction to inorganic synthesis and characterization. Corequisite: CH063. Prerequisite: CH306 or graduate standing. (5)

CH575/075. Chemical Instrumentation. Theory and practice of instrumental methods of chemical analysis: spectroscopy, electrochemistry, and separation science. Two lecture and four lab hours. Spring only. Corequisite: CH075. Prerequisite: CH 271 or CH 311 or CH 312. (4)

CH612. Computational Chemistry. Applications of theoretical chemistry including molecular modeling and quantum mechanical calculations in the high-performance computing environment. Prerequisite: CH 312. (3)

CH618. Topics in Chemistry Education. A review of the basic content of chemistry coupled with pedagogical models appropriate for teaching in the elementary or secondary classroom. This course is not intended for students with an undergraduate or graduate chemistry major. (3)

CH620. Forensic Chemistry. Principles, methods, and instrumentation of chemistry as applied to forensic problems. Covers the everyday functions of a crime laboratory professional. Three lectures and two hour lab. Prerequisite: appropriate undergraduate preparation as evidenced by performance on organic chemistry and quantitative analysis placement examinations. Co-requisite: CH020. (4)

CH647. Advanced One and Two-Dimensional Nuclear Magnetic Resonance (NMR) Techniques. Advanced NMR techniques applied to structure determination. Provides theoretical and hands-on training of various 1D and 2D NMR techniques. Two hours lecture and two hours of lab. Prerequisite: consent of instructor. Co-requisite: CH047. (3)

CH650. Environmental Chemistry. A study of the sources, reactions, transport, and fate of chemical entities in the air, water and soil environments. Prerequisite: CH234 or CH341 or consent of instructor. (3)

CH665. Chemical Crystallography. Study of crystalline materials covering symmetry, properties, diffraction techniques, databases, and practical X-ray structure determination and publication. Prerequisite: MA140; or consent of instructor. (4)

CH688. Problems in Chemistry. Directed study in specific topics in chemistry, chemical education, or chemical instrumentation. (1)

CH689. Problems in Chemistry. (2)

CH691. Research. An in depth investigation of a scientific problem in an approved area that will result in a thesis or a comprehensive scholarly paper upon the completion of the research project. (1)

CH692. Research. (2)

CH693. Research. (3)

CH694. Research. (4)

CH695. Research. (5)

CHILD AND FAMILY (CF)

CF520. Professional Ethics & Practice. Overview of ethical standards and practice related to family life education. Examination of strategies and tools necessary for assessment of the family system. Prerequisite: CF209. (3)

CF555. Responding to the Survivor of Child Abuse. Multidisciplinary perspective to child maltreatment prevention, advocacy, and treatment. Emphasis on developing greater competencies in professional intervention strategies. Pre- or corequisite: CF470. (3)

CF565. Family Service Internship. Capstone professional internship in a human service agency, program or organization. Criminal background check required. Prerequisite: CF209. Pre- or corequisite: CF520. (3)

CF570. Professional & Systems Responses to Child Maltreatment. Systems approach to professional responsiveness to allegations of child maltreatment. Emphasis on child crime identification, investigation, and prosecution. Prerequisite: CF470. (3)

CF602. Trauma-Informed Care. Using an ecological perspective, service systems will be evaluated in relation to trauma-informed models and standards of care. Pre- or corequisite: ED535. (3)

CF645. Advanced Trauma Studies Seminar. An in-depth study of trauma and resiliency. Areas of study will be based on student interest. Prerequisite: ED535. (3)

COMMUNICATION DISORDERS (CD)

CD502. Communication Technology. Provides a study of technology used to aid and assist individuals with communication disorders. Professional issues (e.g., HIPPA, FERPA, Universal Precautions) and ethics of the profession will also be discussed. Prerequisite: CD395. (3)

CD525. Audiological Rehabilitation. Management of hearing impairment and auditory-based learning disabilities in children and adults including psychosocial, technological, educational, and cultural aspects. Prerequisite: CD395 or consent of instructor. (3)

CD570. The Practice of Speech-Language Pathology Abroad. A study of the influence of cultural diversity upon the delivery of speech-language pathology services, and wellness which culminates in a supervised expedition to the region of study. Prerequisites: graduate standing; or CD406 and CD470. (3)

CD603. Advanced Communication Disorders Clinical Practicum. Combined lecture and supervised clinical experience in assessment and treatment of children and adults with communication disorders. Includes the application of formal and informal assessment protocols, and implementation of generic and esoteric treatment programs. A minimum of 35 clinical clock hours must be obtained for the course. May be repeated for credit. Prerequisite: Regular graduate standing. (3)

CD608. Clinical Methods in Speech-Language Pathology. Overview of clinical methods in speech-language pathology to prepare students for on- and off-campus practicum experiences. Prerequisite: MA in Communication Disorders program. (2)

CD616. Literacy Essentials for Speech-Language Pathologists. Students will engage an in-depth study of impairments of oral language, reading, and written expression in school-age children and adolescents. Explores typical development, models of impairment, assessment, and multi-sensory treatment for written language. Pre- or Corequisite: Regular graduate standing. (3)

CD620. Developmental Articulatory & Phonological Disorders. A study of developmental speech sound disorders in children. Models and methods for assessment and differentiation between various types of speech sound disorders, including articulation and phonological disorders and apraxia and dysarthria. Prerequisite: Regular graduate standing or consent of instructor. (3)

CD625. Research Methodology in Communication Disorders. Introduction to research Introduction to research methodologies in communication sciences and disorders, including prospectus development,

data collection, analysis, and professional research writing and editing. Prerequisite: regular graduate standing. (3)
CD628. Cognitive Communication Disorders and Their Functional Implications. Prevention, etiologies, characteristics, assessment, and intervention of adults with cognitive-communication disorders with emphasis on community-based and contextually relevant assessment and treatment practices; use of client-centered model for management and intervention of cognitive communication deficits due to dementia, right hemisphere syndrome, traumatic brain injury, and other neurodegenerative conditions. Prerequisite: Communication Disorders graduate student. (2)
CD630. Language Disorders and Their Functional Implications. Deficits associated with acquired language disorders. Diagnosis, prognosis, treatment methods emphasized with considerations for comorbidities, ethics, counseling, and end-of-care life. Prerequisite: Communication Disorders graduate student. (3)
CD634. Language and Cognitive Disorders in Early Childhood. A study of receptive and expressive language and cognitive development/disorders in infants and preschool children. The needs of this population in terms of service coordination, assessment, planning and implementing prevention and intervention are addressed using a family-centered approach. Prerequisite: Communications Disorders graduate student. (2)
CD635. Language, Cognitive and Social Communication Disorders in School-Aged Children. A study of the receptive and expressive language, cognitive and social behaviors of children and adolescents with language disorders. Methods for assessing, preventing and treating language, cognitive and social skills will be addressed. Prerequisite: Regular graduate standing or consent of instructor. (3)
CD641. Voice Disorders. Study of normal structures and functions of voice and various vocal disorders that result from deviations of structure or function. Differentiating organic from psychogenic disorders. Study of and experience with instrumentation and techniques for the assessment and management of vocal disorders. Prerequisite: Regular graduate standing or consent of instructor. (2)
CD642. Stuttering and Cluttering. Addresses etiologies, comprehensive assessment, and treatment of stuttering and cluttering in children and adults. Prerequisite: regular graduate standing or consent of instructor. (2)
CD643. Augmentative, Alternative, and Assistive Communication Modalities. Diagnostic and therapeutic implications for the individuals who require augmentative/alternative systems and related assistive technologies to function adequately in their environments. Prerequisite: Communications Disorders graduate student. (2)
CD651. Neurogenic Speech Disorders. A study of speech disorders resulting from progressive and non-progressive neurological lesions of the central and peripheral nervous systems. Emphasis is placed on etiology and neuropathology of different dysarthric syndromes, as well as on corresponding diagnostic and management options. Prerequisites: Regular graduate standing or consent of instructor. (2)
CD652. Swallowing Disorders. Swallowing disorders across the lifespan. Emphasis on anatomy and physiology, etiology, characteristics of symptoms, diagnostic, and management techniques. Prerequisites: Regular graduate standing or consent of instructor. (3)
CD653. Pediatric Feeding and Swallowing Disorders. Pediatric feeding and swallowing disorders. Emphasis on typical development, etiology, characteristics of symptoms, diagnostic, and management techniques. Prerequisite: CD652. (1)
CD656. Craniofacial Anomalies and Resonance Disorders. Study of embryologic, anatomic, and physiologic bases of orofacial anomalies and cleft palate; team approach to assessment and rehabilitation; emphasis on genetics, reconstructive surgery, prosthodontics, orthodontics, otolaryngology, and speech-language pathology. Prerequisite: Communication Disorders graduate student. (2)

CD659. Speech and Language Services in Special Populations. Course provides students with strategies for the prevention, education, diagnosis, and intervention of communication disorders found in the low-incidence populations. Prerequisites: regular graduate standing; CD634 or CD635. (2)
CD661. Independent Study in Speech-Language Pathology. Directed individual study of specific problem areas in speech-language pathology. Prerequisites: Communication Disorders graduate student; consent of department chairperson or instructor. (1-3)
CD669. Externship in Communication Disorders. Supervised clinical practicum in either a pediatric or adult setting distinctly different from the University Speech and Hearing Clinic. A minimum of two externships is required for certification. May be repeated for credit. Prerequisites: A minimum graduate GPA of 3.0; completion of a minimum of 100 clinical clock hours obtained at the graduate level, including diagnostic hours in speech, language and hearing; completion of or concurrent enrollment in CD630, CD651 and CD652 for adult sites; completion of CD 620; CD 634 and CD 635 for pediatric sites; permission of instructor for all sites. (3)
CD670. Diversity, Equity, and Inclusion in Communication Disorders. This course considers the breadth and depth of diversity on service provision. Students will investigate resources to provide culturally responsive services. Prerequisites: Graduate standing; CD620; CD635; CD630. (2)
CD683. Research in Communication Disorders. Individual research problems in speech pathology or audiology. Student will be engaged in a variety of relevant professional topics in CSD. May be repeated for a maximum of 15 hours. Prerequisite: CD625. (1-3)
CD685. Professional Topics in Communication Disorders. Exploration of current local, regional, and national issues that impact ethical decision making and service delivery by the speech pathologist and audiologist. Includes ethics and requirements for state and American Speech-Language Hearing Association certification and licensure. Prerequisite: Graduate student in good standing. (2)
CD695. Thesis in Communication Disorders. A written report based upon the investigation of a specific subject/topic or completion of a creative project. May be repeated for a total of 12 hours. Prerequisites: Communication Disorders graduate student; consent of department chairperson. (1-3)

COMPUTER SCIENCE (CS)
CS500. Fundamentals of Programming. Data structures, algorithms, object orientation and standard libraries with emphasis on practical programming. Prerequisite: Permission of department chairperson. (3)
CS503. Fundamentals of Computing. Basic understanding of fundamental concepts in computer organization, networks, algorithms and operating systems. Prerequisite: Permission of department chairperson. (3)
CS505. Data Mining. Explores the trend, principles, and applications of data mining. Prerequisite: CS265 or CS500 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS506. Distributed Cloud Computing. Principles and technologies for distributed cloud computing development. Prerequisite: CS265 or CS500; or pre- or corequisite CY501; with minimum grades of C. (3)
CS533. Mobile Computing. Mobile device architectures and the application development frameworks for various modern mobile platforms. Prerequisite: CS265 or CS500; or pre- or corequisite CY501; with minimum grades of C. (3)
CS560. Computer Architecture. Major architectures in modern computer systems, including the evolution of computer architectures. Prerequisite: CS265 and CS288; or CS500 and CS503 or pre- or corequisite CY501; with minimum grades of C. (3)
CS575. Advanced Web Development. Latest technologies for the front-end and back-end web development. Prerequisite: CS265 or CS500 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS580. Advanced Robotics. Modern topics in Artificial Intelligence robotics. Prerequisites: CS265 and CS288; or CS500 and CS503; or pre- or corequisite CY501; all with minimum grades of C. (3)

CS581. Advanced Network Programming. Client-server communication, inter-process communication, and secure networking programming. Prerequisite: CS300; CS380; CS480 or CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS585. Formal Systems and Modeling. Nondeterminism, program specification and verification, formal models of computation and languages. Prerequisite: CS265 or CS500 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS591. Advanced Artificial Intelligence. Major Artificial Intelligence is covered in detail. Prerequisites: CS300 and CS380; or CS500 and CS503; or pre- or corequisite CY501; all with minimum grades of C. (3)
CS602. Coding Interview Preparation. Course covers the practical implementation of algorithms. Topics include algorithms, problem solving, interview skills, and oral technical communication. Pre- or corequisite: CY501. Prerequisites: CS500; CS503. (3)
CS603. Introduction to Data Analytics. Data collection, analysis and visualization of Big Data. Prerequisite: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS605. Research Methods. Analysis of the types, sources, methods, philosophy of computer science and completion of a research project. (3)
CS609. Advanced Programming Languages. Objects, testing, deployment, maintenance of a component-based solution and design patterns using object orientated concepts. Prerequisite: CS500 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS612. Simulation and Modeling for Computing. Principles of modeling and analysis of discrete event systems, computer systems, and computer networks. Prerequisite: CS500 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS630. Current Topics in Human Computer Interaction. Designing interfaces for interactive systems, usability engineering techniques; implementing and evaluating interfaces. (3)
CS631. Advanced Software Engineering. Software engineering processes, project planning, scheduling, metrics, estimation, testing/quality, and management. Prerequisite: CS500 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS632. Emerging and Converging Technologies and Computing. Current emerging and converging technologies related in computer applications and their implications. Prerequisite: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS633. Digital Signal and Image Processing. Aspects and the corresponding computational techniques and tools currently used in digital signal and image processing. Prerequisite: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS634. Machine Learning. Overview of many concepts, techniques, and algorithms related to machine learning. Prerequisite: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS640. Advanced Database Systems. Major topics on designing, using, and implementing database systems and database applications. (3)
CS645. Internet of Things. Architectures, protocols, layers, services, and applications of a packet network from general internet to sensor networks. Prerequisite: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS648. Blockchain Programming. Fundamental design and architectural primitives of blockchain as distributed digital ledger with application programming. Prerequisites: CS351 or CS500 and CS503; or pre- or corequisite CY501; minimum grade of C required. (3)
CS650. Theory of Computation. Models of computation and theory of programming languages. Prerequisite: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CS653. Special Topics. Contemporary topics in various areas of computer science. May be repeated for credit. Prerequisite: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)

CS680. Emerging Wireless Techniques. This course covers principles and tools for the emerging wireless communication techniques: mmW, UWB, LoRa, VLC, BAN, BLE, D2D, V2X, Nano Network. Prerequisite: CS503. Pre- or corequisite: CY501. With minimum grades of C. (3)
CS690. Graduate Project. Evaluate and defend select activities such as projects, papers, etc., completed during the student's period of study. Credit/no credit. Prerequisites: permission of department chairperson or graduate coordinator; enrollment in final semester. (0)
CS691. Independent Study. Independent study in Computer Science. May be repeated for up to 6 hours of credit. (1)
CS693. Independent Study. Topics in computer science independently under the supervision of advisors. May be repeated for credit. (3)
CS695. Seminar I. Impact of computing on society; social, professional, ethical, legal and security and privacy issues and responsibilities. Prerequisites: CS500 and CS503 OR CS300 and CS380 and CS480; or permission of department chairperson. (1)
CS696. Seminar II. Talks/presentations by invited speakers, faculty and graduate students over major issues and trends in computing. Prerequisite: CS695. (1)
CS697. Thesis Research I. Proposal development leading to thesis as directed by the advisor and/or chair of the thesis committee. Prerequisite: CS605. (3)
CS698. Thesis Research II. Research leading to thesis as directed by the advisor and/or chair of the thesis committee. Prerequisite: CS697. (3)
CS699. Internship. Supervised learning and work experience in a professional field which augments the knowledge in computer science. (3)

CONSTRUCTION MANAGEMENT (CM)
CM510. Building Information Modeling. Explore concepts including creating a computer model of a building, using the model to determine estimated cost and running construct ion time simulations. Two hours lecture; two hours lab. Prerequisite: CM322 or graduate status. (3)

COUNSELING PROGRAM (CP)
CP610. Counseling Orientation and Ethics. Professional orientation, personal characteristics, responsibilities, legal and ethical issues relating to professional counseling will be explored. (3)
CP611. Developmental Theories. Knowledge and understanding of different developmental levels, human behavior, personality and learning theory. (3)
CP612. Counseling Theories. An exploration of a variety of counseling theories to provide a foundation for practice for professional counselors. (3)
CP613. Social and Cultural Counseling. Study of social changes and trends in stereotyping, societal subgroups, and different lifestyles and how this is incorporated in counseling. (3)
CP614. Counseling Skills. Knowledge and application of counseling techniques and helping skills with an emphasis on experiential learning and preparation for practicum. Prerequisites: graduate standing; permission of instructor. (3)
CP615. Career Counseling. Knowledge and application of career development theories, decision-making models, career planning, career education, sources of educational and occupational information. (3)
CP616. Group Counseling. Knowledge and application of group counseling theory skills and techniques. Course includes a personal small group experience. (3)
CP617. Assessment in Counseling. Application of psychometric assessment techniques to increase understanding of the student/client and develop an individualized plan of assistance. Prerequisites: CP610; CP612; CP614. (3)
CP630. Foundations of School Counseling. Knowledge and application of school counseling theory, the comprehensive guidance model and issues of school counseling. (3)

CP631. Crisis Intervention and Consultation. Knowledge and application of consultation theory and knowledge and application of crisis intervention in school and community settings. (3)
CP632. Applications of School Counseling. Professional and ethical issues in school counseling. Focus on current issues, trends, and applications in the field of school counseling. Prerequisites: CP630; permission of instructor. (3)
CP640. Foundations of Mental Health Counseling. An overview of the role and scope of the mental health counselor, the community counseling agencies, and the counseling service programs. (3)
CP641. Mental Health Systems. An overview of the principles of mental health systems and practice in clinical mental health settings, including prevention, intervention and service delivery. (3)
CP643. Psychodiagnostics and Treatment. Knowledge and application of Psychodiagnostics and using the DSM and ICD and subsequent treatment plan development, including an introduction to Psychopharmacology. (3)
CP645. Marriage and Family Counseling. Overview of the historical development and principal conceptualizations of marital and family counseling. Prerequisite: CP680. (3)
CP652. Introduction to Play Therapy. Focus will be given to the definition, history and basic assumptions of play therapy. (3)
CP658. Advanced Play Therapy. Advanced emphasis on play therapy skills, client-centered play therapy, trauma, group play therapy, Sandtray therapy, and working with adults. Prerequisites: CP610; CP614; CP652. (3)
CP680. Counseling Practicum. Supervised practical experience which emphasizes the application of knowledge gained with clients, schools and agencies. Prerequisite: graduate standing or permission of instructor. (3)
CP682. Internship-Elementary. Field based counseling internships designed to give the student practical learning in chosen school counseling environment. (3)
CP683. Internship-Secondary. Field based counseling internships designed to give the student practical learning in chosen school counseling environment. (3)
CP684. Internship-School. Field based counseling internships designed to give the student practical learning in chosen school counseling environment. (3)
CP686. Internship-Mental Health. Field based counseling internships designed to give the student practical learning in chosen Mental Health counseling environment. (3)
CP687. Internship-Mental Health. (3)
CP688. Internship-Mental Health. (3)
CP691. Research Methods and Program Evaluation in Counseling. Overview of data collection, analysis, designs used in program evaluation, and evidence-based practice in the counseling profession. Prerequisite: graduate standing or consent of instructor. (3)
CP699. Portfolio Oral Defense. Capstone experience for all master's level students completing the portfolio requirement. Prerequisite: Taken during the last semester before graduation. All curriculum requirements must be met prior to registering for this course. Credit/No credit. (0)
CP733. Advanced Educational Processes. Required course for the Education Specialist in Counseling Education and School Psychological Examiner Certification in the elementary, middle, and secondary schools. Designed to enhance teaching practices to facilitate learning for a diverse student population. Promotes an understanding of student characteristics and methods of assessing and evaluating variability of students and their performance. Legal and ethical issues and the effect of cultural differences are addressed. (3)
CP735. Intelligence Testing. Provides the student with the training needed, under direct supervision, to administer and score individual intelligence tests. (3)
CP739. Testing Practicum. Practice in an educational or clinical setting with an emphasis on the utilization of tests. (3)

CP771. Counselor Supervision. Students will become familiar with models of counseling supervision; provide individual and group supervision for master's level practicum/internship students; and be acquainted with the research in counselor training and supervision. Individual and group supervision is provided. Video- recording of individual and dyadic supervision sessions with practicum/internship students is required. (3)
CP788. Advanced Internship. Advanced Internship in a Counseling setting consists of a minimum of 200 clock hours per 3 credit hours in an appropriate counseling setting under appropriate supervision. (3-6)

CRIMINAL JUSTICE (CJ)
CJ505. Social Inequality. Provides a critical examination of the meanings, history, correlates, and consequences of both privileges and social inequalities as they relate to the American criminal justice system. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ510. Comparative Criminal Justice Systems. Study of the criminal justice systems of four major countries, including the United States, Great Britain, Japan, and Sweden. Each country's differing philosophical and practical approaches to criminal justice are analyzed and compared. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ519. Restorative Justice. Exploration of the principles and theory of restorative justice and its application as a response to criminal conduct. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ520. Law and Social Control. Analyzes the nature of law and social forces that influence practice of crime, punishment, and social control. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ522. Critical Analysis of Gangs in America. Promotes the critical analysis of gangs in America by exploring the sociological, cultural, political, and economic causes of gangs. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ525. Crime and Criminal Justice Policy. The course is intended as an overview of how crime policy is formulated and adopted into the American political agenda. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ540. Professional Standards. An exploration of the ethical issues that confront criminal justice professionals. Ethical issues include professional conduct in policing, corrections, and courts. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ541. Death Penalty in America. Exploration of the history of capital punishment in the United States, and the related constitutional issues and policy arguments. Prerequisite: Acceptance to M.S. in Criminal Justice program or acceptance to Accelerated M.S. in Criminal Justice program or consent of instructor. (3)
CJ600. Administration of Justice. Exploration of the origins and significance of key ideas influencing the rise and development of the criminal justice system. Selected issues in law enforcement, courts and corrections are examined in relationship to current criminal justice policies and practices. (3)
CJ601. Applied Research. Development of scholarly and/or professional research and reporting within both academic and professional settings. Topics include research and writing issues, negotiating the research process, types of research, topic selection and refinement, development of the theoretical framework, ethics, and reporting. (3)

CJ602. Professional Development Planning. Development of cost-effective productivity-oriented professional criminal justice training programs. Emphasis on needs assessment, curriculum development, delivery, assessment, and accountability of professional training. (3)
CJ603. Standards and Training. Personnel selection and administration within modern criminal justice organizations, including recruitment and evaluation of applicants, employee performance assessment, and legal considerations. (3)
CJ610. Seminar in Law Enforcement. An analysis of contemporary issues in law enforcement as they are translated into agency policy, programs, services, and relationships with public and private agencies, institutions, and the community. (3)
CJ615. Theories of Crime. Overview of research on the correlates and causes of criminal behavior. Focus is on the significance of current knowledge for crime and control prevention. (3)
CJ626. Applied Analysis. Analyzing, understanding, and reporting data to make informed decisions within professional settings. (3)
CJ630. Contemporary Juvenile Justice. Exploration of contemporary issues in juvenile justice, including relationships among the various components of the juvenile justice system. Emphasis is placed on current research literature in the field, as well as analysis of current philosophy, policy, law, and practice in juvenile justice. (3)
CJ635. Civil Law and Liability. Study of the civil justice system, theories of civil liability and management of civil liability in law enforcement and corrections. (3)
CJ645. Criminal Justice Policy Analysis and Evaluation. Examination of the development, implementation, analysis, and evaluation of public policies as they relate to the criminal justice system. (3)
CJ650. Seminar in Criminal Justice Leadership and Practice. Capstone course designed to showcase students' integration and synthesis of the graduate experience from theoretical and practical leadership, analysis and organizational frameworks. Prerequisites: CJ601; CJ615; CJ525 or CJ645; and 15 additional criminal justice graduate level credits. (3)
CJ651. Special Topics in Criminal Justice. Covers variable topics in an area of criminal justice not part of the established department curriculum. May be repeated for a maximum of 6 hours. Prerequisite: Admission to the graduate school or permission of instructor. (3)
CJ680. Travel Study. Educational travel experience within the United States or internationally under the supervision of university instructors. May be taught as an organized study tour or as an independent travel and study project. Topics, prerequisites, and course requirements announced in advance. Prerequisite: approval of instructor. (3)
CJ690. Professional Praxis. Demonstrated mastery of advanced investigative or administrative training in criminal justice. Credit awarded only upon successful completion of Federal Bureau of Investigation National Academy; Federal or State Special Agent School; or equivalent senior/executive-level training in criminal investigation or criminal justice administration. (9)
CJ691. Independent Study in Criminal Justice. Independent work in a specialized area not covered by criminal justice course offerings. Maybe repeated for a maximum of 6 hours. Prerequisite: Acceptance to M.S. in Criminal Justice or Accelerated M.S. in Criminal Justice or consent of instructor. (1-3)
CJ694. Thesis I. Thesis first semester. Prerequisites: CJ601; CJ615; consent of department chairperson or Director of Graduate Programs. (3)
CJ695. Thesis II. Thesis second semester. Prerequisite: CJ694. (3)
CJ696. Internship Capstone I. Internship capstone experience with a criminal justice agency. Student will clarify internship project goals and objectives and complete the requisite hours of service in an approved criminal justice-related agency. Prerequisites: CJ601; CJ615; 15 additional criminal justice graduate level credits. (3)

CJ697. Internship Capstone II. Continuation of internship capstone experience. The student will finalize contact hours and write the internship project to be approved by the internship capstone committee. Prerequisite: CJ696. (3)
CJ699. Criminal Justice Internship. Provides graduate students with a practical learning experience in a criminal justice agency. For those presently employed in a criminal justice agency, internships must involve another agency or employment situation. For those who complete the internship capstone, only 3 hours of CJ699 will count toward the degree. Students can earn either 3 or 6 hours of credit. (3)

CYBERSECURITY (CY)
CY501. Introduction to Cybersecurity. Advanced overview of the field of Cybersecurity, information assurance terminology, security issues, and applied cryptography. (3)
CY510. Information Security and Assurance. System security principles, components of system security, information assurance with high assurance software design. Cryptographic principles to design secure systems. Data protection at rest and in motion and evolution of challenges in information security. Prerequisite: CS265; CS380; CS480 or CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CY520. Information Security in Systems Administration. Information security, security constructs, and authorization models. Security administration of networking elements, databases, operating and cloud-based systems. Prerequisite: CS380; CS480; or CS503. Pre- or corequisite CY501; with minimum grades of C. (3)
CY530. Computer Network Security and Defense. Learn the fundamentals and techniques of defense in depth to protect a computer network. Prerequisite: CS265; CS380; CS480 or CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CY610. Web Application Security. Web/Cloud architectures, languages and protocols. Web/Cloud authentication, certificate authority and cryptographic standards. Security requirements, threat modeling and secure coding standards. Prerequisite: CS500 Pre- or Co-requisite CY501; with minimum grades of C. (3)
CY620. Advanced Computer Forensics. Fundamentals of computer forensics and cyber-crime scene analysis. Prerequisites: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CY630. Hardware Security. Hardware physical attacks and security primitives. Debugging, applicability techniques of hardware security within ecosystems (mobile, cloud computing, Internet of things.) Prerequisites: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CY640. Security of Critical Infrastructure. Critical Infrastructure vulnerability, asset identification, governance. Critical infrastructure control technologies. Monitoring, access control, risk, compliance, defense techniques of critical infrastructure. (3)
CY643. Independent Study. Learn to apply knowledge and skills within a topic in cybersecurity independently under supervision from advisors. May be repeated for up to 6 hours of credit. (3)
CY650. Legal, Risk and Compliance for Security. Cybercrime and legal frameworks. Digital assets and business law. Compliance and risk measurement within cyberspace. Contracting digital content, forensic investigations. Prerequisites: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CY653. Special Topics in Cybersecurity. Students will learn contemporary topics in an area of cybersecurity. Prerequisites: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. May be repeated for up to 6 hours of credit. (3)
CY655. Research Methods in Cybersecurity. Cybersecurity research methodology in analyzing sources, methods, adversaries, threats, and philosophy resulting in completion of a research project. (3)
CY660. Cyber Operations. Cyberspace and Cyber warfare. Tools, techniques of cyber offense and defensive tactics. Foot printing and monitoring techniques within critical infrastructure. Prerequisites: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)

CY662. Ethical Hacking. Introduction to the principles and techniques associated with the cybersecurity practice known as penetration testing or ethical hacking. Prerequisites: CS500; CS503 or Pre- or Co-requisite CY501; with minimum grades of C. (3)
CY670. Secure Operating Environments. Trust frameworks of secure operating environments. Understanding and operation of secure ecosystems within critical infrastructure conforming to policy and compliance. Prerequisite: CY501. (3)
CY690 Graduate Project. Develop and complete a project by applying the knowledge and skills of cybersecurity in a scientific and practical manner. Graded credit/no credit. Prerequisites: consent of department chairperson or graduate coordinator; enrollment in final semester of degree program. (0)
CY691. Thesis Research I. Development of knowledge, understanding and skills necessary to work with problems in cybersecurity in a scientific manner. Prerequisite: CY655. (3)
CY692. Thesis Research II. Development of knowledge, understanding, skills necessary to work with problems within cybersecurity and defend research topics orally. Prerequisite(s): CY 691. (3)

EARLY CHILDHOOD EDUCATION (CE)
CE530. Foundations of Early Childhood Special Education. This course provides in-depth study and examination of recent research findings affecting the education and development of young children with special needs. (3)
CE605. Issues and Trends in Early Childhood Education. This course provides in-depth study and recent findings in the trends and issues affecting the education and development of young children, including those with disabilities. (3)
CE610. Curriculum, Methods and Program Management in Early Childhood. In-depth study of basic principles and concepts underlying curriculum planning in early childhood education including developmentally appropriate principles, play based/inquiry learning, and program administration and management including environmental organization and design. (3)
CE614. Family / School Partnerships in Early Childhood. Analysis of current programs and practices in establishing family/school partnerships to support educational decision making and child learning. (3)
CE634. Assessing Young Children's Learning and Development. Studies informal observation-based assessment practices and their uses in planning and instruction with diverse young learners, including those with exceptional needs (3)

ECONOMICS (EC)
EC525. Public Policy Economics. Economic analysis of the functions of government in a market economy. Prerequisites: EC215; EC225. (3)
EC561. Managerial Economics. Application of microeconomic theory to the practical problems faced by decision makers in business environment. Prerequisite: EC215. (3)
EC580. International Economics. Development and maintenance of trade between nations; trade policies, exchange rate determination, financial activities involved. Prerequisites: EC215; EC225. (3)
EC585. Healthcare Economics. Analysis of the markets for healthcare and health insurance from the perspective of an economist. Prerequisite: EC215. (3)

EDUCATION (ED)
ED506. Education, Law and Society. A study of the social and legal issues that have influenced public K-12 education. Prerequisite: Junior standing or permission of instructor. (3)
ED535. The Trauma Informed Professional. Developing trauma knowledgeable professionals to foster resiliency building practices in children impacted by trauma. (3)

EDUCATIONAL ADMINISTRATION (EA)

EA507. School and Campus Safety. An overview of school safety issues impacting public and private P-12 and institutions. (3)
EA601. Administration of Adult Education Programs. Administration of Adult Education Programs at the University or Junior College level. (3)
EA610. Diversity and Equity in Schools. This course is designed to provide school leaders as they engage in exploring diversity and equity issues within the school setting. Prerequisite: Admission to the MA in educational leadership or teacher leadership. (3)
EA615. Wellness Issues in Higher Education. This course will introduce students to wellness issues in the college setting and analyze solutions to student wellness concerns. Prerequisite: Admitted to the MA in Higher Education or consent of instructor. (3)
EA616. Enrollment Management in Higher Education. This course will examine the strategies used by colleges to establish enrollment goals and effective recruitment and marketing efforts. Prerequisite: Admitted to the MA in Higher Education Administration or consent of instructor. (3)
EA617. Communication in Higher Education. An overview of communication in the context of higher education, including public speaking, intercultural communication, organizational communication, and rhetoric. Prerequisite: Admission to the Master of Arts in Higher Education Administration Program or permission of the instructor. (3)
EA620. Foundations of Higher Education I. An overview of higher education. Exploration of the historical development of higher education; the philosophical aspects; current functions, issues, and participants; and considerations related to the future status of higher education institutions. (3)
EA621. Finance and Assessment in Higher Education. An examination of financial and assessment components of higher education. Prerequisite: EA620 or consent of instructor. (3)
EA622. Leadership in Higher Education. A study of leadership and organizational change as it applies to effective administration in higher education. (3)
EA623. Principles and Practices in Higher Education. An introduction to theory and scholarship on the structure of colleges and universities, their administration, and organizational behavior. Topics include organizational theory, governance, re-structuring, and management. (3)
EA624. Theories of Collegiate Student Development. A study and application of developmental theory as it relates to the higher education student, the higher education environment, and the interaction between student and environment. Prerequisite: Admission to the program or consent of instructor. (3)
EA625. Foundations of Educational Leadership. Explore the foundational principles of establishing a clear focus, managing change, creating a purposeful community, special educational and career education. Prerequisite: Admission to the master of arts degree program in educational leadership or teacher leadership. (3)
EA626. Introduction to Student Affairs. Provides a comprehensive introduction to the field of student affairs and its role within American higher education. A related goal is to help students develop a broad foundation for subsequent study, practice, and research strategies may be added. Prerequisite: Admission to the MA in Higher Education program. (3)
EA628. Teaching in Higher Education. This course provides an overview of the major issues in higher education and methods of instruction in college teaching through the use of experiential learning, lecture, collaborative activities, readings, and discussion. The intent for this course is to provide practical knowledge of designing instruction and to develop skills that will enhance college teaching. (3)
EA629. Internship in Higher Education. The intent of this course is to integrate professional practice, theory, and ethical standards within a supervised higher education administration setting. Repeatable up to 6 credit hours. Prerequisite: completion of 6 graduate credit hours. (1-3)
EA632. The Community College. Structure, function, and working of the community college. (3)
EA633. Legal Aspects of Higher Education. Legal issues and typical problems of higher education. (3)

EA634. School Supervision. Provides the knowledge and skills necessary for personnel supervision in schools. Uses adult growth and development as the context for supervisory behavior appropriate to any supervisor-supervisee relationship. Prerequisite: Admission to MA in school leadership or teacher leadership. (3)
EA638. Equity and Access in Higher Education. Fosters student awareness of both external and internal forces that shape students' experiences and affect their levels of engagement in higher education. Prerequisite: Admission to the MA in Higher Education Administration program or consent of instructor. (3)
EA639. Ethics in Higher Education. Introduces students to the multiple frameworks that inform ethical and moral decisions in the classroom and administration of higher education. Students will learn to recognize these frameworks and use them to resolve ethical dilemmas that they may encounter as professionals. Prerequisite: graduate standing. (3)
EA643. Current Issues in Higher Education. Students find current issues in higher education and share in a seminar. (3)
EA644. Issues in Institutional Research I. Issues that arise in institutional research. (3)
EA645. Issues in Institutional Research II. Institutional research issues II. (3)
EA651. School Law. The course provides school administrators and persons seeking certification in school administration with in-depth study of Missouri and federal laws regulating the operation of public schools and a survey of the state and federal court decisions that affect the operation of public schools. Prerequisite: Admission to the Master of Arts program in educational leadership or teacher leadership. (3)
EA653. Curriculum for Leaders in Education. This course focuses on teaching leaders to connect curriculum, instruction, assessment and evaluation in an effort to improve learning and understanding. Prerequisite: Admitted to the MA in administration; or Teacher Leadership; or consent of instructor. (3)
EA654. The Principalship. Designed to prepare students with the knowledge and skills required to be a school leader. Prerequisite: Admission to MA in educational leadership or school leadership. (3)
EA655. Leadership for Effective School Operations. Designed to prepare school leaders for the responsibilities regarding financial management, facilities management, and public relations strategies. Prerequisite: Admitted to the MA in educational leadership or teacher Leadership. (3)
EA658. Instructional Strategies and Classroom Management in the School Setting. Introduces the student to organization and curriculum of elementary and secondary schools, instructional strategies, and classroom management in school. (3)
EA660. Leadership in Special Education. Designed to prepare school leaders for the responsibilities regarding the administrative and supervision of special education. Prerequisite: Admission to MA in school leadership or teacher leadership. (3)
EA661. Internship I Special Education Administration. First course of a capstone two-course sequence which provides candidates with experiences regarding research activities of the school leader/district special education director. Prerequisite: Admission to the MA in educational leadership program. (3)
EA662. Internship II Special Education Administration. Second course of a capstone two-course sequence which provides candidates with experiences regarding activities to prepare school leaders/district special education directors. Prerequisite: Admission to the MA in educational leadership program. (3)
EA663. Internship I: Leadership for Research in Action. First course of a capstone two-course sequence which provides candidates with experiences regarding research activities of the school leader. Prerequisite: Admission to the MA in Educational Leadership. (3)
EA664. Internship II: Leadership for Experiential Learning. Second course of a capstone two-course sequence which provides candidates with experiences regarding activities to prepare school leaders. Prerequisite: Admission to MA in Educational Leadership program. (3)

EA670. Higher Education Capstone. Culminating experience intended to apply the knowledge and skills acquired in the degree program to complex problems of policy and practice in higher education. Graded credit/no credit. Prerequisite: 27 hours of graduate credit. (3)
EA694. Thesis. A written report based upon investigation of some subject or the completion of a creative project. See Thesis Plan for additional information. (3)
EA695. Thesis. Second semester. (3)
EA696. Thesis. Second semester. (2)
EA697. Thesis. Second semester. (1)
EA698. Independent Study in School Administration. Designed to permit the graduate student to pursue independent study in a topic of interest relating to Educational Leadership. It is expected that the student will secure approval of his/her major advisor and will be assigned a professor who will work closely with the student in structuring and directing the study. (1)
EA699. Independent Study in School Administration. This course is designed to permit the graduate student to pursue independent study in a topic of interest relating to Educational Leadership. It is expected that the student will secure approval of his/her major advisor and will be assigned a professor who will work closely with the student in structuring and directing the study. (2)
EA707. Personnel Management in Education. Provides school administrators with knowledge and skills on the purposes, processes, planning procedures, and policy making in administering the personnel program. Prerequisites: EA625; EA630 or EA635; or consent of the instructor. (3)
EA709. Leadership and Communications. An exploration of the principles of leadership including: the nature of leadership; social justice; changing cultures; leadership for learning; and the future of leadership. Students will learn leadership skills focused on school communication; community support; and long-range planning. Prerequisite: admission to the Ed.S. Program; or consent of instructor. (3)
EA710. Leading District Improvement. Focus on developing the district mission, vision and core values while cultivating a collaborative and individually responsive culture. Includes external leadership. Prerequisites: Master's degree and admittance to the Specialist degree program. (3)
EA716. Innovative Practices in Teacher Leadership. Designed to acquaint educators with theories and current research that support innovative practices and effective teaching strategies in K-12 school settings. Prerequisites: Master's degree; admittance to the Ed.S. Program. (3)
EA718. Instructional Leadership Strategies II. This course is designed to provide students an advanced understanding of the factors and processes related to teacher leadership in K-12 educational settings. The emphasis of the course will be improving classroom performance and student achievement as it relates to school improvement efforts. Students will learn to apply their knowledge of educational theories and current research as it relates to effective teaching strategies and innovative practices. Topics such as mentoring, community relations, shared decision-making, professional development, best practices, classroom management, and assessment issues will be addressed. Prerequisite: EA716. (3)
EA722. Equity in Educational Leadership Practices. This course is designed for experienced teachers as they engage in exploring the foundation of equitable school settings in the context of their work. Prerequisite: admission to the Specialist in Teacher Leadership program. (3)
EA727. Curriculum Development and Alignment. Students will explore how to develop a curriculum based on identified standards, check for alignment of existing curricula, and make appropriate revisions. Prerequisite: admission to the Specialist in Teacher Leadership program. (3)
EA730. Internship Teacher Leadership I: Specialist. This is a project based course focused on gaining relevant expertise in the various teacher leadership positions in a district. Prerequisite: admission to the Specialist in Teacher Leadership program. (3)
EA731. Internship Teacher Leadership II: Specialist. The second of two courses which is project based focused on gaining expertise in the various teacher leadership positions in a district. Prerequisite: admission to the Specialist in Teacher Leadership program. (3)

EA737. Administration of Curriculum. The course is designed to prepare the aspiring and practicing school administrator for the responsibilities at the central office level in proper administration of development of curricula, examining the national, state, district, and school roles in curricular matters, as well as being able to research findings in educational literature to identify trends in curriculum change, and to understand the components of a district curriculum. Prerequisites: Master's degree; admittance to the Specialist degree program; EL606 or SE637. (3)
EA743. Data for Continuous Improvement. Designed to engage school and district administrators and teacher leaders in the process of using data to lead, facilitate, and encourage the process of continuous school improvement. Prerequisites: admittance to the Specialist degree program; or consent of instructor. (3)
EA755. Ethics, Law, and Policy. A study of law that includes the basic fields of contracts, property, torts, constitutional law, and other areas of law that directly affect the educational and administrative processes of the educational system. Prerequisite: EA651 or consent of instructor. (3)
EA756. Financial Management and Leadership. Designed to prepare the aspiring and practicing school administrator for the responsibilities of financial management in a district. Prerequisites: admittance to the Specialist degree program; or consent of instructor. (3)
EA760. Internship I: Specialist Level. First course in a two-course sequence designed to provide advanced specialist students with an opportunity to gain relevant experience in the superintendency. (3)
EA761. Internship II: Specialist Level. Second course in a two-course sequence designed to provide advanced specialist students with an opportunity to gain relevant experience in the superintendency. (3)
EA781. School Improvement Leadership II. Incorporates and explores efforts initiated by private, state and federal educationally related entities and agencies, professional leadership organizations, professional leadership academies, and grant activities designed for school improvement. Prerequisites: teaching certificate; admitted to the Masters in School Administration Program. (1-3)
EA785. School Plant Planning and Operation. This course provides school district administrators the fundamental concepts of planning, designing and constructing new educational facilities and/or the rehabilitation, remodeling or modernization of existing facilities with a focus on learning spaces and sustainability. Additionally, the course includes operation and maintenance programs. Prerequisite: Admission to a Specialist in Educational Administration degree program; or consent of instructor. (3)
EA790. Independent Study in Educational Administration. Directed individual study of problems and special topics in educational administration. Prerequisite: Admission to graduate status on the specialist's degree. On demand. (1)
EA791. Independent Study in Educational Administration. (2)

EDUCATIONAL FOUNDATIONS (EF)
EF691. History of American Education. An examination of education in America from the colonial period to the present, focusing on educational ideas and practices in the context of American social and intellectual history. (3)
EF697. Independent Study in Foundations of Education. Independent work in an educational foundation area not covered by regular course offerings. (1-3)

ELECTRONICS AND COMPUTER TECHNOLOGY (ET)
ET568. Industrial Controls. A study of process controls fundamentals (Proportional Integral, Proportional Derivate, Proportional, Integral, and Derivate), sensors, transducers, actuators, and distributed controls, and their industrial/commercial applications using programmable controllers. (3)
ET570. Energy Management. A study of energy auditing, rate structures, economic evaluation techniques, lighting efficiency improvement, HVAC optimization, combustion and use of industrial

waste, steam generation and distribution system performance, Distributed Digital Control systems, process energy management, and maintenance considerations. (3)

ELEMENTARY EDUCATION (EL)

EL603. Teaching Elementary School Mathematics. Designed to help the teacher better understand mathematical ideas basic to present-day elementary school mathematics and become acquainted with techniques for their presentation. (3)

EL604. Techniques of Teaching Science and Mathematics in the Elementary School. Students will apply standard driven instructional and assessment strategies to develop skills and abilities to work in elementary science classroom. (3)

EL605. Teaching Social Studies in the Elementary School. A course designed to study the structure of the elementary school social studies program. The social sciences, as the core of the social studies, are studied. Emphasis is placed on methods of organizing the curriculum, on teaching techniques, and on new materials. (3)

EL606. Curriculum Construction (Elementary). Investigates historical, philosophical, psychological, and societal factors; organization, trends, and issues influencing curriculum; includes the contributions of each subject area. (3)

EL608. Diagnosis and Remediation of Difficulties in Learning Mathematics. Designed to help teachers learn to use techniques for assessing and remediating difficulties in mathematics. (3)

EL611. Emergent Literacy Learners Practicum. Field-based application in the administration, scoring, and interpretation of reading assessments with appropriate intervention strategies for emergent literacy learners. Prerequisites: EL647 or consent of instructor. (3)

EL615. Research in Action. Introduction to the methods of action research for improving an aspect of the teaching-learning process. Prerequisites: EX601; completion of minimum of 12 hours of graduate work. (3)

EL623. Intermediate and Upper-Level Literacy Learners Practicum. Field basis application in the administration, scoring, and interpretation of reading assessments with appropriate strategies for intermediate and upper-level literacy learners. Prerequisite: EL647 or consent of instructor. (3)

EL624. Literacy Leadership. Survey of leadership theories and styles and their application to the promotion of literacy in educational settings and beyond. Prerequisite: EL644; EL646; EL647; EX601; or consent of instructor. (3)

EL625. Assess in Literacy. A theoretical course of literacy evaluation training in the administration and interpretation of ‘An Observation Survey’ and intervention processes. (2)

EL629. Advanced Studies in Children’s Literature. Integration of children’s literature across the curriculum and within the political, economic, and social factors influencing cultural patterns and values. Prerequisite: graduate standing. (3)

EL630. The Science of Reading I: Foundations of Literacy. Focus on theoretical foundations, purposes and procedures that fosters a positive and literacy rich learning environment to motivate and support all learners. (3)

EL631. The Science of Reading II: Assessing and Correcting Emergent Literacy Learners. Course provides an in-depth understanding of the procedural application program assessment and intervention strategies for emergent literacy learners. Prerequisite: EL630. (3)

EL632. Theoretical Seminar I. This course will introduce the Reading Recovery professional to an in-depth understanding of the theoretical base for the Reading Recovery program as designed by Marie Clay. Prerequisite: Admission to the Reading Recovery Teacher Leader program or completion of EL630 and EL631 or EL660 and EL661. (3)

EL635. Reading Recovery Practicum II. Teacher Leaders-in-training learn the implementation and the system impact of Reading Recovery in class and through field experiences. Prerequisite: Admission in the Teacher Leader Training Program. (3)
EL636. Reading Recovery Advanced Seminar. Advanced level study of Reading Recovery theory, research, and practice. Prerequisite: Successful completion of the Reading Recovery teacher preparation program. Must also be working as a Reading Recovery teacher during the school year when the seminar is taken. The previous advanced seminar must have been taken. (1)
EL637. Reading Recovery Advanced Seminar. (1)
EL638. Reading Recovery Advanced Seminar. (1)
EL639. Reading Recovery Advanced Seminar. (1)
EL644. Creating and Fostering a Literate Environment. Students will learn to foster a positive climate that supports a literacy rich learning environment. Prerequisite: Graduate standing. (3)
EL646. Aspects of Literacy Development and Acquisition. Focuses on the components of reading and its relationship with other aspects of literacy development: reading, writing, and language. Prerequisite: Graduate standing. (3)
EL647. Diagnosis and Correction of Reading Difficulties. Knowledge and expertise in literacy growth and development, test administration, drawing diagnostic conclusions based upon data, background information and observation. Prerequisites: EL644; EL646; EX601; or consent of instructor. (3)
EL648. Dyslexia and Reading Disabilities. Evidence-based practices for teaching children who have dyslexia or related reading disabilities. (3)
EL651. Independent Study in Elementary Education. Selected topics in elementary education to meet the needs of individual students. (1, 2, 3)
EL667. Mathematical Leadership for Elementary Mathematics Specialists: Foundations. This course provides an understanding of leadership principles and the process of continuous improvement for elementary mathematics specialists. (3)
EL668. Mathematical Leadership for Elementary Mathematics Specialists: Influencing and Facilitating. 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 also examine effective 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: EL667. (3)
EL680. The Science of Reading III: Evidence–Based Literacy Instruction in the Area of Language and Reading. Focus oral language and vocabulary, understanding reading comprehension, text-driven comprehension instruction, strategies, and the reading-writing connection that support intermediate and upper grades. Prerequisite: EL631. (3)
EL681. The Science of Reading IV: Developing Research Driven Instruction in Reading Comprehension & Writing. Focus on the application of appropriate interventions and assessments for intermediate and upper-level learners in the areas of oral language, vocabulary, reading comprehension, text-driven comprehension instruction, and the reading-writing connection. Prerequisite: EL680. (3)
EL682. Intervention Designs for Struggling Learners. Differentiating reading and writing instruction within various settings for meeting the needs of struggling learners. Response to intervention Comprehensive Intervention Model. (CIM) as a method. (3)
EL683. Advanced Practicum Intervention Models. Supervised practicum implementing intervention models for learners' experiencing literacy difficulty within school settings, collecting data documenting children's progress over time. (3)

EL685. Literacy Lessons Designed for Individuals I. Training Literacy Intervention Specialists with additional skills in working with at risk students using Reading Recovery teaching procedures. (3)
EL686. Literacy Lessons Designed for Individuals II. Further training for Literacy Intervention Specialists with additional skills in working with at risk students using Reading Recovery methods. Prerequisites: EL685; 3 years teaching experience; acceptance into the Reading Recovery training program by the Teacher Leader. (3)

ENGINEERING PHYSICS (EP)
EP503. Materials Science. The solid state; structure of solids; mechanical, chemical, thermal, electrical, magnetic and optical properties of materials; behavior of materials in engineering applications. (3)
EP505. Nano-scale Science and Engineering. Fundamentals and applications of nano-scale engineering. Size-dependent phenomena, cutting edge applications, nanotechnology for smart grid communication and cybersecurity. Prerequisites: BY173; CH185; PH121 or PH231. (3)
EP578. Interdisciplinary Research. Original research for students of superior ability in major other than engineering physics, physics, or physics education. (1)
EP579. Interdisciplinary Research. (2)
EP600. Bioengineering Laboratory: Flow Cytometry. Principles of flow cytometer. Principles of fluorescence, data analysis, common protocols, cell viability and reactive oxygen species (ROS) assay in presence of smart nanostructures, and comparative analysis with live dead assay. (2)
EP610. Nano-scale Engineering for Healthcare. Presents micro- and nano-devices in biomedical applications. Includes fabrication, remote actuation using smart nanostructures, device performance, nano-carrier delivery of therapeutics. Prerequisite: PH231 or consent of instructor. (3)
EP615. Fundamentals of Bio-Engineering. Introduction to areas of bio-engineering applications. Topics include nano-biomaterials, biomechanics, bioinstrumentation, biosensors, various imaging techniques, fundamentals of bioinformatics and molecular engineering. Prerequisites: BY173; CH185; PH121 or PH231. (3)
EP620. Biomechanics. Introduction to mechanics of biological systems. Mechanics of cardiovascular, pulmonary and renal systems. Implementation of mathematical models and analytical techniques. Prerequisite: EP 263 or consent of instructor. (3)
EP663. Numerical and Finite Element Methods. Introduction to finite element methods with applications. Covers modeling, mathematical formulation, and implementation. Involves exposure to finite element software. Pre- or corequisite: CS101, MA244, or consent of instructor. (4)
EP688. Graduate Research. Original research for students doing graduate research in bio-nano engineering, biophysics, or biomechanics. Prerequisite: Consent of graduate advisor. (3)
EP695. Readings in Nano-Bio Engineering, Understanding of nano-bio engineering research. May be repeated once for credit (1)
EP698. Thesis Research I. Original research for students doing graduate research in bio-nano engineering, biophysics, or biomechanics with a thesis-track option. Prerequisite: Consent of graduate advisor. (3)
EP699. Thesis Research II. Original research for students doing graduate research in bio-nano engineering, biophysics, or biomechanics with a thesis-track option. Prerequisite: Consent of graduate advisor. (3)

ENGLISH (EN)
EN500. History of the English Language. Origin and development of the English language, including grammatical forms, principles of sound change, and growth of English vocabulary. (3)
EN535. Rhetorical Theory and Written Discourse. Historical survey of rhetorical theory (Aristotle to the moderns), with emphasis on critical examination of tests. (3)

EN550. Style in Writing. A study of the theory and practice of style in written expression, analyzing styles of writers representing various periods and types of writing, with focus on the development of style in the student's own writing. (3)
EN572. Creative Non-Fiction Essay. A study of the development of the personal essay form, intensive reading of works by contemporary American and British essayists and composition of original personal essays. Prerequisite: EN140. (3)
EN600. Orientation Seminar for Teaching Assistants. Seminar in methods and materials for teaching freshman English. Open only to graduate assistants in the Department of English. May not be repeated for credit. (3)
EN601. Research in English Studies. This course provides research strategies that will enable students to work more proficiently in the profession. In addition, addresses thesis writing, the prospectus, proposals, and the scholarly paper. (3)
EN606. Topics, Issues and Trends in English. This class is a graduate seminar in which we will discuss current educational issues. The textbook essays will serve as a starting place for these electronic forum discussions. (3)
EN615. Practicum in Teaching Creative Writing. For graduate students who wish to gain mentored experience in teaching introductory creative writing and facilitating a writing workshop within the classroom setting of EN275. Prerequisites: Consent of the mentoring instructor. (3)
EN623. Visual Rhetoric. Advanced study of rhetorical and design techniques for technical writing. (3)
EN624. Editing and Research in Professional Writing. Practicum in the forms of research commonly performed by professional writers, such as historical and data fact-checking; analysis of and collaboration with authorial style; and usage of CMS, APA, and online style manuals. (3)
EN645. Advanced Literary Publishing. Principles, techniques, and theories in the production of literary books, including history of cover art, collaborative typography, special problems in editing and book marketing, review writing, contracts, budgets, and grant writing. (3)
EN657. Composition Pedagogy and Theory. Introduction to the theories and issues that inform the discipline known as Rhetoric and Composition. Course is appropriate for anyone who expects to teach writing and/or who is interested in the study of writing. Course is required for Department of English Teaching Assistants. (3)
EN670. Advanced Creative Writing: Poetry. For graduate students who wish to create imaginative writing in poetry, including open form, the formal poem, and the prose poem. In addition to workshop sessions and special problems assigned in class, at least eight imaginative works in poetry must be completed during the term. May be taken up to 6 hours. (3)
EN678. Advanced Creative Writing: Fiction. For graduate students who wish to create imaginative writing in fiction, including traditional and experimental short fiction, novellas, and novels. In addition to workshop sessions and special problems assigned in class, at least 40 pages of well-revised fiction must be completed during the term. May be taken up to 6 hours. (3)
EN686. Sociolinguistics. The study of language in context, particularly dialects, bilingualism, multilingualism, speech communities, genderlects and regional/social variations as they relate to linguistic variables. (3)
EN694. Thesis. A written report based upon investigation of some subject or the completion of a creative project. See "Thesis" for additional information. (3)
EN696. Thesis. (2)
EN697. Thesis. (1)

ENTREPRENEURSHIP (ER)
ER521. Topics in Entrepreneurship. This course focuses upon the critical issues and challenges encountered at different stages in the processes of new venture initiation and growing privately-held

companies. May be repeated for up to 6 credit hours. Prerequisite: senior standing, admission to a graduate business program, or consent of instructor. (1-3)
ER531. Creative Problem Solving in Business. Investigation of imagination, creativity and innovation in the context of one's interpersonal, social, and organizational environment. Prerequisite: Junior standing; or admission to a graduate business program; or consent of instructor. (3)
ER541. Managing Family Business Theory and Practice. The course will explore and analyze family business continuity challenges and best management, family, and governance practices for leading family-owned businesses. Since the focus is on pragmatic, action-oriented, management, governance, and family/business leadership skills, the course will be taught primarily through live and written cases, discussions, lectures, and a study/consultation experience with a family business. (3)
ER551. Managing and Growing the New Venture. Investigation of fundamental business concepts in the context of successfully launching and managing a family or small business. Prerequisite: ER361 with a minimum grade of C or consent of department chair or consent of graduate business program coordinator. (3)
ER561. Business Planning for New Ventures. Entrepreneurial analysis with a primary emphasis on strategic and business planning for a new venture; an applied course where students develop comprehensive business plans. Prerequisite: ER 361 with a minimum grade of C. (3)
ER562. New Product Development & Innovation Management. Principles and techniques for managing innovation and new product development for high tech, consumer goods, and industrial goods and services. Prerequisite: completion of 45 hours. (3)
ER581. Entrepreneurship Practicum: Venture Creation. Practicum which serves as a platform to systematically build a new venture individually or in teams. May be repeated for up to 6 credit hours. Prerequisite: ER361 with a minimum grade of C or consent of department chair or consent of graduate business program coordinator. (3)
ER593. Independent Study in Entrepreneurship. Study of an approved specific problem in entrepreneurship preferably one growing out of previous coursework or from business experience. May be repeated for up to 6 hours. (1-3)

ENVIRONMENTAL SCIENCE (EV)
EV525. Global Health. An introduction to key principles and topics of global health/burden of disease, risk factors, health systems, and international health organizations. Prerequisite: graduate standing. (3)
EV547. Fundamentals of Disaster/Emergency Management and Planning. This course concentrates on pre-emergency fundamentals critical in emergency management and disaster relief systems including mitigation, planning, and critical processes. The course covers issues associated with emergency planning up to the point that the emergency occurred and a discussion of the principles of sound response, coordinated relief, and orderly recovery. Prerequisite: junior or graduate standing. (3)
EV548. Disaster/Emergency Planning and Response. This course examines the differences between disasters and catastrophes. The issues of the magnitude of impacts on planning and response are addressed through longitudinal examination of national and international disaster response and planning case studies covering catastrophic level disasters. Corequisite: EV547. (3)
EV549. Vulnerability, Risk Reduction, and Critical Incident Management. Course is designed to provide insight into the tasks, roles, and responsibilities required to design and conduct exercises as part of a long-term, carefully constructed plan to help a community prepare for disasters. Students will use community needs assessments to develop the case for exercises, design an exercise, and outline an evaluation plan aimed at improving competence in all emergency functions. Prerequisite: EV548. (3)
EV551. Hazardous Materials Assessments. Introduction to performing investigative or remedial activities at hazardous waste sites. Three hours lecture; one mandatory field exercise. Prerequisites: CH185; CH186. (3)

EV554. Risk Assessment Applications. Introduction to concepts, terminology, methods, and applications of qualitative and quantitative health and ecological risk assessment and risk communication. Prerequisites: CH184; CH181 or CH185; or graduate standing. (3)
EV556. Fundamental Risk Communication in Emergency Management. This course focuses on the art and science of risk communication within the context of natural disasters, disease outbreaks, and terrorism events. The course will address core principles of risk communication, special challenges associated with diverse audiences and prepare students to create a crisis and emergency risk communication plan. Prerequisite: EV554. (3)
EV643. Epidemiology. Concepts, methods and applications of infectious disease, chronic disease and environmental epidemiology focused on epidemiological reasoning processes. Prerequisite: BY283. (3)
EV650. Environmental Chemistry. A study of the sources, reactions, transport, and fate of chemical entities in the air, water, and soil environments as well as their efforts on human health and the environment. Prerequisites: BY283; CH341. Two hours lecture; and one 2-hour lab. (3)
EV653. Occupational Health. Introduction to the factors influencing occupational incidents and the adverse interactions of environmental and occupational chemical/physical agents with humans. Prerequisites: Living Systems (any BI or BS course); CH181 or CH185. (3)
EV655. Industrial Hygiene. The study of chemical and physical hazards in the occupational environment and the methods used for their evaluation and control. Prerequisites: BI310; CH186; MA134 (3)
EV660. Introduction to Toxicology. Introduction to the fundamental principles of toxicology, toxic agents, toxicity testing, mechanisms of toxicity, toxic effects, sources of exposure, and applications of toxicology. Pre-requisites: BY283; CH185. (3)
EV661. Business Strategies for Corporate Environmental Management. Exploration of the importance and effects of environmental leadership in establishing management strategies for national and international businesses. Prerequisites: Admission to the MBA Program; CH181 or CH185; MA134. (3)
EV671. Topics in Environmental Science. Special topics in environmental science typically unavailable in the departmental curriculum. May be taken more than once. Prerequisite: permission of program director. (1)
EV672. Topics in Environmental Science. (2)
EV673. Topics in Environmental Science. (3)
EV674. Readings in Environmental Science. Consideration in depth of subject matter ordinarily unavailable in the program curriculum through directed readings and discussion with the instructor. Prerequisite: Admission to the graduate program in Environmental Science; permission of the program director. (1)
EV675. Readings in Environmental Science. (2)
EV681. Environmental Science Internship. A supervised experiential learning opportunity in environmental science which enhances the student's comprehension of applied environmental concepts and skills. Prerequisite: Admission to the graduate program in Environmental Science; the internship learning site must exhibit a demonstrated relationship to environmental science; approval of program director. (1)
EV682. Environmental Science Internship. (2)
EV683. Environmental Science Internship. (3)
EV691. Environmental Science Research. Conduct of a research project in environmental science including design, evaluation, and relation to current literature. Appropriate summarizing paper required. Prerequisite: Admission to the graduate program in Environmental Science; consent of program director (an abstract of the research problem to be studied is required for approval by the program director). (1)
EV692. Environmental Science Research. (2)
EV693. Environmental Science Research. (3)

EV697. Thesis. A written report based on an independent, in-depth scientific investigation in environmental science. Prerequisite(s): Admission to the graduate program in Environmental Science; consent of the student's Thesis Committee. (1)
EV698-699. Thesis. (2-3)

EXCEPTIONAL CHILD EDUCATION (EX)
EX507. Family and the Child with Exceptionalities. Emphasizes the teaching of children with exceptionalities partnering with families. Stresses collaborating with families and strategies for accessing community resources. (3)
EX555. Introduction to Autism Spectrum Disorder. Overview of student characteristics, theory and teaching applications for students with Autism Spectrum Disorder (ASD). (3)
EX556. Communication Intervention & Strategies for Individuals with Autism Spectrum Disorder. This course addresses the process of verbal and non-verbal communication skills, and investigates research-based strategies and interventions for improving communication in individuals with autism spectrum disorder Co- or prerequisite: EX555 or instructor approval. (3)
EX557. Behavior Management & Interventions for Individuals with Autism Spectrum Disorder. This course provides an analysis of the principles of behavior management and interventions for individuals with autism spectrum disorder and sensory disabilities. Co- or prerequisite: EX555 or instructor approval. (3)
EX558. Research in Autism Spectrum Disorder. This course addresses critical issues and trends in the field of developmental disabilities. Co- or prerequisite: EX555 or instructor approval. (3)
EX559. Clinical Practicum. This course consists of a supervised field experience which will be conducted in a clinical environment with individuals with varying exceptionalities. Pre- or corequisite: EX555 or instructor approval. (1-3)
EX601. Educational Assessment Techniques. Develops skills in selection, administration, scoring, and interpretation of standardized tests used in special education. Appraisal process is reviewed, and report writing is emphasized. (3)
EX602. Language Acquisition of the Child with Exceptionalities. Emphasizes typical and atypical language acquisition; current research and instructional strategies/technologies for student with exceptional learning needs. Prerequisite: Admission into the graduate program. (3)
EX616. Behavior Management. Theoretical background and rationale for managing student behavior. Emphasizes practical application of respondent, operant, and social learning principles. (3)
EX628. Introduction to Mild/Moderate Cross-Categorical. An overview of the field of cross-categorical special education, and K-12 students who are placed in cross-categorical settings. (3)
EX635. Psychology and Education of Students with Special Needs. This course is to assist in preparing graduate students to meet the diverse educational needs of the exceptional learner. (3)
EX652. Techniques of Teaching the Mild/Moderate Cross-Categorical. Presentation of appropriate instructional procedures and methods for teaching individuals identified for cross-categorical services within least restrictive settings. Prerequisite: consent of instructor. (3)
EX691. Transition Planning for Individuals with Exceptional Learning Needs. A course designed to provide structure for infusing transition education into the curriculum to fulfill the unique needs of learners with exceptional learning needs. (3)
EX693. Special Education and the Law. A course designed to study historical and current state and federal litigation and legislation affecting special education services. (3)
EX696. Exceptional Child Education Advanced Field Experience. Clinical experience requiring demonstration of content knowledge, differentiated instruction, curriculum implementation, critical thinking, classroom management, communication, assessments, professionalism and collaboration. (8)

FACILITIES MANAGEMENT (FM)
FM504. Facilities Management. A variety of topics will be covered related to facilities and their management. These include project management, facility planning, maintenance, energy management, cost estimating, accounting, preventative maintenance, and others. (3)
FM544. Sustainable Construction Materials and Technology. This course will explore the philosophy behind the growth in Green Building design. It will also expose the student to Green Building with regards to residential construction. Covering such topics as energy efficient building codes, green construction methods and environmentally friendly construction practices. Prerequisite: FM504. (3)
FM 554. Facilities Operations and Supervision. Facilities management responsibilities involving daily management of corporate needs based on the core competencies such as IFMA (International Facility Management Association), ASHE (American Society for Healthcare Engineering), and PRSM (Professional Retail Store Maintenance Association). Prerequisite: FM504. (3)
FM564. Sustainable Facility Planning and Design. Course on sustainable construction and green building design for large commercial facilities based on LEED standards. Topics include locality, energy systems, controls, materials, water, planning and design using sustainable construction methods. Prerequisite: FM504. (3)
FM565. Building Automation and Technology. Discussion of technology used in facilities management operations. Topics include building automation systems, controls, and current technology used in the different processes in facility management. Pre- or Co-requisite: FM 504. (3)

FASHION AND CONSUMER STUDIES (FA)
FA530. Fashion Industry Internship. Career-related work experience in the fashion industry following an approved work/study plan under an approved site supervisor. Graded credit/no credit. May be repeated up to 6 hours. (1-6)

FINANCE (FI)
FI540. International Finance. Examination of the operations and financial strategies of multinational firms within a global environment. Prerequisite: FI361 with a minimum grade of C. (3)
FI550. Financial Modeling. Present an analysis of financial situations in a coherent and professional manner using Excel spreadsheet models. Prerequisite: FI361 with a minimum grade of C; or BA604 with a grade of CR; or graduate standing. (3)
FI565. Financial Institutions, Credit Markets, and Regulatory Policy. Examines risk/return tradeoffs faced by financial institutions from facilitating market exchange between savers/investors and government financial policies. Prerequisite: FI 361 with a minimum grade of C. (3)
FI568. Portfolio Seminar. Examination of the concepts relating to modern portfolio theory. Topics include EMH, risk, portfolio performance, and related topics. Prerequisite: FI368 with a minimum grade of C. (3)

FOOD AND NUTRITION (FN)
FN502. Nutrition II. Study of metabolism of proteins, fats and carbohydrates, stressing the action and interaction of nutrients within the human body. Prerequisite: FN235; FN355; BS113; BS114; FN255; CH181; CH234. (3)
FN503. Medical Nutrition Therapy I. Part one of the in-depth study of pathophysiology and the principles of medical nutrition therapy for various disease states. Three hours lecture and two hours lab. Prerequisites: BS113; BS114; FN235 and/or FN255; FN355; FN502; UI331 or consent of instructor. (4)
FN504. Medical Nutrition Therapy II. Part two of the in-depth study of pathophysiology and the principles of medical nutrition therapy for various disease states. One-hour lecture and six hours clinical rotation. Prerequisite: FN503 or consent of instructor. (4)

FN505. Senior Dietetics Seminar. Preparation for assuming leadership positions in dietetics. Capstone course for seniors applying to dietetics internships. (1)
FN510. Nutrition and Health Education. Utilization of educational principles and theory for instructional planning, implementation, and evaluation for nutrition and health education. Prerequisite: FN255. (3)
FN520. Nutrition and Aging. A study of the nutritional needs of the mature adult population with consideration of the physiological, psychological and socioeconomic changes associated with aging. Prerequisites: FN370; FN502. (3)
FN525. Nutrition Counseling. Principles of nutrition counseling theories, behavior change models, approaches for nutrition counseling, skill development and application in nutrition counseling setting. Prerequisites: FN235 or 255; FN355/605, FN370. (3)
FN530. Pathophysiology: Implications for Nutrition and Exercise Science. An in-depth examination of pathophysiology and the relationship to nutrition and exercise. Prerequisites: FN502; HL331; or consent of instructor. (3)
FN535. Emergency and Population Nutrition. Nutrition issues in emergencies and in global populations explored in depth, including assessment, prevention, and relief. (3)
FN540. Community Nutrition. Fundamentals of nutritional care and delivery in community programs. A special focus on cultural food patterns, nutrition education assessment and meeting community needs on local, state and federal levels. Prerequisites: FN235; HE409; HE501. (3)
FN550. Vitamin Metabolism. Focus on the theories and principles of vitamin metabolism and their application to health promotion and discuss prevention. Prerequisite: FN502 or consent of instructor. (3)
FN600. Advanced Application of Medical Nutrition Therapy. Advanced integration of theories and principles of medical nutrition therapy into clinical practice. Prerequisite: FN611. (3)
FN601. Sports Nutrition. Theory and application related to nutrition for athletic performance. Application of sports nutrition concepts for recreational and elite athletes. (3)
FN605. Nutrition in the Family Life Cycle. Study of recent scientific findings and developments as they affect the nutrition of all individuals in the family unit. Prerequisite: FN235 or FN255. (3)
FN607. Food Science and Technology. In-depth study of the interrelationships between food production, health, food science, agricultural technology, and food systems sustainability. Pre- or corequisite: FN611. (3)
FN610. Strategic Management of Nutrition and Food Services for the Dietitian. Advanced study and application of quantity food service operations, strategy formulation, and competitive analysis in the context of food service management. Prerequisite: FN611. (3)
FN611. Foundations in Dietetics Practice. Foundational knowledge and application of the Nutrition Care Process, pharmacology, nutrition informatics, research methodologies, leadership theories, and management theories. Prerequisite: Admission to the Master of Science in Applied Nutrition program. (3)
FN615. Culinary Nutrition. Advanced application of nutrition, food science and culinary skills. Students modify recipes according to a variety of needs. Pre- or corequisite: FN611. (3)
FN617. Applied Statistics in Health Sciences. Guide to data analysis: Interpretation and presentation of findings of various data analyses with emphasis on food and nutrition data. Pre- or corequisite: FN611. (3)
FN619. Metabolic Considerations in Performance and Wellness Nutrition. In-depth investigation into nutrient utilization and metabolism with special consideration given to athletes, chronic disease risk, wellness, and performance nutrition. Pre- or corequisite: FN611. (3)
FN620. Community Nutrition Programming: Advanced Concepts and Application. In-depth analysis and application of community-based nutrition practices including needs assessments, health programming, grant writing, and public policy advocacy. Pre- or corequisite: FN611. (3)

FN622. Nutrition Counselling and Education: Advanced Concepts and Application. In-depth study and application of nutrition counseling and nutrition education theories, techniques, and strategies. Prerequisite: FN611. (3)
FN624. Research Methods for the Registered Dietitian. Design and application of research methodology to aid decision making in the food and nutritional sciences. Pre- or corequisite: FN611. (3)
FN627. Essentials of Food Science. Application of food science principles and their efforts on product quality, recipe development, nutritional value and current assessment techniques. Prerequisites: CH181; CH234; FN205; HL303 or PY271. (4)
FN628. Applied Nutrition Field Experience I. Supervised experiential learning in community nutrition, nutrition counseling, nutrition education, and food service management settings. Prerequisite: FN611. (1)
FN629. Applied Nutrition Field Experience II. Supervised experiential learning in community nutrition, nutrition counseling, nutrition education, and clinical nutrition settings. Prerequisite: FN611. (1)
FN630. Energy Metabolism. In-depth study of the metabolism of carbohydrates, lipid, protein and micronutrients and their utilization during exercise and training. (3)
FN637. Research Design and Evaluation. In-depth analysis, description, evaluation, formatting, and reporting of scientific research processes. Pre- or corequisite: PY571. Prerequisite: Graduate standing or permission of instructor. (3)
FN645. Capstone Project in Applied Nutrition. Conduct, analyze and write a report based upon a food and nutrition-focused creative project. Prerequisite: FN611. (1)
FN650. Professional Skills and Emerging Trends in Dietetics. Application of advanced professional skills for registered dietitians. Includes a comprehensive review, professional development portfolio, and investigation into current trends.. Prerequisite: FN611. (3)
FN690. (Cross-listed as HL690). Seminar in Nutrition and Exercise Science. Discussion and presentations on current issues involving the disciplines of Nutrition, Dietetics, and Exercise Science. May be repeated for credit. (3)

FOREIGN LANGUAGE (FL)
FL610. Independent Study in Foreign Language. For graduate credit in French, German, or Spanish. Prerequisite: Consent of department chairperson and Dean of the Humanities and Social Sciences. May be repeated for up to 9 hours of credit. (3)

FORENSIC SCIENCE (FS)
FS550 Forensic Microscopy. Introduction to the techniques of forensic microscopy in the analysis of physical evidence. Four lab hours. Prerequisite: CH344 or consent of instructor. (2)
FS552 Forensic Serology & DNA Analysis. Introduction to biological fluid identification on evidence and the DNA analysis process to obtain a DNA profile. One hour lecture and two-hour lab. Prerequisite: BY283 or consent of instructor. (2)
FS553. Introductory Analysis of Pattern Evidence. One-semester introduction to the chemical and physical techniques used in the collection, preservation, documentation, analysis, and interpretation of pattern evidence. Prerequisite: CJ350 or FS351 or consent of instructor. (3)
FS601. Problems in Forensic Science. Directed study in specific topics related to forensic science, the operation and function of a crime laboratory, or methods of analysis applied to physical evidence. Prerequisite: Consent of instructor. (1)
FS603. Problems in Forensic Science. (3)
FS605. Forensic Expert Witness Testimony. Survey of principles and practice of forensic expert witness testimony, and the scientific and legal issues affecting the expert witness. Prerequisite: Consent of instructor. (2)

GEO INFO SCIENCE (GT)
GT520. Geographic Information System Application. This course covers important geographic information science concepts and provides an extensive overview of how to use geographic information system technology to resolve real-world problems. Prerequisite: GE445 or graduate standing. (3)
GT625. GIS Planning for Emergency Management. Introduction to the current and potential future roles of geographic information science in support of emergency management activities at all geographic scales. Roles are considered at each of the four stages of emergency management and selected focus topics are considered in detail. Prerequisite: graduate standing. (3)

GEOGRAPHY (GG)
GG561. Advanced Topics in Geography. Lectures, discussions, laboratories, field trips and assigned readings in various fields of geography. Topics vary. May be taken more than once. (1)
GG562. Advanced Topics in Geography. (2)
GG563. Advanced Topics in Geography. (3)
GG681. Independent Study in Geography. (1)
GG682. Independent Study in Geography. (2)
GG683. Independent Study in Geography. (3)

GEOSCIENCES (GO)
GO514. Geographic Information Science Today. Encompasses knowledge-based computational modeling of activities and processes in the human and natural environments using geographic information systems. (GIS). (3)
GO520. (Cross-listed as GT520). Geographic Information Science Application. Course covers important geographic information science concepts and provides an extensive overview of how to use geographic information system technology to resolve real-world problems. Prerequisite: GT445 or graduate standing. (3)
GO555. Soil Classification and Resource Management. Classification of soils in terms of their physical, chemical, and mineralogical composition. Interpretation of soils in terms of proper land use, with special attention to soil erosion. Prerequisites: AO215 or GO110; CH181 or CH184/CH185 or consent of instructor. (3)
GO563. Advanced Topics in Geology. Lectures, discussions, labs, field trips and assigned readings in various fields of geology. May be taken more than once. Topics vary. Prerequisite: Consent of instructor. (3)
GO605. Environmental Assessment. A seminar on the philosophy and process of environmental assessment with an interdisciplinary project which includes team writing of an environmental assessment report. Prerequisite: Consent of the instructor. (3)
GO618. Topics in Earth Science Education. A review of the basic content of earth science coupled with pedagogical models appropriate for teaching the elementary or secondary classroom. This course is not intended for students with an undergraduate or graduate major in earth science. (3)
GO640. Remote Sensing. An introduction to the principles/concepts of remote sensing, its applications, and its significance in today's world. Two lectures, one lab per week. Prerequisites: GO110; MA133; MA134; or consent of instructor or consent of instructor. (3)
GO644. Spatial Analysis. Develop an understanding of spatial relationships and methods to analyze those relationships by using GIS and geostatistics for model development. (3)
GO645. Advanced Geographic Information Science. Advanced concepts, methods, and applications of geographic information science for spatial data analysis. Prerequisite: graduate standing. (3)

GO658. Environmental Geochemistry. Application of chemical principles to the study of near surface environments. Prerequisite: CH186 or consent of instructor. (3)
GO661. Environmental Hydrology. An introduction to the interrelationships between the environment and the occurrence, distribution, movement, and chemistry of water. Emphasizing the influence of geologic processes and materials on surface water, groundwater, and fluid and contaminant transport through the vadose zone. Two lectures, one lab per week. Prerequisites: GO110; MA134; or consent of instructor. (3)
GO681. Independent Study. Supervised individual study in a selected field of the geosciences. Prerequisite: Consent of department chairperson and supervising faculty member. (1)
GO682. Independent Study. (2)
GO683. Independent Study. (3)

GRADUATE SCHOOL (GR)
GR603. Seminar on College Teaching. An in-depth study of, and intensive practical training in effective classroom teaching. (0)
GR609. Graduate Thesis/Creative Project Development. Preliminary effort to define and develop a suitable concept for a graduate thesis, creative project, or capstone work. (0)
GR691. Methods of Research: Qualitative and Quantitative Designs. This course prepares students to understand, interpret, evaluate, and design qualitative and quantitative research as well as develop the ability to select and use appropriate research methods. Prerequisite: Admittance to the graduate program. (3)
GR693. Independent Study. May be repeated for credit. (1-3)
GR698. Master's Final Comprehensive Examination. Written comprehensive examination over the degree program. Students must enroll in GR698 during the final semester. (0)
GR699. Master's Oral Examination. The oral examination will be conducted for students writing a thesis or internship paper in lieu of the comprehensive examination. (0)
GR799. Education Specialist Oral Examination. (0)

HEALTH, HUMAN PERFORMANCE & RECREATION (HL)
HL510. Health Concerns of Aging. This course is designed to consider the health concerns of individuals and groups as they relate to the aging process. Emphasis will be on working with the aged population. (3)
HL511. Applied Anatomy. Location and action of skeletal muscles. Anatomy and biomechanical principles of movement as applied to rehabilitation, physical activity, and common anatomical injuries and disease. Prerequisites: BS113; BS114; or graduate standing. (3)
HL526. Health Behavior Change. Behavior change theory, principles, predictive models, and their application to health behavior change programs and interventions. Prerequisites: HL120; HL331/031; or consent of instructor; or graduate standing. (3)
HL531. Advanced Exercise Testing. Development of knowledge and skills necessary to conduct exercise tests in clinical settings. 2-hours lecture, 2-hours lab. Prerequisite: undergraduate exercise physiology course with lab or permission of instructor. (3)
HL550. Exercise Programming for Special Populations. Exploration of exercise testing and exercise programming considerations for special populations. Prerequisite: undergraduate exercise physiology course with lab or permission of instructor. (3)
HL601. Physiology of Exercise. Physiological responses to exercise, the recovery process, and systematic training regimens. Emphasis on bioenergetics, training, and health. Prerequisite: undergraduate exercise physiology course with lab or permission of instructor. (3)

HL603. Cardiovascular Exercise Physiology. Systems approach to the cardiovascular responses to acute and chronic exercise. Emphasis on the myocardial and circulatory adaptations associated with physical training and the impact of environment on pertinent parameters. Prerequisite: undergraduate exercise physiology course with lab or permission of instructor. (3))
HL621. Exercise in Health and Disease. The role of exercise in the prevention and rehabilitation of cardiopulmonary diseases. Emphasis on patient/client education, programming, and assessment. Prerequisite: undergraduate exercise physiology course with lab or permission of instructor. (3)
HL671. Implementation and Organization of Fitness Programs for Healthy and Diseased Populations. Organizational structure, exercise programming, facility administration, and testing/screening procedures for programs serving apparently healthy, symptomatic, and diseased populations. Prerequisite: Graduate standing or consent of instructor. (3)
HL672. Health Promotion Programs. Principles of planning, implementing, and evaluating health promotion programs in various settings. Prerequisite: Graduate standing or consent of instructor. (3)
HL690. (Cross-listed as FN690). Seminar in Nutrition and Exercise Science. Discussion and presentations on current issues involving the disciplines of Nutrition, Dietetics, and Exercise Science. May be repeated for credit. (3)
HL691. Applied Research. An applied research project, guided by a faculty committee within the fields of Health Promotion, Exercise Science, and Athletic Training. Prerequisites: GR691 or equivalent; PY571 or equivalent; consent of department chair. (3)
HL694. Thesis I. A written thesis report based upon investigation of a nutrition or exercise science problem. Prerequisites: FN637; PY 571. (3)
HL695. Thesis II. A written thesis based upon investigation of a nutrition or exercise science problem. Prerequisite: HL694. (3)
HL699. Internship in Nutrition and Exercise Science. Internship with an approved agency for the purpose of applying knowledge and enhancing practical skills through an experiential learning opportunity. Completion of all coursework for M.S. in Nutrition and Exercise Science. (3)

HEALTHCARE MANAGEMENT (HA)
HA510. Healthcare Performance Improvement. Focuses on the analytical tools required to define, assess, and pursue performance excellence in healthcare organizations. Prerequisites: BA601 or PY271 or QM257 with a minimum grade of C; MG301 with a minimum grade of C; or permission of department chairperson. (3)
HA520 Healthcare Quality and Value. Course studies value-based healthcare as an emerging policy and array of methods that expand the foundational approach to healthcare quality. Prerequisites: BA601 or PY271 or QM257 with a minimum grade of C; MG301 with a minimum grade of C; or permission of department chairperson. (3)
HA540. Healthcare Informatics. Introduction to information technology as it is applied to healthcare and health related organizations. Examination of how information is captured, converted and stored in machine readable form and used in the various facets of the healthcare system; the impact of Electronic Medical Record (EMR) and mobile computing on the healthcare system. Prerequisites: MI375 with a minimum grade of C or BA605; HA300 or MG301 with a minimum grade of C; or permission of department chairperson. (3)
HA545. Healthcare Database Systems. Study of the design of databases used in healthcare. Types of database architecture, normalization techniques, file and access techniques, query, and update languages, data integrity, use of health record systems, and applications of databases to support the healthcare system. Prerequisites: MI375 with a minimum grade of C or BA605; HA300 or MG301 with a minimum grade of C. (3)

HA555. Fundamentals of Medical Practice Management. Covers knowledge required and principles used to manage key aspects of a medical practice. Prerequisite: MG 301 with minimum grade of “C’ or consent of Department Chair. (3)
HA556. Topics in Healthcare Administration. Seminar in contemporary healthcare administration problems and issues, stressing the technical, analytical, legal, social, and pragmatic aspects of healthcare administration. Repeatable up to 9 credit hours. Prerequisite: senior standing, admission to a graduate business program, or consent of instructor. (1-3)
HA557. Healthcare Law and Regulatory Compliance. Course reviews the history of law and medicine leading to healthcare reform actions. Management approaches to regulatory compliance are discussed. Prerequisite: MG301 with a minimum grade of C; or permission of department chairperson. (3)
HA560. International Healthcare Administration. Economic, cultural, political, and environmental variables of international healthcare management. Includes trends and organization for international healthcare operations. Prerequisites: HA300 or MG301 with minimum grade of C. (3)
HA582. Health Care Budgeting and Reimbursement. Introduction to health care budgeting and reimbursement and the impact of resource allocation on health care delivery. Prerequisite: HA300 or MG301 with a minimum grade of C; or consent of department chair. (3)
HA586. Healthcare Strategy and Marketing. The close relationship between strategy development and marketing as a success factor determining organization planning is studied. Prerequisite: MG301 with a minimum grade of C; or permission of department chairperson. (3)
HA593. Independent Study in Healthcare. Study of an approved specific problem in healthcare, preferably one growing out of previous coursework or from practical experience. Variable credit. Repeatable up to 6 credit hours. Prerequisite: senior standing or consent of departmental faculty or chairperson. (1-6)
HA657. Applied Research Project in Healthcare. Designed to understand the process by which leaders respond to healthcare problems. Integrates research skills and professional practices and provides an opportunity to apply current research to a healthcare problem. May be repeated for up to 6 credit hours. Prerequisite: Successful completion of 18 hours in the MS in Healthcare Management program; or consent of Graduate Studies Program Director. (3)
HA658. Graduate Internship in Healthcare. Supervised field experience in a healthcare related setting involving at least 150 supervised contact hours. May be repeated for up to 6 credit hours. Prerequisite: Successful completion of 18 hours in the MS in Healthcare Management program; or consent of department chairperson. Credit/No Credit. (1-6)
HA693. Independent Study in Healthcare. Study of an approved specific problem in healthcare management, preferably one growing out of previous coursework or from practical experience. Course may be repeated for up to 9 credit hours. (1-3)
HA681. Health Administration Policy. Introduction to policies impacting health administration. Prerequisite: 21 hours completed in the MS Healthcare Management program; or consent of department chair. (3)

HISTORIC PRESERVATION (HP)
HP500. Historic Preservation Internship I. Professional practicum requiring demonstration of Historic Preservation competency in appropriate settings under the direction of cooperating site administrators and University coordinator. (3)
HP501. Historic Preservation Internship II. Professional practicum requiring demonstration of Historic Preservation competency in appropriate settings under the direction of cooperating site administrators and University coordinator. (6)

HP502. Historic Preservation Internship III. Professional practicum requiring demonstration of Historic Preservation competency in appropriate settings under the direction of cooperating site administrators and University coordinator. (9)
HP525. Living History in Historic Sites. An experiential exploration of living history as an interpretive technique and economic development strategy for historic sites and places. (3)
HP540. Topics in Historic Preservation. Examination of specialized topics or issues in historic preservation. (3)
HP552. Historic Preservation Field School. Intensive field experience in documenting and preserving the built environment and the historic landscape. (3)
HP575. Collections Management. Study of collections management theory, practices for administration, handling, physical care, recording, and study of artifacts in public history institutions. Prerequisite: HP 200 or GH 600. (3)
HP580. History of American Building Materials and Techniques. A survey of traditional construction materials and methods used in buildings and structures in the United States from the late sixteenth century to the recent past. (3)
HP585. History of American Architecture. The study of architectural history as material evidence of America's social, cultural, economic, and technological development. (3)
HP588. Legal and Economic Principles of Historic Preservation. A study of the legal and economic aspects in the procedures for locating, recording and preserving America's historical, architectural and cultural resources. Prerequisites: HP100; HP200. (3)
HP589. Historic Preservation-Based Economic Revitalization. A study of the role of historic preservation in the revitalization of America’s historic downtowns. (3)
HP601. Independent Study in Historic Preservation. Prerequisite: Consent of instructor. (1)
HP602. Independent Study in Historic Preservation. Prerequisite: Consent of instructor. (2)
HP603. Independent Study in Historic Preservation. Prerequisite: Consent of instructor. (3)
HP630. Issues in Historic Preservation. Examination of specialized issues in historic preservation relating to archives and special collections, historic site administration, or museum studies. (3)
HP635. Issues in Interpretations in Public History. Explores potentially controversial or divisive topics in public history education with an emphasis on state, regional and local importance. (3)
HP640. Historic Preservation Internship. Graduate internship in historic preservation. 150 hours required. May be repeated for credit. (3)
HP645. Advanced Projects in Applied History. Individual or group projects requiring knowledge and skill in the field of historic preservation, historic site administration, museum administration, archives administration or heritage education. Prerequisite: Minimum of 16 hours of graduate coursework completed. (3)
HP650. Problems in Historic Preservation. Projects in historic preservation that acquaint the student with a broad spectrum of academic/practical problems that complement professional training. Prerequisites: HP100 and HP200; or HP600; or consent of instructor. (3)

HISTORY-EUROPEAN (EH)
EH516. History of Modern Germany. Germany in the Nineteenth and Twentieth Centuries. (3)
EH620. Seminar in European History. Intensive study in European History. (3)

HISTORY-GENERAL (GH)
GH520. Techniques of Oral History. Study and practice in designing and carrying out oral history projects. (3)
GH 550. Heritage Outreach. Study of the outreach methods used by heritage professionals in public endeavors, with special emphasis on digital humanities tools. Prerequisite: graduate status. (3)

GH600. Introduction to Public History. Guided readings, discussion, and practice in presenting history to audiences outside the academy. Prerequisite: Graduate status. (3)
GH601. Independent Study in History. Prerequisite: Consent of instructor. (1)
GH602. Independent Study in History. Prerequisite: Consent of instructor. (2)
GH603. Independent Study in History. Prerequisite: Consent of instructor. (3)
GH610. Methods of Research in History. Location, evaluation, and presentation of historical material, including a component of historiography. Designed to prepare the student for writing research papers and the thesis. Emphasis will be upon archival and computer research tools. (3)
GH645. Readings Applied History. Study of selected topics in applied history. (3)
GH680. Practicum Teaching History. Applied and mentored experience in teaching history to undergraduates at the college level. (0)
GH694. Thesis. A written report based upon investigation of a subject or the completion of a creative project. See "Thesis" for additional information. (3)
GH695. Thesis. Candidates choosing the Teaching Option may elect to write a thesis under the direction of their advisor. Upon completing the thesis the candidate will defend it before a committee selected by the candidate and advisor. Candidates may elect 6 hours of coursework and 1 non-thesis paper in lieu of the thesis. (3)
GH696. Thesis. (2)
GH679. Thesis. (1)

HISTORY-UNITED STATES (US)
US502. America Since 1920. Thematic survey of American history from 1920 through application of social, cultural, political, and economics historical methods. (3)
US507. Civil War and Reconstruction. Study of the social, economic, military and political aspects of the Civil War and Reconstruction periods of American history. (3)
US508. African Americans During the Era of Segregation and Jim Crow. A study of African Americans from the end of the Civil War to the beginning of the Civil Rights Movement. (3)
US509. American West. The economic cultural, political, and military developments of the various frontiers. (3)
US524. Rural American Society and Culture. Study of geographic, social, economic, and political characteristics of rural United States from 1800-present. (3)
US525. American Urban History. A study of the origins and growth of American cities from the colonial town to the modern metropolis and an analysis of the city's historical impact on American culture and institutions. (3)
US 530. The African-American Experience. Survey of African-American history and culture from 1619 to the present. (3)
US620. Seminar in United States History. Intensive study and research in United States history. Topics vary according to the areas of specialty of the instructor. (3)
US635. American Material Culture. A study of American material culture emphasizing how commonplace artifacts provide historical evidence of the past and the people who made and used them. (3)
US660. African Americans During a Time of Slavery. A study of Africans in America, both slave and free, from 1619 to 1865. (3)

HISTORY-WORLD (WH)
WH520. Latin American Colonial History. Survey of the Iberian and Indian background to the voyages of discovery, European conquest; establishment of imperial institutions, Bourbon reforms of the eighteenth century and the origins of independence. (3)

WH524. History of Mexico. An examination of modern Mexico from wars of independence to the Mexican Revolution of 1910. (3)
WH525. Cold War in Latin America. Examines the Cold War in Latin America. (3)
WH550. The Atlantic World. The political, social, economic, and cultural history of the Atlantic world from 1492 to 1830. Prerequisite: US105 or consent of the instructor. (3)
WH620. Seminar in European History. Intensive study and research in European history. Topics will vary according to the areas of specialty of the instructor. (3)
WH630. Seminar in World History. Intensive study and research in world history. Topics will vary according to the areas of specialty of the instructor. (3)
INTERIOR DESIGN (DS, HI)
DS618. Environmental Design for Human Services. Study of the principles and theories involved in designing effective home, office, educational healthcare, hospitality, service, and retail environments. (3)
DS620. Advanced Environmental Design Studio. In-depth review of design-related research, theories, and case studies. Emphasis of research to the design of interior environments. May be repeated for up to 9 hours of credit. (3)

HUMAN ENVIRONMENTAL STUDIES (HE)
HE610. Independent Study. (1)
HE611. Independent Study. (2)
HE612. Independent Study. (3)

INDUSTRIAL AND SYSTEMS ENGINEERING (EG)
EG506. Operations Research. Provides Operations Research (OR) methods to formulate, analyze, and solve mathematical models in order to optimize real world problems. Prerequisites: MA 345; MA 523; MN 260 or CS 155 or CS 177; or graduate standing. (3)

INDUSTRIAL EDUCATION (IE)
IE590. Assessment for Career and Technical Education. Study of terminology and philosophy of career and technical education, objectives, analysis for development and evaluation of courses of study. (3)
IE592. Selection and Organization of Subject Matter. Study of terminology and philosophy of industrial education; objectives, analysis for manipulative and informational units, projects, exercises, experiments, production jobs, demonstrations, textbooks, job, operation, assignment and information sheets, teaching aids, evaluations, progress charts, performance tests, master teaching plan, instructional guides and courses of study. On demand. (3)
IE593. Principles and Practices of Technical Subjects. A vocational teacher training course designed to serve trade, technical, health, CETA teachers. Designed to give practical and substantial assistance to instructors through the study of the most useful methods, basic principles, and techniques for teaching. (3)
IE594. Guidance in Vocational Education. Problems, methods, and procedures involved in assisting individuals to choose, prepare for, enter and become adjusted in their vocations. Designed for teachers and counselors, employment service personnel, and others. (3)
IE595. Teaching Adults in Vocational Education. Definition, importance, concepts, problems, and movement with characteristics, interests, and abilities of adults. Techniques of overcoming problem areas, methods of conducting classes, and role of school system in an adult vocational education program. (3)
IE596. Foundations of Career and Technical Education. Introduction to the foundations of vocational and industrial education including history, philosophy, definitions, state plan, handbook, certification,

recertification, occupational surveys, safety programs, career education, area vocational-technical schools, co-op education, CETA programs, apprenticeships, related instruction, state department evaluations, accountability, follow-up studies, advisory committees, facilities, funding and federal acts. (3)
IE597. Coordination of Cooperative Education. Organization and operation of cooperative programs, including advisory committees, classroom, development of training stations, methods of instruction and student organizations. (3)

INDUSTRIAL MANAGEMENT (IM)
IM501. Independent Study in Industrial and Engineering Technology. Individualized independent investigation in laboratory and informational content. (1)
IM502. Problems in Industrial and Engineering Technology. Study of special concerns. (1)
IM503. Independent Study in Industrial and Engineering Technology. Individualized independent investigation in laboratory and informational content. (2)
IM504. Problems in Industrial and Engineering Technology. Study of special concerns. May be repeated for up to 6 hours of credit. (2)
IM505. Independent Study in Industrial and Engineering Technology. Individualized independent investigation in laboratory and informational content. May be repeated for up to 6 hours of credit. (3)
IM506. Projects in Industrial and Engineering Technology. Study of special concerns. (3)
IM515. Advanced Technical Communication. Designed to provide students with advanced written and oral communication of technical documents required in industry, using technology tools. (3)
IM516. Documenting and Presenting Technical Instruments and Proposals. Provides students with the ability to analyze and produce technical instructions and proposals for usability to end-users. (3)
IM517. Software in Technical Documents. Course will help students to apply technological software to produce advanced technical documents and descriptions used in industry. (3)
IM518. Advanced Technical Document Design, Organization & Graphics. Provides students with the ability to produce effective technical documents utilizing visual design concepts for industrial applications. (3)
IM520. Technical Training and Development. Course provides students with the knowledge and application of a structured approach for developing technical training. (3)
IM521. Technical Change and Human Resource Development. Course provides students with the knowledge and application of a structured approach for developing technical training. (3)
IM522. Technical Leadership in Training and Development. Course provides students with the theoretical background and application of technical leadership. (3)
IM523. Training and Development of Technical Teams. Course provides students with the theoretical background and application of coaching and training of technical teams. (3)
IM555. Sustainable and Green Manufacturing. Examines the concept of “sustainable manufacturing; using green materials, methods and technologies that are energy efficient, sustainable and friendly to the environment. Topics include carbon footprint management, sustainable manufacturing process design, and life-cycle assessment for industrial processes. Prerequisite: ET 426 or consent of instructor. (3)
IM581. Independent Study in Industrial and Engineering Technology. Individualized independent investigation in laboratory and informational content. May be repeated for up to 6 hours of credit. (1)
IM583. Independent Study in Industrial and Engineering Technology. May be repeated for up to 6 hours of credit. (2)
IM585. Independent Study in Industrial and Engineering Technology. May be repeated for up to 6 hours of credit. (3)

IM597. Technology Management Internship. Supervised field experience in technology management consisting of 240 supervised contact hours. Prerequisite: permission of instructor. (1-3)
IM600. Managing Technology Innovation. This course focuses on management of technology, innovation, and new product development. It will cover concepts such as innovation management in the field of technology, identification of sources of innovation, and creating new products and services in the field of technology. (3)
IM601. Industrial Safety and Ergonomics. This course will examine the role and importance of management in producing and maintaining a safe workplace environment. Topics covered will include the role of Occupational Safety and Health Administration (OSHA) in industry and business, OSHA inspections, regulations, required documentation and legal and ethical issues regarding safety issues. (3)
IM602. Advanced Quality Concepts. This course examines the role(s) and application of quality concepts to modern industrial organizations. The key concepts related to Certified Quality Engineer certification exam will be covered. (3)
IM603. Industrial Supervision in a Diverse Workplace. The role(s) and knowledge required for managers to effectively supervise, interact, communicate, and motivate employees of various demographics in current work environments. (3)
IM605. Innovation for a Lean Enterprise. This course is aimed at preparing students for careers in industry. A team of students will identify and develop solutions to practical problems or market needs. Students will develop creative problem solving abilities and other skills necessary for innovative thought and innovation. (3)
IM606. Knowledge Management. The goal of the course is to prepare students to become familiar with the current theories, practices, tools and techniques in knowledge management (KM) organizations. In addition, students will learn to determine the infrastructure requirements to manage the intellectual capital in organizations. (3)
IM617. Manufacturing Resources Analysis. Prediction of costs involved in manufacturing processes and systems. Students learn how to create effective production and inventory control applications throughout all production phases. Activities will include application of Enterprise Resource Planning Software. (3)
IM681. Independent Study in Industrial and Engineering Technology. Individualized independent investigation in laboratory and informational content. May be repeated for up to 6 hours of credit. (1)
IM683. Independent Study in Industrial and Engineering Technology. May be repeated for up to 6 hours of credit. (2)
IM685. Independent Study in Industrial and Engineering Technology. (3)
IM691. Methods of Research in Technology Management. Covers fundamental issues in planning, conducting, and research in technology management areas. Includes concepts such as identification of research problems, effective research design, data collection and analysis using quantitative and qualitative techniques and techniques for evaluation research results. (3)
IM692. Modeling and Simulation. This course emphasizes the development of modeling and simulation concepts and analysis skills necessary to design, program, implement, and use computers to solve and analyze problems of complex systems/products. Prerequisite: IM691 or consent of instructor. (3)
IM693. Applied Research Project. Designed to develop an understanding of the process by which industrial supervisors respond to problems. Integrates research skills and professional practices and provides an opportunity to apply current research to an identified problem. Prerequisite: IM691. (3)
IM694. Thesis. (3)

INFORMATION SYSTEMS (IS)

IS575. IS/IT Strategy and Management. Business alignment with technology using strategic frameworks for IT deployment in organizations. Course is of applied nature with discussions on industry practices in managing IT. Prerequisite: IS340 with minimum grade of C. (3)

LITERATURE (LI)

LI523. Studies in American Literature. Variable topics course emphasizing foundational and traditional texts, genres, authors, and themes of American literature. May be repeated for credit. Prerequisites: EN 140; or graduate status. (3)

LI542. Literature for the Young Adult. A survey of the literature written for young adults (grades 7-12) with emphasis on literary analysis and evaluation of the literature and on the reading interests of young adults. (3)

LI565. Southern Literature. Study of the literature and culture of the American South, covering a wide variety of themes and topics. Prerequisites: EN140; or graduate status. (3)

LI568. Masculinities in the 19th Century American Novel. Study of works by American writers of the 19th century, including historical and cultural contexts as well as writing styles and novelistic techniques. Prerequisites: EN140; or graduate status. (3)

LI570. Twentieth-Century American Literature. Study of works by American writers of the 20th century, including historical and cultural contexts, writing styles and techniques. Prerequisites: EN140; or graduate status. (3)

LI571. Contemporary American Poetry. Exploration of major and minor American poets of the 2oth and 21st centuries. Themes may include race, ethnicity, poetic forms, gender, regional and specific time periods. Prerequisites: EN140; or graduate status. (3)

LI576. American Fiction of the Twenty-First Century. Studies of novels and short stories from a variety of voices in 21st century American literature. Writing assignments may include response papers, literary analysis, cultural analysis, and literary criticism. Prerequisites: EN140; or graduate status. (3)

LI577. Studies in Early English Literature. A course which focuses on the study of early modern English literature from 1450-1785. It addresses issues, periods, or genre studies in the literature of England not addressed in the regular course listings. May be repeated for elective credit. (3)

LI578. Studies in Later British and Postcolonial Literature. Any literature from 1798 to the present written in English (excluding American literature). Emphasizes emergent issues in British and postcolonial literature; globalization, empire, domination, sexual politics, and/or speculative apocalypse. Prerequisites: EN140; or graduate status. (3)

LI582. Topics in Literature. Directed study of special topics in literature. (3)

LI605. Contemporary Anglophone Literature/Contemporary Theory. An examination of contemporary literary theory through contemporary literature (British, Commonwealth, and post-colonial) which addresses the theoretical issues of our time. (3)

LI 612. Native American Literature. Explores the contributions that Native American writers have made to the development of American literature from the late 19th Century to the present. (3)

LI615. Practicum in Teaching Literature. Teaching practicum: Mentored experience in teaching undergraduate literature; experience includes techniques for writing, presenting, facilitating discussion, and finding employment. (3)

LI 617. Writing Race and Gender in the South. Special topics class with a focus on women's literature and multicultural authors and texts from and about the U.S. South, including novels, poetry, short stories, plays, and films. (3)

LI625. Focus on the Author. One or two authors will be studied in depth in order to better understand the body of work of a major writer or writers. The specific author or authors will change with each course offering. May be repeated for up to 6 hours of credit. (3)

LI 626. Gender and Sexuality in Literary Studies. A study of literary, theoretical, and critical texts related to gender and sexuality. (3)
LI631. Faulkner Seminar. Study of the works of William Faulkner and other writers. Features in-depth study of the works and criticism of Faulkner, paired with a changing selection of other writers and topics. Students will be introduced to the University's world-class L.D. Brodsky Collection of Faulkner materials. Pre- or co-requisites: EN140; any 200 level LI course. (3)
LI 634. African American Literature before 1900. A study of African American Literature from Beginnings through 1900. Pre- or corequisites: EN 140; any 200-level literature course; or graduate student status. (3)
LI 636. African American Literature since 1900. Explores the contributions that African American writers have made to the development of American literature from the turn of the 20th Century to the present. (3)
LI658. Literary Criticism. A course in the techniques of close analysis of literary form. (3)
LI670. Immigration in Literature and Film. A study of the themes of immigration, transculturation, and global diasporas in American literature and film. (3)
LI672. Border Literature of the Americas. This course examines literature, film, and non-fiction narratives of borders across the Americas with a particular but not exclusive focus on the US-Mexico border and Mexican-American writers. (3)
LI673. Studies in English renaissance Literature. Study of the literature of the English Renaissance. Variable content; may be repeated for credit. (3)
LI676. Early Twentieth-Century British Literature. Course addresses how British/Irish modernism's radical artistic experimentation transformed a way of seeing the world, beginning with Oscar Wilde's rebellion against Victorian morality and concluding with modernism's dialogue with postmodernism. (3)
LI679-681. Independent Study in English. Independent work in a specialized area not covered by regular course offerings. (1-3)

MANAGEMENT (MG)
MG516. Acquiring Talent. Covers the human resource activities of strategy development, recruitment, and selection of talent. Emphasis is placed on practice, applications, and exercises. Prerequisite: MG556 with a minimum grade of C. (3)
MG536. Compensating Talent. Covers the human resource activities of paying, providing benefits for, and retaining talent. Emphasis is on practice, applications, and exercises. Prerequisite: MG556 with a minimum grade of C. (3)
MG548. Project Management. Project organization structure and staffing; conflict management; project planning and control; pricing and estimating; earned value analysis; proposal preparation; project information systems; international project management. Prerequisites: IS275 or MI375 with minimum grades of C or BA605. (3)
MG550. Improving Team Performance. The course will investigate team performance and the skills and techniques required to improve team performance. Prerequisite: MG301 with minimum grade of C. (3)
MG560. International Management. Economic, cultural, political, and environmental variables of international management. Includes trends, organization for international operations, international management of human resources. Prerequisite: MG301 with minimum grade of C. (3)
MG562. Organization Theory and Design. Organizational purpose, design, structure, bureaucracy, power and politics; impact of external environmental and internal organizational factors on structure and design. Prerequisite: MG301 with a minimum grade of C. (3)
MG566. Legal and Union Issues in Human Resources. Human resource topics of employment law and labor relations. Emphasis on the impact of case law and union activity on organizations. Prerequisite: MG301 with minimum grade of C. (3)

MG575. Information Technology Management. Business alignment with technology as pertaining to strategic frameworks for IT deployment in an organization. Applied nature, with discussions on industry practices. Prerequisites: MI375/IS275 with a minimum grade of C or BA605; senior standing or admission to a graduate business program. (3)
MG586. Human Resource Strategy and Analytics. Covers the interaction of HR and business strategy and evaluation of HR activities using analytic tools. Prerequisite: MG566 with a minimum grade of C. (3)
MG593. Independent Study in Management. A study of an approved specific problem in management preferably one growing out of previous coursework or from business experience. May be repeated for credit. May be repeated for up to 6 credit hours. (1-3)

MANUFACTURING ENGINEERING TECHNOLOGY (MN)
MN512. Industrial Capstone Projects. Provides students an opportunity to work on industrial capstone projects, such as system integration, data analysis, and design of automation systems. Prerequisites: graduate or senior standing. May be repeated for up to 6 hours of credit. (3)

MANAGEMENT INFORMATION SYSTEMS (MI)
MI556. Topics in Management Information Systems. Seminar in contemporary Management Information Systems covering an emerging topic, trend, or methodology in Management Information Systems. Prerequisite: MI375 with a minimum grade of C or BA605. Repeatable up to 9 credit hours. (3)
MI593. Independent Study in Management Information Systems. Study of an approved specific problem in management information systems preferably one growing out of previous coursework or from business experience. Repeatable up to 6 credit hours. (1-3)

MARKETING (MK)
MK547. Sales Management. Human relations aspect of organizing and managing an outside sales force, sales analysis, planning and control. Prerequisite: MK 301 with a minimum grade of C. (3)
MK 555. Digital Marketing Strategies. An introduction to the Internet as part of a company's marketing strategy. Students will explore Internet consumer characteristics and behavior and their effect on web content. Prerequisite: MK 301 with minimum grade of C. (3)
MK556. Topics in Marketing. Seminar in contemporary marketing management covering an emerging topic, trend, concept, practice/strategy or methodology in marketing. Repeatable up to 9 credit hours. Prerequisite: MK301 with minimum grade of C or instructor approval. (3)
MK560. International Marketing. The marketing environments throughout the world and the management of the marketing function on a global scale. Prerequisites: MK301 with minimum grade of C. (3)
MK586. Customer Metrics and Data-Driven Marketing. A managerial approach to marketing that focuses on identifying, measuring, and applying customer-based metrics to formulate marketing strategy, ensuring a data-driven marketing approach. Prerequisites: completion of 45 hours, MK301, QM257, or BA601; or chair or program director approval. (3)

MATHEMATICS (MA)
MA510. Mathematical Foundations. Review of propositional logic, proof techniques, number theory and discrete probability in preparation for further graduate studies. Cannot be used for credit on any mathematics major or minor. Prerequisite: Admission to MS Cybersecurity or permission of instructor. (3)
MA511. Advanced Mathematics for Data Science. Introduction to calculus and linear algebra pertinent to data science. Emphasis will be on partial derivatives, eigen values and eigen vectors, and singular value decomposition. Prerequisite: consent of the department chairperson. (3)

MA512. Probability and Statistics for Data Science. Introduction to probability and statistics pertinent to data science. Emphasis will be on random variables, expectations, distributions, and statistical inferences. Prerequisites: consent of the department chairperson. (3)
MA523. Probability and Statistics I. Introduction to probability and statistics using the tools of calculus. Algebra of probability, random variables, discrete and continuous distributions. Prerequisite or Co-requisite: MA 145 with minimum grade of C. (3)
MA524. Probability and Statistics II. Continuation of MA523 with emphasis on bivariate distributions and statistical inferences, statistical sampling, estimation, testing hypotheses, parametric procedures for one-sample and two-sample problems. Prerequisite: MA244; MA523; with minimum grades of C. (3)
MA526. Actuarial Seminar. Solving probability problems that are unique to actuarial science. Pre- or corequisite: MA524 with a minimum grade of C. (3)
MA530. Statistical Learning. Introduction to supervised and unsupervised learning with hands-on capability of building predictive models using statistical software. Prerequisite: MA323 with a minimum grade of C. (3)
MA532. Foundations of Geometry. Historical development of the axiomatic approach to Euclidean geometry and non-Euclidean geometries, coordinate systems for affine and projective planes, and metric postulates for Euclidean, hyperbolic, and elliptic planes. Prerequisite: MA250 with a minimum grade of C. (3)
MA538. History of Mathematics. A historical account of mathematics from the time of Newton and Leibniz to its twentieth century developments. Prerequisite: MA139 or MA140 with a minimum grade of C. (3)
MA540. Projective Geometry. Non-Euclidean geometry, study of projective geometry and its relation to other geometries. Prerequisite: MA250 with a minimum grade of C. (3)
MA544. Numerical Methods. Approximation procedures, numerical differentiation and integration, numerical solution of equations, systems of equations, and differential equations, with reference to computers. Prerequisites: MA244 with minimum grade of C; MA334 or CS155 or CS177 with minimum grade of C. (3)
MA545. Linear Algebra and Matrices. Introduction to vector spaces, linear transformations, matrices, eigenvalues, eigenvectors, matrix decompositions, and numerical methods in linear algebra. Prerequisites: MA250 with minimum grade of C; MA345 with minimum grade of C. (3)
MA546. Advanced Calculus I. Sets, relations and functions, sequences of real numbers and sequences in R, continuous and differentiable function on R. Prerequisites: MA244 with minimum grade of C; MA250 with minimum grade of C. (3)
MA547. Advanced Calculus II. Riemann-Stieltjes integral, measure and Lebesgue integral, convergence of infinite series of functions, Fourier series, some Hilbert space theory. Prerequisite: MA546 with minimum grade of C. (3)
MA548. Enumerative Combinatorics. A study of basic enumeration techniques, recurrence relations, generating functions, the inclusion-exclusion principle, Ramsey theory, partially-ordered sets, and combinatorial designs. Prerequisite: MA145 with a minimum grade of C; MA250 with a minimum grade of C. (3)
MA549. Graph Theory. Basic parameters and properties of graphs, representations, trees, connectedness, Eulerian and Hamiltonian cycles and paths, matchings, edge and vertex colorings, independent sets and cliques, planar graphs, directed graphs, multigraphs. Prerequisites: MA145 with minimum grade of C; MA 250 with minimum grade of C. (3)
MA550. Differential Equations II. Theory and techniques of solving ordinary differential equations, partial differential equations, boundary value problems, applications, numerical methods, and stability. Prerequisite: MA350 with minimum grade of C. (3)

MA560. Research Methods in Mathematics. An overview of research methods. Practice in the methods for the formulation and solution of problems. Prerequisites: MA244 with minimum grade of C; MA250 with minimum grade of C. (3)
MA575. Time Series and Forecasting. Introduction to financial time series analysis with hands-on estimation of mean and conditional heteroscedastic processes using statistical software. Prerequisites: MA145; MA425. (3)
MA580. Experimental Design and Analysis of Variance. Completely randomized design and analysis, randomized block design and analysis, factorial experiments, split-plot design and analysis, repeated measurement experiments and analysis, analysis of covariance. Prerequisite: MA223 with a minimum grade of C; or consent of instructor. (3)
MA585. Fundamentals of Actuarial Mathematics I. Introduction to survival models, life tables, life insurance, life annuities, premiums, and policy values using tools of mathematical statistics. Pre- or corequisite: MA524. (3)
MA610 Introduction to Data Science. Introduction to using statistical software to visualize and wrangle data and to use code repositories. Prerequisite: Consent of instructor. (3)
MA625. Applied Regression Analysis. Learn how to use regression to represent a relationship between explanatory variables and their associated response. Emphasis will be on analyzing actual datasets. The following topics will be covered: simple linear regression, multiple regression, prediction, variable selection, residual diagnostics, auto-regression, and logistic regression. Prerequisite: MA223 Elementary Probability & Statistics (3)
MA633. Differential Geometry. Basic properties of curves and surfaces in three-dimensional space, arc length, curvature, torsion, Frenet-Serret formulas, surface normal, tangent plane, fundamental forms of surface theory. Prerequisite: MA240. (3)
MA635. Topology. Study of sets, relations, functions, products, cardinality, metric spaces, topological spaces, convergence, continuity, separation axioms, connectedness, compactness, homotopy, and fundamental group. (3)
MA640. Seminar in Contemporary School Mathematics. Survey of the major issues and curricular trends in mathematics for secondary schools (7-12). Prerequisite: secondary mathematics teaching experience or consent of instructor. (3)
MA642. Groups and Fields. Introduction to the algebraic theory of groups and fields. Use of a computer algebra system to explore applications to related areas. (3)
MA643. Number Theory. Study of prime numbers, congruences, quadratic residues, and numerical functions. (3)
MA644. Rings and Modules. Rings, Ideals, Quotient Rings, Domains, Polynomial Rings, Modules, Modules over PIDs, Commutative Rings. Prerequisite: MA445 with a minimum grade of C. (3)
MA647. Complex Analysis. Study of complex numbers, analytic functions, integrals, power series, residues and poles, and conformal mapping. Prerequisite: MA240. (3)
MA650. Independent Study in Mathematics. Study of topics in specialized area not covered by regular course offerings. (1-3)
MA663 Special Topics in Mathematics. Study in topics in specialized areas not covered by regular course offerings. (1-3)
MA664. Computational Cryptography. Classical and modern cryptosystems, elliptic curves, hashing, digital signatures, factoring, discrete logarithm problem, pseudo-random numbers, identification and authentication schemes, applications. Prerequisite: MA443 or MA445 or MA464 or MA510 with a minimum grade of C. (3)
MA670. CAS Seminar. Introduction to the use of a computer algebra system (CAS) for exploring advanced mathematics. (1)

MA675. Multivariate Methods. Introduction of statistical methods to analyze multivariate data, with emphasis on implementation using statistical software, and interpretations of these methods. Prerequisite: MA323 with a minimum grade of C. (3)
MA678. Mathematical Modeling. Introduction to mathematical descriptions of physical phenomena, computational methodologies, and empirical interpretations of numerical data. (3)
MA685. Projects and Practice of Data Science. Principles and practice of data science with emphasis on project implementation. Prerequisite: MA530 with a minimum grade of C. (3)
MA697. Thesis. Written report based upon investigation of some subject or the completion of a creative project. See Thesis Plan for additional information. (1-3)

MATHEMATICS EDUCATION (MD)
MD611. Internship in Numbers and Operations. Supervised teaching practicum and online seminars in which candidate acquires experience working with a range of students and adult learners on Number and Operations concepts. Corequisite: MD621. (1)
MD612. Internship in Rational Numbers and Proportional Thinking. Supervised teaching practicum and online seminars in which candidate acquires experience working with a range of students and adult learners on Rational Number and Proportional Thinking concepts. Corequisite: MD622. (1)
MD616. Internship in Geometry and Measurement. Supervised teaching practicum and online seminars in which candidate acquires experience working with a range of students and adult learners on Geometry and Measurement concepts. Corequisite: MD626. (1)
MD617. Internship in Algebraic Reasoning. Supervised teaching practicum and online seminars in which candidate acquires experience working with a range of students and adult learners on Algebraic Reasoning concepts. Corequisite: MD627. (1)
MD621. Numbers and Operations. 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. Corequisite: MD611. (3)
MD622. Rational Numbers and Proportional Thinking. 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. Corequisite: MD612. (3)
MD624. Data and Probability. 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 (3)
MD626. Geometry and Measurement. 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 about and learn these concepts and how they fit into an elementary mathematics curriculum. Corequisite: MD616. (3)
MD627. Algebraic Reasoning. 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. Corequisite: MD617. (3)

NURSING (NS)
NS601. Informatics for Advanced Nursing Roles. Overview of informatics, the transformation of data into information, knowledge, decisions, and actions to improve outcomes. (3)
NS603. Advanced Diagnostics & Reasoning for Primary Care. Preparation for clinical reasoning using theoretical, ethical, economic, and communication principles with emphasis on selecting and ordering

appropriate procedure, performing advanced nursing skills, and interpreting diagnostic results to improve healthcare outcomes. Prerequisites: NS625; NS636. (3)
NS610. Policy, Politics, and Advocacy in Advanced Practice Nursing. Examines health policy development and the advanced nursing role in advocacy and influencing policy in health care delivery. Prerequisites: BSN; instructor consent. (3)
NS614. Evidence-based Practice and Quality Improvement for the Advanced Practice Nurse. Analysis, critique, and application of evidence to translate and integrate scholarship into advanced nursing practice to enhance quality and minimize risk of harm in the healthcare system. (3)
NS625. Advanced Pharmacology. Comprehensive study for the management of drug therapy in diverse populations. Meets requirements for prescription writing by nurse practitioners. (3)
NS627. Advanced Health Assessment Practicum. Practice of advanced health assessment skills in the clinical setting to prepare for provision of primary health care to rural families. Corequisite: NS628 (.5)
NS628. Advanced Health Assessment. Systematic approach to health assessment building upon basic health history and physical assessment skills. Corequisite: NS627. (3.5)
NS636. Advanced Pathophysiology. Explores the physiologic human response to illness. (3)
NS637. Primary Care I Practicum. Preparation for providing primary health throughout the lifespan. Integration of theory and practice is guided by experienced practitioners. Corequisite: NS638. Prerequisite: NS627. (4)
NS638. Primary Care I. Preparation to provide primary care to rural pregnant women/families. Emphasizes need identification to achieve optimal health. Corequisite: NS637. Prerequisites: NS625; NS628; NS636. (3)
NS646. Role of the APRN. Preparation to enter the role of primary care provider to rural clients. Emphasizes identification of needs to achieve optimal health, through demonstration of knowledge of regulatory and licensing bodies, and scope of practice. (3)
NS647. Primary Care II Practicum. Development of FNP as primary care provider in family practice setting. Integration of theory into practice guided by experienced practitioners. Corequisite: NS648. Prerequisite: NS637. (4)
NS648. Primary Care II. Preparation to provide primary care to rural families. Emphasizes need identification to achieve optimal health. Corequisites: NS647; NS654. Prerequisite: NS637. (3)
NS654. Primary Care of the Pediatric Client. Preparation to provide primary health care to rural pediatric clients and their families. Emphasis is on preventive health care that is individualized to the client and their family and supports their definition of optimal health. Prerequisites: NS625; NS628; NS636. (2)
NS656. Women's Health in Primary Care. Preparation to provide primary health care to rural clients of child-bearing age and their families. Emphasis is on preventive health care that is individualized to each client's definition of optimal health. Prerequisites: NS625; NS628; NS636. (2)
NS661. Independent Study. (3)
NS662. Independent Study. (2)
NS663. Independent Study. (1)

PHYSICS (PH)
PH501. Optics. Geometrical and physical optics; Fourier analysis; interference, diffraction, double refraction, gratings and light in matter. Prerequisites: MA244; PH231 or consent of instructor. (3)
PH505. Quantum Mechanics. The fundamental postulates of quantum mechanics and their applications to selected systems. Topics include one-dimensional systems, perturbation theory, three-dimensional systems, angular momenta, one-electron atoms, Hartree-Fock formalism, variational principles and quantum theory of scattering. Prerequisites: PH360 or consent of instructor. (3)

PH570. Mathematical Physics. Selected topics in vector analysis, coordinate transformations, Fourier series, Legendre and Bessel functions, and partial differential equations. Emphasis on practical applications in physics. Prerequisites: MA350; PH231; or consent of instructor. (3)
PH578. Interdisciplinary Research. Original research for students of superior ability in majors other than engineering physics, physics, or physics education. May be repeated once for credit. (1)
PH579. Interdisciplinary Research. Original research for students of superior ability in majors other than engineering physics, physics, or physics education. May be repeated once for credit. (2)
PH614. Biological Imaging. Presents the methods and techniques of cellular imaging in an experiential laboratory setting. Prerequisites: PH341; PH345 or UI330. (3)
PH618. Topics in Physics Education. A review of the basic content of physics coupled with pedagogical models appropriate for teaching in the elementary or secondary classroom. This course is not intended for students with an undergraduate physics major. (3)
PH625. Biological Physics. Presents the fundamentals and applications of biological physics. Prerequisites: BY173; PH231. (3)

POLITICAL SCIENCE (PS)
PS502. Fundamentals of Public Administration. A contemporary view of public and nonprofit agencies from an internal and external perspective. Introduction of graduate students to the concepts and functions of administrative organizations. Prerequisite: Acceptance to MPA or Accelerated MPA program; or consent of instructor. (3)
PS505. Organization Theory and Behavior. This course will introduce students to the major concepts of organization theory and organizational behavior. Topics include organization structure and design, bureaucracy, the systems concept, leadership, culture, job satisfaction, and motivation. Prerequisite: Acceptance to MPA or Accelerated MPA program; or consent of instructor. (3)
PS518. Public Policy Analysis. This course is a systematic introduction to the conduct of policy analysis. It is designed for practitioners and for those seriously interested in how policy analysts do their work. Prerequisite: Acceptance to MPA or Accelerated MPA program; or consent of instructor. (3)
PS545. Research Methods for Public Administrators. This course provides a foundation in the theory and practice of applied research methodology for public administrators, from conceptualization to practical data analysis. Prerequisite: Acceptance to MPA or Accelerated MPA program; or consent of instructor. (3)
PS603. Public Personnel Administration. An analysis of public agency personnel practices, procedures, and issues. Exposes students to the history, concepts, research and operation of government personnel administration. (3)
PS615. Government Budgeting. Procedures and decision-making strategies involved in the preparation, authorization, and expenditure of the federal budget. (3)
PS621. Social Media and Politics. Course explores how politicians utilize social media platforms during political campaigns, and the advantages and drawbacks of such practices. (3)
PS625. Administrative Law and Procedure. An analysis of rules, procedures and decision-making practices of public agencies at the state and federal level. (3)
PS631. Nonprofit Management. Explores the functions of nonprofits in public services delivery and their relationships with the government. (3)
PS632. Marketing for Nonprofit Organizations. Focus on the role of marketing efforts of non-governmental, non-profit organizations. (3)
PS636. Grants and Fundraising. Introduction to the tools and techniques of successful fundraising, fundraising terminology, and resources; intersection of grants with mission and values. (3)
PS655. Federalism. This course covers the theory and practice of federalism and intergovernmental relations. (3)

PS687. Independent Study for Political Science. Directed individual study of special topics of particular interest to the student. (1)
PS688. Independent Study for Political Science. (2)
PS689. Independent Study for Political Science. (3)
PS691-696. Topics in Political Science. Analysis of variable topics in Political Science, such as interest groups, rational choice theory or environmental politics. May be repeated for credit when different topics are offered. (3)
PS697. Internship. Provides graduate students with an alternative academic and practical learning experience with a public agency or nonprofit organization. Introduces the student to first-hand experiences in the operations and management practices of public agencies. For those presently employed in public agencies, internships will be in a different type of employment situation. (3)

PSYCHOLOGY (PY)
PY531. Psychological Testing. Technical and methodological principles of test construction, as well as an overview of psychological tests employed in various applied settings. (3)
PY540. Personnel Psychology. Theory, research, and practice in the understanding of such topics as performance appraisal, personnel selection, criterion development/validation, and others. Prerequisite: Completion of 60 hours or graduate standing. (3)
PY555. Health Psychology. Applications of psychology which contribute to the promotion of health and the prevention of disease through behavior change in health enhancing directions. Topics to be covered include health promotion and wellness, psychosomatic illness, risk factor identification, and disease prevention, and career opportunities in health psychology for administrators, service providers, and consultants. (3)
PY556. Organizational Psychology. Theory, research, and practice in the understanding of such topics as job satisfaction, work motivation/performance, leadership, conflict resolution, and others. Prerequisite: Completion of 60 hours or graduate standing. (3)
PY557. Psychometrics. Consideration of assumptions and techniques in psychometrics, including assessment, reliability and validity, test construction, measurement theory, and scaling. Prerequisite: PY531 or graduate status. (3)
PY561. Advanced Social Psychology. Survey of topics in the study of human social interaction with an emphasis on experimental approaches to studying social behavior. Prerequisite: graduate status. (3)
PY571. Introductory Behavioral Statistics. An introduction to descriptive and inferential statistics used in the reporting of educational and psychological research. Prerequisite: graduate status. (3)
PY575. Theories of Leadership. Discussion-based course examining effective leadership strategies across a wide variety of organizational settings. Prerequisite: 60 hours or graduate standing. (3)
PY591. Motivation and Incentive. Discussion-based course examining effective motivation and incentive strategies across a wide variety of organizational settings. Prerequisite: undergraduate junior standing or graduate status. (3)
PY657. Stereotyping and Prejudice. Seminar focused on social psychological research on stereotyping, prejudice, and discrimination. (3)
PY670. Job Analysis and Compensation. Introduction to different methods of job analysis and evaluation as well as important issues related to employee compensation and benefits. (3)
PY671. Design and Analysis II. Correlation and regression analysis, including bivariate and multiple regression, coding of categorical variables, and testing for mediation and moderation. Prerequisite: PY571. (3)
PY675. Legal and Ethical Considerations in I-O Psychology. Legal and ethical considerations in I-O psychology, including equal employment opportunity, uniform guidelines for selection, and relevant major court decisions. (3)

PY681. Program Design and Evaluation. Systematic examination of the theory and practice of research strategies for planning and evaluating various programs. (3)
PY692. Independent Study in Psychology. May be repeated for up to 9 hours of credit. (3)
PY696. Thesis Research. Conducting research related to the student's thesis. May be repeated for up to 6 hours of credit. Prerequisite: 18 hours of PY courses at the 500 or 600 level. (3)
PY697. Thesis Writing. Writing the thesis document. May be repeated for up to 6 hours of credit. Prerequisite: 18 hours of PY courses at the 500 or 600 level. (3)
PY699. Internship in I/O Psychology. Experience in applying industrial-organizational psychological principle, theory, and research to work in organizational settings such as corporations, government, and nonprofits. May be repeated for up to 12 hours of credit. Prerequisite: 18 hours of PY courses at the 500 or 600 level. (6)

QUANTITATIVE METHODS (QM)
QM558. Principles of Supply Chain Management. Design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally. Prerequisite: QM352 with a minimum grade of C. (3)

RECREATION (RC)
RC630. Program Delivery in Leisure Services. Comprehensive analysis of levels of leisure service delivery including needs assessment, program planning, inclusion and diversity issues, policy implementation, evaluation of program impact. Prerequisite: Graduate standing. (3)
RC680. Recreation in Community Development. An analysis of the role of recreation programming and facilities in the community, with emphasis on the importance of inclusion of leisure services in community development. Prerequisite: Graduate standing. (3)

SCIENCE TEACHING (ST)
ST601. Introduction to Science Education. Overview of current thinking and trends in science education, focusing on issues in science teaching, learning and learners, curriculum, and assessment. Emphasis on application of the ideas to science in the classroom, including practical techniques and multimedia strategies for science teaching and learning. Lightly blended course format. Students must have internet access. Prerequisite: Consent of instructor. (3)
ST603. Research Methods in Science Teaching. An overview of assumptions, limitations, and methods of research in science education with emphasis on classroom situations and application to published research; preparation of a proposal for classroom-based research. (3)
ST610. Integrated Science. An emphasis on the integrated nature of science in the natural environment and the design, development and study of teaching units integrating various topics from the fields of biology, chemistry, geosciences, and physics that are appropriate for science classes in a variety of settings, including the public schools. Prerequisite: Consent of Instructor. (3)
ST650. Leadership in STEM Education. Leadership principles and the roles and responsibilities of STEM Education specialists. Applications of models to examples. Prerequisites: ST603; admission to MNS in STEM Education; or consent of instructor. (3)
ST660. Advanced Topics in Science Education. An in-depth consideration of subject matter that is not a part of the established curriculum. Topics available can be obtained from the department chairperson. Lecture, discussion, and practical application sessions. Prerequisite: ST603 or consent of instructor. (3)
ST667-669. Independent Study in Science Education. Directed individual study in science education. (May be taken for 1, 2, or 3 hours of credit and may be repeated up to a maximum of 6 hours.)

Prerequisite: Admission to the graduate program of the MNS in Science Education. Departmental approval of study plan and compliance with university guidelines for independent studies. (1)

SECONDARY EDUCATION (SE)

SE500. Technology in Instruction. Study of the internet and its uses in education, including the design of educational web pages and planning of internet-based activities for students. In addition, this course will give students a background for the management issues surrounding the development and use of information technology in education. Prerequisite: EM102 or consent of instructor. (3)

SE501. AI in Education: Theory, Practice, and Innovation. This course explores the intersection of Artificial Intelligence (AI) and education, focusing on theoretical foundations, practical applications, and innovative approaches to integrating AI in educational settings. Students will engage in project-based learning to develop a deep understanding of AI technologies and their potential to transform teaching and learning processes. (3)

SE502. Content Literacy Methods for Middle and High School. Introduction to content literacy methods and materials for middle and high school. Corequisites: SE551; SE552 or SE553. Prerequisites: Admission to Teacher Education Program; EX390; SE550. (3)

SE550. Pedagogy I: Principles of Effective Teaching in Middle and Secondary School. Exploration of evidence-based practices related to effective teaching in middle and secondary schools and the social, legal, and historical contexts in which those practices occur. Prerequisite: Admission to the Teacher Education Program. Corequisite: EX390. (3)

SE551. Field Experience II. Field experience for implementing competencies: differentiation, using assessment data, addressing diversity, developing collaborations, managing classrooms and professional development. Corequisites: SE502; SE552 or SE553. Prerequisites: EX390; SE550. (3)

SE552. Pedagogy II: Middle School – Interdisciplinary Methods and Technology. Interdisciplinary methods and teaching strategies integrating effective methods for implementing educational technology into instruction at the middle school level. Corequisite: SE551. Prerequisites: Admission to the Teacher Education Program; EX390; SE550. (3)

SE553. Pedagogy II: Secondary School – Interdisciplinary Methods and Technology. Interdisciplinary methods and teaching strategies integrating effective methods for implementing educational technology into instruction at the secondary school level. Corequisite: SE551. Prerequisites: EX390; SE550. (4)

SE600. Multimedia in Education. This is a product-oriented course that examines the role of a variety of media sources in the classroom. Working with wound, photos, and video to design multimedia presentations will be a focal point of the course, and the integration of multimedia productions to in the content curriculum will be addressed. (3)

SE602. Effective Literacy Instruction at the Middle and Secondary Levels. Implementation of effective literacy programs that support content area learning and literacy through use of materials and methods that meet the needs of diverse learners. Prerequisite: Graduate Status. (3)

SE612. Responsive Literacy Interventions for Middle and High School Students with Academic Challenges. Literacy assessment techniques and interventions for middle and high school students with academic challenges. Prerequisites: Graduate Status; SE602. (3)

SE617. Foundations of Educational Technology. An introduction to educational technology and integration into educational programs through examination if history, philosophy, theory, planning, funding, and current issues and trends in technology. (3)

SE618. Assessment Using Technology. Principles of developing and using formal and informal assessments that integrate technology for making instructional and curricular decisions. (3)

SE638. Improvement of Instruction and Assessment. The class is designed for those teachers who are interested in increasing their knowledge and understanding of the teaching process and effective

procedures for the improvement of instruction, classroom management, and assessment in the learning environment. Prerequisite: Graduate Status. (3)
SE641. Teaching in Multicultural Society. The foundations of multicultural education are considered along with approaches to multicultural education and teaching strategies applicable to all ages/grades/subjects. Prerequisite: Graduate Status. (3)
SE642. Secondary Curriculum Development. Designed to provide individuals with understanding of the theory and practice of developing curriculum and training materials in an educational setting. May be repeated for credit. Prerequisite: Graduate Status. (3)
SE650. Introduction to Teaching Methods in Middle and Secondary Schools. Exploration of evidence-based practices related to effective teaching in middle and secondary schools and the social, legal and historical context in which those practices occur. Prerequisite: Full or probationary acceptance into the Master of Arts in Teaching. Pre- or Corequisites: EX390 or ES635; SE602. (3)
SE651. Introductory Practicum I in Middle and Secondary Schools. Field experience for implementing competencies: differentiation, using assessment data, addressing diversity, developing collaborations, managing classrooms and professional development. Prerequisites: Admission to the MAT program; EX390 or EX635; SE602; SE650. Corequisites: SE652 or SE653. (3)
SE652. Intermediate Methods of Teaching in Middle Schools. Interdisciplinary methods and teaching strategies integrating effective methods for implementing educational technology into instruction at the middle school level. Prerequisites: EX390 or EX635; SE602; SE650. Corequisites: SE651. (4)
SE653. Intermediate Methods of Teaching in Secondary Schools. Interdisciplinary methods and teaching strategies integrating effective methods for implementing educational technology in to instruction at the middle and secondary school levels. Prerequisites: EX390 or EX635; SE602; SE650. Corequisite: SE651. (4)
SE654. Advanced Methods of Teaching in Middle and Secondary Schools. Advanced application of evidence-based practices organization, curriculum, assessment and management of the secondary classroom. Prerequisites: SE602; SE650; SE652; SE653. Corequisites: SE655; SE660. (3)
SE655. Techniques of Teaching STEM Content. Research based methods for engaging students in content, development of a unit with aligned standards, lessons and assessments. Prerequisites: Admission to the MAT program; SE650; SE651; SE652 or SE653. Corequisites: SE654; SE660. (3)
SE660. Intermediate Practicum II in Middle and Secondary Schools. Field experience for implementing advanced competencies: differentiation, using assessment data, addressing diversity, developing collaborations, managing classrooms and professional development. Prerequisites: Full or probationary admission to the MAT program; EX390 or EX635; SE602; SE650; SE651; SE652 or SE653. Corequisites: SE654; SE655. (3)
SE656. Techniques of Teaching Middle or Secondary Content. Students will design authentic, content specific, technology rich, data-driven instruction, and assessment for diverse learners in middle or secondary schools. The student will demonstrate competency in planning, implementing, and assessing instruction. Prerequisites: Admission to Master of Arts in Teaching Education Program; SE650. Corequisites: SE 652; or SE 651 and SE 653; or SE612 and SE660. (3)
SE670. Culminating Internship in Middle and Secondary Schools. Culminating practicum requiring a demonstration of content knowledge, differentiated instruction, curriculum implementation, critical thinking, classroom management, communication, assessments, professionalism, and collaboration. Prerequisite: Completion of all courses required for the MAT program. (8)
SE680. Topics in Middle and Secondary Education. Directed study of contemporary issues in middle level and secondary education. (1-3)
SE683. Instructional Design and Technology. Design and development of instruction for classrooms incorporating computers and multimedia tools to enhance learning through instructional materials and web pages. (3)

SE685. Planning for Technology in the School District or Organization. An examination of technology in school districts combined with an exploration of issues and trends from current literature and planning for future technology needs. (3)
SE698. Independent Study in Secondary Education. Independent work in a specialized area not covered by regular course offerings. Prerequisite: Consent of instructor. (1-3)

SPORT MANAGEMENT (SM)
SM512. Contemporary Issues in Sport. Exploring major social, economic, and ethical issues in contemporary mega, professional and college sports. (3)
SM540. Legal Aspects of Sport and Physical Activity. This course is designed to introduce the student to the various legal principles applicable to the sport industry. Prerequisite: Senior or graduate standing or consent of instructor. (3)
SM551. International Sport Management. Understanding the magnitude of the global expansion of sport. Prerequisite: SM360 or permission of instructor. (3)
SM570. Management and Leadership in Sport Organizations. This course will provide students with the opportunity to understand and apply contemporary management concepts to the operations of sport organizations. (3)
SM610. Principles and Practices of Sport Management. Sport management principles and practices for international, collegiate and professional sport. Prerequisite: Graduate standing. (3)
SM612. Topics, Issues and Trends in Sport. Directed study of special topics, issues and trends in sport through seminar. Prerequisite: Six hours of graduate credit in Athletic Administration or consent of instructor. (3)
SM655. Design and Operations of Sport Related Facilities. Prepares the prospective and practicing athletic administrator in the design and operations of sport related facilities. (3)

TESOL (TL)
TL525. English as a Second/Foreign Language: Learning and Teaching. Basic theories of second language acquisition and their implications for second language teaching, including work with ESOL students and development of personal theories of second language learning and teaching. (3)
TL530. Practicum in TESOL. Provides students with practical classroom experience in teaching ESOL. Students who pursue DESE ELL certification acquire experiences in planning for and working with ELLs in both elementary and secondary settings. (3)
TL585. Methods and Techniques for Teaching ESOL. Introduces students to research supported principles and methods for teaching ESO/EFL. Emphasis on curriculum development, problem-solving, adopting/adapting appropriate teaching methods and materials to teach language skills. (3)
TL610. Developing Intercultural Awareness and Competence. The course focuses on diverse worldviews, ethnic heritages and historical contributions of people from different regions of the world. The course provides an opportunity to develop appropriate teaching strategies and materials to use in an intercultural/international classroom setting. (3)
TL620. Approaches to Teaching Grammar. Structural, transformational, and traditional approaches to the teaching of grammar. The class will be concerned with the ways in which they differ, and the underlying theories (philosophies) that gave rise to each approach. (3)
TL625. Materials Development and Assessment Tools for ESOL. Advanced course in the analysis and preparation of materials for teaching ESOL and the basics of test development in ESOL. (3)
TL648. Foundations in Linguistics. A foundation course which uses Chomsky's generative paradigm to provide students with the skills needed to conduct basic linguistic analysis. Primary focus will be linguistic analysis, particularly in sociolinguistics, semantics, phonetics, phonology, morphology, syntax,

and language acquisition. This course is offered as a multimedia online course. Computer literacy and e-mail access required. (3)
TL650. Strategies and Techniques for Teaching Academic Language Skills to ELLs. Introduces current approaches and effective practices in teaching academic language skills to English language learners with an emphasis on research-supported instructional strategies and techniques to teach oral language, vocabulary, content-based reading and writing and strategy-based instruction. (3)
TL652. Computer-Assisted-Language Learning. Introduces the most up-to-date methods for integrating current computer technology into a classroom with non-native English learners. Emphasis on students' development of a technology-integrated curriculum plan for the classroom. (3)

TELECOMMUNICATIONS & COMPUTER NETWORKING (TN)
TN562. Networking I. Comprehensive overview of networking; from fundamentals to advanced applications and services. The course emphasizes concepts and skills required to design networks, while providing opportunities for practical application and hands-on experience. Topics include data networks and the Internet, layered communications, networking models, networking services and protocols. (3)
TN563. Local Area Network Switching. Switching and operation of networking technologies and protocols. Topics include operation and security configurations of VLAN, trunking, VTP (VLAP Trunking Protocol), inter-VLAN routing and layer two networks. Prerequisite: TN475. (3)
TN564. Telecommunications and Networking II. Advanced networking course focusing on the purpose, nature, and operations of routers and routing protocols. The course emphasizes IOS installations, configurations and maintenance of routers. Details of routing protocols including both distance vector and link state algorithms. Configuration and troubleshooting of routing protocols in routed networks. Prerequisite: TN562. (3)
TN565. Network Management. Design, performance analysis, monitoring, optimization, and troubleshooting of modern data communication networks. Topics include managing TCP/IP networks using SNMP, protocol analysis, remote management, and performance improvement. (3)
TN566. IP Telephony. Theories of Voice over IP (VoIP) and data networking. Topics include TCP/IP network, voice packetizing and compression, VoIP protocols and architecture, Quality of Service (QoS) and security of IP telephony systems. (3)
TN625. Wireless Communications and Mobile Data Networks. Topics in analog cellular phone systems (AMPS); digital cellular standards. GSM, IS-95; short message service (SMS); 2.5 G data services; cellular standards (CDMA 2000 and WCDMA/UMTS); Wireless LANs (IEEE 802.11); Bluetooth; Mobile IP; ad hoc and sensor networks. Prerequisite: TN562. (3)
TN635. Network Security. Topics in security services, threats, and vulnerabilities for networked environments. Principles of cryptography, security protocol design and analysis, node and service authentication, address spoofing, hijacking, SYN floods, sniffing, viruses, intrusion detection, firewalls, and ethical and legal issues. Prerequisite: TN564. (3)