EdHD 5007. Technology for Teaching and Learning. (1.5 cr; A-F only. Prereq–MEd/int licensure or CLA music ed or preteaching or #) Diverse educational technology in K-12 classrooms. Effective use of technology. Computer technology used to stimulate personal productivity/communication and to enhance teaching/learning processes.

EdHD 5009. Human Relations: Applied Skills for School and Society. (1 cr; A-F only. Prereq–MEd/int lic or CLA music ed or preteaching or #) Issues of prejudice/discrimination in terms of history, power, social perception. Knowledge/skills acquisition in cooperative learning, multicultural education, group dynamics, social influence, leadership, judgment/decision making, prejudice reduction, conflict resolution, teaching in diverse educational settings.

Educational Policy and Administration (EdPA)

College of Education and Human Development

EdPA 5001. Formal Organizations in Education. (3 cr) Classical/contemporary theories of organizations. Applications to education and related fields.

EdPA 5021. Historical Foundations of Modern Education. (3 cr. §Eds 3021, Hum 3021, Hum 4021) Analysis and interpretation of important elements in modern education derived from pre-classical sources: Greeks, Romans, Middle Ages, Renaissance, Reformation, Enlightenment, and Industrial Revolution.

EdPA 5023. History of Western Educational Thought. (3 cr. §Eds 3023, Hum 3023, Hum 4923) Great educational classics of Western civilization: Plato, Aristotle, Quintilian, Montaigne, Milton, Locke, Rousseau, and others.


EdPA 5028. Education Imagery in Europe and America. (3 cr) Images and ideas of education expressed in the visual arts of Western civilization (antiquity to 20th century) in relation to concurrent educational thought and practice; symbolism, myth, propaganda, didacticism, genre, caricature.

EdPA 5032. Comparative Philosophies of Education. (3 cr) Exploration of the principal philosophies in educational thought today, e.g., realism, idealism, pragmatism, and postmodernism. Practice in philosophical critique.

EdPA 5036. Ethics, Morality, and Values in Education. (3 cr) Application to key issues of professional practice. Moral education, virtues, principles.

EdPA 5041. Sociology of Education. (3 cr §Soci 4545) Structures and processes within educational institutions; linkages between educational organizations and their social contexts, particularly related to educational change.

EdPA 5044. Introduction to the Economics of Education. (3 cr) Costs and economic benefit of education, with a focus on K-12; educational markets, prices, and production relationships; investment and cost-benefit analysis.


EdPA 5056. Case Studies for Policy Research. (3 cr; A-F only) Qualitative case study research methods and their applications to educational policy and practice. Emphasis on designing studies that employ open-ended interviewing as primary data collection technique.

EdPA 5061. Ethnographic Research Methods. (2 cr) Practice in aspects of field methodology below the level of full field study; detailed reading; analysis of studies in anthropology and education for methodological content.

EdPA 5064. Divergent Perspectives in Educational Policy and Practice. (3 cr) Examines fundamental and current issues in the field of education. Participants learn how to approach an issue from multiple perspectives, develop skills to identify and analyze its component parts, and examine personal belief systems to place a given issue within a personal context.

EdPA 5070. Special Topics: School Leadership. (1.5-5 cr [max 15 cr]. Prereq–BA or BS or other baccalaureate degree) Skills/knowledge necessary to respond to multiple challenges of reduced budgets, increased accountability requirements, and growing concerns about impact of technology investments in education.

EdPA 5080. Special Topics: Educational Policy and Administration. (1-3 cr [max 24 cr]) Topical issues in educational policy/administration.

EdPA 5087. Seminar: Educational Policy and Administration. (1-3 cr [max 24 cr]) Shared responsibility of students/instructor in presentation of topics.

EdPA 5095. Problems: Educational Policy and Administration. (1-3 cr [max 24 cr]) Course or independent study on specific topic within department program emphasis.

EdPA 5096. Internship: Educational Policy and Administration. (1-9 cr [max 24 cr]) Internship in elementary, secondary, general, or postsecondary administration, or other approved field related setting.

EdPA 5101. International Education and Development. (3 cr) Introduction to comparative and international development education, contemporary theories regarding the role of education in the economic, political, and sociocultural development of nations; examination of central topics and critical issues in the field.

EdPA 5102. Knowledge Forms and Applications: International Development Education Contexts. (3 cr) Analyzes the interrelationships of “knowledge capital” (nietic symbolic resources) and culture through intrinsic, cross-, and multicultural perspectives. Distinguishes knowledge from information and data, focusing on national and international developments occurring along basic and applied knowledge paths.

EdPA 5103. Comparative Education. (3 cr) Examination of systems and philosophies of education globally with emphasis upon African, Asian, European, and North American nations. Foundations of comparative study with selected case studies.

EdPA 5104. Strategies for International Development of Education (3 cr; A-F only. Prereq–Grad student) Strategies for improving quality/efficiency of schooling in developing countries. Introduction to current research on what policy/programmatic interventions have proven successful in increasing access, raising quality, and improving efficiency of education in developing countries.

EdPA 5121. Educational Reform in International Context. (3 cr) Critical policy analysis of educational innovation and reform in selected countries. Use theoretical perspectives and a variety of policy analysis approaches to examine actual educational reforms and their implementation.

EdPA 5124. Critical Issues in International Education and Educational Exchange. (3 cr) Analysis of comprehensive policy-oriented frameworks for international education; practices of U.S. and other universities; conceptual development of international education and its practical application to programs, to employment choices, and to pedagogy.

EdPA 5128. Anthropology of Learning. (3 cr §Anth 5128) Cross-cultural perspectives in examining educational patterns; the implicit and explicit cultural assumptions underlying them. Methods and approaches to cross-cultural studies in education.

EdPA 5132. Intercultural Education and Training: Theory and Application. (3 cr) Examination of intercultural education; formal and nonformal education programs intended to teach about cultural diversity, promote intercultural communication and interaction skills, and teach students from diverser background more effectively.

EdPA 5301. Contexts of Learning: Historical, Contemporary, and Projected. (3 cr; A-F only) Contextual understanding of education as a social institution. Education is studied as one institution among the several that constitute its dynamic context.


EdPA 5303. Managing the Learning Organization. (3 cr; A-F only) Examines schools, colleges, and other human service organizations centered on learning. Focuses on perspectives and skills needed to manage organizations effectively.

EdPA 5304. Educational Leadership for Equity, Opportunity, and Outcome. (3 cr) Implications of multiple contexts in which leadership occurs. Role of followers. Complexities of collaborative structures and of shared governance.

EdPA 5305. Leadership and Vision in School Technology. (1 cr. §Pre-req–[Mac or PC] with 256 MB RAM, Windows NT 2000 or XP or Mac OS 9 or 10, Pentium [2 or faster], internet connection, [Netscape or Internet Explorer], virus protection software, School Technology Leadership) or #) How to create a shared vision for comprehensive integration of technology into school environments. Ways to foster environment/culture conducive to realizing that vision.

EdPA 5306. Staff Technology Development and Support. (1 cr. §OC 5346. Prereq–[Mac or PC] with 256 MB RAM, Windows NT 2000 or XP or Mac OS 9 or 10, Pentium [2 or faster], internet connection, [Netscape or Internet Explorer], virus protection software, School Technology Leadership) or #) How to lead an organization in designing, implementing, evaluating, improving, and sharing approaches to staff development. Technology-related development. Facilitating staff development through use of technology.
Courses

EdPA 5307. School Management and Technology. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Various individual and organizational issues impacting school technology. Focuses on hardware, software, and database technologies designed to facilitate management/operations of school organization.

EdPA 5308. Emerging Issues and School Technology. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Needs of schools/administrators to remain on forefront of information technologies. Focuses on anticipated technological trends/decades ahead.

EdPA 5309. Electronic Communication Tools and Environments for Schools. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Various electronic communication channels, information environments to facilitate educational organizations’ operations/communication. Focuses on networked environments, integration with handheld computers, and outreach to internal/external stakeholders.

EdPA 5310. Data-Driven Decision-Making I. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Data-driven decision-making needs of schools/administrators. Focuses on data collection/analysis needs of educational organizations and on use of appropriate software/databases to collect, manage, analyze, and report school information.

EdPA 5311. Data-Driven Decision-Making II. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Continuation of 5310. Data-driven decision-making needs of schools/administrators. Hands-on training in students’ own organizations in using technology to analyze data to make educational decisions.

EdPA 5312. School Technology Policy Issues. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Various state/national policy issues related to educational technology. Focuses on “divide into” in schools/communities, federal educational technology policy initiatives, and state/federal educational technology legislation.

EdPA 5313. Legal and Ethical Issues in School Technology. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Social, legal, and ethical issues related to school technology. How to model responsible decision-making related to those issues.

EdPA 5314. School Technology Safety and Security. (1 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentium [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #


EdPA 5315. School Technology Leadership Multimedia Project. (3 cr. Prereq–[Mac or PC] with 256 MB RAM, [Windows NT 2000 or XP or Mac OS 9 or 10], Pentum [2 or faster], internet connection, [Netcapse or Internet Explorer], virus protection software, School Technology Leadership) or #

Students work with school technology leadership topic of choice, deliver a multimedia presentation of project results. Regular consultation with faculty, peer mentors, and outside mentors.

EdPA 5321. The Principalship. (3 cr)

Role of the principal: qualifications, duties, and problems.

EdPA 5322. School Superintendency. (3 cr)

Role/responsibility of superintendent in school district. Emphasizes real life experiences, leadership potential as CEO. Purposes, power, politics, practices of position. Interplay of internal school forces, external community forces analyzed in multiple contexts. Manifestations of leadership in public, high-profile appointment.

EdPA 5323. Women in Leadership. (3 cr. Prereq–technology access)

Women in leadership, in context of larger systems and their own lives. Supporting equity/equality across areas of difference.

EdPA 5324. Financial Management for Elementary-Secondary Education. (3 cr)

Provides an overview of state-local school finance systems, budgeting, governmental fund accounting, and interpretation of financial information. For graduate students pursuing licensure as elementary-secondary principals and superintendents.

EdPA 5325. Analytical Tools for Educational Leadership. (1 cr. Prereq–#)

Technological/analytical tools associated with data-driven decision-making processes in K-12 school environments.

EdPA 5326. Data Analysis for Educational Leadership. (2 cr. Prereq–[5325 or equiv.])

Advanced technological/analytical tools associated with data-driven decision-making processes in K-12 school environments.

EdPA 5328. Introduction to Educational Planning. (3 cr)

Principles, tools, comparative practices, and emerging issues in K-12 and higher education settings; decision making models; strategic and project planning; barriers to effectiveness; and change management processes.

EdPA 5332. Leadership Development Seminar. (3 cr)

Assessment and development of skills required of the educator in planning, decision making, and human relations. Introduction to contemporary issues in educational administration.

EdPA 5336. Laboratory in Decision Making. (3 cr)

Contributions of recent research and theory to effective administration. Analysis of administrative behavior in realistic settings; relations of administration to human behavior.

EdPA 5341. The American Middle School. (3 cr)

Focus on the uniqueness of the early adolescent and appropriate learning situations. For educators working in middle-level schools.

EdPA 5344. Administration of Human Resources in Education. (2 cr. Prereq–Designed for students working on license for dir of community educ or superintendent or K-12 principal or dir of special educ)

Effective personnel practices. Skills required for effective administration/leadership. Emphasizes human resources administration, including employee recruitment, selection, orientation/support, supervision, and performance appraisal of school district personnel.

EdPA 5352. Projective Leadership for Strategic Learning Communities. (3 cr)

Explores many trends and changes facing society, culture, and education from a strategic learning community perspective; helps students “futurize the present.”

EdPA 5356. Disability Policy and Services. (3 cr)

Policy, research, and current practices related to education, health, and social services that support children, youth, and adults with special needs, and that support their families. Federal, state, and local perspectives.

EdPA 5361. Project in Teacher Leadership. (3 cr [max 6 cr]; S-N only) SCI 5178. Prereq–MED student in Teacher Leadership Program

Create, implement, evaluate, and present a leadership project designed to enhance positive change in educational environments. Review of related literature, proposal development, project development, implementation and evaluation, critical reflection, sharing learning outcomes.

EdPA 5364. Context and Practice of Educational Leadership. (3 cr; A-F only)

Current research/practice on educational leadership. Focuses on creating school cultures conducive to continuous improvement/change. Strategies for personal/organizational leadership in PK-12 settings.

EdPA 5368. Special Services Policy and Administration. (3 cr)

Legislative, procedural, executive, and judicial actions that affect services, families, and children with special needs at all levels of government: federal, state, and local. For administrators, supervisors, and other professionals responsible for managing general, special, and alternative education programs.

EdPA 5372. Youth in Modern Society. (3 cr)

Theories of human development; conflicting expectations facing children and youth in the U.S. and South Africa; interplay of internal and external forces, political, social, and economic roles.
EdPA 5384. Collaboration in Heterogeneous Classrooms and Settings. (3 cr) Prereq–Education program. Program overview, lesson planning, cooperation, and social support.

EdPA 5385. Licensure Seminar. (1 cr [max 4 cr]; S-N only) Preparation for licensure program. Program overview, preassessment, reflective practice, APA writing, exit panel review, administrative employment interview.

EdPA 5386. Portfolio Seminar. (1 cr [max 4 cr]; S-N only) Development of electronic administrative licensure portfolio as part of process to earn endorsement for license as a school superintendent, K-12 principal, director of special education, or director of community education.

EdPA 5387. Administration of Teaching and Learning. (1 cr) Administration of teaching/learning as a system in an inclusive school system. Multiple experts present components of system. Focuses on questions an administrator must address when functioning as leader of learning.


EdPA 5389. Administration of Community and Alternative Educational Programs. (3 cr) Competencies of leadership, community relations, community assessment, program development, program evaluation. Philosophy/administration of community/alternative education programs.

EdPA 5391. Special Education Law. (1 cr. Prereq–Designed for students working on licensure in PK-12 administration) Competencies of leadership, policy, and political influence. Legal/regulatory applications focusing on special education law.

EdPA 5396. Field Experience in PK-12 Educational Administration. (3 cr [max 6 cr]; S-N only. Prereq–4) Field experience or internship arranged for students seeking licensure as PK-12 principal/superintendent. Content/credit depend on licensure requirements specified in individual field experience agreement.

EdPA 5501. Principles and Methods of Evaluation. (3 cr) §EPsy 5324) Introduction to program evaluation. Planning an evaluation study, collecting and analyzing information, reporting results, evaluation strategies, overview of the field of program evaluation.


EdPA 5701. U.S. Higher Education. (3 cr) Prereq–5501 or equivalent (3 cr. Prereq–Master’s student, 3 cr. Prereq–Master’s student) U.S. higher/secondary education in historical/contemporary perspective. Emphasizes structure, history, and purposes of system as a whole.


EdPA 5721. Racial and Ethnic Diversity in Higher Education. (2-3 cr [max 3 cr]) Review of research. Theoretical frameworks, methodological perspectives, and research strategies used to study students, staff, and faculty; historical perspectives.

EdPA 5724. Leadership and Administration of Student Affairs. (2-3 cr. Prereq–Bachelor’s degree) Scope; administration, coordination, and evaluation of programs in college and university student affairs.


EdPA 5728. Two-Year Postsecondary Institutions. (2-3 cr [max 3 cr]) Present status, development, functions, organization, curriculum, and trends in postsecondary, but nonbaccalaureate, institutions.

EdPA 5732. The Law and Postsecondary Institutions. (3 cr) Analysis of court opinions and federal regulations affecting postsecondary educational institutions.

EdPA 5734. Institutional Research in Postsecondary Education. (2-3 cr [max 3 cr]; A-F only. Prereq–[5701, EPsy 5231 or EPsy 5261), grad student] or #) Scope, role, administration, research strategies, and evaluation of institutional research in postsecondary institutions. Overview of research methodologies, disciplinary foundations of institutional research. Use of institutional, state, and national databases in addressing full range of institutional missions/functions.

EdPA 5786. Plan B Research Design. (3 cr [max 6 cr]; A-F only. Prereq–Grad student) Foundation to design Plan B research project relevant to student’s professional interests. Literature review strategies to establish conceptual framework for project. Relates research question to design alternatives and to associated qualitative/quantitative analysis techniques. Issues such as human subjects and APA guidelines for preparing research papers.

EdPA 8002. Critical Issues in Contemporary Education. (3 cr. Prereq–Ed or PhD student) Meanings of difference from sociological, psychological, historical and philosophical perspectives as related to current and emerging critical issues in education. Participants help design, facilitate, and present the course.

EdPA 8011. Doctoral Research Seminar I. (1 cr; S-N only. Prereq–EdPhD doctoral student) Introduction for individual program development, prototype, preliminary analysis, and dissertation prospectus. Modes of inquiry used in current research in education, databases relating to education, recent writings on literature synthesis, key contributions to education literature.

EdPA 8012. Doctoral Research Seminar II. (1 cr; S-N only. Prereq–EdPhD doctoral student) Introduction to quantitative/qualitative research approaches/methods. Nature of research, role of researcher, philosophical perspectives on research, ethical issues in conducting research.

EdPA 8013. Doctoral Research Seminar III. (1 cr; S-N only. Prereq–EdPhD doctoral student) Introduction to most important qualitative/quantitative approaches employed in educational policy research.


EdPA 8015. Research Design and Educational Policy. (3 cr. Prereq–8011, EdPhD PhD student) Logic of design research, from research questions and audience considerations to selection of a suitable design for collecting/analyzing qualitative, quantitative, and mixed-method data.

EdPA 8020. Leadership: From Theory to Reflective Practice. (3 cr. Prereq–5501 or equiv, doctoral student) or #) Leadership theory. Emphasizes seminal scholars’ work from related social science disciplines. Implications of theory for practice of leadership. Knowledge, behaviors, values, and skills needed in educational and other public settings.

EdPA 8087. Seminar: Educational Policy and Administration. (1-3 cr [max 24 cr]) Seminar on issues of educational policy and administration.

EdPA 8095. Problems: Educational Policy and Administration. (1-3 cr [max 24 cr]) Independent study on issues of educational policy/administration. Arranged with instructor.

EdPA 8096. Internship: Educational Policy and Administration. (1-9 cr [max 24 cr]) Internship on issues of educational policy/administration. Arranged with instructor.


EdPA 8121. Doctoral Seminar: Comparative and International Development Education. (1-6 cr [max 6 cr]; S-N only. Prereq–EdPA PhD candidate) Focuses on needs of students while writing the dissertation; general guidance in how to construct the thesis.

EdPA 8124. Classic Readings in Anthropology and Education. (3 cr; A-F only) Major contributions to theory or working paradigms.


EdPA 8303. Modeling the Learning Organization. (3 cr [max 4 cr]) Computer software, perspectives on learning organization used to study global education, human service organizations.

EdPA 8304. Leadership and Ethics. (3 cr) Review of major leadership theories, their application to problems of practice in educational organizations. Studies of leadership behavior illustrate major emerging issues in educational management.

EdPA 8321. Data Analysis for Educational Management. (3 cr) Managers of educational organizations are faced with problems that require analysis of a wide range of information. Outlines a frame for data analysis and introduces a set of computer-based tools suited to the practice of educational administration.

EdPA 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

EdPA 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

EdPA 8502. Program Evaluation Theory and Models: Qualitative and Quantitative Alternatives. (3 cr [max 5501 or EPsy 5421)] Concepts, approaches, models, and theoretical frameworks for program evaluation that have developed since the 1990s.


For definitions of course numbers, abbreviations, and symbols, see page 167.
Courses

EdPA 8596. Evaluation Internship. (1-9 cr [max 24 cr]. §EPsy 8296. Prereq–[5501 or EpSy 5240].) Hands-on experience in conducting a program evaluation in a real-world setting under supervision of an evaluation professional.

EdPA 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

EdPA 8702. Administration and Leadership in Higher Education. (3 cr. Prereq–5001, 5701) Leadership, governance, and administration in higher education through theoretical perspectives and practical analysis. Planning, change, decision making, organizational culture, budgets, conflict.


EdPA 8724. Strategic Planning in Higher Education. (2-3 cr [max 3 cr]. Prereq–5701) Strategic planning principles, their application to higher education, pitfalls encountered by planners in higher education. Selected tools of strategic planning/management, strategic planning case studies.

EdPA 8728. Economics of Higher Education. (2-3 cr [max 3 cr]) Institutional responses to changing external economic factors. Economic effects resulting from higher education’s output in teaching, research, and service. Research on institutional and governmental policies.


EdPA 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

EdPA 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

Educational Psychology (EPsy)

Department of Educational Psychology
College of Education and Human Development


EPsy 5101. Intelligence and Creativity. (3 cr; A-F only) Contemporary theories of intelligence and intellectual development and contemporary theories of creativity and their implications for educational practices and psychological research.

EPsy 5112. Knowing, Learning, and Thinking. (4 cr; A-F only) Principles of human information processing, memory, and thought; mental operations in comprehension and problem solving; developing expertise and automaticity; emphasis on applied settings.

EPsy 5113. Psychology of Instruction and Technology. (3 cr) Introduction to instructional design and educational technology. Application of core foundational knowledge to development of effective learning environments for adults. Topics include philosophy, learning theories, instructional models, development and experience, individual differences, evaluation, assessment, and technology.

EPsy 5114. Psychology of Student Learning. (3 cr; A-F only) Principles of educational psychology: how learning occurs, why it fails, and implications for instruction. Topics include instructional strategies, teaching, development, creativity, problem-solving, intelligence, character education, motivation, diversity, special populations.

EPsy 5115. Psychology of Adult Learning and Instruction. (3 cr) Survey of adult learning/instruction. Emphasizes instructional design, learning theories, experience, individual differences, evaluation, tests/measurement, technology. Implications for curricular/instructional design in higher education, continuing education, professional/business related training.

EPsy 5117. Problem Solving and Decision Making. (3 cr; A-F only) Strategies, rules, methods, and other cognitive components involved in problem solving and decision making, implications for educational practices, and applied domains.


EPsy 5135. Human Relations Workshop. (4 cr) Experiential course addressing issues of prejudice and discrimination in terms of history, power, and social perception. Includes knowledge and skills acquisition in cooperative learning, multicultural education, group dynamics, social influence, effective leadership, judgment and decision-making, prejudice reduction, conflict resolution.

EPsy 5151. Cooperative Learning. (3 cr) Participants learn how to use cooperative learning in their setting. Topics include theory and research, teacher’s role, essential components that make cooperation work, teaching social skills, assessment procedures, and collegial teaching teams.

EPsy 5152. Psychology of Conflict Resolution. (3 cr) Overview of the field of conflict resolution. Major theories, research, major figures in the field, factors influencing quality of conflict resolution are covered. The nature of conflict, the history of field, and interpersonal, intergroup conflict, negotiation, mediation are discussed.

EPsy 5154. Organization Development and Change. (3 cr) Overview of organizational development and change. Normative models of effective organizations, entry and contracting skills, diagnosis procedures and intervention procedures (data feedback, skills training, continuous improvement, mediation).

EPsy 5155. Group Dynamics and Social Influence. (3 cr) Overview of the field of group dynamics with emphasis on social influence. Major theories, research, and figures in the field are covered. Group goals, communication, leadership, decision making, problem solving, conflicts, power, uniqueness theory, deindividuation, and minority influence will be covered.

EPsy 5157. Social Psychology of Education. (3 cr; A-F only) Overview of social psychology and its application to education. Participants study the major theories, research, and major figures in field. Class sessions include lectures, discussions, simulations, role-plays, and experiential exercises.

EPsy 5158. Using Power and Influence to Effect Change. (3 cr. Prereq–3xxx course in social sciences or #) How people can influence others and avoid manipulation. Factors that shape extent to which influence is effective. Indirect/direct influence processes, minority influence, motivation, behavior management, conformity, self-fulfilling prophecies, group dynamics.

EPsy 5191. Education of the Gifted and Talented. (3 cr; A-F only) Theories of giftedness, talent development, instructional strategies, diversity and technological issues, implications for educational practices and psychological inquiry, and international considerations.

EPsy 5200. Special Topics: Psychological Foundations. (1-4 cr [max 30 cr]) Focus on special topics in psychological and methodological concepts relevant to advanced educational theory, research, and practice not covered in other courses.

EPsy 5216. Introduction to Research in Educational Psychology and Human Development. (3 cr; A-F only. Prereq–5261 or intro statistics course) Designing/conducting a research study. Reviewing literature, formulating research problem, using different approaches to gather data, managing/analyzing data, reporting results.

EPsy 5221. Principles of Educational and Psychological Measurement. (4 cr. Prereq–5261 or equiv) Concepts, principles, and methods in educational/psychological measurement. Reliability, validity, item analysis, scores, score reports (e.g., grades). Modern measurement theories, including item response theory and generalizability theory. Emphasizes construction, interpretation, use, and evaluation of assessments regarding achievement, aptitude, interests, attitudes, personality, and exceptionality.


EPsy 5231. Introductory Statistics and Measurement in Education. (3 cr. §EPsy 3264, EPsy 5261) Students develop an understanding of basic statistics and measurement concepts and tools and apply them to the collection, analysis, and interpretation of data.

EPsy 5243. Principles and Methods of Evaluation. (3 cr. §EPsy 5501) Introductory course in program evaluation; planning an evaluation study, collecting and analyzing information, reporting results; overview of the field of program evaluation.

EPsy 5244. Survey Design, Sampling, and Implementation. (3 cr. Prereq–[5221 or 5231 or 5261 or equiv]. §C HDD grad student or ME4 student) Survey methods, including mail, phone, and Web-based/mail surveys. Principles of measurement, constructing questions/forms, pilot testing, sampling, data analysis, reporting. Students develop a survey proposal and a draft survey, pilot the survey, and develop sampling/data analysis plans.


EPsy 5247. Qualitative Methods in Educational Psychology. (3 cr. Prereq–Grad student) Introduction to qualitative methods of inquiry. Contrasting different research traditions (e.g., case study, phenomenology, ethnography, social interactionism, critical theory). Practice with field notes, observations, and interviewing. Use of NVivo to track/code data.

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EPsy 5272. Statistics Teaching Internship. (3 cr; S-N only. Prereq–Grad student, #) Supervised teaching experience.

EPsy 5273. Methodology Teaching Internship. (1 cr [max 2 cr]; S-N only. Prereq–Grad student, #) Supervised teaching experience as part of a course in statistics, measurement, or evaluation.

EPsy 5281. Introduction to Computer Operations and Data Analysis in Education and Related Fields. (3 cr; S-N only) Introductory computer literacy course to familiarize students with personal computers and computing resources at the University. Applications include electronic communications, spreadsheets, graphical presentation, and data analysis.

EPsy 5300. Special Topics in Educational Psychology. (1-3 cr [max 9 cr]) Current issues in educational psychology or related areas not normally available through regular curriculum offerings.

EPsy 5400. Special Topics in Counseling Psychology. (1-4 cr [max 8 cr]) Theory, research, and practice in counseling and student personnel psychology. Topics vary.


EPsy 5412. Introduction to Developmental Counseling and Guidance. (3 cr. #Prereq–#) Contemporary models of counselors as advocates for all students. Emphasizes prevention and systems intervention with counselors involved in the developmental guidance curriculum, school change, staff and community collaboration, individual student planning, and learning success with diverse populations.


EPsy 5421. Leadership and Administration of Student Affairs. (3 cr. #Prereq 5274) Theoretical approaches, administrative structure, and evaluation methods used in college/university student affairs.

EPsy 5422. Principles of Group Work: Theory and Procedures. (3 cr. Prereq–Advanced undergrad or grad student in the helping professions) Principles and practices of group work for educators and the helping professions. Discussion of various types of groups (e.g., counseling support, task, psychoeducational). Applications to various settings and populations (e.g., schools and community agencies).

EPsy 5432. Foundations of Individual/Organizational Career Development. (3 cr; A-F only) Introduction to individual and organizational career development theory and practice. Examines critical issues in work patterns, work values, and workplaces in a changing global society, with implications for career planning, development, and transitions emphasizing personal and organizational change. For nonmajors: serves students in adult ed, HIRD, IR, college student advising, and other related fields.

EPsy 5433. Counseling Women Over the Life Span. (3 cr. Prereq–Counseling or career development course) Counseling skills and interventions to facilitate career development of girls and women of different life stages and backgrounds (school girls to older women); developmental issues from a systemic integrative life planning framework; facts, myths, and trends regarding women's changing roles.

EPsy 5434. Counseling Adults in Transition. (3 cr. Prereq–Advanced undergrad or grad student in the helping professions) Psychological, physical, and social dimensions of adult transition (e.g., family and personal relationships, career). Adult development theories, stress and coping, and helping skills and strategies as they relate to adult transition.

EPsy 5451. College Students Today. (3 cr. #Prereq 5704) Issues involving diverse populations of students in colleges/universities. Student development theory, students' expectations/interests, how college affects student outcomes. Role of curricular/extracurricular activities and of student-faculty interactions.


EPsy 5601. Survey of Special Education. (2 cr) Introduction to programs and services provided to people with disabilities in school and community settings. Emphasis on the needs of families, to the roles and responsibilities of teachers, and to related service providers.


EPsy 5612. Understanding of Academic Disabilities. (3 cr; A-F only) Introduction to issues related to the education of students with academic disabilities (learning disabilities, mild mental intellectual disabilities, and emotional/behavioral disabilities) including history, definition, assessment, classification, legislation, and intervention approaches.


EPsy 5615. Advanced Academic Interventions. (3 cr; A-F only. Prereq–5612) Develop knowledge and skills in designing, implementing, and evaluating Individual Educational Plans (IEPs) for students eligible for special education service in learning disabilities, emotional/behavioral disorders, and mild mental intellectual disabilities.


EPsy 5621. Functional/Basic Academic Interventions in Mental Retardation. (3 cr; A-F only. Prereq–5613, 5614) Methods and materials course emphasizing functional approaches to promoting academic learning in students with mild to moderate retardation and moderate to severe mental retardation.

EPsy 5622. Programs and Curricula for Learners with Severe Disabilities. (3 cr. Prereq–5616) Emphasis on developing programs and curricula for students with moderate, severe, and profound developmental delays, as well as severe multidisabling conditions. Special consideration given to preparing children and youth for integrated community environments.


EPsy 5628. Seminar: Developmental Disabilities and Instructional Management. (3 cr. Prereq–5621, 5622 or #) Data-based strategies for school and nonschool instruction of learners with developmental disabilities including assessment, design, implementation, and evaluation of curriculum and instruction: curriculum content, concept and task analysis, classroom arrangements, natural and instructional cues, corrections, and consequences.

EPsy 5635. Education of Students with Physical and Health Disabilities. (3 cr; A-F only. Prereq–5601 or #) Introduction to students with physical and health disabilities and their characteristics; the educational implications of physical disabilities; assessment procedures and appropriate educational interventions for learners with physical and health disabilities.

EPsy 5636. Education of Multihandicapped Learners with Sensory Impairments. (2 cr [max 3 cr; Prereq–5613, 5614]) Characteristics of learners with visual and auditory impairments; design of instructional programs to remediate or circumvent disabilities, including use of prosthetic devices; related areas of performance affected by sensory impairments.

EPsy 5641. Foundations of Education for Individuals Who Are Deaf/Hard of Hearing. (3 cr) Historical and current issues related to education of individuals who are deaf or hard of hearing. Implications of causes of hearing loss, cross-cultural social relationships, philosophies of education, characteristics and legislative guidelines and their applicability to education of individuals who are deaf or hard of hearing.
Courses


EPsy 5646. Reading and Writing Practices with Deaf/Hard of Hearing Children. (3 cr. Prereq--5644 or general education methods in tchy reading and writing skills, or #) Gain knowledge and skills to assess, plan, and implement instruction for children and youth with hearing loss. Emphasis is placed on research, theoretical, and programmatic issues in developing reading and writing skills, curricular adaptations, and effective instructional approaches.

EPsy 5647. Aural and Speech Programming for Persons Who Are Deaf/Hard of Hearing. (3 cr) Study of the speech and hearing mechanisms, causes of hearing loss, and rehabilitation. Emphasis on instructional practices, aural rehabilitation in the educational setting, adaptive technology, and adaptations to optimize functional skills with individuals who are deaf or hard of hearing.


EPsy 5649. Models of Instructional Programming With Deaf and Hard of Hearing Students. (3 cr. Prereq--5641, 5644) or #) Design/development of portfolios for various models of educational service delivery systems for individuals with hearing loss. Emphasizes consultation skills, curriculum management/modifications, material/technology applications, and support service adaptations.

EPsy 5656. Social and Interpersonal Characteristics of Students with Disabilities. (3 cr; A-F only) Emphasis on children and youth of school age and on the ways in which their emotional, social, and behavioral disorders affect their functioning in school and on ways in which their behaviors disturb others.

EPsy 5657. Interventions for Social and Emotional Disabilities. (3 cr; A-F only. Prereq--5616, 5656) Developing comprehensive behavioral programs for students with social and emotional disabilities. Instructing students with social and emotional disabilities.


EPsy 5671. Literacy Braille. (3 cr; A-F only) Mastery of literacy braille code including all contractions and short-form words used in Grade 2 English Braille: American Usage. Use of specialized braille writing equipment including, braille writer, slate and stylus, and computer programs with six-key input.

EPsy 5672. Advanced Braille Codes. (2 cr; A-F only. Prereq--5661) Mastery of the Nemeth code for braille mathematics transcription including elementary math computation, algebra, geometry, trigonometry, and symbolic logic notation. Introduction to foreign languages, computer notation, music, and raised line drawing techniques.

EPsy 5674. Techniques of Orientation, Mobility, and Independence for Students with Visual Disabilities. (3 cr; A-F only. Prereq--5675 or #) Introduction to basic techniques to gain skills in pre-cane techniques, orientation to learning environments, and adaptations for activities of daily living and independence. Introduction to mobility maps, consideration of cane, guide dog, and telescopic aids to mobility.


EPsy 5681. Education of Infants, Toddlers, and Preschool Children with Disabilities: Methods and Materials. (3 cr; A-F only. Prereq--5625) Overview of the methods and materials available to maximize the developmental and educational outcomes for young children, birth to age 5, with disabilities and their families in home, community, and school based-settings.

EPsy 5701. Practicum: Field Experience in Special Education. (1-6 cr; A-F only. Prereq--5614, [FOE or SPED grad or licensure student]) or #) Observations and support of teaching practice in schools or agencies serving children with disabilities in integrated programs.

EPsy 5702. Practicum in Autism Spectrum Disorder. (3 cr. Prereq--5616, 5661, 5690, one of 5622 or 5644 or SLHS 5600) enrolled in Autism Spectrum Disorder certificate program, #) Four hundred hours of supervised work in settings where individuals with Autism Spectrum Disorder are served. On-site supervision is provided by qualified professionals. A University supervisor conducts on-site observations. Bi-weekly seminars.

EPsy 5703. Practicum in Applied Behavior Analysis. (3 cr. Prereq--5616, 5617, PSY 4011, Applied Behavior Analysis Certificate student, #) Four hundred hours of supervised experience in applied behavior analytic intervention with individuals with significant development and learning difficulties. On-site supervision is provided by qualified professionals. A University supervisor conducts on-site observations. Bi-weekly seminars.

EPsy 5720. Special Topics: Special Education. (1-4 cr; max 12 cr; Prereq--#) Lab and fieldwork approach, often assuming a product orientation, e.g., generation of action plan, creating set of observation field notes, collecting data in some form. Provides opportunities for educational personnel to study specific problems and possibilities related to special education.

EPsy 5740. Special Topics: Interventions and Practices in Educational and Human Service Programs. (1-4 cr; max 8 cr; Prereq--#) Concepts, issues, and practices related to the community inclusion of children, youth, and adults with developmental disabilities through weekly seminar and extensive supervised experience working with individuals within the community.

EPsy 5751. Student Teaching: Deaf/Hard of Hearing. (1-6 cr; max 10 cr. Prereq--#) Students participate in educational programming for infants, children, and youth who are deaf or hard of hearing, as well as in on-site, directed experiences under the supervision of master teachers of deaf and hard of hearing students.

EPsy 5752. Student Teaching: Learning Disabilities. (1-6 cr; max 10 cr. S-N only. Prereq--#) Supervised experience in teaching or related work in schools or other agencies serving children and adolescents with learning disabilities.

EPsy 5753. Student Teaching: Early Childhood Special Education. (1-6 cr; max 8 cr; S-N only. Prereq--#) Completion of all course requirements for license in ECSE. Supervised experience in teaching or related work in schools, agencies, or home settings with infants, toddlers, and preschoolers with disabilities and their families.

EPsy 5754. Student Teaching: Social and Emotional Disabilities. (1-6 cr; max 8 cr; A-F only. Prereq--Completion of licensure courses for social and emotional disorders, #) Teach students with social and emotional disorders at public schools and other appropriate sites. Attend a weekly seminar on student teaching competencies.

EPsy 5755. Student Teaching: Developmental Disabilities, Mild/Moderate. (1-6 cr; max 6 cr; A-F only. Prereq--Completion of all licensure coursework, #) Supervised student teaching, or special practicum project, in schools or other agencies serving students at elementary/secondary levels who have mild to moderate developmental disabilities.

EPsy 5756. Student Teaching: Developmental Disabilities, Moderate/Severe. (1-6 cr; max 6 cr; A-F only. Prereq--Completion of all licensure coursework, #) Supervised student teaching, or special practicum projects, in schools or other agencies serving students at elementary/secondary levels who have moderate to severe developmental disabilities.

EPsy 5757. Student Teaching: Physical and Health Related Disabilities. (1-6 cr; max 6 cr; A-F only. Prereq--#) Supervised student teaching and related work (direct instruction and consultation) in schools or other agencies serving children and adolescents who have physical disabilities.

EPsy 5758. Student Teaching: Visual Impairments. (1-6 cr; max 8 cr; A-F only. Prereq--#) Supervised student teaching, or special practicum project, in schools or other agencies serving children and adolescents who have visual impairments.

EPsy 5800. Special Topics in School Psychology. (1-9 cr; max 8 cr) Current issues in school psychology or areas not normally available through regular curriculum offerings.

EPsy 5801. Assessment and Decision Making in School and Community Settings. (1-9 cr; A-F only) Introduction to psychological and educational assessment for individuals who work with children, especially those experiencing academic and behavior problems. Study of standardized group and individual tests of intelligence, achievement, socio-emotional functioning, perception, reading, mathematics, adaptive behavior, and language.

EPsy 5849. Observation and Assessment of the Preschool Child. (3 cr; max 4 cr) Introduction to assessment principles and practices, including observational assessment methods, for children (birth to 5). Intended primarily for teachers in training and others interested in basic information regarding assessment and its relationship to intervention services for young children.

EPsy 5851. Collaborative Family-School Relationships. (2-3 cr; max 3 cr) Prereq--Honors senior or grad student) Theoretical and empirical bases for creating collaborative family-school relationships for students’ development and educational success in school. Emphasis on model programs for K-12 and practical strategies for educational personnel to address National Educational goal 8.

EPsy 5862. Prevention and Early Intervention. (3 cr) Theory/research base for school-based primary/secondary programs to promote academic/social competence of children/youth (birth to grade 12).
EPsy 5871. Interdisciplinary Practice and Interagency Coordination in Education and Human Services. (3 cr.) Principles and procedures of interdisciplinary practice and interagency coordination. Examine the relative strengths of interdisciplinary approaches, develop skills for collaboration with others, and examine different approaches to interagency coordination.

EPsy 5991. Independent Study in Educational Psychology. (1-3 cr. [max 20 cr.]; A-F only. Prereq.–Project) Self-directed study in areas not covered by regular courses. Specific program of study is jointly determined by student and advising faculty member.


EPsy 8115. Psychology of Instruction and Technology. (3 cr. Seminar including, but not limited to, learning and instructional theories, advanced and emerging technologies, and measurement and evaluation.

EPsy 8116. Reading for Meaning: Cognitive Processes in the Comprehension of Texts. (3 cr. Prereq.–Project) Students read primary articles on cognitive processes involved in reading comprehension. Focuses on inferences making during reading and on construction of a coherent memory representation. Computational models, neurological processes, developmental/individual differences, effects of text genre (e.g., expository, narrative).

EPsy 8117. Writing Empirical Paper and Research/Grant Proposals in Education and Psychology. (3 cr. Prereq.–Prereq–Project) Scientific writing skills. Focuses on logic/argumentation. Each student produces an empirical paper or research proposal. Breaks down the writing process into components: one component per week. Each week, students write a section of their paper/proposal and critique others’.


EPsy 8132. Personality Development and Socialization. (3 cr. Prereq.–Personality or child psychology course) Major research in the psychological development of personality. Theoretical and empirical analyses of personality.

EPsy 8215. Advanced Research Methodologies in Education. (3 cr. Prereq.–5221, 5247, 8261, 8262) Quantitative research methods, including models of scientific inquiry, role of theories/research design, role of measurement error in quantitative data-based inference, and qualitative methods of inquiry. Focuses on advanced quantitative/qualitative methodologies used in methodologically-oriented studies in educational measurement, evaluation, and statistics.

EPsy 8216. Seminar: Research Processes in Psychological Foundations of Education. (3 cr. A-F only. Prereq.–[5216, admitted to doctoral program in psych foundations] or #) Advanced examination of research processes in educational psychology. Invited faculty discuss specific research designs. Students refine/implement research projects and present them in class.

EPsy 8221. Psychological Scaling. (3 cr. Prereq.–5221 or equiv, 8261-8262 or equiv) Elementary and advanced topics in unidimensional and multidimensional scaling: measurement theory and statistics, rating scales and other category scaling methods, magnitude estimation, paired comparisons, multi-attribute scaling, and multidimensional scaling.


EPsy 8262. Statistical Methods II: Regression and the General Linear Model. (3 cr. Prereq.–5260, 5261 or equiv) Analysis of variance designs (two/three-way), repeated measures, correlation, simple/multiple regression methods, non-parametric procedures, multivariate analyses.

EPsy 8263. Design and Analysis of Experiments. (3 cr. Prereq.–8261, 8262 or equiv) Advanced treatment of various experimental designs, including completely randomized factorial, randomized block, hierarchical, repeated measures, and Latin square designs. Major computer packages used for data analyses. Univariate and multivariate approaches to these designs.

EPsy 8264. Advanced Multiple Regression Analysis. (3 cr. Prereq.–8261, 8262, regression and ANOVA course, familiarity with a statistical analysis package) General linear models are used as a context for regression. Matrix algebra, multiple regression, path analysis, polynomial regression, standardized regression, stepwise solutions, analysis of variance, weighted least squares, and logistic regression.


EPsy 8271. Statistics Education Research Seminar: Studies on Teaching and Learning Statistics. (3 cr.) Introduction to classic/current research related to teaching/learning of statistics. Research from psychology, education, and statistics. Students focus on a particular research question and review the literature related to that question.

EPsy 8281. Advanced Statistical Computing and Data Analysis. (3 cr. Prereq.–5261 or equiv, 5281 or equiv) Cross-disciplinary course. Students learn to use SAS statistical package to perform data management, data analysis, and report writing.

EPsy 8282. Statistical Analysis of Longitudinal Data. (3 cr. Prereq.–8261, 8262 or equiv) Traditional/modern approaches to analyzing longitudinal data. Dependent t-test, repeated measures ANOVA and MANOVA. Linear mixed models, multilevel models, generalized models. Required labs using SAS computer program.

EPsy 8290. Special Topics: Seminar in Psychological Foundations. (1-6 cr. [max 15 cr.]; A-F only. Prereq.–Project) Students formulate research designs. Learning and cognition, social psychology, measurement, and statistics.

EPsy 8292. Evaluation Problems. (1-6 cr. [max 24 cr.]; EdPA 8596. Prereq.–5243 or EdPA 5501, #) Individually directed study of an issue in the theory or practice of program evaluation.

EPsy 8296. Evaluation Internship. (1-9 cr. [max 24 cr.]; EdPA 8596–5243 or EdPA 5501, #) Hands-on experience in conducting a program evaluation in a real-world setting under supervision of an evaluation professional.

EPsy 8300. Special Topics in Educational Psychology. (1-4 cr. [max 9 cr]) Issues or related coursework in areas not normally available through regular curriculum offerings.

EPsy 8333. FTE: Master’s. (1 cr. Prereq.–Master’s student, advisor and DGS consent)

EPsy 8400. Topics: Counseling and Student Personnel Psychology. (1-3 cr. [max 9 cr]) Current issues in counseling and student personnel psychology, or related coursework in areas not normally available through regular curriculum offerings.


EPsy 8403. Social/Cultural Contexts: Counseling and Skills. (3 cr.; A-F only. Prereq.–Grad ed psy major with CSPP subgroup or #) Broad personal dimensions of race, ethnicity, gender, class, beliefs, disability, age, sexual orientation, and geographic origin. Societal and personal biases and stereotypes; multicultural concepts and culturally appropriate counseling procedures.

EPsy 8404. Group Counseling: Theory, Applications, and Skills. (3 cr.; A-F only. Prereq.–Ed Psy MA or PhD student with CSPP subgroup or #) Theories, research, and procedures of group counseling and of groups such as psychosocial educational groups. Applications to various settings and populations. Ethical issues in group work. Practice of group skills and techniques, including group participation and observation.


EPsy 8411. Advanced Counseling Research. (4 cr.; A-F only. Prereq.–Ed Psy PhD student with CSPP subgroup or #) Focus on critically reviewing counseling research, qualitatively and quantitatively integrating research, and designing valid research.

EPsy 8412. Seminar: Advanced Counseling Theory and Ethics. (4 cr.; A-F only. Prereq.–Ed Psy PhD student with CSPP subgroup or #) Comparative analysis of theoretical models and methods used in contemporary counseling and psychotherapy; ethical standards and models of ethical decision making for professional roles.
Courses

EPsy 8413. Personality Assessment of Adolescents and Adults. (3 cr; A-F only) Prereq—Psy 5041H or Psy 8111 or Psy 8112, doctoral student, # Assessment interviews, MMPI-2, MMPI-A, DSM4, written assessment reports.

EPsy 8431. Master’s Research Seminar: CSPP. (4 cr; A-F only) Prereq—5261 or equiv, 5221 or equiv, EPsy MA student with CSPP subprog or # Survey of research methods, data-based decision making, basic research design skills, and research simulation.

EPsy 8435. Organization of School Counseling Comprehensive Programs. (3-6 cr [max 6 cr]; A-F only) Prereq-CSPP grad student in school counselor prog or # Integrates learning from all courses in MA program with research in comprehensive guidance programming. Critiques of research, analyses of current trends/issues. Theories of management/organization in educational and other service settings. Literature review of comprehensive guidance programs. Students develop/demonstrate knowledge of comprehensive school counseling programming in K-12 school settings.


EPsy 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)

EPsy 8452. Psychological Aspects of Counseling Supervision. (3 cr. Prereq—Ed psy PhD student with CSPP subprog or #) Theories, review of relevant research, demonstration, and in-class practice of supervision skills.

EPsy 8501. Counseling Pre-Practicum. (3 cr; A-F only. Prereq—CSPP or genetic counseling) grad student) Overview of basic helping skills through demonstration, in-class practice.

EPsy 8502. Field Placement in Counseling and Student Personnel Psychology. (2 cr; S-N only, Prereq—8501 or #) Students participate under supervision in practitioner activities within a counseling work environment.

EPsy 8503. Counseling Practicum I. (1-4 cr [max 4 cr]; A-F only. Prereq—8502 or #) Beginning-level supervised practice in counseling with individuals and groups; emphasizes systematic evaluation of student’s counseling practice through direct observations, video, and audio tapes.

EPsy 8504. Counseling Practicum II. (1-4 cr [max 4 cr]; A-F only. Prereq—8503 or #) Intermediate supervised practice in counseling with individuals and groups; emphasizes ethical issues with systematic evaluation of student’s practice through direct observations, video, and audio tapes.

EPsy 8509. Supervision Practicum: CSPP. (2 cr. Prereq—[Ed psy PhD student with CSPP subprog] or #) Students involved in counseling supervision of beginning courses.

EPsy 8512. Internship: CSPP. (1-6 cr [max 12 cr]; A-F only. Prereq—EdPsy MA or PhD student with CSPP subprog) Supervised internship in counseling, counseling psychology, or student personnel psychology at sites approved by CSPP program.

EPsy 8513. University Counseling Practicum I. (4-6 cr; S-N only. Prereq—8514. Prereq—EdPsy MA or PhD student with CSPP subprog) Integrates science of counseling psychology with supervised practice in University Counseling and Consulting Services with career, academic, and personal clients.

EPsy 8514. University Counseling Practicum II. (4-6 cr [max 6 cr]; S-N only. Prereq—8513. Prereq—8513, #) Integrates science of counseling psychology with supervised practice in University Counseling and Consulting Services with career, academic, and personal clients.

EPsy 8521. Counseling Practicum in Student Affairs and Student Development. (1-4 cr [max 8 cr]; A-F only. Prereq—EdPsy MA or PhD student with CSPP subprog or #) Supervised practice in university and college student development offices.

EPsy 8522. Counseling Practicum: Advanced. (3 cr [max 9 cr]. Prereq—Grad ed psy major with CSPP subprog or #) Advanced skills practice in counseling, counseling psychology, or student development.

EPsy 8600. Special Topics: Special Education Issues. (1-3 cr [max 9 cr]) Current trends (e.g., schoolwide discipline, models of collaboration, and diversity) investigated by formulating research projects. Students write a media piece describing an issue and its impact on the community.

EPsy 8612. Seminar: Students with Academic Difficulties. (3 cr; A-F only. Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral) Survey, analysis, and application of relevant theories and research related to current issues. Students in course develop skills in scholarly inquiry, writing, and debate.

EPsy 8621. Seminar on Intellectual Impairments. (3 cr; A-F only. Prereq—Grad students interested in mental retardation and related intellectual impairments) Review of research and theories in context of relevant developmental theories; important contributions in primary sources concerning principles of cognition and behavior and applied problems. Procedures for deriving appropriate field applications; generalizing and implementing researchable questions.

EPsy 8631. Seminar on Social and Emotional Disabilities. (3 cr; A-F only. Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral) Review and critical analysis of current trends and future directions of education of students with social and emotional disabilities.

EPsy 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]) Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

EPsy 8677. Seminar: Information Acquisition for Persons with Disabilities. (3 cr [max 6 cr]; A-F only) Research findings from diverse disciplines on impact of hearing and visual disabilities on ability to acquire and/or access information.

EPsy 8694. Research in Special Education. (3 cr) Design and implementation of research related to the unique developmental characteristics of exceptional learners.

EPsy 8701. Doctoral Core Seminar: Special Education I. (3 cr [max 6 cr]; A-F only. Prereq—EdPsy PhD student with spec subprog or #) Required for students with a family/life span focus on social development, behavioral interaction, and cultural interactions.

EPsy 8702. Doctoral Core Seminar: Special Education II. (3 cr [max 6 cr]; A-F only. Prereq—8701 or #) Required for students focusing on communication/language/academics.

EPsy 8787. Single Case Designs in Intervention Research. (3 cr) Design and analysis of single-case experiments to examine effects of interventions on individual behavior in school, home, and community

EPsy 8772. Seminar in Early Intervention. (2 cr) Explores research from diverse disciplines related to education of infants, toddlers, and preschool children with disabilities and their families. Discusses practical application of this research.

EPsy 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]) Prereq—Max 18 cr per semester or summer; 10 cr total required (Plan A only)

EPsy 8800. Special Topics in School Psychology. (1-4 cr [max 9 cr]) Issues or related coursework in areas not normally available through regular curriculum offerings.


EPsy 8813. Assessment Practicum in School Psychology. (2 cr [max 4 cr]; A-F only. Prereq—8821, grad ed psy major with school psy subprog or ¶8811 or ¶8812) Students administer, score, and interpret standardized tests of intellectual, adaptive, and social-emotional assessment, and assess educational progress using both formal and informal instructional assessment strategies. All measures complement other facets of assessment presented in 8811 and 8812.

EPsy 8815. Systemic Intervention and Consultation. (3 cr; A-F only) In-depth study/analysis of instructional interventions/strategies necessary to work with school counseling channel in developing schoolwide, classroom, individual instructional interventions. Practice in developing/ applying interventions with individual students.

EPsy 8816. Individual Intervention and Consultation. (3 cr; A-F only) Principles/models of consultation/interventions for social-emotional problems exhibited by school-aged children. Emphasizes universal intervention, competence enhancement approaches. All interventions presented from a system-level perspective.


EPsy 8822. Research in School Psychology. (3 cr [max 6 cr]. Prereq—[[[[3860, 8861, 8611] or equiv], grad ed psy major with school psy subprog or #] Integrative, developmental discussions/activities about research in school psychology. Consuming, synthesizing, distributing, and conducting research. Students formulate their own research agenda.


EE 5164. Microelectronic Devices II. (3 cr. Prereq—EE 5163 or #) Principles and properties of semiconductor devices. Charge control in different FETS, transport, modeling, Bipolar transistor models (Ebers-Moll, Gummel-Poon), heterostructure bipolar transistors. Special devices.  

EE 5171. Microelectronic Fabrication. (4 cr. Prereq—IT grad or grad) Fabrication of microelectronic devices; silicon integrated circuits, GaAs devices; lithography, oxidation, diffusion; process integration of various technologies, including CMOS, double poly bipolar, and GaAs MESFET.  

EE 5173. Basic Microelectronics Laboratory. (1 cr. Prereq—5171 or 5171H) Students fabricate a polysilicon gate, single-layer metal, NMOS chip, performing 80 percent of the processing, including photolithography, diffusion, oxidation, and etching. In-process measurement results are compared with final electrical test results. Simple circuits are used to estimate technology performance.  

EE 5231. Linear Systems and Optimal Control. (3 cr. Prereq—IT grad or grad) Properties and modeling of linear systems; linear quadratic and linear-quadratic-Gaussian regulators; maximum principle.  

EE 5235. Robust Control System Design. (3 cr. Prereq—IT grad or grad) Development of control system design ideas; frequency response techniques in design of single-input/single-output (and MIMO) systems. Robust control concepts. CAD tools.  


EE 5324. VLSI Design II. (3 cr. Prereq—5323 or #) CMOS arithmetic logic units, high-speed carry chains, fast CMOS multipliers. High-speed performance parallel shifters. CMOS memory cells, array structures, read/write circuits. Design for testability, including scan design and built-in self test. VLSI case studies.  

EE 5327. VLSI Design Laboratory. (0 cr. Prereq—[4301, 5323 or #5323]) Complete design of an integrated circuit. Designs evaluated by computer simulation.  


For definitions of course numbers, abbreviations, and symbols, see page 167.
Courses


EE 5549. Digital Signal Processing Structures for VLSI. (3 cr. Prereq—EE 4541) Pipelining, parallel processing; fast convolution; FIR, rank-order, IIR, lattice, adaptive digital filters; scaling and rounding noise; DCT; Viterbi coders; lossless coders, video compression.

EE 5551. Multiscale and Multirate Signal Processing. (3 cr. Prereq—EE 4541, 5531, grad in IT major or grad) Multirate discrete-time systems. Bases, frames, continuous wavelet transform; scaling equations; discrete wavelet transform; applications in signal and image processing.

EE 5581. Information Theory and Coding. (3 cr. Prereq—5531 or grad) Source and channel models, codes for sources and channels. Entropy, mutual information, capacity, rate-distortion functions. Coding theorems.

EE 5585. Data Compression. (3 cr. Prereq—IT or grad or grad) Source coding in digital communications and recording; universal lossless codes; lossless image compression; scalar and vector quantizer design; loss source coding theory; differential coding; trellis codes, transform and subband coding; analysis/synthesis schemes.

EE 5601. Introduction to RF/Microwave Engineering. (3 cr. Prereq—EE 3601, IT major student) Fundamentals of EM theory and transmission line concepts. Transmission lines and network analysis. CAD tools. Passive component design.

EE 5602. RF/Microwave Circuit Design. (3 cr. Prereq—EE 5601 or grad) Transmission lines, network analysis concepts. CAD tools for passive/active designs. Diode based circuit designs (detectors, frequency multipliers, mixers). Transistor based circuit design (amplifiers, oscillators, mixer/doubler).


EE 5611. Plasma-Aided Manufacturing. (4 cr. A-F only. 5ME 5361, Prereq–Upper div IV or grad, ME 3321, ME 3322 or grad) Manufacturing using plasma processes; plasma properties as a processing medium; plasma spraying, welding and microelectronics processing; process control and system design; industrial speakers; a cross-disciplinary experience between heat transfer design issues and manufacturing technology.

EE 5613. RF/Microwave Circuit Design Laboratory. (2 cr. Prereq—5560) Scattering parameters, planar lumped circuits, transmission lines, RF/microwave substrate materials, matching networks/tuning elements, resonators, filters, combiners/dividers, couplers. Integral lab.

EE 5616. Antenna Theory and Design. (3 cr. Prereq—EE 5601 or grad IT major) Antenna parameters performance, vector potential/radiation integral, wire antenna structures, broadband antenna structures, microwave apertures theory, antenna measurements.

EE 5621. Physical Optics. (3 cr. Prereq—3015 or grad) Physical optics principles, including Fourier analysis of optical systems and images, scalar diffraction theory, interferometry, and coherence theory. Applications discussed include diffraction, optical elements, holography, astronomical imaging, optical information processing, and microoptics.


EE 5624. Optical Electronics. (4 cr. Prereq—EE 3601 or Phys 3002 or grad) Fundamentals of lasers, including propagation of Gaussian beams, optical resonators, and theory of laser oscillation. Polarization optics, electro-optic, acousto-optic modulation, nonlinear optics, and phase conjugation.


EE 5653. Physical Principles of Magnetic Materials. (3 cr. Prereq—IT or grad) Physics of diamagnetism, paramagnetism, ferromagnetism, antiferromagnetism, ferrimagetism; ferromagnetic phenomena; static and dynamic theory of micromagnetics, magneto-optics, and magnetization dynamics; magnetic material applications.

EE 5655. Magnetic Recording. (3 cr. Prereq—IT or grad) Magnetic fundamentals, recording materials, idealized models of magnetic records/reproduction, analytic models of magnetic record heads, sinusoidal magnetic recording, digital magnetic recording, magnetic recording heads/media, digital recording systems.


EE 5721. Power Generation Operation and Control. (3 cr. Prereq—EE 4721) Engineering aspects of power system operation; economic analysis of generation plants and scheduling to minimize total cost of operation; scheduling of hydro resources and thermal plants with limited fuel supplies; loss analysis and secure operation; state estimation and optimal power flow; power system organizations.

EE 5725. Power Systems Engineering. (3 cr. Prereq—EE 4721) Reliability analysis of large power generation and transmission systems; writing programs for state-by-state analysis and Monte Carlo analysis; power system protection systems, circuit current calculations, short circuit detection, isolating faulted components; characteristics of protection components.


EE 5821. Biological System Modeling and Analysis. (3 cr. Prereq—IT or grad) Purpose of biological system modeling; advantages, limitations, special problems. Models of nerve excitation and propagation. Biological control systems; respiratory and cardiovascular systems. Sensory organs and theories of perception. Limbs and locomotion.

EE 5863. Computer Systems Performance Analysis. (2 cr. Prereq—EE 5371, 4863 or 5361 or grad) Basic performance measurement/simulation techniques necessary for experimental computer science/engineering. Hands-on performance evaluation techniques using simulations/measurements of existing systems. Using measured data to compare computer systems or to judge how much a new architectural feature improves systems performance.

EE 5940. Special Topics in Electrical Engineering I. (1-4 cr. [max 12 cr]) Special topics in electrical and computer engineering. Topics vary.

EE 5950. Special Topics in Electrical Engineering II. (1-4 cr. Max 12 cr) Special topics in electrical and computer engineering. Topics vary.

EE 5960. Special Topics in Electrical Engineering III. (1-4 cr. Max 12 cr) Special topics in electrical and computer engineering. Topics vary.

EE 5990. Curricular Practical Training. (1-2 cr. [max 6 cr.]; S-N only. Prereq—IT or grad) Industrial work assignment involving advanced electrical engineering technology. Review by faculty member. Final report covering work assignment.

EE 8100. Advanced Topics in Electronics. (1-3 cr. Max 12 cr. Prereq—IT or grad) Topics vary according to needs and staff availability.

EE 8141. Advanced Heterojunction Transistors. (3 cr. Prereq—5564 or grad) Recent developments in device modeling with emphasis on bipolar junction transistors. High-level effects in base and collector regions and their interrelationship.

EE 8161. Properties of Semiconductors I. (3 cr. Prereq—IT or grad) Modern solid-state theory applied to specific semiconductor materials; influence of band structure and scattering mechanisms upon semiconductor properties; plasma effects in semiconductors; mathematical treatments of generation-recombination kinetics, carrier injection, drift, and diffusion; use of semiconductor properties in devices of current importance.
EE 8162. Properties of Semiconductors II. (3 cr. Prereq–8161 or 4) Modern solid-state theory applied to specific semiconductor materials; influence of band structure and scattering mechanisms upon semiconductor properties; plasma effects in semiconductors; mathematical treatments of generation-recombination kinetics, carrier injection, drift and diffusion; use of semiconductor properties in devices of current importance.


EE 8190. Electronics Seminar. (1 cr [max 3 cr]; S-N only. Prereq–4) Current literature, individual assignments.

EE 8210. System Theory Seminar. (1 cr [max 3 cr]; S-N only) Current literature, individual assignments.

EE 8213. Advanced System Theory. (3 cr. Prereq–IT grad student, #) Generalized linear systems; applications, structural properties, computational approaches, classification, functional behavior, and synthesis.

EE 8215. Nonlinear Systems. (3 cr; Prereq–4) Current topics in stability analysis of nonlinear systems, design of controllers for nonlinear systems, discrete-time and stochastic nonlinear systems.

EE 8230. Control Theory Seminar. (1 cr [max 3 cr]; S-N only) Current literature, individual assignments.


EE 8235. Advanced Control Topics. (3 cr. Prereq–4) Adaptive and learning systems, optimal and robust control and stabilization, and stability of dynamic systems.

EE 8300. Advanced Topics in Computers. (1-3 cr [max 12 cr]. Prereq–4) Topics vary according to needs and staff availability.

EE 8301. Advanced Topics in Design Automation. (3 cr; A-F only) Advanced topics in state-of-the-art automated design tools used for electronic system design. Topics vary.

EE 8310. Advanced Topics in VLSI. (1-3 cr [max 12 cr]. Prereq–4) Topics vary according to needs and staff availability.

EE 8331. CMOS Data Converters: A/D and D/A. (3 cr. Prereq–5333 or 4) Data converters, low power low voltage analog circuits. Basic background in design of CMOS analog-to-digital and digital-to-analog converters. Special circuit design techniques for low power design. Students design/test several design problems.

EE 8333, FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

EE 8337. Analog Circuits for Wire/Wireless Communications. (3 cr; A-F only. Prereq–5333) Basic background, advanced design concepts necessary to design integrated CMOS RF circuits. Emphasizes CMOS and RF. Where appropriate, mention is made of bipolar circuits and applications to other communications areas.

EE 8360. Computer Systems Seminar. (1 cr [max 3 cr]; S-N only) Current literature, individual assignments.


EE 8370. Computer Aided Design Seminar. (1 cr [max 3 cr]; S-N only. Prereq–EE or CompE or CSci) grad major, #) Current literature, individual assignments.

EE 8444, FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

EE 8500. Seminar: Communications. (1 cr [max 3 cr]; S-N only) Current literature, individual assignments.

EE 8510. Advanced Topics in Communications. (1-3 cr [max 12 cr]. Prereq–4) Topics vary according to needs and staff availability.

EE 8520. Advanced Topics in Signal Processing. (3 cr. Prereq–5451 or 5581 or #) Two-dimensional digital filtering and transforms; application to image enhancement, restoration, compression, and segmentation.

EE 8541. Image Processing and Applications. (3 cr. Prereq–4541, 5581 or #) Theory of diffraction, integral equation methods, Green’s functions.

EE 8581. Detection and Estimation Theory. (3 cr. Prereq–5531 or #) Risk theory approach to detection and estimation, random process representation, signal parameter estimation. Waveform estimation; detection of phase, frequency, and delay in signals. Applications to communications and radar-sensor signal design and processing.

EE 8591. Predictive Learning from Data. (3 cr. Prereq–IT grad student or #) Basic elements and application areas of artificial intelligence (AI) related to design and implementation of expert systems (ES). Knowledge representation, reasoning under uncertainty, ES and their environment, planning, natural language processing (NLP), intelligent computer-aided instruction (ICAI), and AI tools (software and hardware).


EE 8610. Seminar: Electronics, Fields, and Photonics. (1 cr [max 3 cr]; S-N only. Prereq–EE grad major or #) Students are assigned readings from current literature and make individual presentations to class. From time to time outside speakers present research papers.


EE 8630. Advanced Topics in Electromagnetics. (1-3 cr [max 12 cr]) Topics vary according to needs and staff availability.

EE 8660. Seminar: Magnetics. (1 cr [max 3 cr]; S-N only) Current literature, individual assignments.

EE 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr].Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

EE 8725. Advanced Power System Analysis and Economics. (3 cr. Prereq–4721, IT grad student or #) Solving sets of equations that involve large sparse matrices. Sparse matrix storage, ordering schemes, application to power flow, short circuit calculation, optimal power flow, and state estimation.


EE 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

EE 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]) Prereq–Max 18 cr per semester or summer; 24 cr required

EE 8940. Special Investigations. (1-3 cr [max 3 cr]. Prereq–1-3 cr [may be repeated for cr]; IT grad student or #) Studies of approved theoretical or experimental topics.

EE 8950. Advanced Topics in Electrical and Computer Engineering. (1-3 cr [max 12 cr]. Prereq–Cr or [may be repeated for cr]; #) Topics vary according to needs and staff availability.

EE 8961. Plan B Project I. (3 cr. Prereq–Grad EE or CompE major) Project topic(s) arranged between student and adviser. Written report(s).

EE 8963. Plan B Project II. (1-2 cr [max 2 cr]. Prereq–EE grad student; may be taken to satisfy requirement for Plan B student or #) May appear on master’s program but may not be applied toward minimum credit requirement

EE 8970. Graduate Seminar I. (1 cr [max 3 cr]; S-N only.) Prereq–Grad student

EE 8990. Graduate Seminar II. (1 cr [max 3 cr]; S-N only) Recent developments in electrical engineering, related disciplines.

EE 8990. Graduate Seminar II. (1 cr [max 3 cr]; S-N only) Recent developments in electrical engineering, related disciplines.


English: Composition (EngC)

Department of English Language and Literature

College of Liberal Arts

EngC 5051. Graduate Research Writing Practice for Non-native Speakers of English. (3 cr. Prereq–Grad student) Graduate-level writing techniques/formats for summaries, critiques, research, and abstracts. Persuasion, documentation, structure, grammar, vocabulary, field-specific requirements. Writing through several drafts, using mentor in specific field of study. Revising/editing to meet graduate standards. Discussions.

EngC 5052. Graduate Research Presentations and Conference Writing for Non-Native Speakers of English. (3 cr. Prereq–Grad student, non-native speaker of English) or #) Practice in writing/presenting graduate-level research for conferences or professional seminars. Delivery of professional academic presentations to U.S. audiences. Conference abstract, paper, and poster presentation. Communication in research process. Students select topics from their own research/studies. Format, style, transitions, topic narrowing, non-verbatim presentation skills.
Courses

English: Creative Writing (EngW)

Department of English Language and Literature

College of Liberal Arts

EngW 5102. Advanced Fiction Writing. (4 cr. [max 8 cr.]) Advanced workshop for graduate students with considerable experience in writing fiction.

EngW 5104. Advanced Poetry Writing. (4 cr. [max 8 cr.]) Advanced workshop for graduate students with considerable experience in writing poetry. An opportunity to explore new poetic possibilities and to read widely in contemporary poetry and poetics.

EngW 5105. Advanced Poetry Writing. (4 cr. [max 8 cr.]) Advanced workshop for students with considerable experience in writing poetry. An opportunity to explore new poetic possibilities and to read widely in contemporary poetry and poetics.

EngW 5106. Advanced Literary Nonfiction Writing. (4 cr. [max 8 cr.]) Advanced workshop for graduate students with considerable experience in writing literary nonfiction.

EngW 5110. Topics in Advanced Fiction Writing. (4 cr. [max 16 cr.]) Special topics in fiction writing. Topics specified in Class Schedule.

EngW 5120. Topics in Advanced Poetry. (4 cr. [max 16 cr.]) Special topics in poetry writing. Topics specified in Class Schedule.

EngW 5201. Journal and Memoir Writing. (3 cr.) Using memory in writing, from brainstorming to drafting to revising, in several genres (poems, traditional memoir essays, fiction). How diverse cultures shape memory differently.

EngW 5202. Journal and Memoir Writing. (3 cr.) Using memory in writing, from brainstorming to drafting to revising, in several genres (poems, traditional memoir essays, fiction). How diverse cultures shape memory differently.

EngW 5204. Playwriting. (4 cr. [max 8 cr.]) Prereq–[Jr or sr], one EngW 300x course, [pr or sr]. Advanced workshop. Contact creative writing program for specific description.

EngW 5205. Screenwriting. (4 cr. Prereq–[Jr or sr], one EngW 300x course, [permission number available in creative writing office].) Advanced workshop. Contact creative writing program for specific description.

EngW 5570. Minnesota Writing Project Directed Studies. (1-3 cr. [max 3 cr.], 4-F only. Prereq–Participants must be members of the Minnesota Writing Project) Current theories of writing and writing pedagogy. Topics vary. Workshop.

EngW 5606. Literary Aspects of Journalism. (3 cr; A-F only. §Jour 5606W) Literary aspects of journalism as exemplified in and influenced by works of English/American writers past/present. Lectures, discussions, weekly papers.

EngW 5993. Directed Study in Writing. (1-4 cr. [max 18 cr.]) Prereq–R, LJ. Projects in writing poetry, fiction, drama, and nonfiction, or study of ways to improve writing.


EngW 8110. Seminar: Writing of Fiction. (4 cr. [max 16 cr.]) Focuses on full-length book (e.g., novel, short story collection). Assignments in common. Individual project.

EngW 8130. Seminar: Writing of Literary Nonfiction. (4 cr. [max 8 cr.]) Advanced workshop. Assignments in common and individual projects.

EngW 8150. Poetry: Manuscript Preparation. (4 cr. [max 8 cr.]) Prereq–Creative writing MFA student. Students work on creative project.

EngW 8160. Manuscript Preparation: Fiction and Nonfiction. (4 cr. [max 8 cr.]) Prereq–Creative writing MFA student. Students work on their creative project.

EngW 8170. Mixed Genre: Manuscript Preparation. (4 cr. Prereq–Creative Writing MFA student) Students work on their creative project.

EngW 8310. Topics in Creative Writing. (4 cr. [max 8 cr.]) Prereq–[English or creative writing] grad major) Special topics in fiction, literary nonfiction, poetry. Topics specified in Class Schedule.

EngW 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

EngW 8990. MFA Creative Thesis. (2-4 cr. [max 48 cr.]) Prereq–EngW 8140, EngW 8150, 8160, creative writing MFA student. #) For students working on their creative project.

English: Language (EngL)

Department of English Language and Literature

College of Liberal Arts

EngL 5001. Introduction to Methods in Literary Studies. (3 cr. Prereq–Grad or #) Endo/methods of literary research, including professional literary criticism, analytical bibliography, and textual criticism.

EngL 5002. Introduction to Literary and Cultural Theory. (3 cr. Prereq–Grad or #) Approaches to practical/theoretical problems of literary history/gener.

EngL 5030. Readings in Drama. (3 cr. [max 9 cr.]) Prereq–Grad student or # Wide reading in literature of a given period or subject. Prepares students for work in other courses/seminars. Relevant scholarship/criticism. Topics specified in Class Schedule.

EngL 5090. Readings in Special Subjects. (3-4 cr. [max 9 cr.]) §§EngL 5010. Prereq–Grad student or #) General background preparation for advanced study. Diverse selection of literatures written in English, usually bridging national cultures and time periods. Readings specified in Class Schedule.

EngL 5110. Readings in Middle English Literature and Culture. (3 cr. [max 9 cr.]) Prereq–Grad student or #) Wide reading in literature of period. Relevant scholarship/criticism. Topics vary. See Class Schedule.

EngL 5121. Readings in Early Modern Literature and Culture. (3 cr [max 9 cr.]) Prereq–Grad student or #) Topical readings in early modern poetry, prose, fiction, and drama. Attention to relevant scholarship or criticism. Preparation for work in other courses or seminars.

EngL 5140. Readings in 18th Century Literature and Culture. (3 cr. EngW 3141. Prereq–Grad student or #) Literature written in English, 1660-1798. Topics may include British literature of Reformation and 18th century, 18th-century American literature, a genre (e.g., 18th-century novel).

EngL 5150. Readings in 19th-Century Literature and Culture. (3 cr [max 9 cr.]) Prereq–Grad student or #) Topics may include British Romantic or Victorian literatures, American literature, important writers from a particular literary school, a genre (e.g., the novel).

EngL 5170. Readings in 20th-Century Literature and Culture. (3 cr [max 9 cr.]) Prereq–Grad student or #) Topics may include British, Irish, or American literatures, or topics involving literatures of two nations. Focuses either on a few important writers from a particular literary school or on a genre (e.g., drama). Topics specified in Class Schedule.


EngL 5200. Readings in American Literature. (3 cr. [max 9 cr.]) Prereq–Grad student or #) General background/preparation for advanced graduate study. Readings cover either a wide historical range (e.g., 19th century), a genre (e.g., the novel), or a major literary movement (e.g., Modernism).

EngL 5300. Readings in American Minority Literature. (3 cr. [max 9 cr.]) Prereq–Grad or #) Contextual readings of 19th/20th-century American minority writers. Topics specified in Class Schedule.

EngL 5400. Readings in Post-Colonial Literature. (3 cr [max 9 cr.]) Prereq–Grad student or #) Selected readings in post-colonial literature. Topics specified in Class Schedule.


EngL 5593. The Afro-American Novel. (3 cr. §Afro 5593) Contextual readings of 19th/20th-century black novelists, including Chesnut, Hurston, Wright, Baldwin, Petry, Morrison, and Reed.

EngL 5597. Harlem Renaissance. (3 cr §Afro 5597) Multidisciplinary review of Jazz Age’s Harlem Renaissance: literature, popular culture, visual arts, political journalism, major black/white figures.
Courses

Ent 5021. Insect Taxonomy and Phylogeny. (4 cr)

Ent 5041. Insect Ecology. (3 cr. Prereq—Biol 5041 or EEB 5122 or #)
Synthetic analysis of the causes of insect diversity and of fluctuations in insect abundance. Focus on abiotic, biotic, and evolutionary mechanisms influencing insect populations and communities.

Ent 5045. Insect Population Dynamics. (3 cr; A-F only. Prereq—3055 or #)

Ent 5051. Scientific Illustration of Insects. (3 cr)

Ent 5081. Insects, Aquatic Habitats, and Pollution. (3 cr; A-F only. Prereq—3055, Biol 3407, FW 2001, EEB 4601 or #)

Ent 5121. Applied Experimental Design. (4 cr. §Agro 5121. Prereq—Stat 5021 or equiv or #)
Principles of sampling methodologies, experimental design, and statistical analyses. Methods/procedures in generating scientific hypotheses. Organizing, initiating, conducting, and analyzing scientific experiments using experimental designs and statistical procedures. Offered with Agro 5121.

Ent 5211. Insect Pest Management. (3 cr. Prereq—3055 or #)
Prevention or suppression of injurious insects by integrating multiple control tactics, e.g., chemical, biological, cultural. Strategies to optimize the dynamic integration of control methodologies in context of their economic, environmental, and social consequences.

Ent 5241. Ecological Risk Assessment. (3 cr. Prereq—#)
Evaluating inherent potential impact of physical, chemical, biological agents on ecosystems. Identifying ecological stressors, assessing level of exposure, measuring ecological responses, communicating/managing risks. Class participation, two reaction papers, final exam, small-group project.

Ent 5275. Medical Entomology. (3 cr. Prereq—#)
Biology of arthropod vectors of human disease. Emphasizes disease transmission and host, vector, and pathogen interactions.

Ent 5272. Ecology of Agricultural Systems. (3 cr; A-F only. §Agro 5272. Prereq—[D/D or above] course in [Agro or AnSc or Hort], [D/D or above] course in [Ent or Pita or Soil] or #)
Ecological approach to problems in agricultural systems. Formal methodologies of systems inquiry are developed/applied.

Ent 5341. Biological Control of Insects and Weeds. (3-4 cr [max 4 cr]; A-F only. Prereq—3001, Biol 1009, EEB 3001 or grad)
Biological control of arthropod pests and weeds. Analysis of relevant ecological theory and case studies; biological control agents. Lab includes natural enemy identification, short experiments, and computer exercises.

Ent 5351. Insect Pathology. (2 cr. Prereq—5011)

Ent 5361. Aquatic Insects. (4 cr; A-F only. Prereq—#)
Taxonomy, natural history of aquatic insects including their importance in aquatic ecology, water resource management, recreation, and conservation. Emphasizes family-level identification of immatures/ adults. Field trips scheduled to local aquatic habitats. A collection is required.

Ent 5371. Principles of Systematics. (3 cr. Prereq—#; offered alt yrs)
Theoretical/practical procedures of biological systematics. Phylogeny reconstruction, including computer assisted analyses, morphological/molecular approaches, species concepts, speciation, comparative methods, classification, historical biogeography, nomenclature. Use/value of museums.

Ent 5481. Invertebrate Neurobiology. (2-3 cr [max 3 cr]. §NSc 5481)
Fundamental principles/concepts underlying cellular bases of behavior/systems neuroscience. Particular invertebrate preparations.

Ent 5900. Basic Entomology. (1-6 cr [max 6 cr]. Prereq—#)
For graduate students who need to make up certain deficiencies in their biological science background.

Ent 5910. Special Problems in Entomology. (1-6 cr [max 10 cr]. Prereq—#)
Individual field, lab, or library studies in various aspects of entomology.

Ent 5920. Special Lectures in Entomology. (1-3 cr [max 3 cr])
Lectures or labs in special fields of entomological research. Given by visiting scholar or regular staff member.

Ent 8006. Supervised Laboratory or Extension Teaching Experience. (1-3 cr [max 3 cr]. A-F only. Prereq—3055 or equiv or #)
Training/experience conducting lab or extension based educational activities in Entomology. Students select a faculty member to serve as their sponsor, and develop lecture outlines or instructional aids such as Web sites, Web-based training sites, print materials, demonstration aids, and demonstration projects. Students prepare/conduct lab or extension presentations. Overviews of Web-based instructional aids.

Ent 8041. Advanced Insect Genetics. (2 cr. Prereq—5011, basic genetics course or #; offered alt yrs)
Molecular genetic techniques and their applications. Emphasizes insect species other than Drosophila. Application of genetic techniques to physiological processes.

Ent 8051. Toxicology. (2 cr. Prereq—[5011, organic, inorganic chem courses, biochem course] or #)
Chemistry, mode of action of conventional insecticides. Insect growth regulators, microbial pesticides. Transgenic viruses, genetically modified plants. Offered alternate years.

Ent 8061. Scientific Communication and Ethics. (1 cr; S-N only)
Students develop/use critical elements of scientific communication, within an ethical framework. Elements in writing scientific manuscripts and research proposals. Oral communication for scientific, outreach, and classroom presentations.

Ent 8200. Colloquium in Social Insects. (1-3 cr [max 3 cr]. Prereq—3020 or 3260)
Current research on bees, wasps, ants, and termites. Student critiques and research reports.

Ent 8210. Colloquium in Insect Evolution. (1-3 cr [max 3 cr]. Prereq—5371 or #)
Research issues in systematics and evolution. Comparative biology, biogeography, and molecular evolution. Students may re-enroll as topics alternate. Students critique papers from primary literature.

Ent 8240. Colloquium in Insect Ecology. (1-2 cr [max 2 cr]. Prereq—5041 or 5405 or #)
Advanced topics.

Ent 8300. Graduate Seminar. (1 cr; S-N only. Prereq—#)
Oral and written reports on and discussion by students of selected topics from current literature.

Ent 8333. FTE: Master’s. (1 cr. Prereq—Master’s student, adviser and DGS consent)

Ent 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)

Ent 8594. Research in Entomology. (1-16 cr [max 36 cr]. S-N only)
Directed research.

Ent 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

Ent 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq—Max 18 cr per semester or summer; 10 cr total required [Plan A only])

Ent 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq—Max 18 cr per semester or summer; 24 cr required)

Environment and Natural Resources (ENR)

College of Natural Resources

ENR 5000. Colloquium: Environment and Natural Resources. (1 cr; max 6 cr. A-F only. §ENR 3000)
Lectures from experts, readings, discussions of current environmental topics/issues. Topics vary, see Class Schedule.

ENR 5001. Treaty Rights and Natural Resources. (3 cr; A-F only. §ENR 3001. Prereq—Grad student or #)
Relocating, class discussion about treaty rights reserved by indigenous Americans with respect to use of natural resources. Emphasizes Midwest issues. Web-assisted course.

ENR 5002. Colloquium: Restoration of Stream Ecosystems. (1 cr)
Key concepts/techniques. Overview of stream habitat restoration. Relationship of restoration to natural stream systems, planning, research, watershed groups, interagency coordination, and management decision process.

ENR 5019. Business, Natural Environment, and Global Economy. (2 cr)
Business strategies that affect natural environment. Ways business strategies/practices can produce win-win outcomes for the environment and business.

ENR 5021. Ecological Vegetation Management: a Consulting Approach. (3 cr. §ENR 3021. Prereq—Grad student or #)
Application of ecological concepts such as succession/competition to ecosystems under management. Wetlands, riparian zones, urban interfaces, agriculture, agroforestry, Northern/boreal conifer, hardwood forests, grasslands (prairie). Management objectives, methods, impacts. Evaluating practices for sustainability. Social issues, Regional (Great Lakes area), national, global case studies.

ENR 5031. Applied Global Positioning Systems for Geographic Information Systems. (3 cr; A-F only. §ENR 3031. Prereq—Grad student or #)
GIS.

ENR 5035. Advanced Topics in Geographic Information Systems. (2 cr. Prereq—§ENR 3035. Prereq—Grad student or #)
Geographic Information Systems.

ENR 5038. Advanced Topics in Geographic Information Systems. (2 cr. Prereq—§ENR 3038. Prereq—Grad student or #)
Geographic Information Systems.

ENR 5050. Advanced Topics in Geographic Information Systems. (2 cr. Prereq—§ENR 5050. Prereq—Grad student or #)
Geographic Information Systems.
ENR 5061. Water Quality and Natural Resources. (3 cr. §ENR 4001W. Prerequisite: Grad student or #) Issues, parameters, and decision making for managing surface/groundwater resources in Minnesota and globally. Biophysical/human side of water management. Wetlands, exotic species, heavy metal deposition. Cultural, political, and societal dimensions. Case studies, discussions, problem-solving, debates, projects.

ENR 5101. Conservation of Plant Biodiversity. (3 cr. A-F only. §ENR 3101. Prerequisite—Grad student or #) Introduction to principles underlying assessment/conservation of plant biodiversity at individual, population, and community levels. Case studies in management of biodiversity to restore or maintain ecosystem function. Genetics, timber harvesting, invasive species, plant reproduction.


ENR 5195. Problem Solving and Planning in Natural Resources. (4 cr. A-F only. §ENR 4195W. Prerequisite—Grad student or #) Applying problem solving tools/skills in policy, planning, and managerial situations. Students work with ‘real world’ client to produce publishable technical report, present results in professional public forum.

ENR 5202. Environmental Conflict Management, Leadership, and Planning. (3 cr. A-F only. §ENR 3202W. Prerequisite—Grad or #) Negotiation of natural resource management issues. Use of collaborative planning. Case study approach to conflict management, strategic planning, and building leadership qualities. Emphasizes analytical concepts, techniques, and skills.

ENR 5207. Emerging Issues in Tropical Agriculture and Forestry: Costa Rica. (3 cr. §ENR 3207. Prerequisite—Grad student, #) Experiential learning through field trips. From conventional to organic bird-friendly coffee production/marketing. Sustainable management of high/low-land tropical forests and of biodiversity. Lectures, seminars, labs, field work, written project. Offered through CATIE/UofM.

ENR 5211. Survey, Measurement, and Modeling for Environmental Analysis. (3 cr. §ENR 3211. Prerequisite—Grad student or #) Introduction to survey, measurement, and modeling concepts/methods for study of natural resources and environmental issues. Emphasizes survey design for data collection, estimation, and analysis for issues encompassing land, water, air, vegetation, animal, soil, and human/social variables.

ENR 5241. Natural Resource and Environmental Policy: History, Creation, and Implementation. (3 cr. §ENR 3241W. Prerequisite—Grad student or #) Basic concepts of political/administrative processes important to natural resource policy and program development. Case study approach to policy/legislative process, participants in policy development, and public programs. Federal/state laws/regulations, international issues.

ENR 5245. Sustainable Land Use Planning and Policy. (3 cr. A-F only §ENR 3245. Prerequisite—Grad student or #) Overview of policies that affect recreation at local, state, and federal levels. Landscape-level planning. Collaborative relationships as means to implement sustainable natural/social policy. Class project involving all aspects of implementing recreation policy, from public meetings to hands-on evaluation of options.

ENR 5251. Natural Resources in Sustainable International Development. (3 cr. A-F only. §ENR 2521, LAS 3251. Prerequisite—Grad student or #) International perspectives on resource use in developing countries. Integration of natural resource issues with social, economic, and policy considerations. Agriculture, forestry, agroforestry, non-timber forest products, water resources, certification, development issues. Latin American case studies.


ENR 5295. GIS in Environmental Science and Management. (4 cr. A-F only. §ENR 4295W. Prerequisite—Grad student or #) Application of spatial data inventory/analysis in complex environmental planning problems. Spatial data collection. Database development methods, including GPS, DGL, TIGER, NWI data, and spatial analysis. Topics identified by non-University partners.

ENR 5480. Topics in Natural Resources. (1-4 cr max 6) Prerequisite—Sear or grad student) Lectures by visiting scholar or regular staff member. Topics specified in Class Schedule.

ENR 5482. Biosafety Science and Policy. (3 cr) Science/policy for governing environmental/health safety of genetic engineering through Minnesota, national, and international cases.

ENR 5501. Biological Collections: Curation and Management. (1 cr. Prerequisite—One [gen biology or intro to natural resources] course or #) Roles/value of biology collections in natural history museums. Conservation of biodiversity record. Students participate in various hands-on curatorial activities. Lectures, tours.

ENR 5575. Wetlands Conservation. (3 cr. §ENR 3575. Prerequisite—Grad or grad student or #) Freshwater wetland classification, wetland biota, current/historic status of wetlands, value of wetlands. National, regional, Minnesota wetlands conservation strategies. Ecological principles used in wetland management.

ENR 5603. Environmental Life Cycle Analysis. (3 cr. Prerequisite—Math 1142 or [Math 1271, Math 1282], [Econ 1101 or 1101)] or #) Concepts, major issues relating to inventory and subsequent analysis of production systems. Production system from holistic point of view, using term commonly used in industrial ecology: “the metabolic system.”

ENR 5604. Environmental Management Systems. (3 cr. §ENR 3604) Environmental problems such as climate change, ozone depletion, and loss of biodiversity.


ENR 5606. Minimizing Industrial Emissions. (3 cr. §ENR 3606. Prerequisite—Chem 1011 or #) Fundamental waste streams and pollution control technologies in natural resource conversion.

ENR 5607. Industrial Biotechnology and the Environment. (3 cr. §ENR 4607. Prerequisite—Biol 2011, grad student) Biotechnology pertaining to biobased products development and their environmental impact.

ENR 5703. Agroforestry in Watershed Management. (3 cr. §ENR 3703. Prerequisite—Grad student or #) Biological, physical, and environmental attributes of agroforestry as pertains to watershed management. Coupling production with watershed protection benefits. Implications for policy, economics, and human dimensions in sustainable development. Examples/case studies from North America and developing countries.


Environmental Science (ES)

Department of Soil, Water, and Climate

College of Agricultural, Food and Environmental Sciences

ES 5211. Environmental Biophysics and Ecology. (3 cr. A-F only. Prerequisite—[Biol 1009 or equiv, Math 1271, Phys 1101, [upper div or grad student]) or #) Basic concepts of environmental variables such as temperature, humidity, wind, and radiation. Mechanics of heat/mass transfer between a living organism and its surrounding environment. Set of practical examples to integrate concepts and transport processes.


ES 5555. Wetland Soils. (3 cr. A-F only, §SOL 5555. Prerequisite—1215 or 2125 or equiv or §4511 recommended) Morphology, chemistry, hydrology, formation of mineral/organic soils in wet environments. Soil morphological indices of wetland conditions, analytical techniques of identifying hydric soils for wetland delineations. Peatlands. Wetland benefits, preservation, regulation, mitigation. Field trips, lab, field hydric soil delineation project.


Experimental and Clinical Pharmacology (ECP)

College of Pharmacy

ECP 5610. Pharmacoepidemiology. (2 cr. Prerequisite—PubH 5320, PubH 5330 or #) Application of epidemiological principles to study, use, and beneficial/adverse outcomes of drugs in human populations.
Courses

ECP 5620. Drug Metabolism andDisposition. (3 cr; A-F only. Prereq—Grad student or #) Oxidative/conjugative enzymes systems involved in human drug metabolism/disposition. Various in vitro models used to evaluate drug metabolism or chemical entities, process of each. Factors involved in conducting in vivo studies. Components used to predict in vivo drug disposition from in vivo studies.

ECP 8100. Seminar. (1 cr [max 8 cr]. Prereq—SACP grad major in ECP track or #) Selected topics in experimental and clinical pharmacology.

ECP 8200. Research Problems. (1-8 cr [max 16 cr]. Prereq—SACP grad major [ECP track or #]) Individually designed research experience directed at contemporary problems related to drug use.

ECP 8210. Clinical Therapeutics. (3 cr. Prereq—SACP grad major in ECP track or #) Topics in clinical pharmacology that illustrate continuum of pathophysiology of a disease state, its contemporary treatment, problems or controversial issues with treatment approaches, strategies to advance therapy. Lectures, readings.

ECP 8220. Experimental and Clinical Pharmacology. (3 cr. Prereq—SACP grad major [ECP track or #]) Theory of advanced methodologies, applications, and evaluation techniques used to determine efficacy/toxicity of new drug therapies. Techniques for collecting/evaluating data.

ECP 8290. Clinical Clerkship. (2 cr. Prereq—Grad SACP major in ECP track or #) Supervised study of pharmaceutical services at Fairview-University Medical Center or affiliated institutions.

ECP 8400. Pharmacometrics. (3 cr. Prereq—SACP grad major in ECP track or #) Theory/application of contemporary methods for analysis of concentration-time data and exposure-response relationships.

ECP 8410. Population Pharmacokinetic Modeling. (2 cr; A-F only) Theoretical background for using mixed effects model in population analysis. Building fixed/random effects into a pharmacostatistical model. Project allows students to become familiar with a contemporary population pharmacokinetic analysis program.

ECP 8420. Clinical Trial Simulation. (2 cr. Prereq—SACP grad major in ECP track or #) Theory/application of contemporary methods of using simulations to design more efficient/informative clinical trials.

ECP 8900. Advanced Topics in Experimental and Clinical Pharmacology. (1-4 cr [max 8 cr]. Prereq—SACP grad major in ECP track or #) Topic varies depending on faculty teaching course.

ECP 8992. Directed Readings in Experimental and Clinical Pharmacology. (1-2 cr [max 4 cr])

ECP 8993. Directed Study in Experimental and Clinical Pharmacology. (1-4 cr [max 4 cr])

Family Education (FE)

Department of Work, Community, and Family Education

College of Education and Human Development

FE 5200. Special Topics in Family Education. (1-4 cr [max 20 cr]) Topics either not covered in available courses or not covered in sufficient breadth/depth to meet student needs/interests. Topics vary.

FE 8900. Family Education Colloquium. (1-4 cr [max 4 cr]; S-N only) In-depth discussion about current issues not covered or covered as thoroughly in available courses. For family education graduate students, faculty, and community professionals.

FE 8994. Directed Research in Family Education. (1-6 cr [max 6 cr]; A-F only. Prereq—Family ed student doing Plan B research)

Family Medicine and Community Health (FMCH)

Medical School

FMCH 5201. Clinical Family Medicine. (12 cr [max 108 cr]; S-N only. Prereq—family practice resident or #) Supervised care for patients of all ages on a continuous, primary, preventive, and general diagnostic basis. Diagnosis, methods of treatment, and problem-solving devices for benefit of patient and family, emphasizing health hazard appraisal. New and refined methods of recording, documentation, and retrieval of clinical data.

FMCH 5345. Curriculum Design and Teaching Strategies for Medical Education I. (3 cr; A-F only. Prereq—§5346, #) Identifying/developing course goals. Developing course, teacher, learner evaluations. Students must also take §5346, which follows immediately after §5345.

FMCH 5346. Curriculum Design and Teaching Strategies for Medical Education II. (1 cr; A-F only. Prereq—§5345, #) Taken with §5345. Practicum of lecture, demonstration, small-group discussion, clinical teaching, and computer-assisted instruction. Academic ethics, policies, copyright issues, tenure, academic freedom, problem-based learning.

FMCH 5564. Family Practice Seminar. (1 cr [max 9 cr]. Prereq—MD or DO degree) Knowledge, skills, and attitudes in biomedical and behavioral sciences that form foundation for academic discipline of family medicine; medical decision making, common problems and procedures, family theory and assessment, clinical pharmacy, human sexuality.

FMCH 5565. Principles of Geriatrics I. (1 cr [max 5 cr]. Prereq—Medical School or dental school or GNP School graduate) First in two-course sequence. Survey of major topics in geriatric medicine. Epidemiology, etiology, diagnosis, and treatment of major geriatric syndromes and illnesses.

FMCH 5561. Principles of Geriatrics II. (1 cr [max 5 cr]. Prereq—Medical School or dental school or GNP School graduate) Second in two-course sequence. Survey of major topics in geriatric medicine. Epidemiology, etiology, diagnosis, and treatment of major geriatric syndromes and illnesses.

FMCH 5960. Clinical Issues in Human Sexuality. (2 cr. Prereq—Enrollment in health sci grad programs in CSPH, Psych, PubH, SW or FSoS #) Assessment and treatment techniques pertaining to common sexual problems.

FMCH 5955. Directed Study. (1-10 cr [max 10 cr]. Prereq—#; qualified students may arrange for work on a tutorial basis) Studies on special topics as arranged between student and faculty.

FMCH 5960. Basic Research Methods in Family Practice. (3 cr; A-F only. Prereq—Post-MD fellow, #) History and current status of research in family medicine, research resources available in the department. How to ask/describe a research question, conduct a literature search, select a research methodology, meet federal requirements for protection of human subjects in research, critically read the medical literature and facilitate its discussion, and prepare a grant proposal.

FMCH 5901. Family Medicine Fellows and Junior Faculty Integration Seminar. (1-9 cr [max 9 cr]; A-F only. Prereq—Family medicine faculty or fellow, #) Preparation for roles in academia. Achieving success as a clinical investigator. Funding opportunities, authorship, collaboration, publishing, grant preparation.

Family Social Science (FSoS)

Department of Family Social Science

College of Human Ecology

FSoS 5014. Quantitative Family Research Methods I. (3 cr. Prereq—[[2105 or equiv], one statistics course or #) Family research methods, issues associated with multiple levels of analysis. Conducting family-focused data analyses using basic/intermediate methods (through ANOVA and multiple regression), including power analysis. Ethical issues involved in family research such as IRB/HIPAA regulations.

FSoS 5015. Family Research Laboratory. (1 cr; S-N only. Prereq—statistics course or #) Application of basic family research methods into experiential learning using statistical software. Analyses that correspond with problem situations in 5014 and that involve secondary data analyses. Using statistical software for basic family research. Preparation to work with quantitative family data sets.

FSoS 5032. Family Systems Theories and Interventions. (3 cr. Prereq—#) Systemic/cybernetic frameworks as they apply to diverse families. Thinking systemically about families across multiple ecological systems. How to identify crucial epidemiological issues in theoretical/applied areas of family science. Theoretical frameworks. Experiential role-playing, guest presenters, videos, field work, research projects, reading clubs, class discussion.


FSoS 5193. Directed Study in Family Social Science. (1-6 cr [max 6 cr]. Prereq—FSoS or grad student in related field)


FSoS 5429. Counseling Skills Practicum I. (3 cr. FSoS 3429) Basic counseling skills. Counselor needs/motivations, non-verbal communication, basic/advanced empathy, identifying strengths, maintaining focus, challenging discrepancies, use of self. Emphasizes building from client strengths, learning through role-playing.

Courses

FSoS 5432. Chemical Abuse and Families: An Overview. (3 cr)

FSoS 8001. Conceptual Frameworks in the Family. (3 cr)
PreReq-Family course or #)

Major theoretical models about families, emphasizing sociohistorical context.

FSoS 8003. Current Issues in Family Science. (3 cr)
Content, theories, and methodologies in family science. Emphasizes findings of recent/emerging areas of research. Readings covering a wide range of topics. Critical examination of research studies. Targeted class discussion.

FSoS 8005. Multicultural Issues in Family Social Science. (3 cr)

FSoS 8007. Ethical Issues and Moral Dilemmas in Family Life. (3 cr)
Multidisciplinary perspectives of ethics, social norms, family law, family policy, family economics, and family decision-making. Focuses on differing perspectives of individuals representing various ethnicities, socio-economic levels, religions, and sexual orientations.

FSoS 8013. Qualitative Family Research Methods. (3 cr)
Approaches to qualitative family research evaluation. Phenomenological, feminist, grounded theory, content analytic, ethnomet hodological, ethnographic, program evaluation. Theory, research examples, student projects.

FSoS 8014. Quantitative Family Research Methods II. (3 cr PreReq-[5014 or equiv], [8001 or equiv], two stat courses) or #)
Quantitative research process, from developing a research question to putting findings to use. A major course project (development of a federally fundable research grant application) is basis for class discussion. Focuses on family research. Applying research knowledge to study of families.

FSoS 8031. Family of Origin. (3 cr; S-N only. PreReq-PREFERENCE given to marriage and family therapy students) In-depth study of each student’s family of origin in a group of other students and a clinical faculty therapy supervisor.

FSoS 8033. Problems in Families. (3 cr. PreReq-[8032 or equiv], #)
Family therapy assessment/treatment approaches to problems such as depression, alcoholism, and sexual abuse, and to challenges of varying family structures, such as single-parent/remarried families.

FSoS 8034. Marriage and Family Therapy Supervision. (3 cr. PreReq-[5032 or 8032 or #)
Theories of supervision, structures for supervision, methods of supervision, evaluation process, legal/ethical issues. Therapist-client-supervisor relationships, potential problems, contextual issues.

FSoS 8035. Assessment of Couples and Families. (3 cr; A-F only, PreReq-[8014 or equiv or #)

FSoS 8036. Couple and Family Therapy Research. (3 cr; A-F only. PreReq-[8013, 8014]
Strengths and limitations of current couple and family outcome research; methodological approaches, including qualitative and quantitative.

FSoS 8037. Ethical, Legal, and Professional Issues in Mental Health Practice: Issues with Couples and Families. (2-10 cr [max 10 cr]; A-F only. PreReq-[5002, practicum or internship exp] or [grad student in cooperating mental health practice prog who has completed 1 course on therapy with children])
Boundaries and triangles, gender inequities, family law, confidentiality and reporting requirements, dual roles, client diversity, and value clashes.

FSoS 8038. Clinical Interventions for Couples. (3 cr; A-F only. PreReq-8032 or equiv or #)
Interventions into problems faced by couples at various ages and stages of their relationship. Developing and implementing effective strategies for problem solving, relationship maintenance, and partner growth, including integration of sex therapy into ongoing couple therapy.

FSoS 8043. Family Therapy Development: A Systemic Perspective. (3 cr. PreReq-8001 or equiv or #, FSoS PhD student beyond 1st yr)
Concepts and principles of systems and ecosystems and their applications in family science; emphasizes theoretical integration and development of research models with appropriate methodologies.

FSoS 8047. Integrative Research Seminar. (3 cr. PreReq–8011 or equiv, 8013 or equiv, 8014 or equiv)
For advanced doctoral students primarily in family social science who are working on independent research projects. Giving and receiving of constructive criticism and support in integrating theories, methods, and applications in order to create a totality that is logically coherent and conceptually and methodologically sound.

FSoS 8101. Family Stress, Coping, and Adaptation. (3 cr. PreReq-8001 or equiv, research methods course)
Helping families become more resilient to stress by decreasing vulnerability to crises and traumatic stress disorders. Students develop research or intervention proposal on family stress, coping, adaptation, crisis, trauma, or resilience.

FSoS 8102. Seminar in Gender Roles. (3 cr. PreReq-Two grad family courses or #)
Theory and research on gender roles in families. Gender issues in roles of mothers, fathers, marital partners, and same-sexpartners. Issues of race, ethnicity, and social class as they intersect with gender.

FSoS 8103. Family Decision Making. (3 cr. PreReq-Two grad family courses or #)
Analysis and assessment of methodological and theoretical approaches to studying problem-solving and decision-making processes of individuals and family groups.

FSoS 8104. Family Policy Seminar. (3 cr)
Distinguishing family policy research from other family research. Conceptual frameworks, methods, and roles family policy research can play in policy-making and knowledge-building processes.

FSoS 8105. Family Gerontology. (3 cr. PreReq-4154 or equiv or #)
Integrates gerontology and family studies; new lines of inquiry, qualitative and quantitative, into aging families. Family gerontological research, family relationships, family and long-term care institutions, theoretical frameworks and research methods, and research and interventions.

FSoS 8106. Seminar: Families From an Economic Perspective. (3 cr)

FSoS 8107. Family Values Research: Theories and Critical Methods. (3 cr. PreReq–8013 or equiv, 8014 or equiv or #, WCFE 8920 recommended)
Interdisciplinary seminar on critical modes of inquiry in the family domain that require designing studies using normative theories, emerging as values as units of observation, and solving practical problems by collaborative strategies designed to encourage change.

FSoS 8150. Topics in Family Social Science. (1-6 cr [max 6 cr]. PreReq–grad student or #)
Special seminars on timely topics suited to the needs of students.

FSoS 8160. Topics in Marriage and Family Therapy. (1-6 cr [max 6 cr]. PreReq–MFT grad student or #)
Special seminars on timely topics.

FSoS 8193. Directed Study in Family Social Science. (1-6 cr (max 12 cr). PreReq–Doctoral student in FSoS or related field)
Directed study.

FSoS 8200. Orientation for Family Social Science. (1 cr; S-N only. PreReq–#)

FSoS 8201. Teaching Family Courses in Higher Education I. (3 cr; S-N only. PreReq–8-12 grad course; teaching assistant exp recommended)
Students cooperatively plan, administer, and evaluate (with a graduate faculty supervisor) an undergraduate course. Improvement of teaching and evaluation methods, and conceptualization and presentation of research-based course in family studies.

FSoS 8202. Teaching Family Courses in Higher Education II. (3 cr; S-N only. PreReq–8201 or equiv)
Under faculty supervision, students teach an undergraduate course in family science for which they have appropriate academic preparation and professional experience.

FSoS 8275. Clinical Consultation with Couples and Families. (3 cr; S-N only. PreReq–#) required for grad FSoS majors in marriage and family therapy prog
Supervised students serve as a consultation group working with community clinicians and their clients, utilizing a one-way window and observation room; opportunities for cotherapy.

FSoS 8296. Family Therapy Practicum. (1-12 cr [max 12 cr]; S-N only. PreReq–8295 or equiv)
Clinical placement doing marriage and family therapy in a community setting.

FSoS 8296. Family Therapy Internship. (1-21 cr [max 21 cr]; S-N only. PreReq–8295, marriage and family therapy student)
Full-time clinical placement doing marriage and family therapy in a community setting.

FSoS 8297. Supervision of Supervision. (1-3 cr [max 12 cr]; S-N only. PreReq–MFT student, #)
Hands-on practicum to gain AAMFT-approved supervisor status.

FSoS 8333. FTE: Masters. (1 cr. PreReq–Master’s student, advisor and DGS consent)

FSoS 8444. FTE: Doctoral. (1 cr. PreReq–Doctoral student, advisor and DGS consent)

FSoS 8550. Advanced Topics in Family Social Science. (1-6 cr [max 6 cr]; A-F only. PreReq–FSoS PhD student)
Special seminars on topics suited to student needs.

FSoS 8560. Advanced Clinical Topics in Marriage and Family Therapy. (1-6 cr [max 6 cr]; A-F only. PreReq–FSoS PhD student or #)
Special advanced topics or seminars.

FSoS 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 6 cr]. PreReq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

FSoS 8757. Master’s Paper: Plan B Project. (1-6 cr [max 6 cr]. S-N only. PreReq–FSoS MA student)
Graduate faculty work with students on research for Plan B paper.

FSoS 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. PreReq–Max 18 cr per semester or summer; 10 or total required [Plan A only])

For definitions of course numbers, abbreviations, and symbols, see page 167.
Courses


FSOS 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

Finance (Fina)

Department of Finance

Curts L. Carlson School of Management

Fina 8801. Theory of Capital Markets. (4 cr. Prereq–Econ 8101, Econ 8102, business admin PhD student or #) Expected utility theory, discrete theory, continuous theory, theory of the term structure, measures of risk, portfolio choice, aggregation and separation, linear pricing.

Fina 8811. Corporate Finance. (4 cr. Prereq–Econ 8103, Econ 8104, business admin PhD student or #) Theoretical and empirical works in five major areas of corporate finance: capital structure, payout policy, mergers and corporate control, capital acquisition process, and corporate risk management. Theoretical frameworks are used to understand empirical evidence.

Fina 8821. Empirical Methods in Finance. (4 cr. Prereq–8801, business admin PhD student or #) Introduction to commonly used econometric methods in the empirical financial markets area. Econometric tests of linear pricing models, tests of market efficiency, event studies.

Fina 8892. Independent Study in Finance. (1-8 cr [max 16 cr]. Prereq–Business admin PhD student or #) Problems or developments of special interest to the student.

Fina 8894. Directed Research in Finance. (1-8 cr [max 16 cr]. Prereq–Business admin PhD student specializing in finance or #) Individualized directed research on a project of interest to the student, approved and advised by faculty.

Finnish (Fin)

College of Liberal Arts

Fin 5670. Topics in Finnish Studies. (3 cr [max 9 cr]) Interdisciplinary social science topics on Finnish people, culture, and society. Taught in English.

Fisheries and Wildlife (FW)

Department of Fisheries, Wildlife, and Conservation Biology

College of Natural Resources


FW 5051. Analysis of Populations. (3 cr. §EEB 5051. Prereq—Biol 1001 or Biol 1009, [FW 4001 or Stat 3011 or Stat 5021] or #) Factors involved in regulation, growth, general dynamics of populations. Data needed to describe populations, population growth, population models, regulatory mechanisms.

FW 5136. Ichthyology. (4 cr §FW 3136. Prereq—Grad student) Fish biology, adaptations to different environments and modes of living, and environmental relationships. Lab emphasizes anatomy and identification of Minnesota fishes.

FW 5411. Aquatic Toxicology. (3 cr. Prereq—Intro chem, intro envl, #) Pollution assessment approaches, biological effects, fate/flow of contaminants in aquatic systems, major types of pollutants.

FW 5455. Sustainable Aquaculture. (3 cr. Prereq—[Intro biology, intro chemistry or #]) How aquaculture affects the environment and human well-being in Minnesota and worldwide. Role of aquaculture as world’s fastest growing food sector and in hatcheries to support fisheries and rebuild endangered species. Organic aquaculture, other innovations.

FW 5571. Avian Conservation and Management. (3 cr. Prereq—EEB 4134 or grad or #) Current problems in avian conservation/management. Nongame, wetland, game birds.


FW 5625. Wildlife Handling and Immobilization for Research and Management. (2 cr; S-N only. Prereq—General biology, [grad student or vet med student or FW cr]) Practical techniques to maximize human/animal safety and encourage effective operations. Preparation procedures, legal responsibilities, capture drugs/delivery systems, safety measures, ethical issues, basic veterinary procedures for handling wildlife. Field course. Uses live animals.

FW 8200. Seminar. (1-4 cr [max 8 cr]; §S-N only) Oral and written student reports on selected topics from current literature in fisheries biology and management and wildlife. Lectures by and discussions with faculty and visiting specialists.

FW 8333. FTE: Masters’. (1 cr. Prereq—Masters’ student, adviser and DGS consent)

FW 8394. Research in Fisheries. (1-4 cr [max 4 cr]) Directed research.

FW 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)

FW 8448. Fishery Science. (3 cr. Prereq—Grad student [in fisheries or wildlife conserv or conserviol or ecology or #]) Applying ecological theory to study/manipulation of fish populations. Dynamics of growth, mortality, and yield of fish stocks. Field assessment methodology. Simulation applied to management problems. Web-assisted course. Students produce a publishable (print or electronic) project.

FW 8450. Data Analysis. (4 cr; A-F only. Prereq—Soxx statistics course) Advanced statistical methods are used to teach exploratory/analysis of univariate/multivariate data. Descriptive statistics, estimation and inference, regression and smoothing, multivariate techniques, resampling.

FW 8452. Conservation Biology. (3 cr; A-F only) Seminar examining population- system-level biophysical issues (genetics; demographic processes; community, ecosystem, and landscape scale interaction; restoration ecology; ex situ strategies for restoration and recovery) and societal issues (social, economic, cultural perspectives; sustainable development strategies; roles of institutions; international and U.S. policies).

FW 8459. Stream and River Ecology. (3 cr. Prereq—Limnology course or #) Structure/dynamics of running waters from ecosystem perspective. Historical perspective, basic hydrology/fluvial geomorphology, terrestrial-aquatic interactions, deterministic dynamics, metabolism, drift, trophic relations, biotic/abiotic interactions, ecosystem experiments and natural alterations, stability/succession, ecosystem dynamics in a watershed.

FW 8461. Advanced Topics in Fish Physiology. (1 cr. Prereq—Vertebrate physiology course or #) Lectures, discussion, current literature. Complements 5459.

FW 8462. Advanced Topics in Fish Behavior. (1 cr. Prereq—Vertebrate physiology course or #) Current literature. Complements 5459.

FW 8465. Fish Habitats and Restoration. (3 cr. Prereq—Intro ecology course or #) Mechanisms underlying physiology/behavior that shape fish community structure in specific north temperate habitats. Techniques and planning procedures for restoring lakesstreams.

FW 8494. Research in Wildlife. (1-4 cr [max 4 cr]. Prereq—#) Directed research.


FW 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

FW 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq—Max 18 cr per semester or summer; 10 cr total required [Plan A only])

FW 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq—Max 18 cr per semester or summer; 24 cr required)

Food Science and Nutrition (FScN)

Department of Food Science and Nutrition

College of Agricultural, Food and Environmental Sciences

FScN 5411. Food Biotechnology. (2 cr. Prereq—4121) Genetic tools as applied to food biotechnology. Improvement of microbes used in food production by modern biotechnological approaches. Discuss need for stringent regulation of modern biotechnology as well as ethical and legal issues.

FScN 5421. Introduction to Food Law. (3 cr. Prereq—1102) Analysis of the federal legal requirements affecting the production processing, packaging, marketing, and distribution of food and food products using case law studies and regulatory history.

FScN 5441. Introduction to New Product Development. (2 cr. Prereq—4111, 4331) Interactive course that introduces students to the principles of new product development, from identification and testing of new product concepts, through prototype testing, to basic process design using examples from industry.

FScN 5461. Food Packaging. (2 cr. Prereq—1102, 3102, Phys 1102 or Phys 1302) Materials, principles, and procedures of packaging as they apply to food products. Emphasis is on consumer products, but the principles also apply to bulk and institutional foods and ingredients.
and protective functions of antioxidants.

Chemistry of food lipid oxidation and rancidification, FScN 8336. Lipid Chemistry and Rancidity of Foods.


FScN 5531. Grains: Introduction to Cereal Chemistry and Technology. (2 cr. Prereq–Biol 1003, Chem 1022). Origins, structure, biochemistry, and cellular properties of major cereal grains as they relate to primary processing (milking) and secondary processing (production of cereal products).


FScN 5623. Regulation of Energy Balance. (2 cr. Prereq–5621 or 5291). Regulation of energy balance in humans, including regulation of food intake and of energy expenditure.


FScN 8310. General Seminar. (1 cr [max 2 cr]; §S-N only. Prereq–#). Presentations by faculty, graduate students, and outside speakers.


FScN 8320. Advanced Topics in Food Science. [1-3 cr [max 6 cr]] Recent research or special topics.

FScN 8330. Research Topics. (1 cr [max 6 cr]) Seminar in which faculty member or group of faculty/graduate students discuss research progress or review/discuss current research literature.

FScN 8331. Food Proteins. (3 cr. Prereq–4111, 4312). Basic protein biochemistry as applied to food systems and food processing. Emphasizes forces that determine protein structure. Techniques for isolation/characterization of food proteins. Protein structure function relationships in regard to handling/processing specific food protein systems (cereal, meat, dairy).

FScN 8333, FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

FScN 8334, Reaction Kinetics of Food Deterioration. (2 cr. Prereq–Chem 3501). Basis for use of applied chemical kinetics to deteriorative reactions occurring in processing and storage of foods and drugs. Systems include enzymatic reactions, lipid oxidation, nonenzymatic browning, acid base catalysis, and microbial growth and death. Application of these kinetics to study of accelerated shelf-life testing of foods, drugs, and biologics.


FScN 8381. Independent Study: Food Science. (1-4 cr [max 6 cr]) Includes written reports.

FScN 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

FScN 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

FScN 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

FScN 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

Forest Resources (FR)

Department of Forest Resources

College of Natural Resources

FScN 5104. Forest Ecology. (4 cr; A-F only. §FR 5104. [Biol 1001 or 1000], grad student) or #; 1 semester college chemistry recommended) Form/function of forests as ecological systems. Characteristics/dynamics of species, populations, communities, landscapes, and ecosystem processes. Examples applying ecology to forest management. Weekly discussions on research topics, exercises, current issues in forest resource management. Required weekend field trip.


FScN 5131. Geographical Information Systems (GIS) for Natural Resources. (4 cr; A-F only. §FR 5131. [Grad student] or #) Introduction to GIS. Focuses on natural resources. Data structures, sources, collection, and quality. Lab exercises introduce geodey, map projections, spatial analyses, and cartographic modeling.

FScN 5142. Tropical Forest Ecology. (3 cr [max 4 cr]. Prereq–Tropical ecology course) Ecological principles related to form, function, and development of wet/dry tropical forests at organismal, community, and ecosystem scales. Ecophysiology, succession, productivity, biodiversity, sustainability, agroforestry, social forestry, and management alternatives. Natural distribution of forest types. Causes, consequences, and extent of deforestation.


FR 5153. Forest and Wetland Hydrology. (3 cr. Prereq–[Basic hydrology course, upper div or grad student] or #) Topics, methods, and models in forest/wetland hydrology. Hydrologic role of forests, wetlands, and riparian systems in snowfall and rainfall regimes. How human activities such as deforestation, wetland drainage, and stream channel alterations impact hydrologic response of watersheds. Problem solving exercises to understand/quantify runoff and streamflow response from undisturbed/altered forest/ wetland watersheds.


FR 5203. Forest Fire and Disturbance Ecology. (3 cr; A-F only. §FR 3203. Prereq–[Grad student or #]. course fee) Ecology, history, management, and control of fire, wind, insect infestation, browsing, and other disturbances in forests. Disturbance regimes of boreal, northern hardwood, and other major forest types of North America. Influence of disturbance on wildlife habitat, urban/wildland interfaces, forest management, and stand/landscape dynamics. Guest speakers on fire organization, training, and operations. Two-day field trip.


FR 5228. Advanced Assessment and Modeling. (3 cr; A-F only. Prereq–3218, Math 1272, Stat 5021) Application of recently developed mathematics, computer science, and statistics methodologies to natural resource functioning, management, and use problems. Specific topics, software, and methodologies vary.

FR 5264. Advanced Forest Management Planning. (3 cr. Prereq–5471 or #) Applied models for forest planning to integrate forest resource conditions/uses. Stand-level management. Forest-wide/landscape-level planning. Regional timber supply management models and heuristic techniques as tools. Integrating sustainable timber production with desirable future conditions and spatial structure for biodiversity. Problems, case studies involving recent large-scale applications.

FR 5411. Managing Forest Ecosystems: Silviculture. (3 cr. FR 3411. Prereq–3612 or #) Management of forest ecosystems for sustaining ecological integrity, soil productivity, water quality, wildlife habitat, biological diversity, commodity production, recreation, etc. Silvics, forest dynamics, disturbances, regeneration, restoration, silvicultural systems. Ramifications of management choices. Weekend field trip.


FR 5431. Timber Harvesting and Road Planning. (2 cr. FR 3431. Prereq–Grad student or #) Forest operations. Terminology, engineering, equipment/harvesting system options, productivity/costs. Relationship to forest management and silviculture. Road planning, forest management guidelines. Mitigating potential impacts to soil/water resources. Environmental implications of method/equipment choices. Selling timber. Sale design, layout, and administration. Two all-day field trips.

FR 5471. Forest Planning and Management. (3 cr; A-F only. Prereq–3471. Prereq–Grad student or #) Processes/techniques for scheduling forest management. Goals of landowners, industry, government, and society. Issues/policies/regulations that influence management. Predicting outcomes, financial analysis, regulations, mathematical models, linear programming, economic analysis. Landscape-level management, historical range of variability, wildlife management, carbon sequestration, resource monitoring, certification, adaptive management.

FR 5480. Topics in Natural Resources. (1-3 cr. FR 3480. Prereq–#) Lectures in special fields of natural resources given by visiting scholars or regular staff members. Topics specified in Class Schedule.

FR 5501. Urban Forest Management: Managing Greenspaces for People. (3 cr. FR 4501. Prereq–Grad student or #) Management concepts for green infrastructure of cities, towns, and communities. Urban forest as social/biological resource. Emphasizes management of urban forest ecosystem to maximize benefits. Tree selection, risk assessment, cost-benefit analysis, landscape planning, values, perceptions. How urban forestry can be a tool to improve community infrastructure.


FR 5615. Field Remote Sensing and Resource Survey. (2 cr. A-F only. Prereq–3281, 3262) Field applications of remote sensing, sampling/measurement methods to inventory/mapping of forest and other natural resources. Offered at Cloquet Forestry Center.


FR 5700. Colloquium in Natural Resources. (1-3 cr [max 3 cr. Prereq–#]) Colloquium in specialized topics in natural resources.


FR 8102. Research Problems: Forest-Tree Genetics. (1-5 cr [max 5 cr]) Independent research under faculty guidance.

FR 8103. Research Problems: Forest Hydrology. (1-5 cr [max 5 cr]) Independent research under faculty guidance.


FR 8105. Research Problems: Silviculture. (1-5 cr [max 5 cr]) Independent research under faculty guidance.


FR 8107. Seminar: Forest Resources. (1 cr) Assigned topics, problem analyses, and research reports.

FR 8201. Research Problems: Forest Economics. (1-5 cr [max 5 cr]) Independent research under faculty guidance.

FR 8202. Research Problems: Forest Biometry and Measurements. (1-5 cr [max 5 cr]) Independent research under faculty guidance.

FR 8203. Research Problems: Forest Recreation. (1-5 cr [max 5 cr]) Independent research under faculty guidance.

FR 8204. Research Problems: Forest Policy. (1-5 cr [max 10 cr]) Independent research under faculty guidance.

FR 8205. Research Problems: Spatial Data Analysis. (1-5 cr [max 10 cr. Prereq–#]) Independent research under faculty guidance.

FR 8206. Research Problems: Forest Management. (1-5 cr [max 5 cr]) Independent research under faculty guidance.


FR 8208. Research Problems: Environmental Learning and Leadership. (1-5 cr [max 5 cr. Prereq–#]) Independent research under faculty guidance.

French (Fren)

Department of French and Italian

College of Liberal Arts

Fren 5256. Promenades Poétiques: The Subject in Motion. (3 cr [max 9 cr. Prereq–3111 or above]) The search for the subject in poetry and poetic prose as revealed through the motif of the “promenade” and experimentation with literary forms.

Fren 5260. The Returns of Tragedy. (3 cr [max 9 cr. Prereq–3111 or above]) Tragedy as dramatic form in relation to social order, myth and history, and theatre.

Fren 5270. “To Change or not to Change?”, Speculations on (Post) Modern French Texts. (3 cr [max 9 cr. Prereq–3111) The meaning and purpose of the notion of “change” in French novels. Explore how a multiplicity of causes produces major changes in an individual’s personal and public life. The notion of change as it relates to financial and intellectual speculation.

Fren 5301. Critical Issues in French Studies. (3 cr. Prereq–Grad or #) Introduces the methods of interpretation and critical debates that have shaped and continue to define the discipline of French studies. Provides a practical introduction to graduate-level literary research.

Fren 5350. Topics in Literature and Culture. (3 cr [max 12 cr. Prereq–3101 or equiv] Problem, period, author, or topic of interest. See Class Schedule.


Fren 5501. Structure of French: Phonology. (3 cr. §Fren 3501. Prereq–[Ling 3001 or Ling 5001], grad student) Advanced study of sound system of contemporary French.

Fren 5502. Structure of French: Morphology and Syntax. (3 cr. §Fren 3502. Prereq–5501 or #) Linguistic study of contemporary French word forms (inflectional and derivational morphology); introduction to French syntax (linguistic study of grammar) and characteristic syntactic constructions.

Fren 5531. Sociolinguistics of French. (3 cr. §Fren 3531. Prereq–§ 3531; Ling 3001 or 5001, grad) Explores variation in the use of French associated with factors such as medium (oral/written), style (formal/informal), region, social and economic groups.

Fren 5541. Oral Discourse of French. (3 cr. Prereq–3015, grad student; Ling 5001 recommended) Nature of contemporary spoken French discourse. Focuses on spontaneous, multi-speaker discourse. Readings include examples of various linguistic approaches to such discourse. Emphasizes syntactic analysis. Phonological/lexical particularities. ‘Macro’ level analyses such as discourse analysis and conversation analysis.

Fren 5995. Directed Teaching. (1-6 cr [max 24 cr.; S-N only. Prereq–#]) Directed teaching.


Fren 8111. Introduction to Old French. (3 cr) Studies in medieval French: instruction in reading Old French, sources of bibliography, and topics in medieval studies (language and literature). Taught in French.
Courses

Fren 8114. Old Provençal Language and Literature. (3 cr) Language and literature of Old Occitan (Old Provençal), chiefly troubadours’ poems. Some language instruction, reading of poems and other works, and consideration of nature and origins of “courtey love.” Knowledge of French, Spanish, or Italian desirable. Taught in English.

Fren 8120. Topics in Later Medieval French Literature. (3 cr [max 9 cr]; Prereq—8110 or #) Problems presented by texts written in France ca. 1300-1500. Evolution of Middle French language. Specific topics/texts vary. Taught in French.

Fren 8210. Narrative, History, and Memory: Topics. (3 cr [max 9 cr]) Significance of narrative paradigm in literature, history, and cultural memory. Specific topics/texts treated vary. Taught in French.


Fren 8250. Critical Issues: Poetry. (3 cr [max 12 cr]) Significant critical issues relating to poetic writing of selected authors or periods.

Fren 8260. Critical Issues: Theatre. (3 cr [max 12 cr]) Significant critical issues relating to dramatic writing of selected authors or periods.

Fren 8270. Critical Issues: Prose. (3 cr [max 12 cr]) Significant critical issues relating to prose writing of selected authors or periods.

Fren 8271. The Novel of the Ancien Régime. (3 cr) Considers major novels of the 17th and 18th centuries in connection with developments in such areas as esthetic theory, intellectual currents, social transformations, and reading practices.

Fren 8290. Critical Issues: Perspectives on an Author. (3 cr [max 12 cr]) In-depth study of major author’s writing, critical tradition this writing has occasioned, and theoretical issues upon which this writing may be brought to bear.

Fren 8291. Jean Genet’s Writings and French Institutions. (3 cr) Jean Genet’s writings at the crossroads of several disciplines (politics, psychoanalysis, religion, and law). Genet’s novels, dramas, and political essays explore the possibilities of institutional settings and strategies imagined by individuals to short-circuit their impact.

Fren 8333. FTE: Master’s. (1 cr. Prereq—Master’s student, adviser and DGS consent)


Fren 8410. Topics in Quebecois Literature. (3 cr [max 9 cr]) Quebecois in relation to other North American literatures and to Francophone literature produced elsewhere in the world. Specific topics/texts vary. Taught in French.


Fren 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)

Fren 8521. History of the French Language. (3 cr) History of French from its origins in Latin to the present day. Aspects of diachronic phonology (sound change), morphology, syntax. Taught in French.

Fren 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]; Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

Fren 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]; Prereq—Max 18 cr per semester or summer; 10 cr total required [Plan A only])

Fren 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]; Prereq—Max 18 cr per semester or summer; 24 cr required)

Fren 8890. Directed Teaching. (1-5 cr [max 25 cr])

Fren 8892. Directed Readings for Graduate Students. (1-5 cr [max 25 cr]; Prereq—#; may be taken as tutorial with #)

French and Italian (Frt) Department of French and Italian College of Liberal Arts

Frt 5257. Passionate Beings: Literary and Medical Problematics in Italy and France from 1800 to the Present. (4 cr) Literary and medical representations of the passions in Italy and France from 1800 to the present. Texts range from theatrical works to medical treatises on the passions as ways for exploring notions of subjectivity, responsibility, order. Taught in English.

Frt 5850. Topics in French and Italian Cinema. (3 cr. Prereq—Knowledge of [French or Italian] helpful but not required) Focuses on a theme, period, film, filmmaker, or other topic of interest in French or Italian cinema. See Class Schedule. Taught in English.


Genetics, Cell Biology and Development (GCD) Department of Genetics, Cell Biology, and Development College of Biological Sciences

GCD 5036. Molecular Cell Biology. (3 cr. Prereq—Biol 4004 or #; or grad student) Modern, integrative approaches combining cell/molecular biology, biochemistry, and genetics to investigate cell organization/function. Membranes, signaling, extracellular matrix, secretion, endocytosis, cytoskeleton, nucleus. Analysis of scientific papers to illustrate new concepts in and experimental approaches to cell organization/function.

GCD 8008. Mammalian Gene Transfer and Expression. (2 cr; A-F only. Prereq—#) Current gene transfer technology. Applications of genetic modifications in animals, particularly transgenic animals and human gene therapy.

GCD 8073. Advanced Human Genetics. (3 cr. Prereq—Biol 4012 or #) Application of molecular, biochemical, chromosomal, and population genetics to human variation and disease. Abnormal chromosome number and structure; abnormal enzyme, structural protein, receptor and transport; analysis of inheritance patterns; behavioral genetics; genetic basis of common disease. Current research articles in human genetics.

GCD 8103. Human Histology. (6 cr. #) GCD 6103. Prereq—Undergraduate biology, chemistry, math, and physics courses. # Light/electron microscopic anatomy of tissues and their organization into human organs. Emphasizes integrating structure, its relationship to function at levels from molecules to organs. Lecture, lab.

GCD 8121. Advanced Molecular Genetics. (3 cr. Prereq—BioI 4003, Biec 4021 or Biol 4331) Action of gene in molecular, cellular, and organismal development. Mechanisms of information transfer and regulation of these processes in various biological systems; examination of original research.

GCD 8131. Advanced Genetics. (3 cr. #) GCD 8022 or Biol 4033, Biec 2021 or Biol 4331 or # Literature-based course covering modern genetic analysis, including mutant screens, characterization of multialleles, gene mapping and cloning, genome sequencing, intergenic interactions, transposable elements, genetic mosaics, and molecular mechanisms of recombination.


GCD 8161. Advanced Developmental Biology. (3 cr. Prereq—[[4034 or Biol 8002, Biol 4033, Biol 4004] or #) Current concepts of cell and experimental approaches taken to understand basic mechanisms of development. Model organisms. Embryology, cell fate determination, differentiation, pattern formation, polarity, cell migration, and cell interactions. Analysis of original research articles.

GCD 8171. Literature Analysis. (2 cr; A-F only. Prereq—Grad MCDG major) Critical reading and evaluation of current literature. May include evaluation of both excellent and flawed papers. Intensive and in-depth discussions of selected papers in molecular biology, genetics, cell biology, and developmental biology.

GCD 8212. Selected Topics in Cell and Developmental Biology. (3 cr. Prereq—[[8121 or Biol 8002, 8151, 8161 or 8161]) Reading and discussion of papers from current literature. Topics selected from research areas of cell biology and developmental biology and experimental approaches taken in these fields. Topics vary annually.

GCD 8213. Selected Topics in Molecular Biology. (4 cr. #) GCD 8213. Prereq—Biol 8002 or Biol 4004 or #) Sample topics: DNA replication, recombination and gene conversion, regulation of gene expression in procaryotes, regulation of gene expression in eukaryotes, chromatin structure and transcription, organellar gene expression. Lectures, readings, discussions.

GCD 8900. Seminar. (1 cr [max 4 cr]; S-N only. Prereq—Grad MCDG major or #) Current scientific research.

GCD 8910. Journal Club. (1 cr [max 4 cr]; S-N only. Prereq—Grad MCDG major or #) Critical evaluation of selected current literature.

GCD 8912. Genetic Counseling in Practice. (4 cr; A-F only. Prereq—MCDG MS student with genetic counseling specialization or #) Practical genetic counseling, communicating genetics and medical information to the family, helping families with decision making.

GCD 8913. Psychosocial Issues in Genetic Counseling. (3 cr; A-F only. Prereq—MCDG MS student with genetic counseling specialization or #) Interviewing skills, supportive counseling, and case-study analysis specific to genetic counseling.

GCD 8914. Ethical and Legal Issues in Genetic Counseling. (3 cr; A-F only. Prereq—MCDG MS student with genetic counseling specialization or #) Professional ethics; ethical and legal concerns with new genetic technologies.
For definitions of course numbers, abbreviations, and symbols, see page 167.
Courses

Geog 8301. Advanced Qualitative Methods. (3 cr; A-F only)

Geog 8302. Research Development. (3 cr; S-N only. Prereq—#)
Students in geography and related social sciences are guided in key steps to effective research proposal writing.

Geog 8333. FTE: Masters. (1 cr. Prereq—Master’s student, adviser and DGS consent)

Geog 8336. The Developmental State. (3 cr; A-F only)
Why certain interventionist states in third world countries have been able to guide their economies to overcome legacy of underdevelopment while most have failed to induce development. Internal/external conditions that facilitated such departure from underdevelopment. Comparative national/provincial case studies: Taiwan, South Korea, Botswana, Brazil, India. Applying theoretical approaches to policy issues.

Geog 8350. Seminar: World Population. (3 cr. Prereq—#)
Contemporary research in world population development and problems. Topics vary with interests of faculty offering course.

Geog 8405. Seminar: Graduate Student Professional Development. (1 cr [max 2 cr]; S-N only. Prereq—Geography grad student)

Geog 8420. Teaching Practicum. (1 cr [max 3 cr]; S-N only. Prereq—[Geog or MGIS] grad student or #)
Teaching methodologies, learning objectives, course content, classroom techniques, student/course evaluation. Specific application to instruction in Geography.

Geog 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)

Geog 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

Geog 8777. Thesis Credits: Masters'. (1-18 cr [max 50 cr]. Prereq—Max 18 cr per semester or summer; 10 or total required [Plan A only])

Geog 8800. Seminar: Development of Geographic Thought. (3 cr. Prereq—#)
Topics vary with interests of faculty offering course.

Geog 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq—Max 18 cr per semester or summer; 24 cr required)

Geog 8970. Directed Readings. (1-5 cr [max 5 cr]. Prereq—#)
Seminar offered by visiting or regular faculty. Topics vary with interests of faculty.

Geog 8990. Research Problems in Geography. (1-5 cr [max 5 cr]. Prereq—#)
Individual research projects.

Geological Engineering
(geoE)

Department of Civil Engineering

Institute of Technology

GeoE 5311. Experimental Geomechanics. (3 cr; A-F only. §CE 5311. Prereq—IT upper division or grad student, 4301, CE 4301, or #)
Machine stiffness; closed-loop testing. Small-strain theory. Measurement of deformation; strain gages, LVDTs, accelerometers, and associated circuits. Direct and indirect testing. Material behavior: experiments on anisotropic, damaged, and fluid-filled solids.

GeoE 8321. Thermoporoelasticity. (4 cr; A-F only. §CE 8321. Prereq—5331, CE 5331 or #. IT grad student)

GeoE 8322. Storage and Flow of Granular Materials. (3 cr. A-F only. §CE 8322. Prereq—CE 4301 or #. IT grad student)

GeoE 8331. Modeling Geomechanical Processes. (3 cr; A-F only. §CE 8331. Prereq—5321 or CE 5321 or #. IT grad student)

GeoE 8333. FTE: Master’s. (1 cr. Prereq—Master’s student, adviser and DGS consent)

GeoE 8336. Boundary Element Methods I. (3 cr; A-F only. §CE 8336. Prereq—IT grad student or #)

GeoE 8337. Boundary Element Methods II. (3 cr; A-F only. §CE 8337. Prereq—8336, CE 8336 or #)
Transient and nonlinear problems.

GeoE 8341. Dynamics of Soils and Foundations. (4 cr; A-F only)

GeoE 8351. Advanced Groundwater Mechanics I. (3 cr; A-F only. §CE 8351. Prereq—CE 4351, IT grad student or #)
Solute transport; shallow flow in leaky aquifers; complex variable methods in groundwater flow; analytic element methods: potentials for line sinks, line doublet, line dipoles, area sinks, and special analytic elements; singular Cauchy integrals; analytic elements in domains with closed boundaries.

GeoE 8352. Advanced Groundwater Mechanics II. (3 cr; A-F only. §CE 8352. Prereq—CE 4351 or CE 4351, IT grad student or #)
Applying complex methods, including conformal mapping, in groundwater mechanics; solving problems with free boundaries using the hodograph method; drains in aquifers with free boundaries; superposition of solutions with drains; singular Cauchy integrals; boundary elements.

GeoE 8361. Engineering Model Fitting. (3 cr; A-F only. §CE 8361. Prereq—IT grad student or #)
Parameter estimation and inverse modeling for civil and geologic engineering. Formulating engineering model fitting problems; comparing and selecting various fit criteria; implementing numerical algorithms; analyzing and interpreting results using both statistical and qualitative tools; designing future measurement plans.

GeoE 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)

GeoE 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

GeoE 8777. Thesis Credits: Masters'. (1-18 cr [max 50 cr]. Prereq—Max 18 cr per semester or summer; 10 or total required [Plan A only])

GeoE 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq—Max 18 cr per semester or summer; 24 cr required)
Courses

Ger 5630. Topics in German Cinema. (3 cr [max 9 cr]. Prereq–3000 level course or #) Topics chosen may focus on specific directors, genres, film production or reception, and/or other formal, theoretical, historical, or political issues.

Ger 5711. History of the German Language I. (3 cr. Prereq–3011) Historical development of German, from beginnings to 1450.

Ger 5712. History of the German Language II. (3 cr. Prereq–5711) Historical development of German from 1450 to 2000.

Ger 5721. Introduction to Middle High German. (3 cr) Introduction to Middle High German language and literature. Study of grammar through formal description of Middle High German phonology, morphology, and syntax. Normalized MHG texts read.

Ger 5722. Middle High German: Advanced Readings. (3 cr. Prereq–5711) Acquisition of fluency in reading Middle High German normalized as well as non-normalized texts, both poetry and prose.

Ger 5731. Old High German I (3 cr) Study of the monuments of Old High German. Detailed investigation of Old High German in comparison with the other Germanic languages.

Ger 5732. Old High German II. (3 cr. Prereq–5731) Study of the monuments of Old High German. Detailed investigation of Old High German in comparison with the other Germanic languages.

Ger 5734. Old Saxon. (3 cr) Study of the poetry of Old Saxon. Detailed investigation of Old Saxon in comparison with the other Old Germanic languages.

Ger 5740. Readings in Philology. (3 cr [max 9 cr]) Philological analysis of a chosen text in any medieval Germanic language.

Ger 5993. Directed Studies. (1-4 cr [max 12 cr]. Prereq–#) Guided individual reading or study.

Ger 8002. Basic Seminar in German Studies. (3 cr) Theory and methods applicable in study of German literature and culture; introduction to bibliography and research skills; guided research projects.

Ger 8200. Seminar in Medieval German Literature and Culture. (3 cr [max 9 cr]. Prereq–5721) Topics on specific authors, group of authors, genre, or subject matter in German literature, ca. 800-1450.

Ger 8210. Seminar in Early Modern German Literature and Culture. (3 cr [max 9 cr]) Topics on specific author, group of authors, genre, or subject matter in German literature, 1450-1750.

Ger 8220. Seminar in 18th-Century German Literature and Culture. (3 cr [max 9 cr]) Literary, philosophical, and aesthetic texts emerging from major 18th-century literary trends, 1720-1810. Cultural and historical contexts of Enlightenment and Weimar Classicism.

Ger 8230. Seminar in 19th-Century German Literature and Culture. (3 cr [max 9 cr]) Examination of an author, issue, or movement, using a variety of critical approaches.

Ger 8240. Seminar in 20th-Century German Literature and Culture. (3 cr [max 9 cr]. A-F only) Topics on literature, film, or other forms of “high” and popular culture.

Ger 8300. Topics in Literature and Cultural Theory. (3 cr [max 9 cr]) Authors, themes, movements, and social issues from 1700 to present. Focus varies each semester.

Ger 8741. Gothic and Methods of Comparative Reconstruction I. (3 cr) The oldest extant Germanic language and the prehistory of Germanic group of languages.

Ger 8742. Gothic and Methods of Comparative Reconstruction II. (3 cr. Prereq–8741) Continuation of study of the oldest extant Germanic language and the prehistory of Germanic group of languages.

Ger 8751. Paleography: Medieval Manuscript Readings. (3 cr; A-F only) Introduction to techniques of reading and transcribing medieval German and Latin manuscripts.

Ger 8752. Medieval Text Editing. (3 cr) Introduction to techniques of historical text-critical editing of medieval Germanic and Latin manuscripts.

Ger 8810. Feminist Literary Theory and History. (3 cr [max 9 cr]) Cultural, historical, and literary examination of writings of German women, 18th-20th centuries, and feminist theoretical tools used to analyze their work.

Ger 8820. Seminar: Advanced Theory. (3 cr [max 9 cr]) Topic in critical thought, e.g., the Frankfurt School, hermeneutics, reception theory.

Ger 8994. Directed Research. (1-3 cr [max 12 cr]. Prereq–#; may be taken as tutorial with #) German, Scandinavian, and Dutch (GSD)

Department of German, Scandinavian, and Dutch

College of Liberal Arts

GSD 5103. Teaching of German Languages. (4 cr) Second language acquisition theory, methods, testing, and technology applicable to teaching of modern Germanic languages.

GSD 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent) GSD 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

GSD 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq–Doctoral student who has not passed prelim oral)

GSD 8801. Dissertation Seminar. (3 cr; S-N only) For doctoral students in German and Scandinavian studies who are beginning to establish topics and do research for their dissertations. Discussion of a variety of topics related to this process as well as presentation of some written work.


GSD 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

Gerontology (Gero)

School of Public Health

Gero 5105. Multidisciplinary Perspectives on Aging. (3 cr) Sociological, psychological aspects of aging: theories of aging; death and bereavement; issues and problems of older adults in America; human services and their delivery systems (health, nutrition, long-term care, education); public policy and legislation; environment and housing; retirement.

Gero 5110. Biology of Aging. (3 cr) Biological changes that occur with aging. Methods for studying aging, descriptions of population aging, theories on how/why we age. Process of aging in each body system, variation between individuals/populations. Clinical implications of biological changes with age. Guest lecturers from different disciplines.

Gero 5111. Studying Aging and Chronic Illness. (2 cr. Prereq–introductory course in epidemiology or #) Methodological issues unique to studies of older populations. Focuses on measurement of epidemiological characteristics. Health conditions/disorders of older Americans.

Gero 6820. Seminar in Gerontology. (2 cr. Prereq–#) Meets weekly. Students present and discuss new or completed research projects on aging; conduct formal reviews using NIH formats; critique published papers using formal review criteria employed by gerontologic journals; become familiar with large database in aging and describe how that database has been used in research for secondary analyses.

Global Studies (GloS)

Institute of International Studies

College of Liberal Arts

GloS 5103. Empire and Modernity. (3 cr; A-F only. Prereq–[3101, 3144] or #) How modern world has been constituted by colonial encounter. Role of colonialism in construction of west. Images of non-western societies. Modernity in colonial/postcolonial societies. Problems/potential of universal categories such as democracy, gender, history, human rights. Globalization at the margins.

GloS 5114. International Perspectives: U.S.-Mexico Border Cultures. (3 cr. Prereq–Grad student) The relations of Mexico and the United States from an international perspective with a central focus on the cultural interchange in the border lands between the two countries. Uses both literary and historical materials.

GloS 5301. Environment & Empire. (3 cr; A-F only. Prereq–[3101, 3144] or #) Key issues in environmental history. Emphasizes global/colonial processes that have made modern environment. Global spread of diseases, modern remaking of world’s flora/fauna, idea of nature. New technologies and the environment. Conservationist ideology.

GloS 5410. Interactive Global and Local Studies. (3 cr; A-F only. Prereq–#) Global studies topics, locally in the Twin Cities and Minnesota, and internationally through linked communication with classes at cooperating universities in other countries. Students communicate with counterparts abroad through e-mail to develop comparative/interactive elements. Possible topics: role of river in local history, grain storage/processing, manufacturing/trade, growth of metropolitan area.

GloS 5602. Other Worlds: Globality and Culture. (3 cr; A-F only. Prereq–[3101, 3144, grad student] or #) Interconnectedness of world. Considering not one world, but many. Colonialism, consumption, diasporic conditions, global media, nationalism, supra-national governance. How globality is experienced/contested locally/specifically.

GloS 5603. Socialist/Post-socialist Transformations. (3 cr; A-F only. #HIST 5251) Transformations underway in post-socialist societies of Eastern Europe, former Soviet Union. Ramifications of abandonment of state socialism, introduction of market relations. Effect of former system, new market system on cultural institutions/identities.

GloS 5643. Colonialism and Culture. (3 cr; A-F only. §Anth 5043) Making of culture as colonial/anthropological object of knowledge. Relationship between colonial knowledge/formation of academic disciplines (especially anthropology). Colonial/postcolonial transformations of colony, nation, and metropole.
Graduate School (Grad)

Graduate School

Grad 5102. Preparation for University Teaching for Nonnative English Speakers. (2 cr; S-N only. Prereq—Grad student. [SPEAK score of 40-45 or successful completion of “Foundations in English”]. [current or anticipated] TA assignment, #) Theory/practice of teaching in higher education in the United States. Emphasizes awareness of cross-cultural communication issues. Students practice in a simulated instructional setting.

Grad 5105. Practicum in University Teaching for Nonnative English Speakers. (2 cr; S-N only. Prereq—[SPEAK score of 50 or successful completion of 5102]. [current or anticipated] TA assignment) Theory, advanced practice in teaching in higher education for nonnative speakers of English. Emphasizes interactive teaching strategies, oral presentation skills, legal/policy issues.

Grad 8101. Teaching in Higher Education. (3 cr) Teaching methods/techniques. Focuses on active learning, critical thinking, practice teaching, and preparing a portfolio to document/refect upon teaching. Readings, discussion, peer teaching, e-mail dialogue, reflective writing, co-facilitation of course.

Grad 8102. Practicum for Future Faculty. (3 cr; S-N only. Prereq—B101 or equiv, #) Collegial support for teaching, faculty mentorship at regional college or university, investigation of faculty role at variety of institutions, classroom observation/feedback, preparation for academic job search. Non-native English speakers must pass University requirements for international teaching assistants.

Grad 8200. Teaching and Learning Topics in Higher Education. (1 [max 4 cr]; A-F only. Prereq—8101 or PFF prog director consent) Teaching/learning topics in higher education. Applications to specific contexts/topics. Students create course materials for a context/discipline and assess an action plan in terms of student learning. Students write an action plan. Different sections cover topics such as active learning in the sciences, teaching with technology, multicultural education, teaching in clinical settings, learning-community course design.

Greek (Grk)

Department of Classical and Near Eastern Studies

College of Liberal Arts

Grk 5012. Prose Composition. (3 cr. Prereq—Grad student or #) Moving step by step through Ancient Greek grammar, starting with simple sentences and progressing to complex ones. Course ends with students translating short passages of modern English prose into Greek.

Grk 5013. Advanced Composition. (3 cr. Prereq—Grad student or #) English-to-Greek verse composition or writing styles of individual Greek authors.


Grk 5121. Biblical and Patristic Greek. (3 cr. Prereq—Grad student or #) Septuagint, Philo, Josephus, New Testament, Apostolic Fathers, and other patristic literature to 5th century CE. Reading/discussion of selected texts in major genres.

Grk 5310. Greek Literature: Oratory. (3 cr [max 9 cr]) Prereq—Grad student or # One or more authors.

Grk 5320. Greek Literature: Tragedy. (3 cr [max 9 cr]) Prereq—Grad student or # Reading of Greek tragedy.

Grk 5330. Greek Literature: Comedy. (3 cr [max 9 cr]) Prereq—Graduate student status or instructor consent

Grk 5340. Greek Literature: History. (3 cr [max 9 cr]) Prereq—Grad student or # Readings from Greek historians. Traditions of Greek historiography.

Grk 5350. Greek Literature: Philosophy. (3 cr. Prereq—Grad student or #) Readings from one or more works of Plato or Aristotle in original Greek. Selections vary.

Grk 5360. Literature: Religious Texts. (3 cr [max 9 cr]) Prereq—Grad student or # Reading/discussion of religious texts from Greek antiquity, such as Homeric Hymns, cultic verse, aretalogies, sacred tales, oracle texts.

Grk 5370. Greek Literature: Epic. (3 cr [max 9 cr]) Prereq—Grad student or # Reading classical Greek epic.

Grk 5380. Greek Literature: Lyric. (3 cr [max 9 cr]) Prereq—Grad student or # Selections from Greek lyric poets.

Grk 5390. Greek Literature: Romance. (3 cr [max 9 cr]) Prereq—Grad student or # Selections from Hellenistic Romances of e.g., Callimachus, Longus.

Grk 5440. Greek Literature: Later Authors. (3 cr [max 9 cr]) Prereq—Grad student or # Selected topics in later Greek literature, especially Byzantine prose.

Grk 5450. Greek Literature: Classical Authors. (3 cr [max 9 cr]) Prereq—Grad student or # Selected topics in classical Greek literature. Topics specified in Class Schedule.

Grk 5621. Grk Paleography. (3 cr. Prereq—Grad student or #) Analysis of various hands used in Greek manuscripts with attention to date/provenance. History of transmission of Greek literature.

Grk 5715. Introduction to the Historical-Comparative Grammar of Greek and Latin. (3 cr. Prereq—Grad student or #) Historical/comparative grammar of Greek/Latin, from their Proto-Indo-European origins to classical norms.

Grk 5716. History of Greek. (3 cr. Prereq—Grad student or #) Reading and formal analysis of documents illustrating evolution of Greek language from Mycenaean to modern times.

Grk 5993. Directed Studies. (1-4 cr [max 18 cr]. Prereq—Grad student or #) Guided individual reading or study.

Grk 5994. Directed Research. (1-12 cr [max 18 cr]. Prereq—Grad student or #) Supervised original research on topic chosen by student.

Grk 5996. Directed Instruction. (1-12 cr [max 20 cr]. Prereq—Grad student or #) Supervised teaching internship.

Grk 8120. Greek Text Course. (3 cr [max 15 cr]. Prereq—3111; not for students in dept of Classical and Near East Studies) Students attend 3xxx Greek courses. Supplementary work at discretion of instructor.

Grk 8262. Survey of Greek Literature I. (3 cr) Extensive selections from all genres of Greek literature of archaic and early classical periods.

Grk 8263. Survey of Greek Literature II. (3 cr) Extensive selections from Greek authors of the classical and Hellenistic eras.

Grk 8910. Seminar. (3 cr [max 30 cr]) Various topics in Greek literature examined in depth with emphasis on current scholarship and original student research.
Health Informatics (HInf)

Department of Laboratory Medicine and Pathology

Medical School


Hinf 5346. Seminar. (1 cr; S-N only) Presentation and discussion of research problems, current literature and topics of interest in Health Informatics.

Hinf 5494. Topics in Health Informatics. (1-6 cr [max 6 cr]; A-F only) Prereq–#) Directed research under faculty guidance.

Hinf 8866. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]; A-F only. Prereq-Max 18 cr per semester or summer; doctoral student who has not passed prelim oral) Research project. Topic arranged between student and instructor. Written report required.

Hinf 8770. Plan B Project. (4 cr; A-F only. Prereq-Plan B MS student, #) Research project. Topic arranged between student and instructor. Written report required.

Hinf 8777. Thesis Credits: Master's. (1-18 cr [max 50 cr]; A-F only. Prereq-Max 18 cr per semester or summer; 10 cr total required [Plan A only])

Hinf 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]; A-F only. Prereq-Max 18 cr per semester or summer; 24 cr required)

Hebrew (Hebr)

Department of Classical and Near Eastern Studies

College of Liberal Arts

Hebr 5015. Advanced Modern Hebrew I. (3 cr. Prereq-3012) Advanced studies in a variety of genres and media including fiction, poetry, drama, film, and journal. Emphasis on expanded oral and written self expression. Materials from several periods are used to prepare for future specialized study. Taught in Hebrew.

Hebr 5016. Advanced Modern Hebrew II. (3 cr. Prereq-5015 or qualified fr) A continuation of 3015. Emphasis on expanded oral and written self expression. Samples a variety of Hebrew periods to prepare for specialized study. Students utilize a variety of genres and media including fiction, poetry, drama, film, and journal. Taught in Hebrew.

Hebr 5200. Advanced Classical Hebrew. (3 cr [max 18 cr]; A-F only. Prereq-5200) In-depth reading, analysis, and discussion of classical Hebrew texts. Grammar, syntax. Introduction to text-criticism, history of scholarship, and scholarly tools. Format varies between survey of themes (e.g., law, wisdom, poetry) and extended concentration upon specific classical texts.

Hebr 5300. Post-Biblical Hebrew: Second Temple Period. (3 cr [max 18 cr]; A-F only. Prereq-5200 or #) Readings in late/post-biblical Hebrew literature of Persian, Hellenistic, and early Roman periods (e.g., Chronicles, Ezra-Neheemiah, Ecclesiastes, Daniel, Dead Sea Scrolls, apocrypha, pseudopigrapha). Focuses on historical development of Hebrew language and literature in relation to earlier biblical sources.

Hebr 5400. Rabbinic Texts. (3 cr [max 18 cr]; A-F only. Prereq-Grad student or #) Language, idiom, and literary forms of classical Rabbinic sources in Hebrew. Selections drawn from legal, homiletical, and narrative texts (Mishnah, Tosefta, Talmud, Midrash). Original socio-historical/cultural background of Rabbinic literature, its enduring religious significance.

Hebr 5990. Topics in Hebrew Studies. (1-4 cr [max 12 cr]; A-F only. Prereq-Grad student or #) Historical, linguistic, literary, religious, or humanistic study of Hebrew society/culture. Approach/method of study varies with topic.

Hebr 5992. Directed Readings. (1-4 cr [max 12 cr]; A-F only. Prereq-3012 or #) Guided individual reading or study.

Hindi (Hndi)

Department of Asian Languages and Literatures

College of Liberal Arts

Hndi 5040. Readings in Hindi Texts. (2-4 cr [max 12 cr]; A-F only. Prereq-4162 or equiv #) Students read authentic materials of various types to improve reading/speaking ability. Topics specified in Class Schedule.

Hndi 5710. Topics in Hindi Language, Literature, and Culture. (4-5 cr [max 5 cr]; A-F only. Prereq-5040) Topics in Hindi literature or the linguistic structure of Hindi.

Hndi 5990. Directed Research. (3-5 cr [max 5 cr]; A-F only. Prereq-#, Δ, ) Guided individual reading or study of modern Hindi texts.

Hndi 6790. Research. (1-5 cr [max 5 cr]; A-F only. Prereq-#)

History (Hist)

Department of History

College of Liberal Arts

Hist 5011. Quantitative Methods for Historical Research. (4 cr. Prereq-#) Basics of quantitative historical data collection, measurement, and analysis.


Hist 5111. Prosopography in the History of Medieval Europe. (3 cr; A-F only. Prereq-Advanced undergraduates of exceptional ability or grad) Examination of basic scholarly bibliography for medieval Western European history. Aim is to help students to prepare for M.A. and Ph.D. examinations.

Hist 5115. Medieval Latin Historians. (3 cr. Prereq-Reading knowledge of Latin) Writing of history in Western Europe during the Middle Ages. Focus on idea of history, philosophy of various historians, techniques of research by medieval historians and chroniclers, history as literature, and value of medieval histories to modern research scholars. Latin texts only.

Hist 5251. Socialist/Post-socialist Transformations. (3 cr; A-F only. §CNES 5251) Transformations underway in post-socialist societies of Eastern Europe, former Soviet Union. Ramifications of abandonment of state socialism, introduction of market relations. Effect of former system, new market system on cultural institutions/identities.

Hist 5264. Imperial Russia: Formation and Expansion of the Russian Empire in the 18th and 19th Centuries. (3 cr [max 4 cr]; A-F only. §CNES 5264) Interaction with Europe and Asia; attempts at modernization and reform; emancipation of the serfs and rise of revolutionary movements.
Hist 5265. 20th-Century Russia. The Collapse of Imperial Russia, the Revolutions, and the Soviet Regime. (3 cr; A-F only. §Hist 3271) Analysis of the factors that led to the collapse of the tsarist regime; discussion of the 1917 revolution, the evolution of the Soviet regime and the collapse of Soviet communism. Emphasis on the role of nationalities and the rise of the Commonwealth of independent states.

Hist 5271. The Viking World: Story, History, and Archaeology. (3 cr; A-F only. §Hist 3271) Viking society and expansion of Viking influence abroad. Viking impact on Western Europe, interactions with Slavic lands, settlement of North Atlantic islands, Western Europe’s impact on Scandinavian lands. Analyzes archaeological, historical, linguistic, and numismatic evidence.

Hist 5285. Problems in Historiography and Representation of the Holocaust. (3 cr. Prereq–Hist 3521 or Hist 3521 or #) Issues connected with the Holocaust. Inclusiveness of other groups, Holocaust vs. “Shoah,” historiographical conflicts, patronage, problems of representation in literature/art, problems of narrative theology after Auschwitz.

Hist 5294. Social History of Russia and Eastern Europe Through the 19th Century. (3 cr) Lives of peasants and workers, nobles and merchants. Topics on Russian history on family, sex, religion, race, culture and tradition; transformation from an agricultural to a modern society.

Hist 5295. Social History of Russia and Eastern Europe From the Late 19th Century to the Present. (3 cr) Social movements (revolutionary, nationalist, women’s); communist and post-communist societies.

Hist 5301. U.S. Women’s Legal History. (3 cr) Women’s legal status in U.S. history, 1648 to present. Changes in women’s legal status in marriage, divorce, and child custody; reproductive/sexual autonomy; and economic/educational equality. Differences among women based on race, class, and ethnicity.

Hist 5379. Problems in Early American History. (3 cr) Intensive consideration of topics in early American history. Topics may include readings in race, class, and gender; comparative colonialism; slavery; demography; economic history; religion; and regions in the colonial world.

Hist 5381. Minnesota History Workshop. (3 cr [max 4 cr; 243 cr. Prereq–1301, 1302) A case study and seminar approach to historical research and interpretation. It offers teachers and other scholars a chance to survey a particular topic in Minnesota history and to write their own historical narrative based on primary source research.

Hist 5421. Gender in Latin American History. (3 cr) Women’s history/masculinity. Gender/colonialism, marriage, sexuality, nationalism, labor, political movements, feminism.

Hist 5436. Social History of African Women: 1850 to the Present. (3 cr. Prereq–Grad or #) Explore the historical forces which have shaped African women’s everyday lives and the ways in which these women have been active agents in the making of their own histories.

Hist 5437. History of East Africa. (3 cr. §Afr 3437, Afr 5437) Major themes in history of East Africa; from era of early human cultural development to present. Methods that historians use to reconstruct history. Varying interpretations/constructions of history over time.


Hist 5441. Transformations in Pre-Colonial African History. (3 cr; A-F only. §Hist 3467W) African internal/external processes before 1600. Framework by which early African history is understood, tools for reconstructing it, themes/debates that have shaped it, new directions in which it is moving.

Hist 5446. Problems in West African History. (3 cr. Prereq–Grad or #) This problem-centered course explores several of the major historiographical, methodological, and theoretical debates in West African history. Core topics include state formation, trade, slavery, Islam, gender, and colonialism.

Hist 5464. China in the Song, Yuan, and Ming Dynasties. (3 cr. §§EAS 3464W, Hist 3464W) China during the Song (976-1279), Yuan (1279-1368) and Ming (1368-1644) dynasties, political institutions, and social structures. Attention to primary sources and how historians ask and answer questions about the past.

Hist 5465. China in the Ming and Qing Dynasties. (3 cr. §§EAS 3465W, Hist 3465W) Political/social history of China from 1600 until end of Qing dynasty in 1911. Ethnicity, daily life, legal structures, city life, peasantry.

Hist 5467. State and Revolution in Modern China. (3 cr. §§EAS 3467W, Hist 3467W) Modern China’s political evolution including the Taiping Rebellion, Republican Revolution, rise of Nationalist and Communist parties, Maoist era; reform under Deng Xiaoping, and the emergence of democracy in Taiwan.

Hist 5468. Social Change in Modern China. (3 cr. §§EAS 3468, Hist 3468) Opium War and opening of Treaty Ports in 19th century; missionary activity and cultural influence; changes in educational system; women’s movement; early industrialization; socialism and collectivization after 1949; industrialization of Taiwan; PRC’s entry into the world trading system.

Hist 5469. Historiographies of China, 1000-1700. (3 cr; A-F only. Prereq–Grad student or #) Important recent English-language work on Chinese culture during the Song, Yuan, and Ming dynasties. Topics include religion, gender, family structures, ethnic identity, commerce/economics, and political structures/events.


Hist 5474. Sex and the Politics of Desire: Japan and Beyond. (3 cr; A-F only. Prereq–Grad student or #) History of gender/sexuality in modern Japan and Korea. Geography of Japan. Theoretical/methodological literature not specific to Japan. Sexology, eugenics, feminism, nationalism, colonialism, cyber sexuality.

Hist 5479. History of Chinese Cities and Urban Life. (3 cr; A-F only. §§Hist 3479) Introduction to traditional Chinese cities, their modern transformation. Ideal city plan in Confucian classics compared with physical layout of some major cities. Models about Chinese cities, influence of the models on our understanding of Chinese history/society.

Hist 5501. Medieval Europe and the World. (3 cr; A-F only. Prereq–§Hist 3501) Place of medieval Europe in the world. Relations of Europe with Asia, Africa, and the Americas. European knowledge of the world’s other great cultures. European travelers/explorers. Assessment of other cultures’ knowledge of Europe in the period.

Hist 5505. Survey of the Middle East. (3 cr. Prereq–Grad or #) Peoples, lands, cultures of the Middle East, from earliest civilizations to present.

Hist 5520. Topics in Chinese History. (3 cr [max 12 cr) Selected topics not covered in regular courses. Taught as staffing permits.


Hist 5547. The Ottoman Empire. (3 cr. Prereq–Grad student or #) Founding of Ottoman society/state to empire, 1300 to end of empire in 1920. Lands, institutions, peoples, legacy. Impact on Europe.

Hist 5611. Prossemian in Medieval History. (3 cr; A-F only. Prereq–Grad student or #) Basic scholarly bibliography for medieval Western European history during early Middle Ages. Foundation for teaching courses in medieval history, preparing for general doctoral exam.

Hist 5612. Prossemian in Medieval History. (3 cr; A-F only. Prereq–[5611, grad student] or #) Basic scholarly bibliography for medieval Western European history on central/late Middle Ages. Foundation for teaching courses in medieval history, preparing for general doctoral exam.

Hist 5614. The Medieval Church. (3 cr. Prereq–Grad student or #) Introduction to history of western church in Middle Ages. Emphasizes church teachings and institutional structures, beliefs/practices of lay people, medieval Christian encounter with non-Christian world.

Hist 5616. Prossemian in Medieval Spain. (3 cr; A-F only. Prereq–#) Graduate research on the development of the medieval kingdoms of Spain from Roman times to ca. 1500. Emphasis on major social, economic, and cultural developments. Christian, Jewish, and Muslim interaction. Spain and the beginnings of European expansion.


Hist 5621. Prossemian: The French Revolution. (3 cr; A-F only. Prereq–Grad student or [advanced undergrad, #] Historical literature about French Revolution of 1789. Old Regime political culture, Enlightenment, origins of the revolution, revolutionary transformations in society, politics/culture both in France and abroad, the Terror, Napoleon, revolutionary legacy.

Hist 5631. Prossemian: Comparative Early Modern History. (3 cr; A-F only. Prereq–Hist grad or #) Critical reading of historical literature dealing with integration of the globe during the early modern period, ca. 1550-1700; book reports, class discussion.

Hist 5632. World History Prossemian. (3 cr; A-F only. Prereq–#) Historical approaches to world/global history. Review of major theories, controversies, chronologies, pedagogical approaches.

Hist 5633. Socio-Economic History of China. (3 cr; A-F only. Prereq–Grad student or [adv undergrad, #]) Nature of Chinese socio-political formations and economic development in Qing and Republican eras, 1644-1937. Establishment/methods of state rule, merchants, agrarian social structure, domestic industry, demographic regimes, capitalism, and imperialism. Comparisons using theoretical and case studies of economic development.
Courses

Hist 5649. Ideas in Context: Making Early Modern Knowledge, 1500-1800. (3 cr; A-F only. Prereq–Grad student or #) Role of institutions/loci in development of early-modern European thought/culture. University, academies, learned societies, princely court, museum, printing house, workshop, trading company, armies/navies, state bureaucracies, salons, other independent associations of nascent civil society.

Hist 5650. Proseminar: Early Modern Europe. (3 cr; A-F only. Prereq–Hist grad or #) Critical reading of major historical literature for early modern Europe, ca. 1450-1700., dealing with France, Germany, Italy, the Low Countries, and Spain. Each student chooses a country to focus on; book reports, class discussion.

Hist 5651. Proseminar in Tudor England: 1485-1603. (3 cr; A-F only. Prereq–#) A critical study of principal writings about English history during the Tudor and Stuart periods.

Hist 5652. Proseminar in Stuart England: 1603-1688. (3 cr; A-F only. Prereq–#) Critical study of principal writings about English history.

Hist 5671. Proseminar: Modern Britain. (3 cr; A-F only. Prereq–#) Critical study of major writings in British history, 1760-1945, and preparation for research in field.

Hist 5715. Readings in European Women's History: 1450-1750. (3 cr; A-F only. Prereq–#) Introduction to current historical research on European women’s history, 1450-1750. Topics include gender roles and form of family structure, women’s participation in religious movements, legal status of women.

Hist 5720. Society/Politics:Modern Europe. (3 cr [max 6 cr]; A-F only. Prereq–Grad or #) Introduction to literature in English on problems of modern European social, cultural, political history. Thematic/geographic focus varies year to year. Topics include historical approaches to class/gender relations, state formation as social/political process, family history, evolution of public life, popular culture.

Hist 5721. Contemporary Europe From the Late 19th Century to the Beginning of the Cold War: 1890-1950. (3 cr. Hist 5721. Prereq–Previous coursework in 19th- and/or 20th-century Europe, #) The historical literature and debates surrounding major issues in the social, political, cultural, and economic development of Europe from the turn of the century through the impact of WWII. Topics include the development of imperialism, national rivalries, social and political conflict, the rise of fascism and communism, and the origins of war.


Hist 5740. Topics in Modern German History. (3-4 cr [max 12 cr]; A-F only. Prereq–#) Readings and discussions on some central questions concerning the history of Germany during the modern period with a particular emphasis on the relationship between social change and political development. Offerings vary in thematic and chronologic focus.

Hist 5761. Proseminar - Imperial Russia. (3 cr. Prereq–Knowledge of Russian or German or French) Western and Russian historiography on crucial issues of imperial Russia. Political institutions; culture and society; modernization and reforms; new interpretations.

Hist 5762. Proseminar in 20th Century Russia. (3 cr. Prereq–5761, Knowledge of Russian or German or French) Western and Russian historiography on crucial issues of 20th-century Russia. The nature of revolutions, debate over the evolution of the Soviet regime, the collapse of empires, new interpretations.

Hist 5777. Proseminar in Habsburg Central Europe. (3 cr. Prereq–#) Central Europe under Habsburg rule from the reforms of Maria Theresa to imperial collapse. Continuity and change in society; economic and political modernization; the rise of national consciousness and anti-Semitism; politics and culture in the Fin de Siecle; the Empire and World War I.

Hist 5794. Proseminar in European Economic History. (3 cr. Prereq–#) Europe’s rise in the world economy; England’s industrial revolution and uneven development in Europe; imperialism and World War I; the Great Depression; the post-1945 economic miracle; continuity and change in Eastern Europe.

Hist 5797. Methods of Population History. (3 cr; A-F only. Prereq–#) Standard methods of population analysis. Focuses on methods used widely for historical population research.

Hist 5801. Seminar in Early American History. (3 cr; A-F only. Prereq–#) Introduction to the literature of early American history. Readings selected from some of the best scholarship in the field, the questions that now hold the attention of colonial historians, and the theories, methods, and sources they use in pursuing those questions.


Hist 5821. American History in the Twentieth Century. (3 cr; A-F only. Prereq–Grad student, #) Intensive readings seminar.

Hist 5841. Proseminar in American Economic History. (3 cr; A-F only. Prereq–#) Historical literature on American economic and business history from American Revolution to the modern economy. Reading materials.

Hist 5844. U.S. Labor History. (3 cr) Readings in classic and recent approaches to the history of the working class in the United States. Central topics include slavery and free labor, women’s paid and unpaid labor, management strategy, labor protest, and trade union organization.

Hist 5845. History of American Capitalism. (3 cr; A-F only. Prereq–Grad student or #) Historiography/history of American capitalism. Crucial events (e.g., market “revolution,” development of industrial cities) focus weekly discussions of new literature. Students analyze theoretical models of capitalism and new work in social, political, and economic history.

Hist 5857. Proseminar: Readings in the History of American Women. (3 cr. Prereq–#) An intensive graduate-level readings course. Survey selected significant topics in historical literature, conceptual frameworks, and methodological problems in the history of American women from 1600 to the present.

Hist 5861. History of American Immigration. (3 cr; A-F only. Prereq–#) Readings in historical literature on immigration to the United States. Emphasis on recent works distinguished by new research methodologies and interpretations. Each student undertakes an independent reading and/or research project.

Hist 5871. Readings in U.S. Intellectual History: 19th-20th Centuries. (3 cr. Prereq–#) Definitions of American national identity from 1789 to the present as expressed in politics, religion, literature, painting, music, architecture, and history.

Hist 5877. Asian American History. (3 cr; A-F only. Prereq–#) Introduction to key issues, theoretical frameworks, research, and methodologies of Asian American history. Seminal texts that defined the field. Recent scholarship in history and in related disciplines. Emphasis field’s comparative/transnational linkages to ethnic studies, Asian studies, and the Americas.

Hist 5881. American Foreign Relations to 1895. (3 cr. Prereq–#) Intensive readings in the historiography of American foreign relations with emphasis on American imperialism, domestic courses of foreign policy, and international political, economic, and cultural relations.

Hist 5882. American Foreign Relations Since 1895. (4 cr. Prereq–#) Intensive readings in the historiography of American foreign relations with emphasis on American imperialism, domestic courses of foreign policy, and international political, economic, and cultural relations.

Hist 5890. Problems in American Indian History. (3 cr. §AmIn 5890. Prereq–#) Intensive consideration of topics in American Indian history. Topics may include social history, history of particular regions, political systems, education, and American Indian policy.

Hist 5900. Topics in European/Medieval History. (1-4 cr [max 16 cr]; Prereq–Grad or [advanced undergrad with #] Selected topics in European or medieval history not covered in regular courses, taught as staffing permits.

Hist 5901. Latin America Proseminar: Colonial. (3 cr. Prereq–#) Introduces beginning graduate and advanced undergraduate students to major historical writings on various Latin American themes.

Hist 5902. Latin America Proseminar: Modern. (3 cr. Prereq–#) Introduces beginning graduate and advanced undergraduate students to major historical writings on various Latin American themes.

Hist 5910. Topics in U.S. History. (1-4 cr [max 16 cr]; Prereq–Grad or advanced undergrad with #) Selected topics in U.S. history not covered in regular courses, taught as staffing permits.


Hist 5930. Topics in Ancient History. (1-4 cr [max 16 cr]; A-F only. Prereq–Grad or #) Selected topics in ancient history not covered in regular courses. To be taught as staffing permits and as enrollment warrants.

Hist 5931. Topics in Comparative Third World History. (3 cr [max 16 cr]; A-F only. Prereq–Grad student or #) Topics specified in Class Schedule.

Hist 5932. African Historiography and the Production of Knowledge. (3 cr; A-F only. Prereq–Major in African history or #graduate student; #) Recent scholarship on social history of Africa. Focuses on new literature on daily lives of ordinary people in their workplaces, communities, households.
Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hist 5933</td>
<td>Seminar in Ancient History. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Previous coursework in Greek or Roman History.</td>
</tr>
<tr>
<td>Hist 5934</td>
<td>Comparative History and Social Theory. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad student or [upper-div undergrad, #)</td>
</tr>
<tr>
<td>Hist 5935</td>
<td>Methods and Pedagogy in African History. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad student or #</td>
</tr>
<tr>
<td>Hist 5940</td>
<td>Topics in Modern Chinese History. (1-4 cr [max 16 cr].)</td>
<td>1-4 cr</td>
<td>Prereq—Grad student or [advanced undergrad, #)</td>
</tr>
<tr>
<td>Hist 5941</td>
<td>Readings in Chinese Documents. (3 cr)</td>
<td>3 cr</td>
<td>Prereq—Reading knowledge of Chinese</td>
</tr>
<tr>
<td>Hist 5942</td>
<td>Topics: History of Medicine. (3-4 cr [max 16 cr].)</td>
<td>3-4 cr</td>
<td>Prereq—History of medicine or history of science course recommended for undergrads</td>
</tr>
<tr>
<td>Hist 5950</td>
<td>Topics in Latin American History. (1-4 cr [max 16 cr].)</td>
<td>1-4 cr</td>
<td>Prereq—Grad or advanced undergrad with #</td>
</tr>
<tr>
<td>Hist 5960</td>
<td>Topics in History. (1-4 cr [max 16 cr].)</td>
<td>1-4 cr</td>
<td>Prereq—Grad or advanced undergrad with #</td>
</tr>
<tr>
<td>Hist 5962</td>
<td>Expansion of Europe. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad student, #</td>
</tr>
<tr>
<td>Hist 5964</td>
<td>Comparative Economic History. (3 cr; Prereq—#)</td>
<td>3 cr</td>
<td>Theoretical approaches guide cross-cultural examinations of major issues in the economic history of East Asia, Europe, and the New World. Agrarian structures, economic development, markets, the state and economic development, and the industrial revolution.</td>
</tr>
<tr>
<td>Hist 5970</td>
<td>Advanced Research in Quantitative History. (4 cr [max 16 cr].)</td>
<td>4 cr</td>
<td>Students will carry out publishable-quality research on a quantitative historical topic.</td>
</tr>
<tr>
<td>Hist 5980</td>
<td>Topics in Comparative Women's History. (3 cr [max 15 cr].)</td>
<td>3 cr</td>
<td>Prereq—Grad student or [advanced undergrad, #]</td>
</tr>
<tr>
<td>Hist 5993</td>
<td>Directed Study. (1-16 cr [max 16 cr].)</td>
<td>1-16 cr</td>
<td>Prereq—Grad student or #</td>
</tr>
<tr>
<td>Hist 5994</td>
<td>Directed Research. (1-16 cr [max 16 cr].)</td>
<td>1-16 cr</td>
<td>Prereq—Grad student or #</td>
</tr>
<tr>
<td>Hist 8003</td>
<td>Scope and Methods of Historical Studies. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Work on a tutorial basis</td>
</tr>
<tr>
<td>Hist 8020</td>
<td>Seminar: Advanced Historical Writing. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad or advanced undergrad, #</td>
</tr>
<tr>
<td>Hist 8110</td>
<td>Medieval History: Research Seminar. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad student or [advanced undergrad, #)</td>
</tr>
<tr>
<td>Hist 8120</td>
<td>Topics in Research in Gender, Race, Class, and/or Ethnicity in the United States. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Dynamics of gender, racial, class, and ethnic relations in U.S. history: intersections of these forces.</td>
</tr>
<tr>
<td>Hist 8204</td>
<td>Topics in Research in Gender, Race, Class, or Ethnicity in the United States. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Dynamics of gender, racial, class, and ethnic relations in U.S. history: intersections of these forces. Topics vary by instructor.</td>
</tr>
<tr>
<td>Hist 8245</td>
<td>Race, Nation, and Genocides. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad student, #</td>
</tr>
<tr>
<td>Hist 8333</td>
<td>FTE: Master’s. (1 cr. Prereq—Master’s student, adviser and DGS consent)</td>
<td>1 cr</td>
<td>First of two-part course. Radicals in the field of African social history during past two decades. Students select major research topic and begin preliminary investigation.</td>
</tr>
<tr>
<td>Hist 8444</td>
<td>FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)</td>
<td>1 cr</td>
<td>Second of two-part course. Students conceptualize and write major research paper.</td>
</tr>
<tr>
<td>Hist 8577</td>
<td>Thesis Credits: Master’s. (1-18 cr [max 50 cr].)</td>
<td>1-18 cr</td>
<td>Prereq—Max 18 cr per semester or summer; 10 cr total required (Plan A only)</td>
</tr>
<tr>
<td>Hist 8587</td>
<td>Seminar: Research in the History of American Women. (3 cr; A-F only, Prereq—#)</td>
<td>3 cr</td>
<td>Broad research theme/problem: in most cases preparation for dissertation. Students identify primary/secondary sources, conduct research, write paper, and read/comment upon each other’s drafts. Geographic focus varies with instructor, may include Germany or lands of former Habsburg Austrian empire.</td>
</tr>
<tr>
<td>Hist 8655</td>
<td>Research in Yuan, Ming, and Qing History. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad student or [advanced undergrad, #]</td>
</tr>
<tr>
<td>Hist 8709</td>
<td>Seminar: History of Sexuality. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Theories of sexuality (by, e.g., Foucault, Butler, deLauretis), their application in history. Topics may include: feminist critique of Foucault and the classics, psychoanalytic approaches to religious transformations as the Reformation, varying forms of gender transgression, sexuality in colonial encounters, operation of sexual metaphors in political conflict, and AIDS and the writing of history.</td>
</tr>
<tr>
<td>Hist 8715</td>
<td>Research on European Women’s History, 1450-1750. (3 cr, Prereq—#)</td>
<td>3 cr</td>
<td>Broad research theme/problem: in most cases preparation for dissertation. Students identify primary/secondary sources, conduct research, write paper, and read/comment upon each other’s drafts. Geographic focus varies with instructor, may include Germany or lands of former Habsburg Austrian empire.</td>
</tr>
<tr>
<td>Hist 8720</td>
<td>Research Seminar on Central European History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Prereq—Grad or advanced undergrad, #</td>
</tr>
<tr>
<td>Hist 8757</td>
<td>Seminar: History of American Women. (3 cr; A-F only, Prereq—#)</td>
<td>3 cr</td>
<td>Broad research theme/problem: in most cases preparation for dissertation. Students identify primary/secondary sources, conduct research, write paper, and read/comment upon each other’s drafts. Geographic focus varies with instructor, may include Germany or lands of former Habsburg Austrian empire.</td>
</tr>
<tr>
<td>Hist 8857</td>
<td>Research in American Indian History. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad or advanced undergrad, #</td>
</tr>
<tr>
<td>Hist 8888</td>
<td>Thesis Credit: Doctoral. (1-24 cr [max 100 cr].)</td>
<td>1-24 cr</td>
<td>Prereq—Max 18 cr per semester or summer; 24 cr required (Plan A only)</td>
</tr>
<tr>
<td>Hist 8890</td>
<td>Topics in European/Medieval History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Topics not covered in regular courses.</td>
</tr>
<tr>
<td>Hist 8891</td>
<td>Topics in U.S. History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Topics not covered in regular courses.</td>
</tr>
<tr>
<td>Hist 8910</td>
<td>Topics in African History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Topics not covered in regular courses.</td>
</tr>
<tr>
<td>Hist 8930</td>
<td>Topics in Ancient History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Topics not covered in regular courses.</td>
</tr>
<tr>
<td>Hist 8940</td>
<td>Topics in Asian History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Topics not covered in regular courses.</td>
</tr>
<tr>
<td>Hist 8948</td>
<td>Research Seminar: New Directions in African Social History I. (3 cr; A-F only, Prereq—#)</td>
<td>3 cr</td>
<td>First of two-part course. Radicals in the field of African social history during past two decades. Students select major research topic and begin preliminary investigation.</td>
</tr>
<tr>
<td>Hist 8950</td>
<td>Seminar: Research in the History of Ancient China. (3 cr; A-F only)</td>
<td>3 cr</td>
<td>Prereq—Grad student or [advanced undergrad, #]</td>
</tr>
<tr>
<td>Hist 8955</td>
<td>Topics in Latin American History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Topics not covered in regular courses.</td>
</tr>
<tr>
<td>Hist 8960</td>
<td>Topics in History. (1-4 cr [max 16 cr]; A-F only)</td>
<td>1-4 cr</td>
<td>Topics not covered in regular courses.</td>
</tr>
</tbody>
</table>

For definitions of course numbers, abbreviations, and symbols, see page 167.
Courses

Hist 8961. Research Seminar: Intellectual History. (3 cr; A-F only)
Approaches/methods. Readings on or exemplifying intellectual history. Intellectual history as something broader than history of philosophical thought: a set of approaches of broad cross-disciplinary applicability. Each student prepares a research paper on a topic of intellectual history and present it to class for critique.

Hist 8990. Topics in Comparative History-Research. (3 cr [max 15 cr]; Prereq–#)
Topics vary. Students read/discuss historical works from different geographic areas, develop proposals for comparative research, or pursue comparative research projects.

Hist 8993. Directed Study. (1-16 cr [max 16 cr]; A-F only, Prereq-Grad student, #)
Students work on tutorial basis. Guided individual reading or study.

Hist 8994. Directed Research. (1-16 cr [max 16 cr]; A-F only, Prereq–#)
Work on a tutorial basis.

History of Medicine (HMed)

HMed 5002. Public Health Issues in Historical Perspective. (3 cr)
Introduction to the evolution of major recurring problems and issues in public health including environment and health, food customs and nutrition, control of alcohol and drugs, venereal diseases and public policy, human resources regulation, and relationship of science to promotion of health.

HMed 5035. The Germ Theory and Modern Medicine. (3 cr)
Analysis of the formulation of the germ theory of disease and of its consequences for medical procedures (therapeutics, surgery, management of hospitals), public health programs, and the structure and prestige of the medical profession.

HMed 5045. Modern Medical Profession. (3 cr)
Historical analysis of American medical profession in 19th/20th centuries. Role of institutions, influence of social/moral values. Consequences of specialization, scientific innovation.

HMed 5055. Women, Health, and History. (3 cr. Prereq–Grad student or [or cr] with prev coursework in hist or #)
Women’s historical roles as healers, patients, research subjects, health activists. Biological determinism, reproduction, mental health, nursing, women physicians, public health reformers, alternative practitioners. Gender disparities in diagnosis, treatment, research, careers. Assignments allow students to explore individual interests.

HMed 5200. Early History of Medicine to 1700. (3 cr; A-F only)
An introductory survey of the history of medicine in Europe and America.

HMed 5201. History of Medicine from 1700 to 1900. (3 cr. Prereq–5200)
An introductory survey of the history of medicine in Europe and America.

HMed 5210. Seminar: Theories and Methods in Medical History. (3 cr; A-F only)
Histography of the history of medicine.

HMed 5211. Seminar: Theories and Methods in Medical History. (3 cr; A-F only, Prereq–5210)
Use of archives, primary sources. Supervised research project.

HMed 5940. Topics in the History of Medicine. (3-4 cr [max 16 cr])
Seminar on the historical relations between medicine and the State from the 18th to 20th centuries.

HMed 8220. Seminar: Current Topics in the History of Medicine. (3 cr [max 9 cr]; A-F only, Prereq–#)
Topics vary.

HMed 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

HMed 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

HMed 8631. Directed Study. (1-6 cr [max 12 cr]; A-F only. Prereq–#)

HMed 8632. Directed Study. (1-6 cr [max 12 cr]; A-F only. Prereq–#)

HMed 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

HMed 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

HMed 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

History of Science and Technology (HSci)

Department of History of Science and Technology

Institute of Technology

HSci 5211. Biology and Culture in the 19th and 20th Centuries. (3 cr. §HSci 3211)
Changing conceptions of life and aims and methods of biology; changing relationships between biology and the physical and social sciences; broader intellectual and cultural dimensions of developments in biology.

HSci 5242. The Darwinian Revolution. (3 cr. §HSci 3242)

HSci 5244. History of Ecology and Environmentalism. (3 cr. §HSci 3244)
Development of ecological thought from 18th century natural theology to contemporary ecology and conservation biology; changing views of “balance” and the “economy” of nature; conceptual and methodological differences among practitioners; historical practice, different schools of history, work on a tutorial basis.

HSci 5331. Technology and American Culture. (3 cr; §HSci 3331)

HSci 5332. Science and American Culture. (3 cr. §HSci 3332)

HSci 5401. Ethics in Science and Technology. (3 cr. §HSci 3401)
Historical issues involving ethics in science. Ethical problems posed by modern science/technology, including nuclear energy, chemical industry, and information technologies.

HSci 5411. Art and Science in Early Modern Europe. (3 cr)
Interaction of art and science, from Renaissance to 19th century. Development of linear perspective, color theory, artistic practice, and scientific illustration/representation.

HSci 5993. Directed Studies. (1-15 cr [max 15 cr]. Prereq–#)

HSci 5994. Directed Research. (1-15 cr [max 15 cr]. Prereq–#)

HSci 8111. Historiography of Science and Technology. (3 cr; S-N only. Prereq–Grad HSci major or #)
Review of methods and historiography. Tools needed to perform creative work in the field. Models of historical practice, different schools of history, work of representative historians of science and technology.

HSci 8124. Foundations for Research in Ancient Science. (3 cr; A-F only. Prereq–Grad HSci major or minor or #)

HSci 8125. Foundations for Research in the Scientific Revolution. (3 cr; A-F only. Prereq–Grad HSci major or minor or #)
Development of sciences/natural philosophy, 1500-1725.

HSci 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

HSci 8421. Social and Cultural Studies of Science. (3 cr)
Review of recent work: theoretical and methodological differences among practitioners; selected responses from historians and philosophers of science.

HSci 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

HSci 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

HSci 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

HSci 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

HSci 8900. Seminar: History of Early Physical Science. (3 cr. Prereq–#)
For advanced graduate students; topics in development of natural and mathematical science before 1800.

HSci 8910. Seminar: History of Modern Physical Sciences. (3 cr [max 6 cr]. Prereq–#)
For advanced graduate students; topics in development of physical sciences since 1800.

HSci 8920. Seminar: History of Biological Sciences. (3 cr. Prereq–#)
For advanced graduate students; topics in development of natural, biological, and medical sciences from Aristotle to the present.

HSci 8930. Seminar: History of Technology. (3 cr. Prereq–#)
For advanced graduate students; topics in development of technology from ancient times to the present.

HSci 8940. Seminar: History of Science and Technology in the Americas. (3 cr. Prereq–#)
For advanced graduate students; topics in development of science and technology, emphasizing the United States and Canada.

HSci 8950. Seminar: Science and Technology in Cultural Settings. (3 cr. Prereq–#)
For advanced graduate students; topics in development of science and technology in or across specific geographic regions or particular cultures.

HSci 8993. Directed Studies. (1-5 cr [max 15 cr]. Prereq–#)

HSci 8994. Directed Research. (1-5 cr [max 15 cr]. Prereq–#)
Human Resource Development (HRD)

Department of Work, Community, and Family Education

College of Education and Human Development

HRD 5001. Survey: Human Resource Development and Adult Education. (3 cr. §AdEd 5001)
Overview of fields of human resource development and adult education. Includes societal context, theories, processes, definitions, philosophies, goals, sponsoring agencies, professional roles, participants, and resources. Focus on the unique characteristics and ways the fields overlap and enhance one another.

HRD 5101. Foundations of Human Resource Development. (1 cr)
Introduction to human resource development as a field of study and practice.

HRD 5102. Economic Foundation of Human Resource Development. (1 cr. Prereq—5101)
Introduction to economics as a core discipline supporting the theory and practice of human resource development.

HRD 5103. Psychological Foundation of Human Resource Development. (1 cr. Prereq—5101)
Introduction to psychology as a core discipline supporting the theory and practice of human resource development.

HRD 5104. Systems Foundation of Human Resource Development. (1 cr. Prereq—5101)
Introduction to system theory as a core discipline supporting the theory and practice of human resource development.

HRD 5105. Strategic Planning through Human Resources. (3 cr; A-F only Prereq—5001 or 5101, 5102, 5103, 5104)
The theory and practice of strategically developing, utilizing, and aligning human resources as a major contributor to organizational and quality improvement success.

HRD 5106. Evaluation in Human Resource Development. (3 cr; A-F only)
Evaluation of human resource development efforts from the perspective of impact on organizations, work processes, and individuals, plus follow-up decisions.

HRD 5111. Facilitation and Meeting Skills. (1 cr)
Introduction to the disciplines of planning and running effective meetings. Tools and methods for meeting management and evaluation are presented within the context of organization development.

HRD 5196. Internship: Human Resource Development. (1-10 cr [max 10 cr]; S-N only. Prereq—5001, 5201 or 5301)
Students apply and contract for human resource development internships.

HRD 5196. Internship: Human Resource Development. (1 cr)
Field study of the organization development, personnel training and development, career development, and quality improvement theories and practices in a selected nation.

HRD 5201. Training and Development of Human Resources. (3 cr; A-F only)
Training/development of human resources in organizations. Process phases of analysis, design, development, implementation, and evaluation.

HRD 5202. Training on the Internet. (3 cr)
Major concepts, skills, and techniques for giving and receiving training on the Internet.

HRD 5301. Organization Development. (3 cr; A-F only)
Introduction to major concepts, skills, and techniques for organization development/change.

HRD 5302. Managing Work Teams in Business and Industry. (3 cr; A-F only. Prereq—2 core courses in HRD)
Frameworks and strategies for developing effective work teams. Skill development in facilitating resolution of conflicts in organizations. Provides foundational information as well as practical applications for participants (upper-level and graduate students) to become small team leaders.

HRD 5401. Distance Learning in Adult Education and Training. (3 cr; A-F only §AdEd 5401)
Distance learning concepts, theory, history, present practice, delivery systems, course design, major issues, future directions.

HRD 5405. Quality Improvement Through Human Resources. (3 cr; A-F only. Prereq—5201, 5301 or #)
Quality management, productivity improvement theory/practice from a human resource perspective. Organization development/training as integral components of quality improvement. HR role within quality standards. History of quality improvement, contributions of major leaders.

HRD 5408. International Human Resource Development. (3 cr)
Problems, practices, programs, theories, and methodologies in human resource development as practiced internationally.

HRD 5409. Planning and Decision-Making Skills. (1 cr)
Introduction to the disciplines of planning and decision making typically used in process improvement interventions. Tools and methods for facilitating group decisions and problem solving.

Role of research in HRD. Standards/criteria for evaluating research, critique of conference research papers, identification of emerging research themes. Offered in conjunction with the annual conference of Academy of HRD.

HRD 5496. Field Study in Human Resource Development. (3 cr. Prereq—5001)
Field study of the organization development, personnel training and development, career development, and quality improvement theories and practices in a selected nation.

HRD 5601. Student and Trainee Assessment. (2 cr; A-F only. §WCPE 5601)
Developing learning progress reporting systems and tests of knowledge, affect, and processes for programs focused on instruction of skills associated with business/industry. Evaluating instructional effectiveness. Applying tests and other evaluation instruments to assess/report learning in business/industry and career/technical education fields. Students develop each type of test and an overall evaluation plan for a course.

HRD 5612. Managing and Consulting in Human Resource Development and Adult Education. (3 cr. §AdEd 5612. Prereq—5001)
The theory of managing and consulting in human resource development and adult education. Includes a personal assessment of role requirements and experimentation with management and consultation processes and techniques.

HRD 5624. Sales Training. (3 cr; A-F only §BIE 5624)
Strategies and techniques for developing effective sales people.

HRD 5625. Technical Skills Training. (3 cr. §BIE 5625)
Analyzing technical skills training practices in business and industry. Systems and process analysis and trouble-shooting of work behavior; design methods and developing training materials.

HRD 5626. Customer Service Training. (3 cr; A-F only §BIE 5626)
Overview of customer service strategies used by successful organizations and training practices used to develop customer-oriented personnel.

HRD 5627. Management and Supervisory Development. (3 cr §BIE 5627)
Problems, practices, programs, and methodologies relating to the training and development of managers and supervisors, including needed competencies, assessment, delivery modes, and evaluation.

HRD 5628. Multimedia Presentations in Business. (3 cr. §BIE 5628)
Designing, creating, and presenting information using multimedia resources in business settings.

HRD 5629. Course Development in Business and Industry. (2 cr; A-F only §WCPE 5629)
Designing instructional programs/courses that help learners develop desired competence. Designing instruction for performance-based training and vocational/technical education. Developing course syllabus components that clarify course expectations. Developing academic/community-based elements that complement course goals. Students reflect on and compare performance-based instruction with other curriculum models for the field.

HRD 5661. Instructional Methods in Business and Industry. (2 cr. §WCPE 5661)
Theory/practice in instructional methods for career/technical education (CTE) instructors and human resources/development (HRD) professionals. How to select various teaching methods and plan for their delivery. Preparing an instructional methods plan to clarify course content, teaching methods selected, rationale for their selection, and how a student organization might facilitate student learning.

HRD 5662. Comptt Treg in Sch & Ind. (3 cr §BIE 5662. Prereq—BIE 5511 or equq)
Alternative practices for teaching business applications software use—such as word processors, spreadsheets, graphics software, desktop publishing software, databases, and communications software—in both public school and industry settings.

HRD 5770. Special Topics in Human Resource Development. (1-4 cr [max 12 cr])
Exploration of issues, methods, and knowledge in HRD areas. Topics vary.

HRD 5802. Education and Human Resource Development Through Tourism. (3 cr; A-F only)
Policies/practices of education and human resource development in tourism industry.

Nature of diverse populations and their unique learning and training needs, exemplary programs, and collaborative efforts among persons representing work, community, and family settings.

HRD 5822. Diversity and Organizational Transformation in Work, Community, and Family. (3 cr. §WCPE 5822)
Develop models for understanding the impact of diversity on individual, organizational, and community outcomes. Discuss organizational change in relation to diversity.

HRD 8001. Advanced Theory in Human Resource Development and Adult Education. (3 cr; A-F only §AdEd 8001. Prereq—5001 or AdEd 5001)
Theoretical understanding of individuals and organizations as adaptive entities; roles of human resource development and adult education in mediating complex demands.

HRD 8201. Advanced Training and Development of Human Resources. (3 cr; A-F only. Prereq—5201)
Personnel training/development research. Critical review of selected/innovative practices.

HRD 8301. Advanced Organization Development. (3 cr; A-F only. Prereq—5301)
Organization development research. Critical review of selected, innovative practices.
Courses

HRIR 8053. Employer-Sponsored Employee Benefit Programs. (2 cr. Prereq–8011, 8051 or #, grad HRIR major; grad majors must enroll A-F only) Design and administration of nonmandatory compensation benefit programs; medical expense insurance, group insurance, profit sharing plans, disability, and other employee benefits. Effects of providing benefits on workers’ incentives with regard to performance, acquisition and maintenance of human capital, mobility, and risk sharing.

HRIR 8061. Introduction to Labor Market Analysis. (4 cr. Prereq–Econ 1101, Econ 1102 or #, grad HRIR major; grad majors must enroll A-F only) Labor supply and demand analysis, its international dimensions, determination of wages, employment and unemployment; accumulation of human capital and investment in education and training; government regulation in areas of discrimination and workplace safety, role of unions in wage determination.

HRIR 8062. Human Resource Strategy and Planning. (2 cr. Prereq–8061 or #, grad HRIR major; grad majors must enroll A-F only) Case studies used to diagnose strategy.

HRIR 8063. Human Resources and Organizational Performance. (2 cr. §PA 8105. Prereq–8061 or #, grad HRIR major or Δ, grad majors must enroll A-F only) Impact of human resource policies and practices on organizational productivity and effectiveness. Role of government, unions, and private sector institutions on organizational effectiveness.

HRIR 8064. Topics in Micro Labor Market Analysis. (2-4 cr [max 3 cr]. Prereq–EH 9601 or #, HRIR PhD student; grad majors must enroll A-F only) May include micro aspects of unemployment, implicit contracts and efficiency wages, investment in human capital, occupational choice, job search, job matching and turnover, migration, labor force participation, and government program evaluation.

HRIR 8065. Topics in Macro Labor Market Analysis. (2-4 cr [max 3 cr]. Prereq–8061 or #, HRIR PhD student; grad majors must enroll A-F only) May include theories of unemployment based on sectoral shocks, theories of wage rigidity, efficiency wage theories, interindustry wage structure, role of labor market in resource allocation, and effects of government intervention in labor market.

HRIR 8071. Labor Relations and Collective Bargaining. (4 cr. Prereq–Econ 1101, Econ 1102 or #, grad HRIR major; grad majors must enroll A-F only) Evolution of U.S. labor unions and public policy, bargaining mechanism, structure, goals and negotiations, contract administration and results. International comparisons, labor-management cooperation, and newly emerging issues.


HRIR 8073. Dispute Resolution: Labor Arbitration. (2 cr. Prereq–8071 or #, grad HRIR major; grad majors must enroll A-F only) Arbitration to resolve grievances and impasses arising out of the collective bargaining agreement’s administration and negotiation. Arbitration law and legal issues, procedures and practices, case presentation, management rights, discipline and discharge, evidence, contract language interpretation, and remedies. Newly emerging approaches.


HRIR 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent) Illustration and analysis of union growth and adjustment to external economic environments. Topics vary each semester.

HRIR 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent) Application of theories and methods of employee relations to current labor relations problems and employment relationships.

HRIR 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral) HRIR 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr], Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only]) General linear model and its assumptions and violations; simultaneous equations; pooling cross-section and time series; limited qualitative dependent variable models; sample selection models; hazard models. Emphasizes application to human resources and industrial relations.

HRIR 8812. Seminar: Human Resources and Industrial Relations Research Methodology. (2-4 cr [max 8 cr]. Prereq–HRIR PhD student; grad majors must enroll A-F only) Application in research projects.

HRIR 8821. Seminar: Human Resources and Industrial Relations Systems. (1-4 cr [max 4 cr]. Prereq–HRIR core or #, HRIR PhD student; grad majors must enroll A-F only) Thought and research in the field. Investigating, integrating, and synthesizing more traditional related disciplines, theories, and research into interdisciplinary body of knowledge concerned with human resource and industrial relations problems and employment relationships.

HRIR 8830. Seminar: Staffing, Training, and Development. (1-4 cr [max 8 cr]. Prereq–8031 or #, HRIR PhD student; grad majors must enroll A-F only) Concepts, problems, and research.

HRIR 8840. Seminar: Organization Theory and Behavior. (1-4 cr [max 8 cr]. Prereq–8041 or #, HRIR PhD student; grad majors must enroll A-F only) Application in human resources and industrial relations research/practice.

HRIR 8850. Seminar: Compensation and Reward. (1-4 cr [max 8 cr]. Prereq–8051 or #, HRIR PhD student; grad majors must enroll A-F only) Relevant theoretical models; formulation of research into compensation and reward issues.


HRIR 8870. Seminar: Labor Relations and Collective Bargaining. (1-4 cr [max 8 cr]. Prereq–8071 or #, HRIR PhD student; grad majors must enroll A-F only) Analysis of contemporary theoretical and empirical research.

HRIR 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required) HRIR 8991. Independent Study in Human Resources and Industrial Relations. (1-8 cr [max 8 cr], A-F only, Prereq–#) Individual readings and/or research projects.

Industrial Engineering (IE)

Department of Mechanical Engineering

Institute of Technology

IE 5080. Topics in Industrial Engineering. (4 cr. Prereq–Upper div or grad student) Topics vary each semester.


IE 5511. Human Factors and Work Analysis. (4 cr; A-F only) Prereq–Upper div IT or grad student. Human factors engineering (ergonomics), methods engineering, and work measurement. Human-machine interface: displays, controls, instrument layout, and supervisory control. Anthropometry, work physiology and psychology, Fatigue, work environment factors noise, illumination, toxicology. Methods engineering, including operations analysis, motion study, and time standards.

IE 5512. Applied Ergonomics. (4 cr; A-F only) Prereq–Upper div IT or grad student, 5511) Small groups of students work on practical ergonomic problems in local industrial firms. Projects cover a variety of ergonomic issues: workstation design, equipment and tool design, back injuries and material handling, cumulative trauma disorders, illumination and noise, and safety.

IE 5513. Engineering Safety. (4 cr; A-F only, Prereq–Upper div IT or grad student) Occupational, health, and product safety. Standards, laws, and regulations. Hazards and their engineering control, including general principles, tools and machines, mechanics and structures, electrical safety, materials handling, fire safety, and chemicals. Human behavior and safety, procedures and training, warnings and instructions.

IE 5522. Quality Engineering and Reliability. (4 cr. Prereq–[4521 or equiv], [upper div or grad student or CNI]) Quality engineering/management, economics of quality, statistical process control, total quality experiments, reliability, maintainability, availability.

IE 5531. Engineering Optimization I. (4 cr. Prereq–Upper div or grad student or CNI) Linear programming, simplex method, duality theory, sensitivity analysis, interior point methods, integer programming, branch/bound/dynamic programming. Emphasizes applications in production/logistics, including resource allocation, transportation, facility location, networks/flows, scheduling, production planning.

IE 5541. Project Management. (4 cr. Prereq–Upper div or grad student) Project screening/selection, multiple-criteria methods for project evaluation, project structuring/work breakdown, project teams, project scheduling, resource management, life-cycle costing, project control, project termination, research/development projects, computer support for project management.


IE 5551. Production Planning and Inventory Control. (4 cr. Prereq–CNI or upper div or grad student) Inventory control, supply chain management, demand forecasting, capacity planning, aggregate production and material requirement planning, operations scheduling, and shop floor control. Quantitative models used to support decisions. Implications of emerging information technologies and of electronic commerce for supply chain management and factory operation.


IE 8333. FTE. Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

IE 8444. FTE. Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)


IE 8534. Advanced Topics in Operations Research. (4 cr [max 8 cr], Prereq–8531, 8532) Special topics determined by instructor. Examples include Markov decision processes, stochastic programming, integer/combinatorial optimization, and queueing networks.


IE 8541. Decision Support Systems. (4 cr; A-F only. Prereq–College-level computer programming course) Intelligent computer tools to aid designers, project planners, and analysts in making decisions better or faster.

IE 8552. Advanced Topics in Production, Inventory, and Distribution Systems. (4 cr [max 8 cr]. Prereq–8551) Cutting edge research issues in production, inventory, and distribution systems. Topics vary: stochastic models of manufacturing systems, stochastic inventory theory, multi-echelon inventory systems and supply chains, supplier-retailer and supplier-manufacturer coordination, supplier and warehouse networks, business logistics, transportation.

IE 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr], Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim orally)

IE 8773. Graduate Seminar. (1 cr; S-N only)

IE 8774. Graduate Seminar. (1 cr; S-N only. Prereq–8773) Recent developments.

IE 8777. Thesis Credits. Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

IE 8794. Industrial Engineering Research. (1-6 cr [max 10 cr, Prereq–#]) Directed research.

IE 8888. Thesis Credit. Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

IE 8951. Plan A Course. (1 cr; S-N only) Structured environment in which students can complete M.S. Plan A project.

IE 8953. Plan B. (2 cr; A-F only; Prereq–#) Structured environment in which students can complete M.S. Plan B project.

Information and Decision Sciences (IDSc)

Department of Information and Decision Sciences

Curtis L. Carlson School of Management

IDSc 8511. Conceptual Topics and Research Methods in Information and Decision Sciences. (4 cr. Prereq–Business admin Ph.D student or #) Relationships underling disciplines; major research streams; seminal articles, survey literature, and major researchers. Provides framework for organizing knowledge about information and decision sciences.

IDSc 8521. System Development. (2 cr. Prereq–Business admin Ph.D student or #) Why it is hard to develop efficient/effective information systems, what can be done to improve situation. Defining efficiency/effectiveness in development process and in systems. Producing/evaluating artifacts (constructs, models, methods, tools) that enable more efficient/effective information systems to be developed.

IDSc 8711. Cognitive Science. (4 cr. Prereq–Business admin Ph.D student or #) Empirically based concepts of knowledge and reason, mental representation and conceptual systems that guide problem solving and decision making. Computational metaphor of mind drawn from psychology, computer science, linguistics, anthropology, and philosophy. Implications for understanding of knowledge work.

IDSc 8721. Behavioral Decision Theory. (2 cr [max 4 cr]. Prereq–Business admin Ph.D student or #) Folly, normal accidents, decision problems in which individuals manipulate information to influence/deceive others.

IDSc 8680. Research Seminar in Information and Decision Sciences. (4 cr [max 20 cr]. Prereq–Business admin PhD student or #) Topics, which vary by semester, are selected from new courses in research, research methods, and significant issues.

IDSc 8691. Research Seminar in Information and Decision Sciences. (2 cr [max 20 cr]. Prereq–Business admin PhD student or #) New areas of research, research methods, issues.

IDSc 8692. Readings in Information and Decision Sciences. (1-8 cr [max 16 cr]. Prereq–Business admin Ph.D student or #) Readings useful to a student’s individual program and objectives that are not available through regular courses.

IDSc 8894. Graduate Research in Information and Decision Sciences. (1-8 cr [max 16 cr]. Prereq–Business admin Ph.D student or #) Individual research on an approved topic appropriate to student’s program and objectives.

Infrastructure Systems Engineering (ISE)

Center for Development of Technological Leadership

Institute of Technology

ISE 5101. Project Management. (3 cr; A-F only. Prereq–ISE student) Broad areas in project management and leadership. Emphasizes practical understanding of business/engineering project management. Project planning, scheduling, controlling, Budgeting, staffing, task/cost control. Communicating with, motivating, leading, and managing conflict among team members. Lectures, discussions, experiential exercises.


For definitions of course numbers, abbreviations, and symbols, see page 167.


ISE 8105. Capstone Project. (1-2 cr [max 3 cr]; A-F only. Prereq–ISE student) Integrates knowledge from courses in Master’s program with job experience. Students prepare proposal, conduct project, and report results in written and oral form. Project involves aspect of design, management, or operation of some feature of infrastructure.

ISE 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser approval. DGS approval)

Insurance and Risk Management (Ins)

Industrial Relations Center

Curtis L. Carlson School of Management


Ins 5100. Corporate Risk Management. (2 cr) Theory applied to corporate risk management and insurance practices. Identification, measurement, and treatment of an organization’s financial risks integrated with its property, liability, workers compensation, and human resource risks. Selection and application of risk control and risk financing tools: risk retention, reduction and transfer, including insurance.

Ins 5101. Employee Benefits. (2 cr. Prereq–5100 or HRIR 3021 or #) Design/administration of employee benefit plans and pension programs: health insurance, disability plans, salary reduction/deferred compensation programs—from social insurance to executive benefits. Multiple employer trusts. Alternative funding methods, including self-insurance. Ethical issues, legal liability, compliance with regulations.

Ins 5200. Insurance Theory and Practice. (2 cr) Risk theory is applied to practices in health, liability, life, property, and workers compensation insurance. Insurance marketing, pricing, underwriting, and claims administration, with adverse selection and moral hazard effects. Policy issues of tort versus no-fault compensation systems. Self-insurance and integrated risk financing methods.


Interdisciplinary Archaeological Studies (InAr)

College of Liberal Arts

InAr 5100. Topics in Interdisciplinary Archaeological Studies. (3 cr; A-F only. Prereq–InAr grad major or #) Topics specified in the Class Schedule.

InAr 8004. Method and Theory in Archaeology. (3 cr; A-F only. Prereq–InAr grad major or #) Survey and evaluation of archaeological approaches to non-literary, material evidence for past human activities and societies.

InAr 8100. Interdisciplinary Seminar. (3 cr; A-F only. Prereq–InAr grad major or #) Review and evaluation of approaches to interdisciplinary research; themes vary. Leadership and research shared by staff, visitors, and students.

InAr 8200. Directed Readings. (1-7 cr [max 7 cr]. Prereq–InAr grad major or #)

InAr 8300. Directed Research. (1-7 cr [max 7 cr]. Prereq–InAr grad major or #)

InAr 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

InAr 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

InAr 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr. Prereq–Max 18 cr per semester or summer; doctoral student who has not passed prelim oral]

InAr 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

InAr 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr. Prereq–Max 18 cr per semester or summer; 24 cr required]

Interpersonal Relationships Research (IRel)

College of Education and Human Development

IRel 8001. Proseminar in Interpersonal Relationships Research. (1 cr [max 2 cr]; S-N only. Prereq–Grad IRel minor) Survey of major topics, including theoretical assumptions, methods, and samples of current research.

IRel 8021. Seminar: Statistical and Methodological Issues in Research on Dyadic Relationships. (2 cr; S-N only. Prereq–Grad IRel minor, #) Survey of topics in design and analysis of research on behavior in two-person interactions.

IRel 8360. Seminar: Topics in Interpersonal Relationships Research. (1-3 cr [max 6 cr]. Prereq–Grad IRel minor or #) Intensive study of topics.

Italian (Ital)

Department of French and Italian

College of Liberal Arts

Ital 5201. Reading Italian Texts: Poetics, Rhetoric, Theory. (3 cr [max 12 cr]. Sjtal 3201. Prereq–Grad student or #) Rhetorical/poetic aspects of language and literature. Interpretive methods, theoretical concepts.

Ital 5203. Italian Travelers: From the Enlightenment to the Present. (3 cr [max 12 cr]. Sjtal 3203. Prereq–Grad student or #) Literary representations of travel, migration, immigration, exile, and tourism in Italy, from Enlightenment to present.

Ital 5209. Trecento Literature: Ruling the Canon. (4 cr [max 16 cr]. Prereq–5215, 3201 or #) Works of Boccaccio and Petrarch and their role in establishing the canon of Italian vernacular literature. Taught in English also as MSit 5610.

Ital 5289. The Narrow Door: Women Writers and Feminist Practices in Italian Literature and Culture. (4 cr [max 16 cr]. Prereq–3015) Focuses on issues of gender, sexual difference, equality, and emancipation raised by Italian women writers and thinkers from the 19th century to the present.

Ital 5305. Staging the Self: Theater and Drama in Modern Italy. (4 cr [max 16 cr]. Sjtal 3305. Prereq–Grad student or #) Theatrical representations of the self in modern Italy. Focuses on issues of identity, gender, and class in theatrical works ranging from Alfieri’s Mirra, Pirandello’s Enrico IV to Dacia Maraini’s Clytemnestra.


Ital 5337. Nation and Narration: Writings in the 19th Century. (4 cr [max 16 cr]. Prereq–3015) Introduces the construction of modern Italian national identity by examining the role that literature plays in this process. Works by Manzoni, Foscolo, Leopardi, Gioia, Verga, Serao, and Deledda studied in the context of a range of sociopolitical and cultural issues.

Courses

Ital 5550. Topics in 19th Century Italy. (3 cr [max 12 cr]. Prereq–Ital 3015 or #) Explodes the literature and culture of Italy in the 19th century. Content will vary depending on the instructor. Topics and readings may include literary, critical, cultural, historical, and/or social issues, a specific author, a genre, or other topics of interest for the period. Specific content will be posted in the department and listed in the Course Guide.

Ital 5699. World of Dante. (4 cr [max 8 cr]) Taught in English. Intensive reading of Dante’s Inferno, Purgatorio, and Vita Nuova with emphasis on the personal, poetic, and political stakes of the journey of Dante’s pilgrim through hell to the earthly paradise.

Ital 5640. Topics in Italian Studies. (3 cr [max 12 cr]. Prereq–Ital 3015) Topics of interest in studies of Italian and/or Italian American culture of the 20th century. Topics and readings may include literary, critical, cultural, historical, and/or social issues, a specific author, a genre, or other topics. Content varies by instructor. Specific content posted in the department and in the Course Guide.

Ital 5806. Negotiating the Terms: Italian Film and Literature. (3 cr [max 12 cr]. §Ital 3806. Prereq–Grad student or #) Cinematic representations of Italian literary texts. Basic tools of literary/film analysis. How both media impact Italian culture. Taught in English.

Ital 5970. Directed Readings. (1-4 cr [max 16 cr]. Prereq–#) Meets unique requirements decided on by faculty member and student. Individual contracts list contact hours, number of credits, written and other work required.

Ital 8333. FTE: Masters. (1 cr. Prereq–Masters’ student, adviser and DGS consent)

Ital 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq-Max 18 cr per semester or summer; 10 cr total required [Plan A only])

Ital 8992. Directed Readings. (1-4 cr [max 16 cr]. Prereq–#) Requirements decided on by faculty member and student: contact hours, number of credits, written/other work.

Japanese (Jpn)

Department of Asian Languages and Literatures

College of Liberal Arts

Jpn 5040. Readings in Japanese Texts. (2-4 cr [max 12 cr]; A-F only. Prereq–4041 or 4042 or #) Students read authentic materials of various types to increase reading/speaking ability. Topics specified in Class Schedule.

Jpn 5071. Communicative Competence for Japan-Oriented Careers. (4 cr. Prereq–5071 or #) Effective communication using spoken and written Japanese in contexts likely to be encountered by a career-oriented professional in Japan.

Jpn 5072. Communicative Competence for Japan-Oriented Careers. (4 cr. Prereq–5071 or #) Effective communication using spoken and written Japanese in contexts likely to be encountered by a career-oriented professional in Japan.

Jpn 5160. Topics in Japanese Literature. (4 cr [max 16 cr]) Literary, historical, or cultural study of selected Japanese literature.

Jpn 5161. Women’s Writing in Premodern Japan. (4 cr; A-F only. Prereq–3162, 4061 or # when readings are in Japanese; 3162 or # when in translation) Works by women in premodern Japan including Genji monogatari, a lengthy narrative, Makura no soshi, a collection of vignettes, and poetry. Concerns include gendered writing system/authorship, narrative techniques, sexuality and the figure of the author, and strategies of fictionality.

Jpn 5162. Tale Literature in Premodern Japan. (4 cr; A-F only. Prereq–3162, course from classical Japanese language sequence or #) Tale literature, both Buddhist and secular, presents the world of the middle- to lower-class people. Rhetoric and religious fiction, genre, history and sexuality, the role of the supernatural/fantastic, and re-tellings of earlier texts.

Jpn 5163. Premodern Historical Narratives. (4 cr; A-F only. Prereq–3162, course from classical Japanese language sequence or #) Narratives rooted in history. Issues include the problematization of reality, the formation of national identity, the idea of divine Imperial power, oral storytelling and its relationship to written texts, and the popularization of historical writings.

Jpn 5164. Readings in Early Modern Japanese Literature. (4 cr; A-F only. Prereq–5032 when readings are in Japanese or #) An examination of the stylistic and ideological aspects of the prose fiction, poetry, and non-fiction of the period 1863 to 1945. Offered in a rotating format alternating between readings in the original language and readings in English translation.

Jpn 5165. Readings in Postwar and Contemporary Japanese Literature. (4 cr; A-F only. Prereq–5032 when offered in Japanese or #) Literary and historical exploration of selected works published between 1945 and the present. Focus may be on a writer, a period, or a theme. Offered in a rotating format alternating between readings in the original language and readings in English translation.

Jpn 5166. Literature by 20th-Century Japanese Women. (4 cr. Prereq–5032 or #) Literary and historical exploration of selected works by Japanese women writers in a variety of genres. All literary texts read in Japanese; critical readings may be in English.


Jpn 5650. Proseminar: Japanese Linguistics. (4 cr [max 12 cr]. Prereq–5451 or 5452 or 5453 or #) Selected topics in Japanese linguistics and/or contrastive analysis of Japanese and English with attention to contributions from Eastern and Western linguistic traditions.


Jpn 8333. FTE: Master’s. (1 cr. Prereq–Master’s student, adviser and DGS consent)

Jpn 8444. FTE: Doctoral. (1 cr. Prereq–Doctoral student, adviser and DGS consent)

Jpn 8630. Seminar in Premodern Japanese Literature. (4 cr [max 12 cr]; A-F only. Prereq–#) Selected topic in Japanese literature from 8th century to 1860s; theoretical tools used to analyze modern Japanese literature.

Jpn 8631. Premodern Poetry. (4 cr; A-F only. Prereq–3162, course from classical Japanese language sequence or #) Presentation of poetry in four genres: imperial anthologies, narratives centered around poetry, personal collections, and noh plays. Implications of anthologizing/collating, relationships between prose and poetry, and construction of an authorial figure.


Jpn 8633. Premodern Urban Literature. (4 cr; A-F only. Prereq–course from classical Japanese language sequence [preferably both courses] or #) Literature and dramatic scripts between 1600–1688 about urban space and society in regions of Kyoto/Osaka and Edo (Tokyo). Notion of popular culture, relationship between textual production and consumption, and discourses of the urban.

Jpn 8640. Seminar in Modern Japanese Literature. (4 cr [max 12 cr]. Prereq–#) Selected topic in Japanese literature from 1680s to the present, including analytical styles and strategies used in Japanese literary criticism.


Jpn 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq–Max 18 cr per semester or summer; doctoral student who has not passed oral)

Jpn 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 cr total required [Plan A only])

Jpn 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq–Max 18 cr per semester or summer; 24 cr required)

Jewish Studies (JwSt)

Department of Classical and Near Eastern Studies

College of Liberal Arts


JwSt 5011. Problems in Historiography and Representation of the Holocaust. (3 cr. §RelA 5111, Prereq–JwSt 3521 or RelA 3521 or #) Focuses on issues connected with the Holocaust. Inclusiveness of other groups, Holocaust vs. Shoah., historiographical conflicts about perpetrators, an examination of the problems of representation in literature and art, problems of narrative theology after Auschwitz.

JwSt 5112. Jewish Mysticism, Magic, and Kabbalah. (3 cr; A-F only. §JwSt 5112, RelA 5112, Religion 5112) Mystical traditions from early rabbinic traditions to Zohar (Book of Splendor) in 13th century. Literature of heavenly ascent (Hekhalot, Merkavah), Book of Creation (Sefer Yetzirah), precursors of Zohar (Book of Splendor). Zohar and poetry. Tension between legal/mystical aspects, magical theurgic techniques, evolution of doctrine of Sefirot, mystical interpretation of Scripture, erotic dimension.
Courses

JwSt 5115. Mishnah and Midrash in Translation. (3 cr.) (JwSt 3115, ReiA 3115, ReiA 5115) Jewish law studies as mirror of society and as way to actualize its value. Original socioreligious contexts, current applications. Biblical interpretations addressing moral, theological, legal, and literary problems.

JwSt 5113. Scripture and Interpretation. (3 cr.; A-F only, #) Idea of divine revelation, its impact upon religion/literature. How history of Bible’s creation, transmission, and interpretation help us think critically about role of idea of revelation in religious traditions. What is revelation? How does belief that a text is revealed affect the way it is read within the community for which it constitutes revelation?

JwSt 5900. Topics in Jewish Studies. (3-4 cr [max 8 cr]) Topics specified in Class Schedule.

JwSt 5992. Directed Readings. (1-12 cr [max 12 cr].) Prereq— #) Guided individual reading or study.

Journalism and Mass Communication (Jour)

School of Journalism and Mass Communications

College of Liberal Arts


Jour 5131. Capstone: In-Depth Reporting. (3 cr.; A-F only. Prereq—[3004W, 3101, [3121 or 3173W or 3451], [jour major or approved IDIM major or IDIM major or BIS major] or grad student) Techniques/issues of special project stories. Explanatory, investigative, civic, and literary or ethnographic journalism. Topics (e.g., civil rights, governmental malfeasance, health care problems) typically involved in these stories.

Jour 5155. Capstone: Advanced Reporting Methods. (3 cr.; A-F only. Prereq—[3004W, 3101, [3121 or 3173W or 3451], [jour major or approved IDIM major or IDIM major or BIS major] or grad student) Investigative techniques for mass media, computer-assisted reporting, use of records/documents, advanced interviewing, methods for adverse conditions, or field-based practicum.

Jour 5174. Capstone: Magazine Editing and Production. (4 cr.; A-F only. Prereq—[3004W, 3101, [3155 or 3173W or 3321 or 4303]), [jour major or IDIM major or BIS major] or grad student) Writing, editing, illustration, design, layout, and photography of print or Web magazine. Emphasizes reporting, telling substantive stories. Students work in groups with varying specializations.

Jour 5251. Psychology of Advertising. (3 cr.; A-F only. Prereq—jour major or min or design comm or graphic pre-design or design comm or graph design or IDIM/IBIS #) Psychological principles, research techniques, and applications in advertising/selling. Consumer attitudes/behavior. Psychological mechanisms upon which effectiveness of advertisements/commercials depends.

Jour 5316. Theories of Visual Communication. (3 cr.; A-F only. Prereq—jour major or jour minor or approved IDIM major or approved IDM major or approved BIS major) Perspectives on study/analysis of visual communication: Message structure, systems of production, use of visual media. Contributions from sociology, anthropology, psychology, and history.

Jour 5501. Communication and Public Opinion. (3 cr.; A-F only. Prereq—Non-jour major or jour major with course appr on prog plan or prej major with adviser approval) Theories of communication, persuasion, attitude change. Functions of interpersonal/mediated communication in diffusion of information and in opinion formation.

Jour 5541. Mass Communication and Public Health. (3 cr. Prereq—jour major or jour minor or grad major or IDIM major or ICP major or BIS major) Role, function, effect of mass media on public health. Planned/unplanned effects. Review/analysis of literature on how theories, models, assumptions of mass communication research relate to public health.

Jour 5552. Law of Internet Communications. (3 cr.; A-F only. Prereq—Non-jour major or jour major with course appr on prog plan or pre-jour with adviser approval) Whether/how/which traditional media laws/regulations apply to the Internet. Developing law of communication on Internet, global/ethical issues.

Jour 5601. History of Journalism. (3 cr. A-F only. Prereq—jour major or jour minor or approved IDIM major or IDM major or BIS major; IDL sections are open to non-majors; prereq do not apply to IDL sections) Development of American media, from beginnings in Europe to present day. Rise of film/radio/television/Internet. Relation of communications development to political, economic, social trends.

Jour 5606. Literary Aspects of Journalism. (3 cr. A-F only. Prereq—5506. Prereq—jour major or jour minor or approved IDIM major or IDM major or BIS major; IDL sections are open to non-majors; prereq do not apply to IDL sections) Literary aspects of journalism as exemplified in, and influenced by, works of American/ British writers, past/present. Lectures, discussions, weekly papers, critiques.

Jour 5615. History of the Documentary. (3 cr. A-F only. Prereq—Non-jour major or jour major with course appr on prog plan or pre-jour with adviser approval) Social history of photography, film, video. Informational, documentary, propaganda, and entertainment functions of visual communication. Rise/influence of visual media industries and of public-image making.

Jour 5725. Management of Media Organizations. (3 cr.; A-F only. Prereq—Non-jour major or jour major with course appr on prog plan or prej major with adviser approval) Introduction to concepts/principles of media management. Strategic planning, leadership, organizational strategies, ethical/legal issues. Working in teams. Balance sheets, income statements. Motivating/promoting people.

Jour 5771. Media Ethics: Principles and Practice. (3 cr.; A-F only. Prereq—Non-jour major or jour major, course appr on prog plan) or (pre-jour, adviser approval) Connecting theoretical approaches to media ethics with real-life case studies. History of ethical standards in print, broadcast, photojournalism, public relations, and advertising. Making ethical judgments in complex situations.

Jour 5777. Contemporary Problems in Freedom of Speech and Press. (3 cr.; A-F only. Prereq—jour major or jour minor or approved IDIM major or IDM major or BIS major) Legal/constitutional derivation of freedom of press/speech. Emphasizes case law, statutes, judicial theories. Leading cases in privacy torts, prior restraints, news gathering/dissemination. Access to courts/government, including via the Internet. Legal-research techniques.


Jour 5990. Special Topics in Mass Communication. (3 cr. [max 8 cr]; A-F only. Prereq—Jour major or approved IDM major or ICP major or BIS major) Topics specified in Class Schedule.

Jour 5993. Directed Study. (1-3 cr [max 6 cr]; A-F only. Prereq—[jour major or jour minor or approved IDM major or ICP major or BIS major], GPA of at least 3.00, Q, #) Directed study/projects.

Jour 8001. Studies in Mass Communication I. (3 cr.; A-F only) Historical development of mass communication studies in social sciences, humanities, and legal areas; survey of research literature utilizing individualistic and structural approaches to mass communication.

Jour 8002. Studies in Mass Communication II. (3 cr.; A-F only. Prereq—8001) Literature on history of the field, cultural and humanistic approaches to its study, and legal and ethical issues.

Jour 8003. The Changing Media Environment. (3 cr.; A-F only. Prereq—Jour, journalism graduate students) Nonprofessional skills course. Prepares entering graduate students to work in the changing media environment, emphasizing its political, social, economic, legal, ethical and technological implications nationally and globally; students produce scholarly research about changing media.


Jour 8193. Directed Study: Health Journalism Capstone. (1-4 cr [max 4 cr]; A-F only. Prereq—8191, 8195, health journalism MA prog) Individual directed study, capstone course. Students prepare/present a final project that could be a publishable article on an important health topic, an original research paper on a dimension of health/communications, or a multimedia production on a health issue/problem aimed at a particular audience.

Jour 8195. Information Technology and Health. (3 cr; A-F only. Prereq—Grad student; enrollment in MA in health journalism preferred) Trends in use/application of selected technologies.


Jour 8201. Factors Affecting Communication Strategy. (3 cr. Prereq—Strat Comm MA grad major) Literature/research concerning identification/analysis of the media and environmental, regulatory, competitive, and economic factors that affect the development of communication strategy.

Jour 8203. Integration of Communication Strategies Across Media. (3 cr. Prereq—8200, 8201, 8202, strat comm MA grad major)

Concepts, analytical techniques, and methodologies used to plan communication strategies and implement communication campaigns utilizing a diverse range of media.

Jour 8204. Measuring the Effectiveness of Strategic Communication Campaigns. (3 cr. Prereq—8203, Strat Comm MA grad major)

Examination, evaluation, and application of concepts/methods to evaluate effectiveness of strategic communication campaigns and their components.

Jour 8205. Cases in Strategic Communication. (3 cr. Prereq—8203, strat comm MA grad major)

Case study analysis concerning development, implementation, and evaluation of communication strategies. Cases cover broad range of organizations, focus on such issues as brand introduction, brand reinforcement, revitalizations, crisis communication, issues management, and legal/ethical considerations.

Jour 8206. Directed Study: Development of an Integrated Strategic Communication Campaign. (3 cr. [max 6 cr.]

Prereq—8205, strat comm MA grad major) Project to develop a case study analysis concerning development, implementation, and evaluation of a strategic communication campaign.

Jour 8317. Seminar: Visual Communication Research. (3 cr; A-F only. Prereq—5316, [8001, 8002] or #)

Theoretical approaches, analysis of research methods, development of research designs/projects.

Jour 8333. FTE: Master’s. (1 cr. Prereq—Master’s student, adviser and DGS consent)

Jour 8442. Seminar: Broadcast News. (3 cr; A-F only. Prereq—4442 or #)

Major issues. Confrontations between federal government and network news departments. Historical studies.

Jour 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGS consent)

Jour 8501. Seminar: The Process of Quantitative Mass Communication Research. (3 cr; A-F only. Prereq—9 or soc sci, EpHy 5260 or equiv or EpHy 5260)

Logic of social sciences research. Relationship between theory and research, concept explication, measurement, instrumentation, and design issues.

Jour 8502. Seminar: Multi-method research in Mass Communication. (3 cr; A-F only. Prereq—6501, (EpHy 5260 or equiv or EpHy 5260)

Quantitative/qualitative research principles/techniques applied to mass communication and kindred questions. Reliability, generalizability, and validity in their classic/contemporary senses. Survey methods, focus groups, interviews, other methods. Emphasizes “triangulation” of diverse methods.

Jour 8513. Seminar: Ethnic Methods in Mass Communication Research. (3 cr; A-F only. Prereq—8001, 8002) or #)

Theoretical foundations in anthropology/sociology. Field projects.

Jour 8514. Seminar: Mass Communication Theory. (3 cr; A-F only. Prereq—8001, 8002)

Research paradigms, concepts, and findings for developing a general theory of mass communication.

Jour 8801. Seminar: Methods in Mass Communication History Research. (3 cr; A-F only. Prereq—5601, #)

Critical analysis of research in journalism/communication history. Research designs/methods. Development of a research project.

Jour 8802. Seminar: History of Mass Communication. (3 cr; A-F only. Prereq—5601)

Research in history/development of U.S. mass media.

Jour 8803. Seminar: Theories and Models in Mass Communication/History Research. (3 cr; A-F only. Prereq—5601, #)

Literature on theory in historical research. Uses of theoretical models in historical explanations. Role of theory in historical research, debate about uses. Specific works in journalism/communication history in context of theoretical models. Development of major paper examining models/theories relevant to student’s project.

Jour 8820. Seminar: Advertising Research. (3 cr; A-F only. Prereq—5201 or #)

Advertising as persuasive communication. Current research/theory related to advertising decision-making process. Measurement issues in advertising and in market research.

Jour 8851. Seminar: Mass Media and Social Change. (3 cr; A-F only. Prereq—8001 or 8002 or equiv)

Interplay between social theories and media studies. Pragmatism, structural-functionalism, Marxism, political economy, cultural studies, globalization.

Jour 8862. Seminar: Literary Aspects of Journalism. (3 cr; A-F only. Prereq—5606)

Research in literary aspects of journalism exemplified in careers/work of American/ British writers.

Jour 8866. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr.]

Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

Jour 8867. Seminar: Communication Ethics—Public/Civic Journalism. (3 cr; A-F only)

Historical underpinnings, philosophical debate, theoretical dynamics, legal concerns, ethical implications.

Jour 8873. Seminar: Media Management. (3 cr; A-F only. Prereq—5725 or #)

Management issues in media organizations. Relation to dynamics of organization structure, employees, markets, economics/finances.

Jour 8875. Seminar: Issues in Information Access and Communication. (3 cr; A-F only)

Societal, industry, technological, and policy aspects/developments that affect information access, particularly through mass media.

Jour 8876. Seminar: Constitutional Law—Theories of Freedom of Expression. (3 cr; A-F only. Prereq—8001, 8002 or #)

Problems of constitutional/federal law affecting the press. Underlying theories.

Jour 8879. Seminar: Research Methods in Media Ethics and Law. (3 cr; A-F only)

Research at intersection of first amendment and media ethics.

Jour 8861. Seminar: Media and Globalization. (3 cr; A-F only. Prereq—4601 or 5825 or #)

Main problems/currents. Concepts, research, policy relevant to global development. Issues of freedom/constraint, media technology, role of journalism in world affairs.

Jour 8721. Seminar: Communication Agencies as Social Institutions. (3 cr; A-F only. Prereq—4721 or equiv or #)

Influence/effects of mass communication, internal dynamics of media organizations, criticism/modes of reform. Theoretical frameworks for analysis.

Jour 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr.]

Prereq—Max 18 cr per semester or summer, 10 cr total required [Plan A only])

Jour 8801. Seminar: Comparative Research in Mass Communication, a Cross-National Approach. (3 cr; A-F only. Prereq—4801 or 5825)

Comparative research designs/strategies. Analysis of production, presentation, transmission, and consumption of mass media products/services (particularly news, entertainment, and information) across national borders. Theoretical concerns, empirical problems, policy. Ethical issues involving research on form/content of mass communication within/between countries.

Jour 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr.]

Prereq—Max 18 cr per semester or summer; 24 cr required)

Jour 8990. Special Problems in Mass Communication. (3-4 cr [max 12 cr.]) A-F only.

Topics specified in Class Schedule.

Jour 8993. Directed Study. (1-6 cr [max 6 cr.]) A-F only.

Prereq—Grad mass comm major or minor, #)

Directed study.

Kinesiology (Kin)

School of Kinesiology

College of Education and Human Development

Kin 5001. Foundations of Human Factors/Ergonomics. (3 cr; A-F only. §HumF 5001)

Variability in human performance as influenced by interaction with designs of machines and tools, computers and software, complex technological systems, jobs and working conditions, organizations, and sociotechnical institutions. Emphasizes conceptual, empirical, practical aspects of human factors/ergonomic science.

Kin 5103. Developmental/Adapted Physical Education. (3 cr; A-F only)

Introduction to physical education for students with disabilities, emphasizing conceptual, organisational, and administrative issues. Topics include historical and legal foundations, service components, individualized education plans, professional roles, and assessment of movement skills.

Kin 5104. Physical Activities for Persons with Disabilities. (3 cr; A-F only)

Different approaches to providing physical education service and related movement interventions for persons with disabilities. Topics: movement behavior foundations, movement skill progressions, unique considerations for specific impairments, and sport for persons with disabilities

Kin 5111. Sports Facilities. (3 cr; A-F only. §Rec 5111.

Prereq—Kin or Rec grad student or MEd student)

Steps in planning/building facilities for athletics, physical education, and sport for college, professional, and public use.

Kin 5115. Event Management in Sport. (3 cr; A-F only.

Prereq—Grad student, #)

Techniques/principles of planning, funding, and managing sport events. Collegiate championships, non-profit events, benefits, professional events.

Kin 5121. Application of Basic Sciences to Kinesiology. (3 cr; A-F only)

Examination of how knowledge from the basics of science can lead to differing perspectives from which to approach questions directed to kinesiological inquiry.

Kin 5122. Applied Exercise Physiology. (3 cr; A-F only. Prereq—4385 or equiv or #)

Mechanisms of cardiorespiratory and muscular responses to exercise; application of exercise physiology to assessment of work capacity, athletic conditioning, and requirements of human powered vehicles; low to moderate exercise as an intervention in lowering risk for common health problems.

Kin 5126. Sport Psychology. (3 cr. Prereq—4326 or equiv or #)

Theory and research in sport psychology. Focus on the psychological study of human behavior in sport and physical activity settings.

Kin 5136. Psychology of Coaching.

(3 cr. Prereq—3126 or equiv or #)

Prereq—grad student, #)

Prereq—3126 or equiv or #)

Prereq—Grad student, #)

Prereq—Grad student, #)

Prereq—4385 or equiv or #)

Mechanisms of cardiorespiratory and muscular responses to exercise; application of exercise physiology to assessment of work capacity, athletic conditioning, and requirements of human powered vehicles; low to moderate exercise as an intervention in lowering risk for common health problems.

Kin 5126. Sport Psychology. (3 cr. Prereq—4326 or equiv or #)

Theory and research in sport psychology. Focus on the psychological study of human behavior in sport and physical activity settings.

Kin 5136. Psychology of Coaching. (3 cr).

Psychological dimensions of coaching across age levels, including coaching philosophy, leadership, communication skills, motivation, and mental skills training for performance enhancement.
Courses


Kin 5171. Foundations of Kinesiology. (3 cr; A-F only. Prereq—Kin major or #) Introduction to the emerging field of kinesiology, broadly conceived as the study of human movement. Development and emergence of the term kinesiology and the scholarly, political, and educational ramifications of its development.

Kin 5196. Practicum: Development/Adapted Physical Education. (1-4 cr [max 4 cr]; S-N only. Prereq—5103 or 5103 or 5104 or 5104 or #; Kin undergraduate pre-teaching with a status is limited to 2 practicum hrs) Observation of, participation in physical education instruction for students with disabilities. Current issues in development/adapted physical education. Exchange of ideas/peer review.


Kin 5371. Sport and Society. (3 cr; A-F only. SProj 5371. Prereq—[3126, grad student] or #) Sport, sporting processes, social influences, systems. Structures that have affected and exist within/among societies, nations, and cultures. Contemporary issues such as social differentiation, violence, and honesty.

Kin 5375. Competitive Sport for Children and Youth. (3 cr) Cognitive, behavioral, and biological factors having important implications for competitive sport participation from early childhood through high school age. Emphasis on translating sport science research into practical implications for youth sport coaches, teachers, and administrators.

Kin 5385. Exercise for Special Populations. (2 cr; A-F only. Prereq—[5291 or intro to exercise physiology or equiv]) Exercise testing and prescription with modifications required because of special considerations associated with aging, gender differences, environmental conditions, and the presence of medical conditions.

Kin 5421. Sport Finance. (3 cr; A-F only. SProj 5421. Prereq—Grad student or #) Introduction to financial analysis in sport. Cash flow statements, budgeting issues, traditional/innovative revenue producing strategies available to sport organizations. Discussion, practical analysis of current market.

Kin 5435. Advanced Theory and Techniques of Exercise Science. (3 cr; A-F only. Prereq—[3385, 4385, Kin major] or #) Theoretical constructs, in-depth description of procedures used in exercise science research and clinical settings. Laboratory exercises, lectures.

Kin 5461. Foundations of Sport Management. (3 cr; A-F only. Prereq—[Kin or Rec] student or #) Theories/techniques in administration/management of sport enterprises. Organizational theory/policy, practical examples of sport management skills/strategies.


Kin 5511. Women in Sport and Leisure. (3 cr; A-F only. SProj 5511) Critically examines women’s involvement in contributions to sport, physical activity, and leisure.

Kin 5601. Sport Management Ethics and Policy. (3 cr; A-F only. SProj 5061. Prereq—MEd or grad student or #) How to critically analyze ethical concepts that underpin and inform sport policies and evaluate sport policies from a normative point of view. Selected sport policy issues are used to illustrate relevance of ethical considerations in policy development and to explore the ethical implications of sport policy.

Kin 5631. Programming and Promotion in Sport. (3 cr; A-F only. SProj 5631. Prereq—Kin or Rec grad student or #) Introduction to marketing concepts as they apply to sport industry. Consumer behavior, market research, marketing mix, corporate sponsorship, licensing. Discussion, practical application.

Kin 5696. Practicum in Kinesiology. (1-6 cr [max 6 cr]; S-N only. Prereq—Grad—student in Kin) Practical experience in kinesiology under supervision of a University adviser and an agency supervisor.

Kin 5697. Student Teaching: Coaching. (1-10 cr [max 10 cr]; S-N only. Prereq—Grad—student in coaching program, #) Student coaching experience under supervision of a mentor coach.

Kin 5720. Special Topics in Kinesiology. (1-8 cr [max 8 cr]. Prereq—Kin—upper div undergrad or grad student or #) Current issues in the broad field and subfields in kinesiology, methodology, or research not normally available through regular offerings.


Kin 5725. Organization and Management of Physical Education and Sport. (3 cr; A-F only. Prereq—Grad—initial licensure or #) Comprehensive analysis of organization and management of physical education and sport in educational settings. Focus on management and planning processes, management skills, functions, roles, decision making, leadership, shared systems, and organizational motivation. For physical education teachers, coaches, community sport administrators.

Kin 5726. Physical Education—Teaming and Trecking. (2 cr; A-F only. Prereq—Kin-major, MEd student, or #) Development of cooperative and team-building activities, group planning, and leadership skills in preparation for a two-day trip in a state park using practiced outdoor skills of camping, canoeing, and backpacking. Must be comfortable in water.

Kin 5727. Physical Education—An Adventure Experience. (1-4 cr; A-F only. Prereq—Kin-major, MEd student, or #) Group and individual initiatives in an experientially based program emphasizing participation in leadership, group cooperation, problem solving, low ropes, climbing walls, sensible risk taking, and trust-oriented activities.

Kin 5740. Topics: Coaching of Individual, Dual, or Team Sports. (1-9 cr [max 9 cr]; A-F only) Instruction at the advanced level, including analyses of skills, game strategies, specific techniques of coaching, and methods of training and conditioning.

Kin 5801. Legal Aspects of Sport and Recreation. (4 cr; A-F only. Prereq—Kin or rec major) Legal issues related to recreation, park, and sport programs/facilities in public/private sectors.


Kin 5981. Research Methodology in Kinesiology, Recreation, and Sport. (3 cr; A-F only. SProj 5981. Prereq—3151 or equiv) Defines/reviews various types of research in exercise/sport science, physical education, and recreation studies. Qualitative research, field studies, and methods of introspection as alternative research strategies to traditional scientific paradigm.

Kin 5987. Professional Skills and Grant Writing for Health Sciences. (2 cr. Prereq—Grad student) Introduction to structure/function of different organizations (e.g., NIH, AHA). Writing/reviewing grants/manuscripts. Preparing for a job in academia.

Kin 5992. Readings in Kinesiology. (1-9 cr [max 9 cr]; A-F only. Prereq—CEHD student, grad, #) Independent study under tutorial guidance.

Kin 5995. Research Problems in Applied Kinesiology. (1-6 cr; A-F only. SProj 5995—[Grad or MEd student in KIN], #) Selected topics in physical activity/human performance.

Kin 8122. Seminar: Exercise Physiology. (2-6 cr [max 6 cr]; A-F only. Prereq—5122 or equiv or #) Classic and contemporary literature in exercise physiology and allied disciplines, emphasizing contributions of major leaders in the field and opportunities for interdisciplinary research.

Kin 8126. Seminar: Sport Psychology. (3 cr; A-F only. SProj 5126 or instr approval) Literature, theoretical constructs, research methodology, design. Focuses on student-selected topics/problems.

Kin 8132. Seminar: Motor Development. (3 cr; A-F only. Prereq—4132 or equiv or #) Contemporary research literature focusing on motor skill development from before birth to senescence. Emphasizes interaction between, physical, environmental, and performer constraints, and coordination/control of movement.

Kin 8135. Seminar: Motor Control and Learning. (3 cr [max 6 cr]; A-F only. Prereq—4135 or equiv or #) Advanced reading and discussion of research on motor control, motor learning, and human performance.

Kin 8211. Perception and Action. (3 cr. Prereq—[CEHD or Psy] grad student or #) Survey of theory/research on use of perceptual information for control of action. Focuses on behavioral research on perception, emphasizing performance of daily activities (e.g., standing, walking, driving). Perceptual control in context of expertise (e.g., sports), perceptual-motor development.

Kin 8333. FTE: Master’s. (1 cr. Prereq—Master’s student, adviser and DGs consent)

Kin 8444. FTE: Doctoral. (1 cr. Prereq—Doctoral student, adviser and DGs consent)

Kin 8666. Doctoral Pre-Thesis Credits. (1-18 cr [max 60 cr]. Prereq—Max 18 cr per semester or summer; doctoral student who has not passed prelim oral)

Kin 8696. Internship: Applied Sport Psychology. (3-6 cr [max 6 cr]; S-N only. Prereq—5126, 5126, Kin PhD student, #) Supervised internship; emphasis on educational sport psychology, dy approaches to athletic performance enhancement and psychological adjustment to sport injury.

Kin 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq—Max 18 cr per semester or summer; 10 cr total required [Plan A only])

Kin 8888. Thesis Credit: Doctoral. (1-24 cr [max 100 cr]. Prereq—Max 18 cr per semester or summer; 24 cr required)

Kin 8880. Graduate Research Seminar in Kinesiology. (1 cr [max 9 cr]; S-N only. Prereq—Grad major, #) Reporting and discussion of student and faculty research activity.

Kin 8995. Research Problems in Kinesiology. (1-9 cr [max 9 cr]; S-N only. Prereq—Kin PhD student or #)

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Laboratory Medicine and Pathology (LaMP)

Department of Laboratory Medicine and Pathology

Medical School


LaMP 5120. Chronobiology, (2-6 cr [max 6 cr]) How to interpret biologic time series and how to use them in practice as well as in designing chronobiology experiments. Chronobiologic procedures of data collection and analysis, interpretation of the output in clinical practice.

Landscape Architecture (LA)

Department of Landscape Architecture

College of Architecture and Landscape Architecture

LA 5201. Making Landscape Spaces and Types, (6 cr; A-F only. Prereq—BED accelerated status or LA grad or #) Design exploration using 3-D models and historical precedent studies to create outdoor spaces for human habitation and use. Application of the basic landscape palette of landform, plants, and structures to give physical, emotional, cognitive, and social definition to created places.

LA 5202. Landscape Analysis Workshop, (1 cr; S-N only) Introduction to field techniques for site analysis, including vegetation, soil, and landform description. One-week session, before fall term, at Lake Itasca Forestry and Biological Station.

LA 5203. Ecological Dimensions of Space Making, (6 cr; A-F only. Prereq—LA major or #; recommended for both BED and Grad students) Design studio experience drawing on ecological, cultural, aesthetic influences to explore development of design ideas responsive to ecological issues and human experience.

LA 5204. Landscape Ecology, (3 cr. Prereq—BED accelerated status or LA grad student or #) Relationships among spatial patterns, temporal patterns, ecological processes in landscape. Factors affecting landscape patterns, measurement of landscape pattern, material transport through landscape, landscape interactions, landscape pattern on population dynamics, landscape planning.


LA 5311. AutoCAD I, (3 cr. Prereq—BED-B.E.D. major or LA grad or #; may not be taken for graduate credit) Basic concepts, tools, and techniques of computer-aided drawing. Introduction to current AutoCAD Release software. Strategies and techniques for producing dimensioned and annotated drawings. Introduction to 3-D drawing capabilities. Use of dimension variables, attributes, blocks, symbols, and creation of customized menus.

LA 5322. AutoCAD II, (3 cr. §ARCH 5352) Intermediate concepts, tools, and techniques of computer-aided drawing. Production of dimensioned and annotated drawing. Use of dimension variables, attributes, blocks, symbols, and creation of customized menus.

LA 5371. Computer Methods I, (1 cr; S-N only. §ARCH 5371, Prereq—B.E.D. only) Introduction to current techniques, programs, and new editions of computer programs, and their application to landscape architecture computing.

LA 5372. Computer Methods II, (1 cr; S-N only. §ARCH 5372, Prereq—Arch/LA 5371, LA grad or #) Current techniques and computer programs, and their application to landscape architecture computing.

LA 5373. Computer Methods III, (3 cr. §ARCH 5373, Prereq—LA grad or #) Advanced techniques and computer programs, and their application to landscape architecture computing in design, theory, and technology.

LA 5400. Topics in Landscape Architecture, (1-3 cr [max 12 cr]; A-F only. Prereq—B.E.D. accelerated status or LA grad or #) Current topics in landscape architecture. Taught by regular or visiting faculty in their areas of specialization.

LA 5401. M-Term drawing class, (1-3 cr [max 12 cr]; A-F only. Prereq—#) Independent studies under direction of landscape architecture faculty.

LA 5402. Directed Studies in Landscape Architecture History and Theory, (1-6 cr [max 12 cr]; A-F only. Prereq—#) Independent studies under the direction of landscape architecture faculty.

LA 5403. Directed Studies in Landscape Architecture Technology, (1-6 cr [max 12 cr]; A-F only. Prereq—#) Independent studies under the direction of landscape architecture faculty.

LA 5404. Directed Studies in Landscape Architecture Design, (1-6 cr [max 12 cr]; A-F only. Prereq—#) Independent studies under the direction of landscape architecture faculty.

LA 5405. Interdisciplinary Studies in Landscape Architecture, (1-6 cr [max 12 cr]; A-F only. Prereq—#) Research, planning, or design projects. Topics vary.

LA 5406. Urban Design Journal, (3-4 cr [max 4 cr]; A-F only. Prereq—Admitted to Denmark International Study Program co-sponsored by the University; given in Denmark) Methods and theories in urban design and human behavior. Students develop journal as tool for experiencing, analyzing, and recording the urban landscape, its fabric, spatial elements, and individual components, and for analyzing design solutions.

LA 5407. Landscape Architecture Studio, (3-4 cr [max 4 cr]; A-F only. Prereq—Admitted to Denmark International Study Program co-sponsored by the University; given in Denmark) Individual and student projects focusing on urban issues; design process in Danish conditions; solutions based on knowledge of Danish problems in landscape and urban design and an understanding of how these problems are solved within Danish and European contexts.

LA 5408. Landscape Architecture, Architecture, and Planning, (3-4 cr [max 4 cr]; A-F only. Prereq—Admitted to Denmark International Study Program co-sponsored by the University; given in Denmark) Methods and theories in urban design and human behavior. Students develop urban design journal as tool for experiencing, analyzing, and recording the urban landscape, its fabric, spatial elements, and individual components, and for analyzing design solutions.

LA 5413. Introduction to Landscape Architectural History, (3 cr; A-F only. Prereq—One course in history at 1xxx or higher) Introductory course examines the multiple roots of landscape architecture by examining the making of types of landscapes over time. Emphasis on ecological and environmental issues, and issues related to political, economic, and social contexts of landscape architectural works.

LA 5431. History of Landscape Architecture: Individual Influences, (3 cr; A-F only. Prereq—Grad LA grad student or #) Assessment of influences of individuals on formation of the profession of landscape architecture from 1800 to present. Lectures, presentations, field trips, readings, papers, projects.

LA 5571. Landscape Construction: Landform Systems and Spatial Performance, (3 cr; A-F only. Prereq—Accelerated B.E.D student or LA grad student) Theory and professional applications of landform systems for design. Landform typology, representation methods, manipulation techniques, use of land survey data, earthwork construction issues. Spatial accommodation of vehicles in landscape architecture, including road design.

LA 5572. Plants in Design, (3 cr; A-F only. Prereq—#, 5203, plant identification course) Design principles for using plants in landscape. Cultural/ecological principles in design projects of various scales. Lectures, presentations, field trips, readings, projects.

LA 5573. Landscape Technology: Introduction to Geographic Information Systems, (3 cr; A-F only. Prereq—# or B.E.D. major or LA grad or #) GIS as an analytical tool to solve geographical problems of regional landscape design and resource management. Topics include application techniques, analytical procedures, data characteristics, data sources, input/output methods, and implementation.

LA 5574. Identification of Minnesota Flora, (3 cr; A-F only. Prereq—BED accelerated status or LA grad student or #) Introduction to identification of approximately 500 plants commonly used by landscape architects and environmental designers in Minnesota. Students develop a working knowledge of over 250 plants. Focuses on plant selection techniques, plant landscape associations, and issues of plants for use in standard landscape architectural settings. Regular field sessions.


LA 5721. Proseminar in Metropolitan Design, (3 cr; A-F only. §ARCH 5721, Prereq—[Arch 5711 or equiv], enrollment in CMD prog or #) Seminar. Evolution of the contemporary city. Dynamics that created contemporary urban spatial patterns. Planning/design theories that have guided public interventions in the built environment. Thematic texts, classroom discussions.

LA 5790. Special Topics in Metropolitan Design, (3 cr [max 6 cr]; A-F only. §ARCH 5790, Prereq—Enrollment in CMD prog or #) Special topics in metropolitan design. Hypothetical projects include development of schematic master plans for site layout, grading, and planning. Design for residential, commercial, and civic uses with attention to zoning and other controls, environmental quality, human behavior, markets, project finance, and technics. Requires concurrent registration in LA 8202.

LA 8202. Designing Landscapes for Dwelling and Settlement, (6 cr; A-F only. Prereq—#, 5203, 5571, LA grad major, #, 6202 or #) Professional design studio. Hypothetical projects include development of schematic master plans for site layout, grading, and planning. Design for residential, commercial, and civic uses with attention to zoning and other controls; deed restrictions; preparation of design brief; environmental quality; human behavior; market; project finance; and techniques of site development.
LA 8203. Making Regional Landscape Space. (6 cr; A-F only. Prereq–8202, grad LA major, concurrent enrollment 8204 or #) Design exploration of landscape ecology, landscape perception, regional economics, and public policy as informants of design decision-making in regional landscapes or exceeding township level. Geographic information systems as design tools.

LA 8204. Regional Landscape Space. (3 cr; A-F only. Prereq–Grad LA major or #) Theoretical investigations and current advances in use of landscape ecology, landscape perception, regional economics, and public policy as informants of design decision-making in regional landscapes at or exceeding township level. Geographic information systems as design tools.

LA 8205. Urban Ferm Options: Landscape Architecture Studio. (6-8 cr [max 8 cr]. Prereq–2 yrs of studio, grad LA major or #) Urban landscape design issues, theories, and problems explored via formal/spatial inquiry in studio, reading, and the exposition of ideas in panel seminar. Urban systems, gathering spaces, ecology, infrastructure, recreation, and public space.

LA 8301. Landscape Architecture: Research Issues and Methods. (3 cr; A-F only. Prereq–8201 or #8201, grad LA major or #) Alternative methodological approaches to landscape architectural research and consideration of their appropriateness for contemporary research topics.

LA 8302. Professional Practice. (3 cr; A-F only. Prereq–8205, grad LA major or #) Office and project management case studies. Organizational behavior, marketing, sales, strategic planning, financial and cost accounting, insurance, legal issues and contracts.

LA 8333. FTE: Masters. (1 cr. Prereq–Masters’s student, adviser and DGS consent)

LA 8400. Topics in Landscape Architecture. (1-3 cr [max 12 cr]. Prereq–Grad LA major or #) Seminar offered by regular or visiting faculty in their area of specialization. Content varies with interest of instructor.

LA 8401. Directed Studies in Emerging Areas of Landscape Architecture. (1-6 cr [max 12 cr]; A-F only. Prereq–#) Current topics in landscape architecture. Seminar offered by regular or visiting faculty in their area of specialization. Subject matter varies with instructor.

LA 8402. Directed Studies in Landscape Architecture History and Theory. (1-6 cr [max 12 cr]; A-F only. Prereq–Grad LA major or #) Advanced independent studies under direction of landscape architecture faculty.

LA 8403. Directed Studies in Landscape Architecture Technology. (1-6 cr [max 12 cr]; A-F only. Prereq–Grad LA major or #) Advanced independent studies under direction of landscape architecture faculty.

LA 8404. Directed Studies in Landscape Architecture Design. (1-6 cr [max 6 cr]; A-F only. Prereq–Grad LA major or #) Advanced independent studies under direction of landscape architecture faculty.

LA 8405. Interdisciplinary Studies in Landscape Architecture. (1-6 cr [max 12 cr]; A-F only. Prereq–Grad LA major or #) Research, planning, and/or design project. Sample topics: energy-efficient design, historic preservation, urban revitalization, agricultural land use, computerized land-use planning, housing.

LA 8406. Concepts of Landscape Evaluation. (3 cr; A-F only. Prereq–Grad land arch major or #) Philosophical basis for wide-ranging approaches to evaluating qualitative aspects of landscape. Aesthetic factors and integration of landscape evaluation into regional design decision-making.

LA 8407. Perception Manipulation in Design of Exterior Space. (3 cr. Prereq–Grad land arch major or #) Historic and modern devices that alter one’s sense of spatial control and arrangement to create illusionary situations in exterior environment. Organized to inform and test principles of perception distortion in exterior space.

LA 8408. 18th-Century Landscape Theory: Nature and the Sublime, the Beautiful, and the Picturesque. (3 cr; A-F only. Prereq–Grad land arch or arch major or #) Eighteenth-century landscape architectural theory underpinned most modern western traditions in landscape architecture. These theoretical positions framed the nature of culture in the context of human experience through treatises and works of landscape architecture.

LA 8409. Fitting Buildings to the Land. (3 cr; A-F only. Prereq–Land arch or arch grad student with 1 yr grad design or #) Exercises and projects in site manipulation to adjust structures and attendant uses and circulation to specific land parcels.

LA 8554. Project Programming. (1 cr [max 3 cr]. A-F only. Prereq–8203, grad land arch major or #) Individual research in preparation for final studio.

LA 8555. Advanced Landscape Planning and Design. (6 cr; A-F only. Prereq–8205, grad land arch major or #) Advanced studies in area of student’s choice.

LA 8574. Landscape Storm Water Management. (3 cr. Prereq–8201, grad land arch major or #) Theory and applications of hydrology and storm water management techniques. Applied hydrology, catchment delineation, storm water runoff models, and storm water management techniques (detention ponds, swales, channels, culverts, small storm sewer systems, run-off systems, sedimentation, and erosion control systems).

LA 8575. The Art and Ecology of Landscape Detail. (3 cr. Prereq–Grad LA major or #) Design of pavements, enclosures, decks, lighting, electrical, and irrigation systems for landscape architecture. Theory/principles of design of light structures, properties/use of materials, construction communication. Landscape integrity and economic viability as performance issues.

LA 8741. Metropolitan Design Workshop and Optional Seminar. (3-6 cr [max 6 cr]; A-F only. Prereq–Enrollment in CMD prog or #) Introduction to discipline/methodologies of urban design. Contributing fields/issues, including government/community goals, land use, housing, economic development, natural resources, services, and transportation. Implementation program.

LA 8777. Thesis Credits: Master’s. (1-18 cr [max 50 cr]. Prereq–Max 18 cr per semester or summer; 10 or total required [Plan A only])

Language, Teaching, and Technology (LgTT)

Institute of Linguistics, ESL, and Slavic Languages and Literatures

College of Liberal Arts

LgTT 5101. Applications of Technology in Language Teaching. (3 cr) Explore uses of technology in language teaching; theoretical background, demonstrations, and applications.

LgTT 5110. Technology in the Second Language Classroom. (2 cr. ILGT 5110) Examine, evaluate, and use technology in language teaching. Theoretical background, demonstration, hands-on exploration.

LgTT 5111. Technology in Second Language Instruction. (3 cr. ILGT 5111) Using audio, video, and computer technology in second language teaching/learning in classroom, independent study, and distance education environments.

LgTT 5170. Special Topics in Language Teaching and Technology. (1-3 cr [max 12 cr]) Examine, evaluate, apply specific area of technology to K-higher education, second/foreign language teaching/learning in classroom, independent study, distance education environments.

Latin (Lat)

Department of Classical and Near Eastern Studies

College of Liberal Arts

Lat 5012. Latin Prose Composition. (3 cr. Prereq–Grad student or #) Latin grammar, syntax, diction, and prose style. Graduated exercises in prose composition.


Lat 5033. Epigraphy. (3 cr. Prereq–Grad student or #) Practical/theoretical introduction to Latin epigraphy (study/interpretation of inscriptions). Readings/discussion of epigraphic texts. Focuses on their value as historical documents, as evidence for development of Latin language, and as literary texts.

Lat 5310. Latin Literature: History. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5320. Latin Literature: Epistles and Essays. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5330. Latin Literature: Oratory. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5340. Latin Literature: Epic and Pastoral. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5350. Latin Literature: Lyric and Elegiac Poetry. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5360. Latin Literature: Latin Dramatists. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5370. Latin Literature: Satire. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5380. Latin Literature: Legal Texts. (3 cr [max 12 cr]. Prereq–Grad student or #) One or more authors.

Lat 5390. Literature. Religious Texts. (3 cr [max 12 cr]. Prereq–Grad student or #) Reading/discussion of religious texts from Latin antiquity, such as Varro’s Antiquitates Divinae, Cicero’s De natura deorum, Apuleius’s Metamorphoses, or Christian writers (Tertullian, Cyprian, Lactantius, Jerome, Augustine).

Lat 5410. Latin of Late Antiquity. (3 cr [max 12 cr]. Prereq–Grad student or #) Pagan/Christian Latin literature selected from authors of 3rd to 6th centuries AD. Topics specified in Class Schedule.

Lat 5420. Medieval Latin. (3 cr [max 12 cr]. Prereq–Grad student or #) Literature from 6th to 15th centuries. Authors/genres vary. Topics specified in Class Schedule.
Lat 5621. Latin Paleography. (3 cr. Prereq--Grad student or #) Analysis of various hands used in manuscripts of Latin authors, with attention to date/provenance. Transmission of ancient Latin literature.

Lat 5715. Introduction to the Historical-Comparative Grammar of Greek and Latin. (3 cr. §Grk 5715. Prereq--2 yrs college Greek) Historical and comparative grammar of Greek and Latin from their Proto-Indo-European origins to the classical norms.

Lat 5717. History of Latin. (3 cr. Prereq--Grad student or #) Reading/analysis of documents illustrating stylistic registers/evolution of Latin language, from its earliest attestations through Middle Ages.

Lat 5993. Directed Studies. (1-4 cr [max 18 cr]. Prereq--. A) Guided individual reading or study.

Lat 5994. Directed Research. (1-12 cr [max 20 cr]. Prereq-Grad student or #) Guided research on original topic chosen by student.

Lat 5996. Directed Instruction. (1-12 cr [max 20 cr]. Prereq-Grad student or #) Supervised teaching internship.

Lat 8120. Latin Text Course. (3 cr. Prereq--3111 or A, not for students in dept of Classical and Nr East Studies) Students attend 3xx Latin courses. Supplementary work at discretion of instructor.

Lat 8262. Survey of Latin Literature I. (3 cr) Extensive readings in variety of works from republican and early Augustan period.

Lat 8263. Survey of Latin Literature II. (3 cr) Variety of works from Augustan and imperial periods.

Lat 8267. Graduate Survey of Latin Literature of Late Antiquity. (3 cr. Prereq--) Latin literature of 3rd to 6th centuries A.D., including Ammianus and Augustine.

Lat 8910. Seminar. (3 cr [max 30 cr]) Various topics in Latin literature examined in depth with emphasis current scholarship and original student research.

Liberal Studies (LS)

Courses

College of Continuing Education

LS 5100. Liberal Studies Seminar. (1-4 cr [max 24 cr]; A-F only) Interdisciplinary topics.

LS 5125. Field Experience. (1-8 cr; A-F only. Prereq--MLS student) Off-campus observation, experience, and evaluation in interdisciplinary field of study.

LS 5900. Special Topics. (1-4 cr [max 12 cr]; A-F only. Prereq--MLS student or #) Special interdisciplinary topics.

LS 5993. Directed Studies. (1-4 cr [max 15 cr]. Prereq-Grad student) Guided individual reading or study.

LS 5994. Directed Research. (1-4 cr [max 15 cr]. Prereq--) Tutorial for qualified graduate students.

LS 8001. Introduction to Interdisciplinary Inquiry. (3 cr. A-F only. Prereq--MLS student) Required course. Emphasizes what students need to know or be able to do to successfully complete their individually crafted program, including critical thinking, clear writing, and interdisciplinary research.

LS 8002. Final Project for Graduate Liberal Studies. (3 cr; A-F only. Prereq--MLS all MLS coursework must be completed by end of sem) Students synthesize/complete final project.


LS 8333. FTE: Master’s. (1 cr. Prereq--Master’s student, advisor and DGS consent)

Linguistics (Ling)

Institute of Linguistics, ESL, and Slavic Languages and Literatures

College of Liberal Arts

Ling 5001. Introduction to Linguistics. (4 cr. §LING 3001, LING 3001H. Prereq--grad or #) Phonetics, phonology, morphology, syntax, semantics, and historical-comparative linguistics; language learning and psychology of language; linguistic universals; language in society.

Ling 5005. Applications of Linguistics. (3 cr. Prereq--3001 or 3011 or 5001 or #) Relationships between linguistics and neighboring disciplines. Applications to practical fields such as lexicography, orthography, translation/interpreting, language planning, reading, language teaching, bilingual education, education of the deaf, and correction of language disorders. Computer applications, forensic applications. Topics vary with each offering.

Ling 5101. Language Types and Linguistic Universals. (3 cr. Prereq--[[3001 or 3011 or 5001], 5201, 5302] or #) Comparison of languages and language types. Cross-linguistic similarities/universals of language, their explanation.

Ling 5105. Field Methods in Linguistics I. (4 cr. Prereq--5201, 5302 or #) Techniques for obtaining and analyzing linguistic data from unfamiliar languages through direct interaction with a native speaker.

Ling 5106. Field Methods in Linguistics II. (4 cr. Prereq--5105) Techniques for obtaining and analyzing linguistic data from unfamiliar languages through direct interaction with a native speaker.

Ling 5201. Syntax I. (3 cr. Prereq--3001 or 3001H or 5001 or #) Syntactic phenomena/constructions in various languages. Principles of grammar construction/evaluation. Syntactic theories as instruments of grammatical analysis.

Ling 5202. Syntax II. (3 cr. Prereq--5201) Foundation in modern syntactic theory. Syntactic phenomena in various languages. Emphasizes syntactic argumentation, development of constraints on grammatical formalisms.

Ling 5205. Semantics. (3 cr. Prereq--5201 or #) Analysis of sentence meaning. Semiotic properties. Relations such as analyticity, entailment, quantification, and genericity. Philosophical background, formal techniques of semantic analysis, how sentence meaning depends on word meaning, syntax, and context. The role of semantics in grammatical theory.

Ling 5206. Linguistic Pragmatics. (3 cr. Prereq--5201 or #) The analysis of linguistic phenomena in relation to beliefs and intentions of language users; speech act theory, conversational implicature, presupposition, information structure, relevance theory, discourse coherence.

Ling 5301. Phonetics. (4 cr. §LING 3301, Prereq--3001 or 3001H or 5001 or #) Phonetic analysis/transcription of speech. Articulatory/ acoustic correlates of speech sounds. Extensive practice transcribing. Emphasizes narrow transcription of human speech. One section focuses on universal phonetics, another focuses on English.

Ling 5302. Phonology. (3 cr. Prereq--5301) Concepts/types of information needed for describing patterns in sounds of words, for all speakers of all human languages, including current theoretical frameworks. Extensive practice identifying/analyzing phonological patterns in words of a language.

Ling 5303. Phonology II. (3 cr. Prereq--5302 or #) Phonology of human languages. Preparation for reading papers in the literature and for doing research in phonology.

Ling 5461. Conversation Analysis. (3 cr. §COMM 5461. Prereq--3001 or 3001H or 5001 or #) Discourse processes. Application of concepts through conversation analysis.

Ling 5462. Field Research in Spoken Language. (3 cr. §COMM 5462. Prereq--5461 or Spch 5461 or #) Transcribing and analyzing talk and movement related to talk. Applying concepts to recorded conversations.

Ling 5501. Introduction to Language Acquisition. (3 cr. Prereq--3001 or 3001H or 5001 or #) First/second language acquisition.

Ling 5505. Introduction to Second Language Acquisition. (3 cr. Prereq--3001 or 3011 or 5001, a course on phonological and grammatical structure of a language) Introduction to research on the language and learning processes of second-language learners; the linguistic structure of their interlanguage, the cognitive and social factors which influence their acquisition of a new language.

Ling 5601. Historical Linguistics. (3 cr. §LING 3601. Prereq--3001 or 3011H or 5001) Historical change in phonology, syntax, semantics, and lexicon. Linguistic reconstruction. Genetic relationship among languages.

Ling 5701. Sociolinguistics. (3 cr. Prereq--3001 or 3011 or 5001 or #) Social determinants of linguistic diversity, variation, and change. Topics may include social and regional dialects, language style and register, style-shifting and code-switching, the quantitative study of speech, linguistic and social inequality.

Ling 5721. Bilingualism. (3 cr. Prereq--3001 or 3011 or 5001 or #) Sociolinguistic theory and methods in the study of bilingualism; language ecology in multilingual societies; language and language behavior in the bilingual individual; language in ethnic conflict; implications for public policy and planning.

Ling 5801. Introduction to Computational Linguistics. (3 cr. Prereq--3001 or 3011 or 5001 or #; programming experience helpful) Methods and issues in computer understanding of natural language. Programming languages and their linguistic applications. Lab projects.

Ling 5802. Computational Linguistics. (3 cr. Prereq--5801 or #) Computer processing of natural language. Applications to such areas as speech recognition and information retrieval.

Ling 5900. Topics in Linguistics. (1-4 cr [max 12 cr]) Topics vary. See Class Schedule.

Ling 5931. Morphology and Syntax of Contemporary English. (3 cr. Prereq--3001 or 3011H or 5001 or #) Linguistic analysis of word/sentence structure of contemporary English. Focuses on data from recorded/ written texts.

Ling 5932. Topics in the Structure of Modern English. (3 cr. max 12 cr. Prereq--[[3001 or 3011H or 5001], [5201 or 5931] or #) Aspects of the morphology, syntax, or semantics/pragmatics of modern English. Emphasizes analysis of written or recorded texts. Topics vary.

Ling 5993. Directed Study. (1-3 cr [max 10 cr]. Prereq--. A) Directed study for Linguistics.
Courses

Logistics Management (LM)

Department of Marketing and Logistics Management

Curtis L. Carlson School of Management


Readings useful to student’s individual program or objectives that are not available in regular courses.

LM 8894. Graduate Research in Logistics Management. (1-3 cr; max 16 cr). Prereq–Adviser consent or #.

Individual research on an approved topic appropriate to student’s program and objectives.

Mgmt 8892. Readings in Management Theory and Administration. (1-8 cr; max 16 cr). Prereq–Business admin PhD student or #, adviser consent.

Intensive research on a management topic; major term paper.

Mgmt 8894. Graduate Research in Management Theory and Administration. (1-8 cr; max 16 cr). Prereq–Business admin PhD student or #, adviser consent.

Research project on a management problem of interest to student; may be completed in cooperation with a business firm.

Management of Technology (MOT)

Institute of Technology

MOT 5991. MOT Independent Study. (1-3 cr; S-N only. Prereq–MOT grad student).

Independent study in MOT-related topic.

MOT 6111. Marketing Management in Technology-Based Organizations. (2 cr; A-F only. Prereq–Grad MOT major).

Emphasizes marketing industrial products. Overall consideration of marketing strategy, Product strategy, including pricing, promotion, product mix, and sales and distribution decisions.

MOT 6112. Management Accounting. (2 cr; A-F only. Prereq–Grad MOT major).

Introduction to methods for estimating and analyzing product costs and for using cost information to make product mix and pricing decisions. Cases from manufacturing firms illustrate principles of activity-based costing. Uses of cost data in managerial decision making, budgeting and control, and financial statement analysis.

MOT 6113. Operations Management for Competitive Advantage. (2.5 cr; A-F only. Prereq–Grad MOT major).

Strategic framework to describe key relationships between operations and other business functions to achieve optimized operational decisions. Product-process design, production-inventory control. Quality improvement, quality-in-the-product development process. Just-in-time production, work force issues, role of technology.

MOT 6114. Technology, Fundamental Structure. (1 cr. Prereq–Grad MOT major).

Technology, technology-related management procedures, general business disciplines, management functions. Developing a macro-mindset that is comprehensive, future-focused, global, and change-oriented.

MOT 6121. Managing in a Technological Environment. (2 cr; A-F only. Prereq–Grad MOT major).

General management principles with applications to management of professional, technical, and research and development personnel. Discussions, readings, cases, and projects.

MOT 6122. Financial Management for Technology-Based Organizations. (2.5 cr; A-F only. Prereq–Grad MOT major).

Creating value within the organization. Financial methods important to managers of technology-based organizations, including budgeting capital, projecting financial needs, and managing working capital.

MOT 6133. Communication in a Technical Environment. (2 cr; A-F only. Prereq–Grad MOT major).

Oral and written communication. Introductory and specialized workshops on topics such as presentation skills, memo and report writing, listening skills, and visual aid design and integration.

MOT 6212. New Product Development. (2 cr; A-F only. Prereq–Grad MOT major).

Need for and problems of organizational integration in development of product policy. Execution of development process for new product. Necessary organizational interactions among marketing, research/development, and operations in design/delivery of products.
MOT 8213. Business, Government, and Macroeconomics. (2 cr; A-F only. Prereq—Grad MOT major)
Business-government relations, especially as they affect scientific and technical issues; global competitiveness; macro-economic policies influencing corporations’ domestic and international strategies and operations. Effects of legal and economic forces on management and technical strategies of corporations.

MOT 8214. Understanding and Forecasting Technology Development. (2 cr; A-F only. Prereq—Grad MOT major)

MOT 8221. Project Management and Leadership. (2 cr; A-F only. Prereq—Grad MOT major)
Principles and methods for planning and controlling a project, including development of a project plan, resource planning and scheduling (PERT/CPM), project monitoring, and termination. Leadership for effective teamwork. Skills to effectively manage interdisciplinary project teams.

MOT 8224. Pivotal Technologies in the New Millennium. (2 cr [max 2.5 cr]; A-F only. Prereq—Grad MOT major)
Technologies expected to play pivotal roles in industrial development. State-of-the-art technology, principal barriers to its commercialization. Student groups develop/present concepts for applying technology to industry. Lectures by guest experts, international field experience.

MOT 8231. Managing Information Resources in a Technology-Based Organization. (1.5 cr; A-F only. Prereq—Grad MOT major)
Information technologies such as database management systems and telecommunications. Management issues such as power/politics of information systems, role of information technology infrastructures, information systems as competitive weapons.

MOT 8232. Managing Innovation in a Technological Environment. (2 cr; A-F only)
Reviews managing innovation based on scientific studies. Inputs, processes, outputs of innovation ventures from concept through implementation. Focuses on developing a “road map” to guide an innovation manager. Conditions that facilitate/inhibit innovation. Typical patterns of innovation development. Adopting innovations developed elsewhere.

MOT 8233. Strategic Management of Technology. (2 cr; A-F only. Prereq—Grad MOT major)
Technology from perspective of a general manager as a key strategic resource for building competitive advantage of an organization. Important links between technology and strategic planning. Technology and global competition; creating, acquiring, and leveraging technology competence.

MOT 8234. Capstone Project. (1-2 cr [max 3 cr]; A-F only. Prereq—Completion of two semesters, grad MOT major)
Practicum carried out in cooperation with home organization of each participant. Full development, analysis, and proposed resolution of a significant issue. Students expected to perform adequate research in problem areas as well as apply concepts and methods learned in the MOT program working with a faculty adviser and a current organization mentor.

MOT 8333. FTE: Master’s. (1 cr. Prereq—Master’s student, adviser and DGS consent)

MOT 8900. Conflict Management. (5 cr. Prereq—Grad MOT major)
Theory and methods for applying conflict management techniques in organizations. Cooperative and competitive models of conflict, basicst of bargaining, conflict strategies, communication styles, listening skills, dispute resolution, third-party mediation, and use of computers for conflict mediation.

MOT 8910. Corporate Responsibility. (1 cr; A-F only. Prereq—Grad MOT major)
Principles of stakeholder management. Ethical framework for responsible management of investors, employees, suppliers, customers, and external community. Moral leadership, trust in organizations, and quality control. New metaphors and techniques for managing the socially responsible organization.

MOT 8920. Science and Technology Policy. (1.5 cr; A-F only. Prereq—MOT grad student)

MOT 8930. Topics in Emerging Technologies. (5 cr; S-N only. Prereq—MOT grad student)
Invited speakers give half- or full-day seminars on special topics in emerging technologies (e.g., energy systems, tissue engineering, thermal spray coating technology).

MOT 8940. Managing Intellectual Property. (5 cr; S-N only. Prereq—MOT grad student)

MOT 8950. International Residency. (1.5 cr; A-F only. Prereq—MOT grad student)
Twelve-day visit to educational/manufacturing organizations in Asia Pacific Region. Lectures by local university faculty on economic/managerial practices. Visits to plants, both domestically owned and joint ventures with U.S. companies. First-hand cultural/business experience. Written assignment required.

Managerial Communications (MCom)

MCom S400. Managerial Communications for the HR Professional. (2 cr. Prereq—HR student)
MCom S500. Managerial Communications for the HR Professional. (2 cr. Prereq—HR student)
MCom S540. Managerial Communications for the HR Professional. (2 cr. Prereq—HR student)

MCom S541. Managerial Communications for the HR Professional. (2 cr. Prereq—HR student)
Memorandum writing, oral presentations, and team communication required of HR professional. Emphasizes hands-on, experiential learning, including videotaping.

Manufacturing Systems (MS)

MS 5101. Manufacturing Strategy and Operations Management. (3 cr; A-F only. Prereq—Grad MS major)
Strategic roles of manufacturing, process technology, operations management, and market strategies; their impact on manufacturing. Overview of operations functions such as demand forecasting, capacity planning, inventory planning, inventory control, materials management, Kanban & JIT, facility selection, strategic alliances, and outsourcing.

MS 5102. Manufacturing Processes. (3 cr; A-F only. Prereq—Grad MS major)

MS 5103. Quality Engineering. (3 cr; A-F only. Prereq—Grad MS major)

MS 5104. Design of Manufacturing Systems. (3 cr; A-F only. Prereq—Grad MS major)

MS 5105. Financial Decision Making in Manufacturing. (2 cr [max 3 cr]; A-F only. Prereq—Grad MS major)
Fundamental topics in engineering economics, such as risk and uncertainty, equity and debt, accounting, cost accounting, time value of money, investments, and capital. Skills developed in budget management, capital justification, cost estimation, value engineering, equipment depreciation and replacement, and creating business plans.

MS 5106. Intelligent Decision Support Systems in Engineering. (3 cr; A-F only. Prereq—Grad MS major)
Methods for identifying where to apply DSSs, technologies for building them, strategies for evaluating their effectiveness. Examples from many engineering areas.

MS 5107. Simulation of Manufacturing Systems. (1 cr; A-F only. Prereq—MS grad student, #)
Using integrated simulation/animation environment to create, analyze, and evaluate realistic models for various manufacturing, assembly, and material handling systems. Experimental design for simulation. Random number generation, selecting input distributions, simulating output. See Class Schedule.

MS 5201. Project Management. (1 cr; A-F only. Prereq—Grad MS major)
Practical understanding of project management. Project planning; scheduling; budgeting; staffing; task and cost control; and communicating with, motivating, and managing team members.

MS 5202. Technology Forecasting. (1 cr; A-F only. Prereq—Grad MS major)
Introduction to methods of technology assessment/forecasting. Applications to history of technology/industry. Technological developments and their economic, social, and industrial impacts.

MS 5203. Minimizing Environmental Impacts in Manufacturing. (2 cr; A-F only. Prereq—Grad MS major)

MS 5204. Automated Machining Processes. (1 cr; A-F only. Prereq—Grad MS major)
Description and demonstration of automated machines, machine tools and machine tool controller. Machining center configuration and operation, machine tool controller, machining code generation, in-process sensing and control, cell controllers, and system simulation.

MS 5205. Issues in Quality. (1 cr; A-F only. Prereq—Grad MS major)
Courses

MS 5206. Industrial Safety. (1 cr; A-F only. Prereq–Grad MS major) Occupational safety and health/product safety for engineers. Fundamental safety concepts, engineering intervention principles. Standards, laws, and regulations governing safety of work places/products. Hazards and their engineering control, the human element, management of safety/health.

MS 5207. Design for Manufacturability. (1 cr; A-F only. Prereq–Grad MS major) Machine design practice plans for assembly of components into systems. Basic design principles.

MS 5208. Plasma Processing. (1 cr; A-F only. Prereq–Grad MS major) Plasma coating processes, manufacturing issues. Details of technologies such as plasma spraying and diamond deposition. Lab demonstrations.

MS 5209. Micro Electrical Mechanical Systems. (1 cr; A-F only. Prereq–Grad MS major) Introduces MEMS by presenting various microfabrication techniques such as integrated circuit microfabrication processes, bulk micromachining, bonding, and high-spectroscopy processes. MEMS design processes. MEMS applications. Future of MEMS.


MS 5502. ASE: Public Interactions. (1 cr [max 4 cr]; A-F only. Prereq–ISSE grad student) Techniques for effective public communication. How to run a successful public hearing. Resources for publishing public notices.

MS 5900. Directed Study. (1-3 cr; A-F only) Directed study/research in manufacturing systems. Topics chosen in collaboration with instructor.

MS 8333. FTE: Master's. (1 cr. Prereq–Master’s student, adviser and DGS consent)

MS 8760. Computer-assisted Product Realization: Capstone Project. (4 cr; A-F only. Prereq–Grad manufacturing systems major) Students experience the complete part design to production process. Manufacturing process design and commercial software packages for use, in part, in process design.

Marathi (Mar)

Department of Asian Languages and Literatures

College of Liberal Arts

Mar 5992. Directed Readings. (3-5 cr [max 12 cr]. Prereq–#) Individualized guided reading or study of modern Marathi texts.

Mar 5994. Directed Research. (3-5 cr [max 12 cr]. Prereq–#) Directed research on a subject agreed upon by student and instructor.

Marketing (Mktg)

Department of Marketing and Logistics Management

Curtis L. Carlson School of Management

Mktg 8811. Seminar: Consumer Behavior. (4 cr. Prereq–MBA 6210 or equiv, business admin PhD student or #) Theories and research in consumer behavior and related disciplines of social and cognitive psychology. Perspective primarily from information processing or social cognition. Consumer categorization, memory, beliefs, attitudes, and attitude change.

Mktg 8831. Seminar: Inter-Organizational Relations. (4 cr. Prereq–MBA 6210 or equiv, business admin PhD student or #) From an efficiency perspective, inter-organizational networks involved in task of moving goods and services from point of production to point of consumption. Literature covering the functional, institutional, analytical, and methodological traditions, as well as the behavioral school of thought and transaction cost and relational contracting.

Mktg 8841. Seminar: Theory and Methods of Measurement. (4 cr. Prereq–MBA 6210 or equiv, business admin PhD student or #) Issues surrounding validity and reliability of measures developed as key indicators of constructs in a behavioral context. Various methods of measurement such as indicators of reliability, Multi- Trait Multi- Method, exploratory factor analysis, and confirmatory factor analysis using Lisrel.

Mktg 8851. Seminar: Marketing Management and Strategy. (4 cr. Prereq–MBA 6210 or equiv, business admin PhD student or #) Topics in marketing management and formulation and implementation of marketing strategies. Exposes students to diversity of thought, within marketing and the strategic management literature.

Mktg 8890. Seminar: Marketing Topics. (4 cr [max 8 cr]. Prereq–MBA 6210 or equiv, business admin PhD student or #) Current topics and problems of interest considered in depth. Topics vary with each offering.

Mktg 8892. Readings in Marketing. (1-8 cr [max 16 cr]. Prereq–MBA 6210 or equiv, business admin PhD student or #) Readings useful to student’s individual program and objectives that are not available in regular courses.

Mktg 8894. Graduate Research in Marketing. (1-8 cr [max 16 cr]. Prereq–MBA 6210 or equiv, business admin PhD student or #) Individual research on an approved topic appropriate to student’s program and objectives.

Master of Business Taxation (MBT)

Department of Strategic Management and Organization

Curtis L. Carlson School of Management


MBT 5200. Tax Accounting Methods and Periods. (4 cr; A-F only. Prereq–Acct 5135, MBT student) Rules affecting timing of income and deductions for tax purposes. Examination of cash and accrual accounting methods on an overall basis and with respect to individual items of income and deductions; rules for changing accounting methods and periods; annual accounting and transactional concepts, including the claim of right doctrine, the Arrowsworth doctrine, and the tax benefit rule.

MBT 5220. Tax Research, Communication, and Practice. (4 cr; A-F only. Prereq–Acct 5135, MBT student) In-depth treatment of tax research methodology including tax questions, locating potential authority, assessing potential authority, and communicating research results. Substantive material on dealing with the IRS including sources of IRS policy; processing returns, auditing returns; rulings and determination letters; closures agreements; assessments and collections.

MBT 5223. Tax-exempt Organizations. (2 cr; A-F only) Tax law and issues concerning Section 501(c)(3) and other tax-exempt organizations, including qualification and procedures. Unrelated business income, private foundations (including intermediate sanctions), joint ventures.

MBT 5226. Negotiation Techniques in Taxation. (2 cr; A-F only) Hands-on approach. Applications from facilitating business sales, mergers, and acquisitions, to representing client’s position before IRS, to controlling TV remote. Negotiation process: planning, pre-negotiation preparation, strategy development.

MBT 5230. Corporate Taxation I. (2 cr; A-F only. Prereq–5135, MBT student) Federal income taxation of corporations and shareholders. Organization of a corporation; establishment of its capital structure; determination of its tax liability; dividends and other nonliquidating distributions; stock redemptions, and liquidations.

MBT 5238. Introduction to Taxation of Business. (2 cr; A-F only. Prereq–5135 or Acct 5135) Introduction to income tax laws governing taxation of corporations, partnerships, limited liability companies, limited liability partnerships, and S corporations. Students write research memorandum.

MBT 5323. Mergers and Acquisitions I. (2 cr; A-F only) Different types of acquisitions, dispositions, reorganizations, and spin-offs involving C corporations. Tax consequences of acquisition to corporations/sharholders involved. Use of 338 elections, limitations on acquired net operating losses/ credits, use of covenants not to compete, consulting agreements, deferred payment terms, treatment of transaction costs.

MBT 5328. Mergers and Acquisitions II. (2 cr; A-F only) Current corporate transactions serve as case studies for analyzing tax consequences of various transaction structures. Participants prepare present value models of related tax consequences to corporations/ shareholders involved. Use of Section 338(h)(10) for acquisitions of S corporations, international acquisitions.

MBT 5333. Tax Aspects of Consolidated Returns. (2 cr; A-F only. Prereq–5230, MBT student) Covers aspects of filing consolidated federal income tax returns. Includes determining affiliated groups; election and filing requirements; intercompany transactions, limitations on certain loss and credit carryforwards; allocation of federal income tax liability; E&P and investment credits; loss allowance rules; and excess loss accounts.

MBT 5335. Taxation of the Small Business Corporation. (2 cr; A-F only. Prereq–5230, MBT student) Federal income taxation of S corporations. Election eligibility; termination of status; treatment of income and deduction items; distributions, basis of stock and debt. Compensation arrangements in closely held corporations; fiscal year issues; personal service corporations; advantages of C corporations vs. S corporations; corporation liquidation and redemption rules; S corporation’s built-in gains tax.

MBT 5340. Taxation of Partners and Partnerships. (2 cr; A-F only. Prereq–Acct 5135, MBT student) Reviews tax consequences associated with formation, operation, and dissolution of a partnership.

MBT 5341. Taxation of Partnerships. (2 cr; A-F only) Advanced partnership allocation issues (special allocation arrangements, substantial economic effect regulations. Allocations of gains, losses, and depreciation under Code Section 704(c)), advanced partnership disguised sales issues, allocation of partnership liabilities, mergers/divisions. Interaction of section 197 and partnership rules (including antichurning provisions). Issues relating to choice of entity, issues encountered when converting to/from partnership form.
Courses

Math 5075. Mathematics of Options, Futures, and Derivative Securities I. (4 cr; Prereq—Two yrs calculus, basic computer skills)

Mathematical background (e.g., partial differential equations, Fourier series, computational methods, Black-Scholes theory, numerical methods—including Monte Carlo simulation). Interest-rate derivative securities, exotic options, risk theory. First course of two-course sequence.

Math 5076. Mathematics of Options, Futures, and Derivative Securities II. (4 cr; A-F only. Prereq—5075)

Mathematical background and such as partial differential equations, Fourier series, computational methods, Black-Scholes theory, numerical methods (including Monte Carlo simulation), interest-rate derivative securities, exotic options, risk theory.

Math 5165. Mathematical Logic I. (4 cr. §Math 4152. Prereq—2283 or 2374 or Phil 5201 or CSci course in theory of algorithms or #)


Math 5166. Mathematical Logic II. (4 cr. Prereq—5165)

First-order logic: provability/truth in formal systems, models of axiom systems, Godel's completeness theorem, Godel's incompleteness theorem: decidable theories, representability of recursive functions in formal theories, undecidable theories, models of arithmetic.

Math 5248. Cryptography and Number Theory. (4 cr. Prereq—2 sems soph math)


Math 5251. Error-Correcting Codes, Finite Fields, Algebraic Curves. (4 cr. Prereq—2 sems soph math)


Math 5255. Honors: Fundamental Structures of Algebra I. (4 cr. Prereq—[2243 or 2373 or 2573], [5287 or 5288 or 5289])

Review of matrix theory, linear algebra. Vector spaces, linear transformations over abstract fields. Group theory, including normal subgroups, quotient groups, homomorphisms, class equation, Sylow's theorems. Specific examples: permutation groups, symmetry groups of geometric figures, matrix groups.

Math 5256. Honors: Fundamental Structures of Algebra II. (4 cr. Prereq—5255)

Ring/module theory, including ideals, quotients, homomorphisms/domains (unique factorization, Euclidean, principal ideal), fundamental theorem for finitely generated modules over Euclidean domains, Jordan canonical form. Introduction to field theory, including finite fields, algebraic/ transcendental extensions, Galois theory.

Math 5335. Geometry I. (4 cr. Prereq—[2243 or 2373 or 2573], [5287 or 5288 or 5289])

Advanced two-dimensional Euclidean geometry from a vector viewpoint. Theorems/problems about triangles/circles, isometries, connections with Euclid's axioms. Hyperbolic geometry, how it compares with Euclidean geometry.

Math 5336. Geometry II. (4 cr. Prereq—5335)

Projective geometry, including: relation to Euclidean geometry, finite geometries, fundamental notions of projective geometry. N-dimensional Euclidean geometry from a vector viewpoint. Emphasizes N=3, including: polyhedra, spheres, isometries.