Course Catalog

Graduate Course Descriptions

Winter/Spring 2011-2012
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General Information

Catalog Version

GRADUATE UPDATE: OCTOBER 15, 2011
Please use the menu items to the left for current catalog navigation. Access archived catalogs by choosing the link to the right.

300-level Courses

Some graduate programs allow students to complete 300-level courses for graduate credit. Please see the undergraduate course descriptions for these course descriptions.
Subjects beginning with the letter A are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

Administration & Supervision
Accountancy
Animation
Applied Brass
Applied Keyboard
Applied Music
Applied Percussion
Applied Professional Studies
Applied Strings
Applied Technology
Applied Voice
Applied Woodwinds
Arabic
Art

Administration & Supervision

A&S 491 ADMINISTRATIVE THEORY AND BEHAVIOR
This course concerns theoretical concepts and empirical research relating to administrative behavior in organizations with special reference to educational organizations. Concepts are examined within the typical decisional framework of supervisors, chief school business officers, principles, and superintendents, and similar positions in the helping professions. Assignments are individualized.

A&S 492 THE PRINCIPALSHIP
An intensive study of factors involved in the administration and supervision of a school. Topics considered include the administration and supervision of student personnel, faculty, the instructional program, financial and physical resources, community relations and other basic needs in administering and supervising schools.

A&S 493 DATA DRIVEN DECISION MAKING
This course provides future administrators with the tools they need to critically examine demographic, financial, personnel and testing data and to use the insights gained in making well informed administrative decisions.

A&S 494 SCHOOL FINANCE
Major consideration will be given to problems relating to the preparing of a school budget, procuring revenue, financial accounting, capital outlays, insurance on property, taking of inventory, and the social and political implications of how schools are financed.

A&S 495 SCHOOL LAW
Authority, powers and liability of school personnel; rights and status of students; character of districts and school board control of curriculum, school property, finances. Special emphasis on recent state and federal court decisions as they affect Illinois and neighboring states.
A&S 496 HOME, SCHOOL, COMMUNITY RELATIONS
This course will examine the formation of educational partnerships within the home, school, community for the general purpose of school improvement and more specifically to affect the improvement of student achievement within the context of school reform. Students will have the opportunity to critically examine their individual and collective roles as administrators and educators in the school reform movement and be reflective regarding actions taken and planned. Among the issues to be discussed and integrated into the administrative role are how groups form, school leadership, group relations, power relationships, communications/public relations, collaborations, shared decision making, needs identification, resource identification and individual and collective action.

A&S 498 PRINCIPLES AND PRACTICES OF SUPERVISION
Supervision viewed from a human resources perspective, dealing with motivation, responsibility and successes at work as a means to intrinsic satisfaction.

A&S 499 CLINICAL SUPERVISION
Develops competencies in a system of person-to-person supervision that will give supervisors reasonable hope of accomplishing significant improvements in the personnel performance.

A&S 570 HISTORICAL, PHILOSOPHICAL AND THEOLOGICAL FOUNDATIONS OF CATHOLIC SCHOOL LEADERSHIP
A survey of the history of Catholic K-12 education in the United States and the foundational documents of Catholic Education. Students will examine the history and philosophical/theological foundation of Catholic Schools in the United States and will be asked to reflect on the nature and mission of Catholic education in the multicultural, multiethnic milieu of Twenty-first Century America.

A&S 571 SPIRITUAL AND ADMINISTRATIVE LEADERSHIP IN CATHOLIC SCHOOLS
Students will be asked to conceptualize leadership from the Transformational and Servant Leadership perspectives. Using these principles, students will examine the spirituality if Catholic School leadership, and its implications for them in their role as ministers and coordinators of ministries in the school setting. Students will then examine the unique administrative and managerial factors that impact Catholic schools from a leadership framework that is imbued with the spirituality of Servant Leadership.

A&S 590 ORGANIZATIONAL DEVELOPMENT
A development approach used in combining theory, research, and applications for improving interpersonal effectiveness and to develop problem-solving capacity of the organization. The course is about change theory, people in organizations and the achievement of individual and organizational goals.

A&S 591 RESEARCH SEMINAR IN EDUCATIONAL LEADERSHIP
This course is designed to help graduate students in Educational Leadership through the process of planning, organizing, drafting, and revising their Master's papers. Students will be expected to complete a literature review and to develop a strong proposal for an integrative paper as a prelude to selecting an advisor for their Master's papers. For M.Ed. students only.

A&S 593 PRACTICUM IN EDUCATIONAL LEADERSHIP
The practicum provides opportunities for advanced students in administration and supervision to participate in and complete a research project in selected systems on a full-time or part-time basis. The experiences are intended to provide, under professional direction and supervision for (1) study for major factions, policies, and problems for administration and supervision, and (2) intensive study of certain critical administrative and supervisory practices. PREREQUISITE(S): Advanced standing in administration and supervision and permission of faculty advisor.

A&S 594 INTERNSHIP IN EDUCATIONAL LEADERSHIP
The internship provides supervised experiences in selected organizations on a full-time or part-time basis. The student intern is cooperatively assigned to an organization under the immediate supervision of organizational personnel. The experiences provided are designed to enrich the student's theoretical background with practical opportunities of participating in (1) overall contact with personnel and with the major functions and problems of certain critical administrative and/or supervisory activities, and (2) a detailed study and analysis of a particular administrative and/or supervisory function or activity. PREREQUISITE(S): Advanced standing in administration and supervision and permission of faculty advisor.

A&S 595 WORKSHOP IN EDUCATIONAL LEADERSHIP
Topics of particular interest and concern to administrators and supervisors will be presented in a high-involvement seminar format. Primary reliance will be on written materials; however, audio-visual and role-playing mechanisms may also be used. Participation in workshops is limited to advance students of administration and supervision. PREREQUISITE(S): Consent of instructor.
A&S 596 HUMAN RESOURCE MANAGEMENT
Theory, practice and relevant research in modern personnel administration. Recruitment, staff-development, interviewing, collective bargaining, conflict resolution and employee evaluation are emphasized. Human resource administration, induction programs, and in-service opportunities are touched upon.

A&S 597 POLITICS OF EDUCATION
Policy development in education as a political process; community power, state and national politics in educational decision-making and the role of leadership and pressure groups in the shaping of educational policy at local, state and national levels.

A&S 598 INDEPENDENT STUDY IN EDUCATIONAL LEADERSHIP
PREREQUISITE(S): Permission of instructor, department chair and associate dean.

A&S 599 THESIS SEMINAR IN EDUCATIONAL LEADERSHIP
A student writing a thesis registers for this course for four quarter hours of credit. When the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. PREREQUISITE(S): SCG 410 and approved thesis proposal.

A&S 600 REGISTERED STUDENT IN GOOD STANDING
(0 credit) Registration in this course is open to students who are not registered for any other courses but need to complete requirements/assignments for previously taken courses. It provides access to University facilities. Permission of advisor required. $50 per quarter.

A&S 606 REVIEW OF LITERATURE
This paper will give students the opportunity to develop and demonstrate written competence in a subfield of their disciplines and to enhance life-long learning. Specifically, they will broaden their knowledge base and inform themselves about a topic, issue, theory, etc., reviewing and synthesizing existing literature. To do so, students will need a variety of bibliographic skills including searching databases. In other words, student will need to be able to ask and answer such question as "What is know about? What are major issues and themes?"

A&S 607 INTEGRATIVE PAPER
Students will observe and/or participate in the reciprocal interaction of theory and practice, by investigating actual practice in the field as it relates to theory. This might take the form of investigating how a particular theory is applied in the field, developing a practical application of a theory, or, conversely, developing/refining a theory based on investigations made in the field. In other words, as graduates encounter new theories and practices they will need to be able to investigate and evaluate them, asking and answering questions about "how theories work."

A&S 608 CAPSTONE IN EDUCATIONAL LEADERSHIP
Students who have completed the majority of the program will engage in an analysis of an urban school. Students will be given demographic, financial and testing data; a narrative of the school’s history and recent past; photographs of the setting, and other pertinent data and artifacts. Using these artifacts, students will be asked to design their first year agenda as the chief administrator in the building. Using the ISLLC standards as a guideline, students will create a portfolio that clearly outlines, schedules, professional development plans, budgets, enrollment projections, and so forth.

A&S 625 CANDIDACY CULMINATING PROJECT (STUDENT IN GOOD STANDING)
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing culminating projects for their program of study, including theses, papers, and final portfolios. It provides access to university facilities. Permission of advisor required. Registration limited to three terms. $50 per quarter.

A&S 640 LEGAL ASPECTS OF SPECIAL EDUCATION FOR CLASSROOM TEACHERS
The course will include a discussion of the legal rights of students with disabilities and the corresponding responsibilities and obligations of schools and educational personnel for meeting their educational needs. The course will include specific legal components inherent with the identification and education of students with disabilities including adaptations of classroom instructional methodology for students with disabilities in the regular education classroom.

A&S 645 THE ADMINISTRATION AND SUPERVISION OF SPECIAL EDUCATION
This course will examine the role and function of special education; special services within the school and community, including special classes for the mentally and/or physically handicapped; and various services, such as school psychology, school social work, speech correction, learning disabilities specialist, and others.
The course includes specific models for administration of special education programs and procedures for supervision and evaluation of special education personnel.

A&S 694 SCHOOL FINANCE
Major consideration will be given to problems relating to the preparation of a school budget, procuring revenue, financial accounting, capital outlays, insurance on property, taking of inventory, and the social, political, and ethical implications of how schools are financed.

A&S 695 SCHOOL LAW
Authority, powers and liability of school personnel; rights and status of students; character of districts and school board control of curriculum, school property, finances. Special emphasis on recent state and federal court decisions as they affect Illinois and neighboring states.

A&S 700 REGISTERED DOCTORAL STUDENT IN GOOD STANDING
Non-credit. This registration is required of all doctoral students who are not enrolled in a doctoral course, but are completing course requirements and/or dissertation research. It provides access to University facilities. Academic advisor approval required. After the third enrollment, dissertation chair approval required.

A&S 706 CANDIDACY PAPER
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing a dissertation. It provides access to university facilities. Permission of advisor required. This registration indicates that a student has successfully completed the candidacy paper as specified in the Doctoral Student Handbook. $50 per quarter.

A&S 801 LEADERSHIP: THEORY AND PRACTICE
This course examines leadership theories from various social, psychological and philosophical perspectives both historical and contemporary. The student will also be called upon to reflect upon contemporary practice in K-16 educational leadership settings and evaluate the efficacy of the theoretical frameworks in light of practice.

A&S 803 SCHOOL PROGRAMS, PLANT AND HUMAN RESOURCES
The development of school programs, based on current research and school laws and regulations, will be explored. The focus will be on the core curriculum, Education and Secondary Education Act (ESEA), State Chapter I, Bilingual and Special Education mandates and opportunities as well as on other discretionary school programs. Responsibilities in relation to plant operation and management, staffing formulas for all staff, developing job descriptions, recruitment, and staff selection and evaluation are included.

A&S 811 ASSESSMENT AND ACCOUNTABILITY
This course addresses the key role of leaders in educational systems for the development, articulation, implementation, and supervision of an assessment process that provides accountability for all stakeholders-students, parents, teachers, legislators, relevant communities, and governing authorities. Issues of philosophy, standards, outcomes, curricula, instrumentation, technology, and the interconnected nature of these factors are identified as they influence the leadership role in accountability compliance. Factors related to ethical practice and social justice anchor the philosophical and political parameters of the course.

A&S 823 COMMUNITY AND CONSENSUS BUILDING FOR SCHOOL IMPROVEMENT
Students will examine inclusive models for consensus building among school/community members that engage membership in processes and decision making through data collection, self-analysis, mission/vision development, goal setting and program planning, implementation and evaluation that leads to school and community improvement. Attention will be given to establishing linkages with local municipal, state, and federal resources, business and industrial resources, community services, and other community resources.

A&S 843 THE POLITICS OF SCHOOLING
Students will engage in analyzing educational policy and the political processes related to problem identification, problem solving, decision making, the underlying political processes and their impact on the school/community, students, parents, educators, staff, and community members. The role of such entities as, school boards, unions, professional associations, businesses, university preparation programs, book and test publishers, and local, state, and national policy makers in the education political arena will be analyzed. Attention will be given to the means by which support for change is developed with special emphasis on collaborative dialogue and teamwork for political action. Strategies for coalition building, and individual and collective action will be informed by the use of theory from applied behavioral science and political science.

A&S 849 SUPERVISED DISSERTATION PROPOSAL DEVELOPMENT
Students register for this course during the quarter in which they defend their dissertation proposals. PREREQUISITE(S): Permission of dissertation chair.
A&S 859 INDEPENDENT DISSERTATION RESEARCH: EDUCATIONAL LEADERSHIP
Students register for this course in the quarter after they successfully defend their dissertation proposals. PREREQUISITE(S): Permission of dissertation chair.

A&S 873 CURRENT TRENDS IN BUDGETING AND FINANCE
This course focuses on the priorities of school funding. Financial decisions undergird instructional programs and administrative decision making. Relating these to available money and funding, setting priorities and maximizing the impact on student achievement will be studied.

A&S 883 SCHOOL LAW
This course examines the current legal requirements of schools and how changes impact schools. Administrators make decisions that respond to many realities, including the rules and regulations at the local, state, and national levels. The administrator works within a constantly changing system. The duties and liabilities of school administrators as determined by federal rules and regulations, state school codes, the policies of boards of education, and case law will be examined.

A&S 894 INTERNSHIP IN EDUCATIONAL LEADERSHIP
(4-8 qh) The internship provides supervised experiences in selected organizations on a full-time or part-time basis. The student intern is cooperatively assigned to an organization under the immediate supervision of organizational personnel. The experiences provided are designed to enrich the student's theoretical background with practical opportunities of participating in (1) overall contact with personnel and with the major functions and problems of certain critical administrative and/or supervisory activities, and (2) a detailed study and analysis of a particular administrative and/or supervisory function or activity. PREREQUISITE(S): Advanced standing in administration and supervision and permission of faculty advisor.

A&S 899 SUPERINTENDENT INTERNSHIP
This course is intended for those seeking the Illinois State Board of Education (ISBE) Superintendent Endorsement. The experiences provided are designed to enrich the students' theoretical background with practical opportunities to participate in major functions and critical duties at the district, regional and/or central office level. The student will be cooperatively assigned to site(s) and be supervised by the on-site superintendent and a DePaul faculty member. PREREQUISITE(S): Advanced standing in the educational leadership program, possession of an ISBE Administrative Endorsement (type 75 certificate), and permission of faculty advisor.

Accountancy

ACC 500 FINANCIAL ACCOUNTING
This introduction to financial accounting provides both a theoretical foundation and an opportunity to apply accounting logic in increasingly complex situations. The accounting model and information processing cycle are developed. The content of the income statement, balance sheet, and statement of cash flows are studied in detail and analyzed. PREREQUISITE(S): Graduate standing

ACC 502 ADVANCED MANAGEMENT ACCOUNTING
Interpretation, analysis and use by management of internal accounting information. Topics include cost management, activity-based costing, inventory management (including just-in-time), cost allocation, performance measurement, analysis and control of non-manufacturing costs, budgeting and financial planning, and capital budgeting. Students are familiarized with quantitative models and approaches used in management accounting. Computers will be used for problem-solving. PREREQUISITE(S): ACC 542 or ACC 555

ACC 503 ACCOUNTING INFORMATION SYSTEMS AND AUDITING
Accounting systems design and the audit process, and how they interact to aid management in controlling business operations. This course will enable the student to interface with accounting systems, and to participate in their design and audit. Comparisons and contrasts between internal and external auditors are discussed at appropriate points. PREREQUISITE(S): ACC 500.
ACC 533 CORPORATE PLANNING
This course investigates the conceptual framework for and the development of integrated corporate planning and control in business enterprises and not-for-profit organizations. Consideration will be given to long-range strategic planning, annual budgets, product and project planning. The course also conveys an understanding of the human elements and organizational constraints that may affect the corporate planning function. PREREQUISITE(S): ACC 542, ACC 555 or equivalent

ACC 535 ACCOUNTING SYSTEMS (CROSS-LISTED AS ACC 610)
Today's business person requires a fundamental knowledge of computer-based information systems and their role in accounting functions and financial decision-making. This course will enable the student to interface with accounting systems, and to participate in their design and audit. It will focus on the nature and flows of accounting information in organizations, security and internal controls and the use of information technology in accounting information systems and decision-making. PREREQUISITE(S): ACC 500 or equivalent

ACC 541 FINANCIAL ACCOUNTING THEORY & PRACTICE I
Intermediate theory and preparation of financial statements; review of accounting concepts and development of accounting models; methods and problems in valuation and reporting; with emphasis on current assets and liabilities, property, plant and equipment, and intangibles, review of relevant authoritative literature. PREREQUISITE(S): ACC 500 or equivalent

ACC 542 COST AND MANAGERIAL ACCOUNTING I
Introduction to cost and managerial concepts and techniques. Topics include cost accumulation (job, process, standard costing, and activity-based costing), cost behavior, breakeven analysis, budgeting, contribution approach to income measurement, joint and by-product costing, cost allocation methods, and their relevance for decision-making. PREREQUISITE(S): ACC 500 or equivalent

ACC 543 FINANCIAL ACCOUNTING THEORY & PRACTICE II
Continuation of intermediate theory and financial statement preparation with emphasis on the components of stockholder's equity; special problems such as earnings per share, accounting changes, income taxes, derivatives, and statement of cash flows; review of relevant authoritative literature and interpretation of financial statements. NOTE: This is a M.S.A. course PREREQUISITE(S): ACC 541

ACC 545 ADVANCED TOPICS IN ACCOUNTING THEORY
This course is designed to provide comprehensive coverage of the following: consolidations, partnership accounting, foreign operations and not-for-profit accounting. Coverage of the topics emphasizes both theory and practice. Mastery of the material is obtained through problem-solving situations. NOTE: This is a M.S.A. or M.ACC course. PREREQUISITE(S): ACC 543

ACC 547 AUDIT AND REGULATION OF CORPORATE FINANCIAL REPORTING
This course covers the theory of the auditing function. Topics covered include generally accepted auditing standards; the profession's ethical and legal dimensions; audit planning; the internal control structure; audit evidence; and auditor's reports. The development of the professional judgment needed to apply generally accepted auditing standards is emphasized. NOTE: This is a M.S.A. course. PREREQUISITE(S): ACC 541

ACC 548 TAX TREATMENT OF INDIVIDUALS AND PROPERTY TRANSACTIONS
This course provides detailed coverage of the federal income tax treatment of individual taxpayers. It includes coverage of inclusions, exclusions, deductions, credits, rates of taxation, special tax computations and the tax aspects of property transactions. It also includes tax research. This course is a prerequisite for students in the M.S.T. program not having the equivalent undergraduate coursework in taxation. NOTE: This is a M.S.A. or M.ACC course. PREREQUISITE(S): ACC 500 and ACC 541 or equivalent

ACC 550 ADVANCED TOPICS IN AUDITING (CROSS-LISTED AS ACC 620)
Advanced Topics in Auditing, a companion and sequel to Accounting 547, emphasizes the implementation and application of generally accepted auditing standards to transaction cycles and classes of transactions. It includes the study of sampling techniques used in tests of controls and tests of details, internal control in computer-based systems, and introduces the use of Computer Assisted Audit Tools and Techniques. The role of internal auditors is also covered. NOTE: This is a M.S.A. course. PREREQUISITE(S): ACC 547

ACC 551 TAX TREATMENT OF CORPORATIONS AND PARTNERSHIPS
This course covers the federal income tax treatment of corporations and partnerships. It includes ethics in tax practice and an exposure to estate and gift taxation. This course is a prerequisite for students in the M.S.T. program not having the equivalent undergraduate coursework in taxation. NOTE: This is a M.S.A. or M.ACC course. PREREQUISITE(S): ACC 548 or its equivalent

ACC 552 LEGAL AND ETHICAL ENVIRONMENT OF ACCOUNTING PRACTICE
This course covers the aspects of the legal environment of special concern to accounting practitioners, including: the ethical standards of auditing and tax practice; legal liability of accountants; contract law; property law, commercial paper; the laws of agency; sales laws and public regulation and disclosure laws. NOTE: This course is a M.S.A. course. PREREQUISITE(S): Graduate standing

ACC 555 MANAGEMENT ACCOUNTING FOR DECISION-MAKING
This course addresses the financial, nonfinancial & ethical dimensions of decision-making. It provides students with a conceptual understanding of cost management and managerial accounting skills. Topics include cost behavior, cost-volume-profit analysis, cost systems, budgeting and control and decision-making. Emphasis is on the interpretation & use of accounting information rather than its creation & accumulation. PREREQUISITE(S): ACC 500 or equivalent.

ACC 558 TAX RESEARCH
Tax research methods are taught in the classroom. The course begins with a study of the history of the body of tax law. A "walk through" technique is employed to give the student firsthand experience in the use of a tax research service. NOTE: This is a MST course. PREREQUISITE(S): Graduate standing

ACC 559 TOPICS IN INDIVIDUAL AND CORPORATE TAXATION
This course deals with a variety of topics which are important in tax practice, such as alternative minimum tax, passive losses, interest limitations, the at-risk rules, hobby losses, use of a home, net operating losses. Depreciation and capital recovery including related credits, unearned income of a minor child, uniform capitalization rules and time value of money concepts. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 or equivalent

ACC 560 TAXATION OF CORPORATIONS AND SHAREHOLDERS
Emphasis is on the federal income taxation of distributions to corporate shareholders, including nonliquidating distributions and distributions in connection with liquidations. Collapsible corporations and the tax consequences of transfers of property to a corporation are also covered. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 558

ACC 561 CORPORATE REORGANIZATIONS
Federal income tax implications of transfers of stock, securities and property in connection with corporate acquisitions, combinations and separations. This course is mainly concerned with the tax consequences to corporate parties, to reorganizations and to their shareholders. Emphasis is given to determining the taxability of transactions and asserting the availability of tax attributes to successors in interest. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 558 and ACC 560

ACC 562 CONSOLIDATED RETURNS
This course deals with the principles and mechanics of tax consolidations including eligibility, intercompany transactions, inventory adjustments, basis of property, net operating losses, earnings and profits and separate return limitations. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 560

ACC 563 PARTNERSHIPS
An in-depth analysis of the federal income tax rules governing partners and partnerships. This course includes study of the aggregate and entity theories, partnership distributions and liquidations, dispositions of partnership interests, transactions concerning unrealized receivables and substantially appreciated inventory items and special basis adjustments. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 and ACC 558

ACC 564 TRANSACTIONS IN PROPERTY
This course is concerned mainly with the federal income tax implications of gains and losses derived from sales and other dispositions of property. Emphasis will be given to the determination and recognition of gain or loss, character of gain or loss (capital or ordinary), basis and holding period. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 or equivalent and ACC 558

ACC 565 TAX ACCOUNTING, PERIODS, AND METHODS
This course deals with federal income tax planning as to determination of the proper periods for reporting income and deductions, overall methods of tax accounting and special elections available to taxpayers. Topics include the installment method, accounting method changes, accrual method, cash method, FIFO, LIFO and accounting periods. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 or equivalent

ACC 566 FEDERAL INCOME TAX PROCEDURES
A study of the procedures which must be followed when dealing with the Internal Revenue Service and possible alternative courses of action. Included are such topics as the organization of the Internal Revenue Service, filing requirements, refund claims, closing agreements, examination procedures, protests, assessment, payment and collection of tax, statute of limitations, interest and penalties. NOTE: This is a
ACC 567 INTERNATIONAL ASPECTS OF U.S. TAXATION
This course covers the federal income taxation of United States persons investing or doing business outside the United States and nonresident aliens and foreign corporations having nexus with the United States. Topics covered include, among others, the foreign tax credit, Subpart F income, controlled foreign corporations, sourcing rules and expatriate taxation. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 or equivalent

ACC 568 TAXATION OF CLOSELY HELD CORPORATIONS
This course deals with federal income tax planning in connection with the accumulated earnings tax, personal holding companies, S corporations, multiple corporations, transactions between related parties and small business corporation stock. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 or equivalent and ACC 558

ACC 569 CONCEPTS OF DEFERRED COMPENSATION
The nature, purpose and operation of the various forms of deferred compensation are examined and evaluated: employee pension; profit sharing and stock bonus plans, stock options; executive compensation plans; retirement plans for self-employed individuals; other plans. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 558

ACC 570 STATE AND LOCAL INCOME AND FRANCHISE TAXATION
This course identifies and examines the types of income and capital stock taxes imposed on corporations and pass-through entities by state governments. Topics include nexus and the impact of P.L. 86-272, conformity to the Internal Revenue Code, business and nonbusiness income, methods of reporting, and allocation and apportionment. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 or equivalent and ACC 558.

ACC 571 ESTATE AND GIFT TAXATION
This course consists of a detailed review of the federal estate and gift tax laws. In the area of estate taxation, assets included and deductions allowed are reviewed in detail by reference to law, regulations and cases. Recognition of gifts and gift tax deductions and exclusions are also covered. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 551 or equivalent and ACC 558.

ACC 572 CONCEPTS OF STATE PROPERTY AND TRANSACTION TAXATION
This course focuses on concepts of property and sales taxation, but will survey other state and local transaction taxes, including excise taxes, utility taxes, fuel taxes and escheat statutes. Property tax concepts include distinctions between real and personal property and valuation approaches. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 558

ACC 573 INCOME TAXATION OF ESTATES, TRUSTS AND DECEDENTS
This course deals with federal income taxation of estates, trusts and decedents with special emphasis on such concepts as income in respect of a decedent and estate and trust distributions. Also, included are such topics as the income and deductions included in the decedent's final return, death of a partnership member, the income and deductions of estate and trusts, the throwback rule, grantor trusts and the tax ramifications of the use of other special trusts. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 548 and ACC 571

ACC 574 ESTATE PLANNING
This course will deal primarily with how to avoid and minimize federal estate taxes and estate administration expenses upon the subsequent demise of the client. Therefore, the student must have taken the estate and gift taxation, the use of outright gifts, the use of trusts. Generation skipping transfers and charitable gifts will also be considered. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 571

ACC 576 FEDERAL TAX VALUATION
Fair market value is referenced hundreds of times in the Internal Revenue Code, and many more times in the Regulations. In the initial part of this course the procedures and methods applicable to tax valuation are reviewed to heighten practitioner awareness of the range of potential valuation outcomes, and the reasons therefore. Tax cases are used extensively to achieve this objective. In the second part of the course presentations and discussions address more specific topics such as built-in gains, determination of carryover of net operating losses, valuation aspects of charitable giving, conservation easements, ESOPs, family limited partnerships, reasonable compensation. S-corporations, special use properties, and transfer pricing.

ACC 580 ACCOUNTING FOR INCOME TAXES
Covers the financial accounting and reporting standards for the effects of income taxes that result from corporate activities. Topics include computation of current and deferred tax expense or benefit, temporary differences, carry-forwards, computation of deferred tax assets and liabilities, valuation allowances, business combinations, investments in subsidiaries and equity method investments, tax allocations, presentation and
disclosure, and implementation of accounting for uncertainty in income taxes under FIN 48. This class is open
to non MST students with the instructor's permission.

**ACC 581 TAXATION OF REAL ESTATE**
An in-depth study of federal income taxation as it relates to real estate, including current issues and planning
possibilities. Topics include consequences of acquisition and disposition, real estate development, leasing,
mortgages and other financing devices and forms of ownership of real estate. NOTE: This is a M.S.T. course.
PREREQUISITE: ACC 563 or equivalent

**ACC 582 ADVANCED CONCEPTS IN INTERNATIONAL TAXATION**
This advanced course is a companion offering to the introductory international taxation course (Accountancy
567). In this course, planning issues and tax savings opportunities are emphasized in complex areas, including source of income considerations, foreign tax credit matters, Subpart F issues and the tax matters of foreign corporations. In addition, tax treaty matters, international bribes and boycott sanctions and foreign currency translation issues are addressed. NOTE: This is a M.S.T. course. PREREQUISITE(S): ACC 567 or equivalent

**ACC 584 INCOME TAX AND BUSINESS DECISIONS**
The study of the impact of federal income taxation on business decisions with emphasis on such areas as choice of business organization, acquisition planning, executive compensation & accounting for income taxes. This course in intended for students in the M.B.A. program and restricted to those who have not had undergraduate credit for ACC 548 or ACC 551 or their equivalents. (MSA students may not take this class)
PREREQUISITE(S): ACC 500

**ACC 591 TAX EXEMPT ORGANIZATIONS**
Tax treatment of public charities and private foundations. The way exempt status is secured and retained, qualified exemptions, unrelated business income, the loss of exemption, prohibited transactions, deductibility of contributions and required reporting and auditing. PREREQUISITE(S): ACC 558

**ACC 598 SEMINAR ON CURRENT PROBLEMS IN TAXATION**
Covers recent significant developments in the future of legislation, regulations, administrative rulings and case law on federal income, estate and gift taxation. Emphasis is placed on specific tax planning in light of these current developments. Topics are discussed against background of leading Supreme Court cases. Recommended as final tax course in M.S.T. program. Required course for all candidates for Master of Science in Taxation degree. PREREQUISITE(S): ACC 558, ACC 560, ACC 565 and ACC 566

**ACC 599 GRADUATE SEMINAR IN MANAGEMENT ACCOUNTING**
Capstone seminar for M.B.A. students with a concentration in Management Accounting. Attention is directed to the current developments in Management Accounting. Students learn to exercise judgement in the solution of accounting-related problems by drawing upon their integrated and comprehensive body of accounting and related knowledge. This seminar involves extensive reading and research in the literature of management accounting and related disciplines. PREREQUISITE(S): ACC 502 or equivalent

**ACC 610 ACCOUNTING INFORMATION SYSTEMS (CROSS-LISTED AS ACC 535)**
Today's businessperson requires a fundamental knowledge of computer-based information systems and their role in accounting functions and financial decision-making. This course will enable the student to interface with accounting systems and to participate in their design and audit. It will focus on the nature and flows of accounting information in organizations, security, internal controls, the use of information technology in accounting information systems and decision-making. NOTE: This is a M.S.A. or a M.ACC course. PREREQUISITE(S): ACC 500 or equivalent

**ACC 620 ADVANCED AUDITING THEORY (CROSS-LISTED AS ACC 550)**
Advanced Topics in Auditing, a companion and sequel to Accounting 547, emphasizes the implementation and application of generally accepted auditing standards to transaction cycles and classes of transactions. It includes the study of sampling techniques used in tests of controls and tests of details, internal control in computer-based systems, and introduces the use of Computer Assisted Audit Tools and Techniques. The role of internal auditors is also covered. NOTE: This is a M.ACC course. PREREQUISITE(S): ACC 547

**ACC 630 BUDGETING, FINANCIAL PLANNING & CONTROL**
The study of quantitative, organizational behavioral aspects of budgeting for management planning and control. Topics include strategic planning, long-range planning, budgeting, cost analysis, capital budgeting, transfer pricing and divisional performance measurement. Exposure given to special applications in nonprofit organizations. Emphasis is placed on the use of accounting information for effective planning and control. PREREQUISITE(S): ACC 542 and M.Acc or M.S.A program or permission of instructor.
ACC 640 ACCOUNTING THEORY AND POLICY FORMULATION
A study of the process by which accounting policies are formulated. The students are asked to make critical evaluations of basic issues such as income determination and current issues such as FASB agenda items in light of their theoretical, empirical, practical and political aspects. Students are expected to demonstrate an ability to use the accounting research literature. Students should plan to take this capstone course at the end of their degree program. NOTE: This is a M.S.A. and a M.ACC course. PREREQUISITE(S): ACC 542, 545, and 550 and M.Acc or M.S.A. programs

ACC 690 GRADUATE INTERNSHIP
Technical knowledge acquired in the classroom is applied in an actual business environment through varied assignments under supervision in industry, government or public accounting. Offered variably. PREREQUISITE(S): Permission

ACC 798 SPECIAL TOPICS
Content and format of this course are variable. An in-depth study of current issues in accountancy. Subject matter will be indicated in class schedule. Offered variably. PREREQUISITE(S): As indicated in the class schedule

ACC 799 INDEPENDENT STUDY
Available for graduate students of demonstrated capability for intensive independent work in accountancy. PREREQUISITE(S): Written permission

American Sign Language
Graduate Course Descriptions - Current American Sign Language

ASL 499 INDEPENDENT STUDY
Variable credit. PREREQUISITE(S): Permission of Chair and instructor required.

Animation
Graduate Course Descriptions - Current Animation

ANI 415 AUDIO FOR ANIMATION
This class will explore concepts and practical techniques students need in order to address many of the unique challenges associated with creating audio for animated films. Students will begin with an introduction to audio production before moving on to build practical skills for both field and studio recording. Lectures, readings, and hands on projects will give students a working knowledge of how to approach and create the immense range of styles of audio for animated films, from classic cartoon soundtracks to the live action style mixes of many of today’s animated Hollywood blockbusters. Students will complete several audio projects including a multi-track mix for an animated short. PREREQUISITE: None

ANI 420 HAND-DRAWN ANIMATION
This course is devoted to the complex aspects and techniques of classical drawn animation required to create convincing movement, frame to frame consistency, and character acting. Beginning with a review of the fundamentals and progressing to more complicated techniques, students will learn how to create unique and technically accomplished drawn animation as well as methods for its eventual clean-up, inking and coloring. Contemporary uses of digital technology to enhance production will be emphasized. PREREQUISITE(S): ANI 201 (or ANI 101)

ANI 421 ANIMATION MECHANICS
Students in this course will rigorously investigate the foundational aspects of animation through traditional and digital methods. Basic principles, including timing, spacing and the abstraction of movement, will be
analyzed and questioned through experimentation. Students will experience how the process of making work can be used to generate emergent ideas, and be challenged to push the art form beyond the accepted conventions. PREREQUISITE(S): None

ANI 422 ANIMATION STYLES & TECHNIQUES
The history of animation is explored with a focus on inspiring the students’ own work. Students will be involved in an intense study of animation throughout history and around the world, and are required to view a large amount of work outside of class. Animations will be grouped by time period, theme, and/or technique. Through writing and group discussions they will examine the significance of the technique and subject matter. They will put this study into practice by creating short animated films based on their reactions to the films.

PREREQUISITE(S): ANI 421

ANI 425 VISUAL STORYTELLING
This class focuses on storyboarding and animatics as key pre-production tools for animation, film, and game development projects. Areas of focus include narrative development, drawing, performance, and editing. Students will apply these techniques to create an animatic: a comprehensive time-based draft for a short film.

PREREQUISITE(S): None

ANI 430 3D CHARACTER ANIMATION
This course concentrates on the acting techniques of classical character animation as applied to 3D animation technology, both for cinema and game design. We will examine the history of the field in hand-drawn, stop-motion and 3D, focusing especially on the principles developed at the Disney and Warner Brothers studios. The student will explore the technical aspects of translating these ideas to 3D models, including basic modeling, skinning, bone systems, rigging and kinematics, but the main focus will be on creative performance. Exercises will cover communicating the illusion of intelligence, mood through movement, staging, acting basics, the feeling of weight, and progressing dialogue.

PREREQUISITE(S): ANI 231 or GPH 438.

ANI 431 ADVANCED 3D CHARACTER ANIMATION
This course introduces advanced concepts in 3D character animation that are necessary for achieving professional quality results. Students will hone their skills through the study of advanced techniques for animating multiple characters, creating continuity, and building character through performance. An emphasis will be placed on the exploration of movement for developing personal style.

PREREQUISITE(S): ANI 300 or ANI 430

ANI 432 3D RIGGING FOR ANIMATORS
Students will study the processes and techniques for creating professional quality character rigs. Following a professional production workflow, students will create character skeletons, learn aesthetic and technical considerations for skinning, learn techniques for optimal parameterization, and learn to construct character animation controls.

PREREQUISITE(S): ANI 231

ANI 435 3D CHARACTER MODELING
This course will instruct students in the process of 3D polygonal based character modeling. Students will learn professional techniques for building quad-based polygon meshes with an extra emphasis on proper topology to help prepare their model for rigging. Students will learn complete UV unwrapping for the entire figure as well as effective techniques for advanced texturing.

PREREQUISITE(S): ANI 231 or GPH 250

ANI 436 3D MODELING WORKSHOP
Students in this course will broaden and improve their overall skill set by learning a range of modeling techniques. Students will complete several smaller projects that cover topics including speed modeling, efficient low-poly modeling, hard surface modeling, projection texturing, and advanced UV unwrapping techniques. The course will culminate in a final project in which the student will propose and complete an advanced model of their own design.

PREREQUISITE(S): ANI 231 or GPH 250

ANI 437 ENVIRONMENT MODELING
This course covers the planning, production and implementation of environment models for games. The term “environment model” includes landscape, exterior architecture, interior architecture, and both organic and man-made props. Topics include visual art direction, setting mood, developing narrative and cinematic lighting strategies. After creating assets in a modeling program, students will implement them in a game engine editor to learn about game engine requirements, limitations and pipeline.

PREREQUISITE: ANI 230

ANI 439 3D TEXTURING AND LIGHTING
Students will study the processes and techniques for creating shaders and lighting setups for both cinematic
and gaming environments. Techniques in UV mapping and projection mapping will be explored for both environments and character creation. Lighting will be approached from the foundation of traditional cinematography. Additional topics, including negative lighting and global illumination, will also be covered. PREREQUISITE(S): ANI 230 or GPH 250

ANI 440 COLLABORATIVE SHORT ANIMATED FILM
Students will work in small groups to produce short animated films from concept to completion using the media of their choice. Emphasis is placed on a collaborative environment for pitching ideas, visual development and creative problem-solving during production. Different studio methodologies and techniques will be discussed. Each team will face various technical and aesthetic challenges to complete a finished film.
PREREQUISITE(S): ANI 421

ANI 444 VISUAL DESIGN FOR GAMES
The stages of development in the visual direction of a video game will be identified and detailed, and students will participate in the creation of the visual art direction of a product, giving special attention to the design of 3D models and animation. Visual Design for Games topics include: creating visual direction, concepting, art bibles, art production, and post-production strategies. Students will create proposals, create concepts, iteratively create artwork, and analyze competitive products. PREREQUISITE(S): ANI 105, GPH 211, ART 105 or ANI 425 (or equivalent 2D design experience)

ANI 445 CHARACTER DESIGN
Students will be introduced to various methods of creating interesting and original character designs for animated films and games, and then put these approaches into practical use. Methods of creative concepting will include drawing, collage, sculpture and 3D mock-ups. Fundamental visual design and color principles will be stressed, along with the basics of caricature. Students will utilize their character designs in an animated short. PREREQUISITE(S): ANI 230

ANI 450 MOTION CAPTURE
This course is a workshop focusing on realistic character motion obtained through motion capture. Students will learn the motion capture pipeline, including character skinning and mapping, planning and directing motion capture sessions, applying motion to a character and motion editing. PREREQUISITE(S): ANI 231 or GPH 438.

ANI 451 ADVANCED MOTION CAPTURE WORKSHOP
This course will enable students with motion capture experience to advance their technical skills and gain experience with practical application in the motion capture studio. Emphasis will be placed on advanced skinning and mapping techniques as well as complex motion capture sessions involving sets, props, and multiple actors. Students will be required to plan, arrange, and direct their own sessions in the motion capture studio. PREREQUISITE(S): ANI 310 or ANI 450

ANI 455 STOP MOTION ANIMATION
The principles of stop motion character animation in real space are the emphasis of this intermediate level course. Students are introduced to basic armature building, lighting and scene composition, and the designing and fabrication of characters with a variety of materials. Contemporary uses of digital technology to enhance stop motion production will be explored. PREREQUISITE(S): ANI 201 (or ANI 101)

ANI 456 EXPERIMENTAL ANIMATION
This course introduces strategies for an experimental approach to animation. Students will study how experimentation relates to both concept and technique, and examine the work of classic experimental animators. This is a production class that requires students to produce a series of short animations in a variety of processes and styles. PREREQUISITE(S): ANI 201 or ANI 101

ANI 460 ANIMATION GRADUATE SEMINAR
This seminar will explore the animator's role in contemporary culture, including careers in entertainment, art, game development and education. A combination of guest speakers, critical readings, animation analysis and group discussion will help students lay a foundation for their graduate study in the field.

ANI 466 CINEMA, ANIMATION AND ART IN CONTEMPORARY PRACTICE
This seminar course focuses on animation and cinema from the standpoint of Modern and Contemporary art. Students study the major styles and themes of historical experimental film and video, and relate these topics to contemporary animation and independent cinema practices. Emphasis is placed on theory and criticism, and how it informs experimental work. Students are expected to discuss work and theory in a seminar setting, and to engage the class material in several research papers.
ANI 470 ACTING FOR ANIMATORS
This is acting training designed specifically for the needs of animators, as opposed to stage actors. Utilizing lecture/discussion, examination/deconstruction of animated and live-action film clips, home assignments and a few simple in-class improvisations, this course provides the animator with the skills necessary to deliver dynamic animated character performance. Assessment measures include oral and written reflective analysis, short animated character sketches and class participation. PREREQUISITE(S): None

ANI 479 ADVANCED 3D COMPOSITING
This course is designed to allow advanced compositors and animators to merge the 2D, 3D and/or live-action video worlds, drawing from a combination of techniques such as motion tracking, compositing, rotoscoping, hand-drawn, cut-out and 3D animation. The goals are to go beyond simply achieving technical proficiency, as we will also focus on learning principles of good animation in preparation for both artistic and commercial endeavors. PREREQUISITE(S): ANI 230 and (DC 378 or 478)

ANI 480 ANIMATION PRODUCTION
Students study the traditional processes used for the production of animation for cinema and games. Topics include pre-production, sound, planning and scheduling, the division of labor, and post-production. Students will apply these methods to their own projects, using the medium of their choice. PREREQUISITE(S): ANI 101 or ANI 201

ANI 490 TOPICS IN ANIMATION
Advanced study in animation focusing on a specific area each quarter. May be repeated for credit. PREREQUISITE(S): ANI 101 or ANI 201 or consent of the instructor.

ANI 493 TOPICS IN 3D ANIMATION
Advanced study in 3D animation focusing on a specific area each quarter. May be repeated for credit. PREREQUISITE(S): ANI 230 or consent of the instructor.

ANI 540 ANIMATED SHORT FILM PART I
This course and its continuation, ANI 541, will concentrate on facilitating the graduate students' production of a short, independently animated project. The topics of idea generation, experimentation, problem solving, planning and time management, and the process of critical analysis will be applied to the students work, with the choice of animation technique, content and form left to the individual. We will have technical demonstrations on an as-needed basis, depending on the nature of your animations. This course must be taken consecutively with ANI 541 Animated Short Film Part II. PREREQUISITE(S): ANI 440

ANI 541 ANIMATED SHORT FILM PART II
This course is a continuation of ANI 540 Animated Short Film Part I. Throughout the quarter students will continue working on their films, meeting with the instructor for advising, and other students for group critiques. Students will also learn effective post-production strategies as they near completion of their first film. This course must be taken consecutively with ANI 540. PREREQUISITE(S): ANI 540

ANI 560 GRADUATE TEACHING SEMINAR
This seminar exposes students to effective methods and professional practices of teaching undergraduate and graduate students. A variety of approaches to course materials and projects will be introduced and discussed in detail. In addition to work in class, students will work closely with a faculty member in order to gain first-hand knowledge, including class observation, of practical aspects of creative and academic instruction. PREREQUISITE(S): none

ANI 599 INDEPENDENT STUDY
Independent study form. PREREQUISITE(S): Consent of dean and consent of instructor required.

ANI 639 MFA PRE-THESIS
In this course the MFA student will develop the concept and pre-production of their thesis animation through workshops, critiques and assignments. Students will create inspiration and concept art, write a treatment, create a storyboard and animatic as well as research design options to be used on their final film project in ANI 640 MFA Thesis Animation. PREREQUISITE(S): ANI 442

ANI 640 MFA THESIS ANIMATION
This course is a three quarter class that will concentrate on the graduate students' production, post-production and completion of their final thesis project. Students will have regular critique sessions with their three Thesis Advisors from the animation faculty. The student’s project will be presented to the committee upon completion. PREREQUISITE(S): ANI 639
Applied Brass

APB 410 EUPHONIUM
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

APB 430 FRENCH HORN
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

APB 465 TROMBONE
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

APB 470 TRUMPET
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

APB 475 TUBA
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

Applied Keyboard

APK 450 PIANO
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

APK 460 HARPSICHORD
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

Applied Music

APM 400 OPERA WORKSHOP
(2 credits) This is a results oriented course for students who have completed basic acting/performing studies
and are ready to engage those skills in work to be presented for public performance.

**APM 405 GRADUATE RECITAL**
A full 60 minute, public recital performance of solo and/or chamber repertoire to be completed during the graduate residence. This recital is required as partial fulfillment of the degree of Master of Music in Performance and for the post-Masters Certificate in Performance. COREQUISITE: Students must be registered for a total of 4 credits of applied lessons during the quarter the recital is presented.

**APM 411 WOODWIND PEDAGOGY**
(2 credits) This course is designed to provide students with an overview of the important aspects of woodwind pedagogy. Students will gain the necessary tools to teach woodwind students of all ages and ability levels.

**APM 415 ITALIAN DICTION/LANGUAGE LAB FOR GRADUATE STUDENTS**
This course is offered in conjunction with the first year of graduate vocal study. It focuses on the translation, pronunciation, grammatical understanding, and interpretation of Italian texts.

**APM 416 GERMAN DICTION/LANGUAGE LAB FOR GRADUATE STUDENTS**
This course is offered in conjunction with the first year of graduate vocal study. It focuses on the translation, pronunciation, grammatical understanding, and interpretation of German texts.

**APM 417 FRENCH DICTION/LANGUAGE LAB FOR GRADUATE STUDENTS**
This course is offered in conjunction with the first year of graduate vocal study. It focuses on the translation, pronunciation, grammatical understanding, and interpretation of French texts.

**APM 428 ORCHESTRAL REPERTOIRE FOR WOODWINDS**
(2 credits)

**APM 429 ORCHESTRAL REPERTOIRE FOR STRINGS**
(1 credit) Study of standard orchestral repertoire.

**APM 431 THE ART OF THE PIANO**
The course is designed to introduce the art of piano playing as a part of broader spectrum of the world culture, and to guide the graduate students in their search for the true mastery, where playing the instrument is identified as an artistic expression of spiritual freedom, and technical prowess is seen as a step to meaningful communication.

**APM 432 ORCHESTRAL REPERTOIRE FOR STRING BASS**
(2 credits) Students will study, discuss, and perform orchestral excerpts for the string bass.

**APM 441 ACCOMPANYING PRACTICUM**
(1 credit) The course is designed to give students an opportunity to learn different styles and practice accompanying voice, wind, and string instrumentalists in studio and performance format.

**APM 442 ACCOMPANYING CLASS**
(2 credits) Role of pianist as accompanist.

**APM 443 CHAMBER MUSIC WORKSHOP**

**APM 446 PERCUSSION PEDAGOGY**
(3 credits)

**APM 447 ORCHESTRAL REPERTOIRE: PERCUSSION**
Study of standard orchestral repertoire.

**APM 451 PIANO PEDAGOGY**
(3 credits) Offered Fall Quarter only.

**APM 453 ADVANCED TECHNIQUES OF THE MUSIC STAGE**
(2 credits)

**APM 471 BRASS CONCEPTS**
(2 credits)

**APM 472 ORCHESTRAL REPERTOIRE FOR BRASS**
(1 credit) Study of standard orchestral repertoire.
**APM 486 STRING PEDAGOGY**
(2 credits) Concepts and philosophies, teaching beginners to advancing students, and coaching chamber music.

**APM 487 ADVANCED VOCAL DICTION**
(2 credits) Advanced study in Italian, French and German diction, phrasing and text translation.

**APM 496 VOICE PEDAGOGY**
(2 credits) Course is designed to enhance APM 336.

**APM 498 INDEPENDENT STUDY**
INDEPENDENT STUDY

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**Applied Percussion**

Graduate Course Descriptions - Current

**APP 400 PERCUSSION**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

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**Applied Professional Studies**

Graduate Course Descriptions - Current

**AP 502 LEARNING PLAN REVIEW**
Throughout the second quarter, students finalize their Learning Plans, convene their Academic Committees (comprised of themselves, their Professional Advisor, and their Faculty Mentor) to review their Learning Plans, and upon initial approval, submit their Learning Plans to the Mastery Review Committee (MRC) for approval.

**AP 510 MAIN THEORIES**
This area addresses knowledge and understanding of theories, models and/or theoretical frameworks - including implications for practice - that are most relevant to the Focus Area.

**AP 520 METHODS OF RESEARCH**
This area addresses the systematic gathering of data and interpretation of findings as practiced within the Focus Area and/or related fields.

**AP 528 ASSESSMENT AND INTEGRATION 1**
This session includes orientation of Professional Advisors, and provides opportunity to integrate and apply dynamics of reflective practice, self-assessment, liberal learning, and ongoing collaboration.

**AP 530 SPECIALIZED SKILLS**
This area involves identifying skills that are particular to the profession and the context(s) in which these skills are applied. The emphasis is on actual demonstration of specialized skills used in practice.

**AP 540 COMMUNICATION MODES**
This area involves facility with communication modes relevant to professional practice in the focus area. It requires an understanding of the relationship among key communication variables (the message, the method, the audience, and the context), a repertoire of communication strategies, and a dexterity or ease of access permitting the professional to adapt communication strategies to changing situations as necessary.

**AP 548 ASSESSMENT AND INTEGRATION SEMINAR 2**
This session provides further opportunity to integrate and apply dynamics of reflective practice, self-
This session provides further opportunity to integrate and apply dynamics of reflective practice, self-assessment, liberal learning, and ongoing collaboration.

**AP 550 ORGANIZATIONAL AND INTERPERSONAL DYNAMICS**
This area addresses the human and structural issues that professionals encounter within practice (work) environments, providing students with the opportunity to consider how their professional role affects and is affected by systems, technology, structure and other people within their practice settings.

**AP 558 ASSESSMENT AND INTEGRATION SEMINAR 3**
This session provides further opportunity to integrate and apply dynamics of reflective practice, self-assessment, liberal learning, and ongoing collaboration.

**AP 560 LARGER CONTEXTS**
This area addresses the issues and problems of the student's focus area within a context that includes at least one of the following: the historical development of the profession over time and its future direction (temporal); the relationship between the profession and the society within which it exists (social, multicultural); and/or, the nature of the profession globally (international).

**AP 570 ETHICAL ISSUES**
This area addresses the relationship between beliefs and assumptions regarding humanity, good/evil, right/wrong, etc., and behavioral outcomes (including conflicts).

**AP 574 REFLECTION ON PRACTICE**
This area addresses the interplay between thinking, doing and reflecting in the often-ambiguous and complex contexts of daily practice.

**AP 578 ASSESSMENT AND INTEGRATION SEMINAR 4**
This session provides further opportunity to integrate and apply dynamics of reflective practice, self-assessment, and liberal learning, as well as planning for program progress.

**AP 585 SUPPLEMENTAL COMPETENCE I**
Student selects a second area from among Theories, Research, Skills, Communication Modes, Organizational/Interpersonal Dynamics, Larger Contexts, Ethical Issues, and Reflection on Practice in which to develop and demonstrate competence.

**AP 586 SUPPLEMENTAL COMPETENCE II**
As an option to the Integrating Project, student may elect to develop and demonstrate an additional four areas of professional competence from among Theories, Research, Skills, Communication Modes, Organizational/Interpersonal Dynamics, Larger Contexts, Ethical Issues, and Reflection on Practice.

**AP 587 SUPPLEMENTAL COMPETENCE III**
As an option to the Integrating Project, student may elect to develop and demonstrate an additional four areas of professional competence from among Theories, Research, Skills, Communication Modes, Organizational/Interpersonal Dynamics, Larger Contexts, Ethical Issues, and Reflection on Practice.

**AP 588 SUPPLEMENTAL COMPETENCE IV**
As an option to the Integrating Project, student may elect to develop and demonstrate an additional four areas of professional competence from among Theories, Research, Skills, Communication Modes, Organizational/Interpersonal Dynamics, Larger Contexts, Ethical Issues, and Reflection on Practice.

**AP 589 SUPPLEMENTAL COMPETENCE V**
As an option to the Integrating Project, student may elect to develop and demonstrate an additional four areas of professional competence from among Theories, Research, Skills, Communication Modes, Organizational/Interpersonal Dynamics, Larger Contexts, Ethical Issues, and Reflection on Practice.

**AP 591 INTEGRATING PROJECT PROPOSAL**
A concise, well-honed document that clearly delineates the student's readiness to engage in the Final Integrating Project as well as the project's nature and scope. The topic under investigation should be supported by relevant literature in the field and the use of appropriate methods of inquiry.

**AP 592 FINAL INTEGRATING PROJECT**
The Integrating Project is an original, independently conducted project that incorporates elements of theory, practice, knowledge, and skill and demonstrates integration of the Liberal Learning Skills with the professional Focus Area. It serves as the culminating Learning Activity of the program and is intended to make an original contribution to the student's professional field. The topic of the Integrating Project is chosen by the student with the approval of the Professional Advisor and the Mastery Review Committee and typically involves a
with the approval of the Professional Advisor and the Mastery Review Committee and typically involves a practice-based problem with an appropriate intervention.

### Applied Strings

**APS 427 GUITAR**  
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**APS 460 STRING BASS**  
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**APS 480 VIOLA**  
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**APS 485 VIOLIN**  
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**APS 490 VIOLONCELLO**  
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

### Applied Technology

**AT 519 MAIN THEORIES**  
This area addresses knowledge and understanding of theories, models and/or theoretical frameworks - including implications for practice - that are most relevant to the Focus Area.

**AT 529 METHODS OF RESEARCH**  
This area addresses the systematic gathering of data and interpretation of findings as practiced within the Focus Area and/or related fields.

**AT 539 SPECIALIZED SKILLS**  
This area involves identifying skills that are particular to the profession and the context(s) in which these skills are applied. The emphasis is on actual demonstration of specialized skills used in practice.

**AT 549 COMMUNICATION MODES**  
This area involves facility with communication modes relevant to professional practice in the focus area. It requires an understanding of the relationship among key communication variables (the message, the method, the audience, and the context), a repertoire of communication strategies, and a dexterity or ease of access permitting the professional to adapt communication strategies to changing situations as necessary.

**AT 559 ORGANIZATIONAL AND INTERPERSONAL DYNAMICS**
This area addresses the human and structural issues that professionals encounter within practice (work) environments, providing students with the opportunity to consider how their professional role affects and is affected by systems, technology, structure and other people within their practice settings.

**AT 569 LARGER CONTEXTS**
This area addresses the issues and problems of the student's focus area within a context that includes at least one of the following: the historical development of the profession over time and its future direction (temporal); the relationship between the profession and the society within which it exists (social, multi-cultural); and/or, the nature of the profession globally (international).

**AT 579 ETHICAL ISSUES**
This area addresses the relationship between beliefs and assumptions regarding humanity, good/evil, right/wrong, etc., and behavioral outcomes (including conflicts).

**AT 589 REFLECTION ON PRACTICE**
This area addresses the interplay between thinking, doing and reflecting in the often-ambiguous and complex contexts of daily practice.

**AT 598 SPECIAL TOPICS**
Special Topics

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Applied Voice

Graduate Course Descriptions - Current

**APV 400 VOICE-STUDIO**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

Applied Woodwinds

Graduate Course Descriptions - Current

**APW 415 BASSOON**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**APW 420 CLARINET**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**APW 425 FLUTE**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**APW 435 OBOE**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.
**APW 455 SAXOPHONE**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

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**Arabic**

Graduate Course Descriptions - Current

**ARB 497 SPECIAL TOPICS IN ARABIC**
See schedule for current offerings. PREREQUISITE(S): Graduate standing required.

**ARB 498 STUDY ABROAD**
Variable credit. PREREQUISITE(S): Permission required. Graduate standing required.

**ARB 499 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Permission of chair and instructor required. Graduate standing required.

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**Art**

Graduate Course Descriptions - Current

**ART 405 ADVANCED COLOR DESIGN**
Advanced Color Design PREREQUISITE(S): ART 105

**ART 427 COMPUTER GRAPHICS**

**ART 460 ART AND DESIGN I: HISTORY, CONCEPT AND CULTURE**
Graphic Design I PREREQUISITE(S): ART 101 and 105.

**ART 461 ART AND DESIGN II: WORD AND IMAGE**
Graphic Design II

**ART 489 VIDEO ART**
An advanced level course designed to introduce students to the uses of video within a variety of artistic practices including installation, projection and performance as well as linear, single-channel non-narrative, non-documentary pieces. This course will take a “theory/practice” approach. Instruction will combine a study of the historical uses of video in the art world as well as the theoretical and critical perspectives on the practices of a wide range of artists who use video. Hands-on application of these concepts will be applied to the students' own work, culminating in a finished project by the end of the term which will be edited in the computer application Dreamweaver, Flash and Fireworks. Basic literacy with Macintosh platform is required. Graduate students will do extra work for this class. PREREQUISITE(S): Instructor's consent.

**ART 490 GRADUATE TOPICS IN STUDIO**
Intensive studio experience in the student's media of choice. PREREQUISITE(S): Graduate standing or consent of instructor.
Bilingual- Bicultural Education

BBE 97 100 FIELD EXPERIENCE HOURS IN ESL / BE DOCUMENTED
(non-credit) Required of all Bilingual Bicultural students. Observations and participatory experience with children and youth in a school or agency. The observation hours are a prerequisite for student teaching and related professional courses.

BBE 402 BILINGUAL-BICULTURAL PROGRAM DESIGN AND CURRICULUM DEVELOPMENT
(4 credits) Reviews theory and application of curriculum development to bilingual instructional programs, such as design, organizational patterns, materials and media, teacher training, parent and community involvement, and evaluation. Principal bilingual education program models are examined and analyzed. Includes a review of multiethnic literature and literacy that advocates for students' self-concept, acceptance, and sense of identity (includes 15 clinical hour requirement).

BBE 404 LANGUAGE, LITERACY AND CULTURE
(4 credits) Examines the interdisciplinary study of language and literacy in their cultural, social, and political contexts, with emphasis on linguistically diverse communities and the implications for human developmental processes. Explores the social and political conditions that endorse different language and literacy practices and doctrines and create anti-bilingual education ideologies in the U.S. Topics include language and literacy and ethnicity, identity, social class, and gender, among other related topics.

BBE 406 SOCIOCULTURAL AND HISTORICAL PERSPECTIVES IN BILINGUAL EDUCATION
(4 credits) Presents theoretical constructs of bilingual schooling in the U.S. and other multilingual societies from historical, theoretical and sociocultural perspectives. Emphasizes issues in bilingual education related to the sociocultural and legal aspects of language policy and bilingual education in the U.S. The historical trajectory of language policy and bilingual education in the U.S. is discussed in reference to Native American languages and early European settlers' language schooling practices. The focus shifts to 20th and 21st century bilingual education and immigration policies that have influenced both the advocacy for and opposition to bilingual education as well as the movement to make English the official language in the U.S.

BBE 407 EQUITY ISSUES IN ASSESSMENT
(4 credits) Examines assessment procedures, including standardized and performance-based, as well as ethical standards and practices used in the assessment of culturally and linguistically diverse students. Equity and legal issues related to assessment practices, research, first and second language acquisition, bilingualism, cultural and sociopolitical issues related to assessment are discussed. Emphasizes existing biases in assessment and non-discriminatory assessment practices and policies. National, state, and local assessment policies are examined (includes 15 clinical hour requirement).

BBE 408 BILINGUAL EARLY CHILDHOOD DEVELOPMENT THEORETICAL FOUNDATIONS
This course is designed to equip bilingual and second language teachers with the knowledge and philosophy to work effectively in the education of early childhood language minority students in the context of bilingual/ESL programs. The course will explore the historical, political and legal foundations of bilingual
education programs in the United States. It will examine different models of bilingual programs and the psycholinguistic and sociolinguistic principles upon which they are based.

BBE 409 ENGLISH AS A SECOND LANGUAGE INSTRUCTIONAL FOUNDATIONS IN EARLY CHILDHOOD SETTINGS
Candidates explore English as a Second Language (ESL), theory, and practice as it applies to young children and their families. Candidates also study the socio-cultural, pedagogical, linguistic, and political issues underlying current models of education for non-English speaking children, as well as models for ESL instruction in early childhood settings. Critical emphasis is placed upon theories that support young learners in second language acquisition.

BBE 425 BILITERACY PRACTICES IN BILINGUAL EDUCATION AND ESL
(4 credits) Analyzes and evaluates methods and materials used in bilingual education and ESL programs. Stresses effective instructional strategies and best practices in first and second language literacy development and content learning. Reviews language teaching approaches and cooperative models of learning relating to development of reading and writing in the first and second language. Presents the acquiring language through content learning versus learning language programs. Investigates appropriate first language usage in bilingual classrooms, focusing on the different content areas, appropriate terminology for native language instruction, and the study of language distribution issues (includes 15 clinical hour requirement).

BBE 466 FIRST AND SECOND LANGUAGE ACQUISITION
(4 credits) Addresses the relationship between language development and use and social, emotional, cognitive, and physical development of children. Introduces the study of bilingualism by examining theoretical constructs and research in psycholinguistics, sociolinguistics, and applied linguistics. Includes an analysis of language contact phenomena, cross-linguistic transfer, language alteration, language shift and loss, and bilingualism (includes 15 clinical hour requirement).

BBE 474 READING AND ELLS
(4 credits) This course examines current theories of second language acquisition, literacy teaching and learning for English language learners (ELLs), and explores the relationships between the first and second language as it relates to the approach to teaching for transfer with ELLs. This course links theory and practice by examining pedagogical approaches that most effectively promote ELLs reading and writing development. Multicultural and multilingual characteristics of ELLs are also discussed as they relate to their literacy development. Other factors that impact the academic achievement of ELLs in relation to literacy, such as (delete such as) include sociocultural, sociolinguistic, and sociopolitical dimensions of teaching ELLs. This course is designed to assist teachers with a specialization in reading to develop expanded understandings of theoretical and pedagogical perspectives related to the literacy and language processes of students learning English as a new language. In addition, literacy assessment in the first and second language represented by standardized testing as well as authentic performance-based evaluations are also presented.

BBE 476 BILITERACY PRACTICES: SECONDARY/ADULT
(4 credits) Analyzes and evaluates current research and pedagogical approaches used in second language programs in relation to literacy instruction in the secondary and adult classroom settings. The course focuses on effective instructional strategies and best practices in first and second language literacy development. Special attention is given to content area learning in relation to acquiring literacy skills in a second language for secondary students. The course reviews language and literacy instructional approaches and cooperative models of learning related to the development of reading and writing in the first and second language. Discussions center on issues of acquiring language and literacy skills through content instruction as well authentic and performance-based assessment. Investigates appropriate first and second language development in bilingual, ESL and foreign language classrooms, focusing on the different aspects of literacy and subject matter learning (includes 15 clinical hour requirement).

BBE 490 MULTICULTURAL AND MULTILINGUAL CHILDREN'S LITERATURE
(4 credits) This course will use multicultural and multilingual children's books to survey pluralism and linguistic diversity. Students will analyze folk and modern literature, including application of literary and culturally responsive criteria to these selections. Students will explore means of teaching using multicultural literature to encourage diverse learners and learning styles. Students will evaluate literature for its literary value as well as cultural acceptability. Students will read a broad variety of current multicultural literature for children and young adults. Student interested in specializing in one specific age group or grade level may focus their literature selections on literature appropriate for specific ages. Genres of children's and young adult literature will be examined and criteria for selection and renewing collections for school and public libraries will be discussed. Notable authors, poets, and illustrators of children and young adult literature will
be studied with an emphasis on those who contribute to bilingual, multilingual, and multicultural, and multiethnic collections. The use of children's and young adult literature to develop literacy, particularly for ELLs will be studied and the use of children's and young adult literature in meeting national, state, and district standards will be discussed. Children's and young adult literature will be examined from diverse perspectives in particular literature reflecting African American, Asian, Latino, and Native American cultures. However, students will read literature from all cultural groups including traditional children's and young adult literature.

**BBE 510 SPECIAL TOPICS IN LANGUAGE EDUCATION**

This course is designed to explore a specific area of study in the field of linguistics, such as sociolinguistics, psycholinguistics, applied linguistics, language planning and policy, and cognitive bilingualism, among other related topics. The particular focus of study will vary and change as the course is offered.

**BBE 520 RESEARCH METHODS IN BILINGUAL & BICULTURAL STUDIES**

(4 credits) Introduces students to, and engages them in reading, research design within the context of bilingual-bicultural education and second language learning and instruction. Students will consider important linguistic and sociocultural issues in language education as examined with various research methods, including quantitative, qualitative, and mixed methods. Students will conduct and present a mini-action research project about their own learning and development, and will write a cogent review of literature about a personally meaningful topic, problem, or issue related to language and culture education. For many students, this paper forms the beginning stages of their BBE Masters thesis or M.Ed. paper. (includes 15 clinical hour requirement) PREREQUISITE(S): SCG 410 or SCG 610.

**BBE 524 METHODS OF TEACHING ESL**

(4 credits) Course examines the relationship of reading and writing development to second language acquisition in ESL contexts. Discusses various learning and teaching approaches that effectively extend English language learners' literacy and language skills. Explores the literacy progress of native and non-native speakers of English by examining the theoretical perspectives of language and literacy development (includes 15 clinical hour requirement).

**BBE 526 THEORETICAL FOUNDATIONS OF TEACHING ESL**

(4 credits) Presents an introduction to the field of English as a second language, with attention to basic concepts of second language acquisition in various language learning contexts. Discusses interdisciplinary perspectives of second language acquisition and their application to classroom practices. The different factors influencing the acquisition of English as a second language are examined as well as current research in applied linguistics and different approaches to language teaching.

**BBE 530 LATINOS AND EDUCATION**

This course examines historical and current issues related to the education of Latinos in the US that includes PK-12 and higher education. The course explores the sociolinguistic, theoretical, historical, sociocultural, legal, and political contexts that shape the educational experience of Latinos in the US. Demographic trends and data are examined in light of the various characteristics that make up the diverse Latino population. The course also analyses the theoretical, historical, and political constructs of bilingual schooling and the underlying assumptions and implications for Latino students. Current research conducted by prominent scholars in the field are presented and examined. The course considers factors that influence, positively or negatively, the educational attainment of Latino students. The readings and class discussions emphasize how power relations in the wider society influence patterns in Latino education outcomes and policy-making. The course also examines arguments, assumptions, and interpretations of current and past legislation in regards to the education of Latinos in the US.

**BBE 554 METHODS OF TEACHING ESL: ELEMENTARY**

4 credits) The course provides an in-depth study of instructional approaches and curricular designs for the second language elementary classroom setting. Presents reviews and critiques specific methods and strategies for teaching second language learners, as well as comparative methods of learning the first and second language. Emphasizes methods for implementing constructivist strategies such as cooperative learning, thematic approach, flexible grouping, and sheltered instruction. The course provides guidelines for planning effective lessons using both thematic units and content-based subject matter. A critical focus of this course is on teaching and learning ESL through the content areas for elementary students (includes 15 clinical hour requirement).

**BBE 556 METHODS OF TEACHING ESL: SECONDARY/ADULT**

(4 credits) The course explores the theoretical underpinnings and the applications of second-language theories and cultural knowledge to ESL teaching methodology and curriculum design in secondary and adult classroom settings. In addition, various approaches to second language teaching and learning as well as methods for modifying lessons to suit the needs of second-language learners to enhance their acquisition and use of
English are presented. Concentrates on assisting educators in the development of appropriate strategies for teaching speaking, listening, reading, writing, and grammar in ESL environments. A major focus of this course is on teaching and learning ESL through the content areas through effective lessons panning using both thematic units and content-based subject matter. The course explores constructivist approaches such as sheltered language instruction (includes 15 clinical hour requirement).

**BBE 560 SECOND AND WORLD LANGUAGE ACQUISITION**
(4 credits) This course is an introduction to the theoretical study of second or world language acquisition (SLA) from a generative and psycholinguistic perspective. The content of the class is founded on the major concepts and issues of language acquisition, including UG-access, L1-transfer, and age effects, and the acquisition of form vs. meaning. The course pays particular attention to empirical second and world language studies at the syntax/semantics interface. Course readings and discussion examine the complexities of the processes involved in acquiring a world language that includes the relation between first and SLA; contrastive and error analysis; interlanguage; the social and cultural influences on SLA; learner variability; learning strategies; and classroom interaction analysis. Issues surrounding second and world language acquisition are discussed and deliberated through university classroom experiences as well as required field experiences (15 hours, minimum; level 1).

**BBE 570 METHODS OF TEACHING INTEGRATED WORLD LANGUAGE K-12**
(4 credits) The purpose of this course is to provide the theoretical, research, and pedagogical foundations that underpin effective instructional practices for world language teaching and learning through the content areas. The central premise of the course is to reformulate world language instruction to integrate subject matter content into the curriculum, including science, social studies, math, fine arts, etc. This methods course is organized around the Standards for Foreign Language Learning, commonly referred to as the Five Cs: Communication, Cultures, Connections, Comparisons, and Communities. Students will learn about current theoretical bases for second-language acquisition and how theory informs classroom practice. Issues surrounding integrated instruction are discussed and deliberated through university classroom experiences as well as required field experiences (15 hours, minimum; level 2).

**BBE 588 INDEPENDENT STUDY IN BILINGUAL BICULTURAL EDUCATION**
PREREQUISITE(S): Permission of instructor, program chair and associate dean.

**BBE 589 THESIS RESEARCH IN BILINGUAL-BICULTURAL EDUCATION**
(4 credits) A student writing a thesis registers for this course for four quarter hours of credit. When the thesis research and writing of the thesis are prolonged beyond the usual time, the program advisor may require the student to register for additional credit.

**BBE 600 REGISTERED STUDENT IN GOOD STANDING**
(0 credit) Registration is this course is open to students who are not registered for any other courses but need to complete requirements/assignments for previously taken courses. It provides access to University facilities. Permission of advisor required. $50 per quarter.

**BBE 608 CAPSTONE IN BILINGUAL-BICULTURAL EDUCATION**
Culminating experience(s) that help(s) students acquire the qualities of professionalism and leadership needed to play a significant role in one's professional education community. Students are expected to situate and understand educational issues in a larger context; keep current in and be able to organize and present a body of research on an education-related question; connect research with practical, professional activity; demonstrate mastery of a sub-field of a discipline; write in a format that meets accepted scholarly criteria and participate in an ongoing professional conversation. A final product such as master's paper(s), comprehensive exam, or collection of professional work products is required.

**BBE 625 CANDIDACY CULMINATING PROJECT (STUDENT IN GOOD STANDING)**
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing culminating projects for their program of study, including theses, papers, and final portfolios. It provides access to university facilities. Permission of advisor required. Registration limited to three terms. $50 per quarter.

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Biological Sciences
BIO 400 DEVELOPMENT OF TOPICS FOR RESEARCH
The purpose of this course is to help graduate students in formulating research questions and design methods while improving written expression and oral presentation skills. Students will, with the guidance of a faculty member, undertake a detailed investigation of a topic, formulate a potential research project in that area, and present their proposal orally to the faculty at the end of the quarter.

BIO 401 INDEPENDENT STUDY
Two or four quarter hours. Experimental and/or Library study of selected topics in the life sciences. A-Cell Biology, B-Immunobiology, C-Developmental Biology, D-Physiology, E-Endocrinology, F-Genetics, G-Structural Biology, H-Ecology, I-Molecular Biology, J-Neurobiology. Offered in the Autumn, Winter, Spring and Summer quarters. Two or four quarter hours.

BIO 409 PLANT PHYSIOLOGY (CROSS-LISTED AS BIO 309)

BIO 415 TOPICS IN ECOLOGY (CROSS-LISTED AS BIO 315)
The focus of this course is to read and critique classic papers in ecology and to connect their foundational ideas with modern research and understanding. PREREQUISITE(S): Graduate standing or consent of instructor.

BIO 416 PHYCOLOGY (CROSS-LISTED AS BIO 316) (LAB FEE)
Introduction to algae with emphasis on taxonomy, morphology, ultrastructure, physiology, life histories of freshwater and marine species. Lecture-laboratory. Lab fee. PREREQUISITE(S): Graduate standing or consent of instructor.

BIO 417 AQUATIC BIOLOGY (CROSS-LISTED AS BIO 317)
The study of biological, physical and chemical phenomena in fresh water and marine environments. Emphasis on organisms and their interactions. Lecture-laboratory. Lab fee. PREREQUISITE(S): Graduate standing or consent of instructor.

BIO 420 MICROBIAL ECOLOGY
This course will explore key roles that microorganisms play in life on earth and how they are being used in biotechnology. This is a lab course, which will enable students to study processes used in the enrichment, isolation, and identification of microorganisms from various environments.

BIO 421 MOLECULAR METHODS IN ECOLOGY AND EVOLUTION
This course will provide hands-on experience in methods of detecting and analyzing molecular variation in nature. By the end of the course, students should be competent employing molecular markers to answer a wide variety of basic questions in ecology and evolution. Cross-listed with BIO 321. PREREQUISITE(S): BIO 103, BIO 215 and BIO 260 or consent of instructor.

BIO 425 CELLULAR EVENTS IN THE IMMUNE RESPONSE
Analysis of cellular and subcellular interactions in the immune response. Lecture, seminar, discussion. PREREQUISITE(S): Completion of Immunobiology course or its equivalent.

BIO 430 DEVELOPMENTAL BIOLOGY
A survey of developmental phenomena in animals from fertilization to sexual maturity. Topics include gametogenesis, early cell divisions, organ formation, metamorphosis, regeneration, birth defects, stem cells, reproductive technology and mammalian cloning. Lecture-laboratory. Lab Fee. PREREQUISITE(S): BIO 250 and BIO 260 or consent of instructor.

BIO 431 TOPICS IN DEVELOPMENTAL BIOLOGY (CROSS-LISTED AS BIO 331)
This seminar course examines the current embryological literature using both evolutionary and molecular perspectives. Previous student-led topics include: how early embryos are organized, the signals controlling left-right asymmetry, the evolutionary origin of feathers and the development of the retina. PREREQUISITE(S): BIO 330 or BIO 360 or consent of instructor.

BIO 433 ZOOLOGY (CROSS-LISTED AS BIO 333)
This course provides an opportunity for students to integrate their knowledge of cell biology, genetics, ecology and physiology at the organismal level by focusing on fungi. Students will gain an appreciation of the biological diversity within the major groups of fungi and their role in the environment, research and biotechnology. Lecture-laboratory. Lab fee.
BIO 435 CONCEPTS IN EVOLUTION (CROSS-LISTED AS BIO 335)
Study of evolution and diversity in the living world. Lecture only.

BIO 439 CELLULAR NEUROBIOLOGY (CROSS-LISTED AS BIO 339)
A study of the cellular and molecular mechanisms of the nervous system and the role they play in neural signaling and neural development. PREREQUISITE(S): Graduate standing or consent of the instructor.

BIO 440 SYSTEMS NEUROBIOLOGY (CROSS-LISTED AS BIO 340)
An examination of the ways in which neural systems underpin behavior with an emphasis on vertebrates. In this course, behavior is understood in its broadest sense, from the functioning of organs and organ systems to the activities of whole organisms. Lecture-Laboratory. Lab Fee. PREREQUISITE(S): Graduate standing or consent of instructor.

BIO 441 TOPICS IN NEUROBIOLOGY
A seminar course examining current topics in neurobiology. Original readings will include both current review and classic articles in the fields of neurobiology, neuroethology and the related neurosciences. PREREQUISITE(S): BIO 439 or BIO 440.

BIO 445 TOPICS IN PALEOBIOLOGY (CROSS-LISTED AS BIO 345)
A seminar course examining various topics in paleobiology (the study of ancient life) including morphological concepts, macroevolutionary processes, extinction events, phylogenetic systematics, paleoecology, paleobiogeography, and the adequacy of the fossil record. Readings include classic and recent articles in the fields of paleobiology.

BIO 447 TOPICS IN MEDICAL BACTERIOLOGY
This course will address current topics of concern and research in medical bacteriology. Students participating in this course will explore key concepts used in bacterial pathogenesis and learn how to critically appraise recent research papers in the field. PREREQUISITE(S): BIO 210 or equivalent.

BIO 450 PROBLEMS IN CELL MOTILITY
Analysis of contemporary problems in cellular movements, with emphasis on the biochemistry, biophysics and regulation of cell and organelle movements. Lecture, seminar, discussion.

BIO 452 ADVANCED COMPARATIVE PHYSIOLOGY (CROSS-LISTED AS BIO 352)
Comparative and environmental approach to the function and mechanisms of vertebrate organ systems. Selected topics in comparative physiology will be addressed using a lecture/discussion/seminar format.

BIO 455 GENETIC TOXICOLOGY
This course will deal with the study of agents that damage the genome or alter the proper functioning of the genome that can lead to disease in humans. Topics covered will include basic spectrum of genetic damage and chromosomal effects, mechanisms of mutations, DNA repair, genetic assays used for evaluation of genetic toxicology, health consequences of genetic damage, including cancer and inheritable mutations, and the current position of US government and global regulatory agencies on the issues of genetic toxicology. PREREQUISITE(S): BIO 260.

BIO 460 MOLECULAR BIOLOGY (CROSS-LISTED AS BIO 360)
Study of biology at the molecular level, focusing on the regulation of gene expression and the principles of genetic engineering. Lecture-laboratory. Lab fee. Cross-listed as BIO 360.

BIO 461 TOPICS IN MOLECULAR BIOLOGY (CROSS-LISTED AS BIO 361)
Discussion and seminars in selected areas of molecular biology.

BIO 462 BIOINFORMATICS FOR BENCH SCIENTISTS
Study how high-throughput technologies like whole-genome sequencing have changed biological research, and learn to use computers in real research tasks such as primer design, DNA sequencing, homology searches, sequence alignment, and more. PREREQUISITE(S): BIO 191, 192, 193 and 260. Cross-listed with BIO 362.
BIO 465 PRINCIPLES OF TOXICOLOGY
A study of the adverse effects of chemicals on living organisms, including the chemical natures, kinetics, dose-response relationships, metabolism, and mechanisms of action of various toxins and toxicants. PREREQUISITE(S): BIO 103 and CHE 175 (or equivalent) or consent of instructor.

BIO 471 IMMUNOBIOLOGY (CROSS-LISTED AS BIO 370)
Basic factors governing immune phenomena and antigen antibody reactions. Lecture-laboratory. Lab fee.

BIO 475 INTRODUCTION TO PHARMACOLOGY (CROSS-LISTED WITH BIO 375)
Introduction to Pharmacology will explore the relationships between an organism and its response to an administered drug. This will include: 1) How drugs are administered to the body 2) What is their fate once in the body, i.e. Pharmacokinetics 3) What their mechanisms actions are - i.e. Pharmacodynamics, and 4) Adverse reactions to drugs. We will explore these relationships in different physiological systems of the human body including (but not limited to) the nervous system, circulatory system, digestive system and endocrine system. Lastly, this course will provide an understanding of the pharmaceutical system by providing a framework to explore how drugs are discovered, produced, tested, and regulated. Cross-listed with BIO 375.

BIO 480 CANCER BIOLOGY (CROSS-LISTED AS BIO 380)
This course will explore the cellular and molecular aspects of cancer. Topics will include the pathology and epidemiology of cancer, the origin and spread of cancer, hereditary and familial cancers, cancer associated genes and strategies of cancer therapy. PREREQUISITE(S): BIO 250 and BIO 260

BIO 485 MAMMALIAN REPRODUCTION
Molecular, cellular, physiological, and behavioral aspects of mammalian reproduction. Mechanisms and strategies used by mammals in reproductive processes including sexual differentiation, gamete production, puberty, reproductive hormone cyclicity, neuroendocrine control mechanisms, pregnancy, parturition, and reproductive behavior. PREREQUISITE(S): BIO 250 and BIO 210 or BIO 202 or consent of instructor. Cross-listed with BIO 385.

BIO 486 INTRODUCTION TO ENDOCRINOLOGY (CROSS-LISTED AS BIO 386)
A study of hormones as chemical regulators of development, growth, metabolism, homeostasis, reproduction, response to stress, and behavior; as well as hormone synthesis, chemistry, mechanisms of action, and endocrine gland structure. PREREQUISITE(S): BIO 250, BIO 260, and BIO 310 or consent of instructor.

BIO 488 ADVANCED ENDOCRINOLOGY
Analysis of non-hypothalamic-hypophyseal pathways for hormonal regulation of the structure, function and biochemistry of hard tissues, calcium metabolism, and regulation of glucose metabolism. Lecture-seminar. PREREQUISITE(S): BIO 386 or BIO 486, or equivalent.

BIO 490 SPECIAL TOPICS
Occasional courses offered at the graduate level. See schedule for current offerings. Two or four quarter hours. PREREQUISITE(S): Graduate standing in Biology.

BIO 491 MASTER OF ARTS SEMINAR
A seminar course dealing with current readings in the biological sciences. Students will evaluate and interpret these readings both orally and in writing. PREREQUISITE(S): Second year standing in the Master of Arts program.

BIO 495 INTRODUCTION TO GRADUATE STUDY
Presents the biology faculty and facilities. Various research and teaching methods in biology will be explored. Consideration of such topics as laboratory safety, handling of radioactive chemicals, instrument and equipment use, handling living organisms, library and computer use, etc. Required of all graduate students. Autumn quarter only. Two quarter hours.

BIO 496 RESEARCH
Experimental work in selected areas of biology. These studies do not necessarily relate to a thesis. Autumn, Winter, Spring, Summer. Laboratory. Two or four quarter hours. Lab fee. PREREQUISITE(S): Approval of the department.

BIO 498 RESEARCH FOR MASTER’S THESIS
Original study of a specific biological problem leading to a thesis. Autumn, Winter, Spring, Summer. Laboratory. Two or four quarter hours. Lab fee. PREREQUISITE(S): Approval of the department.

BIO 500 SEMINAR
Non-credit. Presentation, throughout the academic year, of their research by practicing scientists from a variety of institutions. Required of first year graduate students.

**BIO 501 SEMINAR CONTINUATION**
Non-credit. Presentation, throughout the academic year, of their research by practicing scientists from a variety of institutions. Required of second year graduate students.

**BIO 502 CANDIDACY CONTINUATION**
Students who have completed their coursework but who must take extra time to complete the requirements for the Master's thesis (MS), or final project (MA), must enroll in candidacy continuation each quarter of the academic year until the Master's requirement has been completed. This course carries part-time student status. Non-credit, fee per quarter. Prerequisite: Permission of Graduate Program Director.

**BIO 503 CANDIDACY MAINTENANCE**
Placeholder course for students NOT actively working on their thesis. This course is meant only to maintain university student status, it will not give the student full- or part-time student status and will not permit deferment of student loans. Non-credit, fee per quarter. Prerequisite: Permission of Graduate Program Director.

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**Business Law**

Graduate Course Descriptions - Current ▶ B ▶ Business Law

**BLW 500 LEGAL AND ETHICAL ENVIRONMENT**
This is an introduction to the nature and sources of law, including an analysis of ethical perspectives present in the judicial process. Students will learn how legal and ethical issues influence the decision-making process of managers. Students will explore the relationship between personal values and business decisions, and whether there exists a social responsibility of managers. This course will cover legal concepts relevant to business including basic concepts of public law (constitutional and administrative law) and private laws (sales and product liability). Students will examine business organizations and issues in employment law.

PREREQUISITE(S): Graduate Standing

**BLW 508 LEGAL ASPECTS OF BUSINESS-TOTAL PERSPECTIVE FOR THE EXECUTIVE**
Personal and professional legal liability of officers and directors has received considerable attention in recent years, thus highlighting the need for a view of the totality of his or her legal environment. It demands an integrated understanding and planning of the reciprocal aspects of his or her legal, social and ethical responsibilities and rights encountered in his or her office, outside and at home. From the end of the spectrum focusing on possible criminal and civil liabilities to the personal responsibilities of proper estate planning; the "socio-legal world of the executive" is presented. PREREQUISITE(S): BLW 500

**BLW 798 SPECIAL TOPICS**
Content and format of this course are variable. Subject matter will be indicated in class schedule.

PREREQUISITE(S): Graduate Standing

**BLW 799 INDEPENDENT STUDY**
Available to graduate students of demonstrated capability for intensive independent work in business law.

PREREQUISITE(S): Written permission
Subjects beginning with the letter C are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

Chemistry
Chinese
Communication
Communication Studies
Comp, Info and Network Security
Composition
Curriculum Studies
Computer Graphics & Motion Technology
Computer Science
Counseling

Chemistry

CHE 412 QUANTUM CHEMISTRY
Quantum chemistry, electronic structure of atoms and molecules, molecular spectroscopy. Cross-listed as CHE 312. PREREQUISITE(S): CHE 215.

CHE 422 ADVANCED INORGANIC CHEMISTRY I
First of a two-quarter sequence of inorganic chemistry for advanced undergraduates and graduate students in the M.S. program. The course emphasis is variable and can include any topic(s) that fall under the broad umbrella of inorganic chemistry. PREREQUISITE(S): CHE 320.

CHE 424 ADVANCED INORGANIC CHEMISTRY II
Second of a two-quarter sequence of inorganic chemistry for advanced undergraduates and graduate students in the M.S. program. The course emphasis is variable and can include any topic(s) that fall under the broad umbrella of inorganic chemistry. PREREQUISITE(S): CHE 320.

CHE 430 POLYMER SYNTHESIS
This course focuses on the key synthetic organic chemistry methods for making polymers and coatings. A detailed consideration is given to the three types of polymerization reactions: step, chain, and ring-opening polymerizations. Practical application of polymer chemistry in society is a theme throughout the course. Offered: Spring of even-numbered years. PREREQUISITE(S): CHE 234 or CHE238.

CHE 431 POLYMER SYNTHESIS LABORATORY
The goal of this lab course is to expose students to experimental polymer chemistry. This course focuses on the key synthetic methods for making polymers and basic structural characterization techniques. Practical application of polymer chemistry in society is a theme throughout the course. Laboratory fee: $70.00. Offered: Spring of odd-numbered years. Formerly CHE 461. PREREQUISITE(S): CHE235 or CHE239, or equivalent.

CHE 432 PHYSICAL CHEMISTRY OF POLYMERS
This course looks at the broad subject of the physical chemistry of polymers and coatings. A detailed consideration is given to the role of molecular conformation and configuration in determining the physical behavior of polymers. Practical application of physical polymer chemistry in society is a theme throughout the
course. Offered: Spring of odd-numbered years. PREREQUISITE(S): CHE 304.

**CHE 434 POLYMER CHARACTERIZATION**
This course looks at the broad subject of polymer characterization. A detailed consideration is given to major methods of analysis of chemical structure, molecular weight, morphology, and rheology. Practical application of polymer characterization in society is a theme throughout the course. Offered: Autumn of even numbered years. PREREQUISITE(S): CHE 234 or CHE238.

**CHE 435 POLYMER CHARACTERIZATION LABORATORY**
The goal of this lab course is to expose students to hands-on polymer characterization techniques. This course will focus on the basic characterization techniques for determining structure and physical properties of polymers. Practical application of polymer characterization is a theme throughout the course. Laboratory fee: $70.00. Offered: Autumn of odd-numbered years. Formerly CHE 463. PREREQUISITE(S): CHE 234 or 238.

**CHE 436 POLYMER TECHNOLOGY**
This course looks at the broad subject of the polymer and coatings technology. A detailed consideration is given to polymerization processes, and polymer and coatings processing. Practical application of polymer and coatings technology in society is a theme throughout the course. Offered: Spring of odd-numbered years. Formerly CHE 460. PREREQUISITE(S): CHE234 or CHE238.

**CHE 438 MATERIAL SCIENCE**
This course looks at the broad subject of the materials science with emphasis on theory and applications of metals, ceramics, polymers, coatings and composites from atomic and macroscopic points of view. Practical application of materials science is a theme throughout the course. Offered Autumn of odd-numbered years. Formerly CHE 462. PREREQUISITE(S): CHE 234 or CHE238.

**CHE 440 BIOCHEMISTRY III**
Offered: Spring. Cross-listed as CHE 344

**CHE 442 ADVANCED BIOCHEMISTRY I**
In-depth exploration of the structure/function relationship of biomolecules, especially proteins. Offered: Autumn of even-numbered years. PREREQUISITE(S): CHE 344.

**CHE 444 ADVANCED BIOCHEMISTRY II**
Discussion and seminars in selected areas. Offered: Winter of odd-numbered years. PREREQUISITE(S): CHE 344.

**CHE 450 ADVANCED ORGANIC CHEMISTRY I**
First of a two-quarter sequence of organic chemistry for advanced undergraduates and graduate students in the M.S. program. This course emphasizes physical organic chemistry and mechanisms. PREREQUISITE(S): CHE234 or CHE238.

**CHE 452 ADVANCED ORGANIC CHEMISTRY II**
Second of a two-quarter sequence of organic chemistry for advanced undergraduates and graduate students in the M.S. program. This course emphasizes classic and modern synthetic methods. PREREQUISITE(S): CHE234 or CHE238.

**CHE 470 ADVANCED PHYSICAL CHEMISTRY I**
Thermodynamics. Offered: Autumn of even-numbered years. PREREQUISITE(S): CHE 215 or equivalent.

**CHE 472 ADVANCED PHYSICAL CHEMISTRY II**
Advanced topics in physical chemistry drawn from the areas of thermodynamics, statistical mechanics, kinetics, and molecular dynamics. PREREQUISITE: CHE306.

**CHE 474 ADVANCED QUANTUM MECHANICS**
Quantum chemistry, electronic structure of atoms and molecules, molecular spectroscopy. PREREQUISITE(S): CHE302.

**CHE 476 COMPUTATIONAL CHEMISTRY**
This course is designed to provide an accessible and practical introduction to computational chemistry. The course provides an overview of different methods commonly used in the field ranging from classical to quantum mechanical ab initio and density functional methods. CO-REQUISITE(S): CHE477. PREREQUISITE(S): CHE302.

**CHE 477 COMPUTATIONAL CHEMISTRY LABORATORY**
Laboratory to be taken in conjunction with CHE476. The laboratory experiments students will perform will reinforce material presented in lecture and allow students to explore lecture topics in more detail. The writing of laboratory reports will also offer students the opportunity to develop their scientific writing skills. CO-REQUISITE(S): CHE476. PREREQUISITE(S): CHE302.

**CHE 480 SPECIAL TOPICS IN ANALYTICAL CHEMISTRY**
This course may be any topic related to chemical analysis, such as mass spectroscopy, electrochemical analysis, principles of chromatography, polymer properties, coatings, sampling methods, design of experiments, etc. This course may be repeated if the topics are different. PREREQUISITE(S): CHE204.

**CHE 482 SPECIAL TOPICS IN BIOCHEMISTRY**
This course may cover any topic related to biochemistry or medicinal chemistry. This course may be repeated if the topics are different. PREREQUISITE(S): CHE344.

**CHE 484 SPECIAL TOPICS IN INORGANIC CHEMISTRY**
This course may cover any topic related to inorganic chemistry. This course may be repeated if the topics are different. PREREQUISITE(S): CHE320.

**CHE 486 SPECIAL TOPICS IN ORGANIC CHEMISTRY**
This course may cover any topic related to organic chemistry. This course may be repeated if the topics are different. PREREQUISITE(S): CHE234.

**CHE 488 SPECIAL TOPICS IN PHYSICAL CHEMISTRY**
This course covers specific topics in the area of physical chemistry. Examples of topics include single molecule techniques, molecular electronic spectroscopy, interaction of electromagnetic radiation with particulate matter, and hydrogen bonding. This course may be repeated if the topics are different. PREREQUISITE: CHE306.

**CHE 490 ADVANCED PROBABILITY AND STATISTICS**
This course introduces students to statistical methods that can be used in error analysis of experimental data. Computers are used to apply concepts discussed in lecture to actual data sets. Offered: Winter of even-numbered years. Familiarity with Excel or a modern programming language is strongly recommended. PREREQUISITE(S): CHE202.

**CHE 497 RESEARCH**
Graduate student laboratory research. Laboratory fee applies. Variable credit. This course may be repeated as needed. PREREQUISITE: Department consent.

**CHE 500 INDEPENDENT STUDY**
Variable credit. This course may be repeated as needed. PREREQUISITE: Department consent.

**CHE 502 CANDIDACY CONTINUATION**
Required of all students who are not registered for regular courses but who occasionally utilize university facilities during completion of course requirements and/or research. This course carries no credit. Quarterly fee applies. PREREQUISITE: Department consent.

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**Chinese**

Graduate Course Descriptions - Current - Chinese

**CHN 401 ADVANCED SPEAKING**
Advanced practice of speaking skills in Mandarin, focusing on expanding vocabulary and information needed for the discussion of topics to full capacity in the target language. PREREQUISITE(S): Three years of college study or equivalent knowledge. Graduate standing required.

**CHN 403 ADVANCED WRITING**
Advanced practice of writing skills in Mandarin, focusing on standardized formal writing practices, ranging from the writing of letters to the writing of essays including both descriptive and expository styles. Students in this course will develop vocabulary, expressions, peculiar reading and writing strategies through working
with historical texts. They are also expected to develop deeper understanding of the content in the texts as well as the special historical and cultural contexts of the selected texts. All assignments will be submitted in mandarin Chinese. PREREQUISITE(S): three years of college study or equivalent knowledge. Graduate standing required. Cross-listed as CHN 303.

**CHN 497 SPECIAL TOPICS IN CHINESE**
See schedule for current offerings. PREREQUISITE(S): Graduate standing.

**CHN 498 STUDY ABROAD**
Variable credit. PREREQUISITE(S): Permission and graduate standing required.

**CHN 499 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Permission of chair and instructor and graduate standing required.

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**Communication**

Graduate Course Descriptions - Current ▹ Communication

**CMN 591 INTERNSHIP**
This graduate level course is designed to integrate the student's work experience at the internship site with a career-management curriculum that enhances internship success and increases employability.

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**Communication Studies**

Graduate Course Descriptions - Current ▹ Communication Studies

**CMNS 501 COMMUNICATION IN CULTURAL CONTEXTS**
Analyzes theories of the interaction between culture and communication. Investigates the facets of culture that influence communication in a variety of settings, ranging from corporate and educational realms to social and familial domains, particularly among people from different cultures. Examines how communication can serve to bridge gaps in a multicultural setting. Formerly CMN 501.

**CMNS 502 INTERCULTURAL COMMUNICATION THEORIES**
The course provides an overview of different theories of intercultural communication. The course also prepares students to conduct pure theoretical inquiry and theory-driven research into intercultural communication practices, processes, and patterns. Formerly CMN 502

**CMNS 504 LANGUAGE, THOUGHT AND CULTURE**
This course examines the interrelationship among language, thought, and culture. Reviews and critiques theories and research of how language or the use of symbols reflects culture and shapes reality for certain cultural/ethnic groups and organizations. Explores how language influences thought and action of the collective and of individuals in social, political and organizational settings. Formerly CMN 504.

**CMNS 509 SPECIAL TOPICS IN MULTICULTURAL COMMUNICATION**
Course covers a variety of topics that address theories about multicultural communication such as culture, gender, sexual orientation, race, and ethnicity. Formerly CMN 509.

**CMNS 521 LANGUAGE AND POWER**
Reviews the role of language and representation as social power. Topics include rhetorical form as strategy, semiotic analysis of power relations, language and the construction of subjectivity, and discursive structures of empowerment. Formerly CMN 521.

**CMNS 522 RHETORICAL CONSTRUCTIONS OF IDENTITY**
Focuses on the rhetorical theories and practices through which various cultural groups within the US. construct
a sense of identity. The course examines different rhetorical forms and strategies through an analysis of the rhetorical situations, texts and artifacts of various cultural groups. Formerly CMN 522

CMNS 523 GENDERED COMMUNICATION
Examines research into the ways the various aspects of communication are affected by and affect the social construction of gender. Topics covered include language and language usage differences, interaction patterns and perceptions of the sexes generated through language and communication. (Cross-listed as MLS 445/WMS 440). Formerly CMN 523

CMNS 525 COMPARATIVE MANAGEMENT COMMUNICATION
Examines and contrasts the management philosophies of different cultures around the world, paying special attention to how European and Asian organizational practices influence structure, culture and communication within American corporations. Formerly CMN 525

CMNS 526 COMMUNICATION IN ORGANIZATIONAL ASSIMILATION
This class introduces students to the processes by which individuals join, become a part of, and exit organizations. The course structure closely parallels the popular organizational assimilation stage model outlined below, but takes an explicit multicultural perspective throughout. Specifically, in addition to discussing the traditional body of work on this subject, which often ignores issues of diversity, this course examines the organizational assimilation experiences for women, gays/lesbians, and ethnic minorities in the United States. Revealed here are some of the subtle and not-so-subtle ways which employees can be discriminated against at different stages of the assimilation process.

CMNS 527 ASSESSMENT AND INTERVENTION IN ORGANIZATIONS
Organizations are symbolic realities constructed by humans in communication. In other words, organizations are creations, and both organizational members and observers need to comprehend them as such. Communication 527 is devoted to preparing you to become communication professionals able to understand organizations through the analysis of organizational patterns of meanings and expectations. Communication professionals help organizations to improve communication by (1) identifying differences between actual and desired conditions of communication and (2) devising ways to close the gap between actual and desired states. The first function involves organizational communication evaluation (gathering, analyzing, and interpreting data about an organization's communication processes). The second function is referred to as intervention (actions taken to improve organization communication). People who perform organizational communication evaluation and intervention may be members of the organization or outside agents brought in to perform specific projects. This class will on the role of the communication professional in the maintenance and change of organizational communication functions, structures, and the communication processes that occur at various systems levels, including dyads, groups, intercultural and multicultural relations, and organization-wide network processes. Formerly CMN 527

CMNS 529 TOPICS IN ORGANIZATIONAL AND MULTICULTURAL COMMUNICATION
The current historical moment increasingly defines itself through (for, against, and in multiple relations to) globalization. This course surveys interdisciplinary theories, discourses and practices of globalization with an emphasis on communication and culture. Through reading, writing, and attending to contemporary and historical moments of globalization we consider its productive force in its transnational relations and dynamics, relations of power and uneven flows, as well as resistances and collaborative imaginaries of social justice and sustainable practices.

CMNS 530 INSTRUCTIONAL DEVELOPMENT
This course is designed to assist students in understanding the principles necessary for effective design, delivery and evaluation of instruction based on recognition of situational learning styles, instructional content, the educational venue, and measured outcomes. The point of view of the course is that the instructional development process is a dynamic, unique, significant, and challenging concept that demands the attention of instructors and faculty in all educational settings, both academic and corporate. This course will help students reflect upon issues related to instructional development by emphasizing the realms of interaction within and about educational setting and the components that are recognized as critical in the development, delivery, and assessment of quality instructional experiences.

CMNS 531 INSTRUCTIONAL DEVELOPMENT PRACTICUM
After completing CMNS 530, students have the option of taking CMNS 531. The course allows students to apply concepts learned in Instructional Development as they partner as a teaching assistant with a College of Communication instructor to prepare assignments, conduct teaching sessions, and grade.

CMNS 532 INTRODUCTION TO TRAINING AND DEVELOPMENT
This course provides an introduction to training and its relationship to organizational problem solving. Basic
and advanced training strategies are taught within the context of developing organizations. Organizations often have in house training and development specialists that facilitate ongoing organizational change processes. The functions of such human relations specialists are explored and the kinds of communication knowledge, competencies and skills needed to enact such functions are examined.

CMNS 541 ORGANIZATIONAL COMMUNICATION AND CULTURE
The central purpose of this course is to introduce students to the role communication plays in organizational life. Throughout the quarter, attention will be devoted to examining the various theoretical perspectives from which organizational communication can be viewed, and selectively surveying major content topics and current issues in the organizational communication literature.

CMNS 542 MULTICULTURAL COMMUNICATION IN THE WORKPLACE
Multicultural issues affect the communication of organizational members on a day-to-day basis. This course examines multicultural issues in professional settings. It provides students with knowledge about co-cultural communication patterns, which will enhance their own ability to interact. Further, it demonstrates how multicultural communication can be an organizational asset. Formerly CMN 542

CMNS 543 COMMUNICATION AND ORGANIZATIONAL CHANGE
Change in an organization implies change in communicative processes at the individual, dyadic, group and systemic levels. Communication variables that define patterns of interaction within these organizational contexts will be examined as well as key issues that might cause communication difficulties. Formerly CMN 543

CMNS 544 POLITICS AND POWER IN ORGANIZATIONS
Examines political activities sanctioned and encouraged by organizations, subjective political activities initiated by individuals, bases of power within organizations (influence strategies), living and working with organizational politics (coping mechanisms). Formerly CMN 544

CMNS 545 COMMUNICATION AND TECHNOLOGY
Communication and Technology explores the process through which technological and social systems co-create or invent each other. As such, this course not only examines the role that new communication technologies play in shaping our social systems and the organizations within them, but also looks at how social, cultural, economic and legal contexts influence the development and emergence of these technologies. Formerly CMN 545

CMNS 546 BUSINESS AND PROFESSIONAL COMMUNICATION
Explores presentational skills, interviewing skills, bargaining and negotiating skills, and small group communication skills. Surveys topics critical to effective managerial communication in a corporate environment. (Cross-listed with PRAD 510). Formerly CMN 546

CMNS 547 COMMUNICATION IN CUSTOMER SERVICE
America's economy is currently driven by service industries. In this course we will explore the communicative dimensions of customer service. By reviewing the theory and research of customer service and exploring the research methods available for assessing service, students will be both better able to appreciate the service process and diagnose and change ineffective service systems. Formerly CMN 547

CMNS 548 TEAMS AND LEADERSHIP
Modern organizations are increasingly interested in shifting their organizational structures toward the goal of creating self-managed work teams. Therefore, the current communication graduate greatly benefits from knowledge and experience with two interdependent aspects of group dynamics: decision-making under conditions of uncertainty, and the philosophy and practice of developing groups into self-managed teams. The December quarter version of this course will combine a relatively brief period of lecture/discussion with a teamwork intensive action learning component towards the goal of making each student competent to either spearhead a change to self-managed work teams in their own organization (if called upon to do so), or to understand and weather this change in work mode without stress. Formerly CMN 548

CMNS 549 SPECIAL TOPICS IN ORGANIZATIONAL COMMUNICATION
Course covers a variety of topics that address theories about organizational communication such as group processes, conflict management, and leadership. Formerly CMN 549

CMNS 550 ORGANIZATIONAL DIVERSITY & LEADERSHIP

CMNS 552 STRATEGIC COMMUNICATION
This course explores the process by which communicators attempt to accomplish their goals. In particular, this course covers theories of persuasion, strategic message design (creating messages that take into account
multiple audiences and goals), and how the inferential process influences decision-making.

Formerly CMN 552.

**CMNS 553 COMMUNICATION AND DIVERSITY TRAINING FOR LEADERS**
Diversity translates into knowledge, competencies and skills in business contexts. Diversity training for leaders will include an examination of EEO (Equal Employment Opportunity) requirements, affirmative action, sexual harassment and the ADA (Americans with Disabilities Act). This course provides an overview of how knowledge of diversity should influence training, recruiting, retention and other key managerial functions of business leaders including application of managerial philosophy.

**CMNS 554 TECHNOLOGY & COMMUNICATION TRAINING STRATEGIES**
This course explores how communication processes in training contexts may be improved via the effective use of technology. Because employees have limited time to participate in onsite training activities, online strategies for the presentation of information, relevant application, peer review of objective mastery as well as employee discussion and feedback will be explored. Special communication strategies are needed to animate employee interest in online education as well.

**CMNS 555 ADULT LEARNING THEORIES AND STRATEGIES**
The relationship between effective communication in training contexts and principles of adult learning is explored. The adult learner wishes to function in an autonomous and self directed environment, and brings a foundation of life experience and professional knowledge to the classroom. Communication trainers must provide goal oriented instruction that is both relevant and practical to those with intellectual and professional resources from which to draw. Adaptation and adjustment on the part of the instructor to the adult audience necessitates familiarity with both appropriate instructional strategies and applications.

**CMNS 556 INTERCULTURAL CONFLICT AND NEGOTIATION STRATEGIES**
This course focuses on the role of communication strategies in conflict negotiation, mediation, and resolution within a globalized society. Students will be introduced to core concepts in intercultural communication in order to understand differing value systems and communication strategies between cultures. The course will examine conflict situations in a variety of cross cultural contexts, e.g., conflict in interpersonal relationships between members of different cultural groups, conflict in multicultural organizations, and conflict at global political levels. Students will apply intercultural communication theories to various cross cultural conflict scenarios in order to obtain practical and theoretical understanding of conflict negotiation and resolution between cultures.

**CMNS 557 SPECIAL TOPICS IN TRAINING AND DEVELOPMENT**
This course varies on topics related to issues in training and development.

**CMNS 561 INTERNATIONAL MEDIA**
Examines the political economy of the global media, with attention to institutional, historical, and contemporary questions of ownership and program content, as well as representations by the US. commercial news media of the foreign other and the representation of Western culture and institutional life in non-Western contexts. Includes examination of issues in the mass media now debated within the international community, pursuing questions about the New World Information Order, the international marketplace of images, cultural imperialism and national culture, and types of programming aimed at an international audience. Formerly CMN 561.

**CMNS 563 MULTICULTURAL MEDIA REPRESENTATIONS**
This course examines both representational practices and theories that are informed by multicultural perspectives. It explores ways in which scholars and media practitioners have dealt with the epistemological problem of "difference". The course may take up topics such as race, class, age, and sexual orientation as categories of difference that have informed and continue to inform academic inquiries. The course also looks at historical and/or contemporary media texts, and analyzes them through these methods. Formerly CMN 563.

**CMNS 581 QUALITATIVE RESEARCH METHODS**
Introduction to qualitative approaches to research in communication. The course includes a systematic review and application of ethnography, unstructured interviewing, personal document analysis, historical research, and critical practice. Addresses the rationale, method, and theory of each qualitative approach to research in addition to placing emphasis upon data collection and interpretation. Formerly CMN 581.

**CMNS 582 QUANTITATIVE RESEARCH METHODS**
Introduces students to quantitative approaches to research and basic statistics. Topics include research design and control, survey construction, measurement and other general research issues, nonparametric statistics, correlation, the t-test and analysis of variance. Formerly CMN 582.
CMNS 583 RESEARCH METHODS
Focuses on developing an understanding of appropriate quantitative and qualitative research methodologies and relevant descriptive and inferential statistics for the investigation of both practical and theoretical problems in the study of communication. By considering the nature, concepts, and logic of the research enterprise, permits a critically informed assessment of published research, including data gathering and data analysis procedures.

CMNS 590 COMMUNICATION WORKSHOP (VARIABLE TOPICS)
This course allows students to sample a range of hands on, practical offerings in communication that can enhance their knowledge and expertise. Topics offered include survey design and focus groups.

CMNS 592 INDEPENDENT STUDY
Students will be guided in the development of a special project that furthers their collaboration with an instructor and produces a report that demonstrates their mastery of critical content and competencies. The independent study option is intended for students who have demonstrated a mastery of course content, who would benefit from a sustained, focused collaboration with a relevant faculty member.

CMNS 599 RESEARCH THESIS
Enroll in 599 during the term you plan to defend your thesis or complete your final project. This is a graded, 4-credit hour course. Tuition is charged. You must have a scheduled defense/completion date to be approved for this class. Your thesis/project advisor needs to communicate this date to the Graduate Studies Director for your program, before you are allowed to enroll. Loan deferment is allowed to those registered for this class.

CMNS 601 ACTIVE DEGREE COMPLETION
This is a 0-credit hour course that is available to students who are working actively toward the completion of a thesis or project. Enrollment in this course is limited to the two quarters prior to the defense of the thesis/project and requires graduate director approval and proof of work each quarter. No tuition is charged, only student fees (approx. $50), which allows you access to the library and other campus facilities. This course is graded as pass/fail. Eligible for loan deferment and student loans.

CMNS 602 CANDIDACY CONTINUATION
This is a 0-credit hour course that requires permission from the graduate director. Students can enroll in 602 if they are finishing a course in which they received an incomplete (IN). If the student does not register for any regular courses in the quarter they plan to finish the incomplete, they can enroll in 602 and access the library and other campus facilities. No tuition is charged, only student fees (approx. $50). This course is graded as pass/fail. Not eligible for loan deferment or student loans.

Comp, Info and Network Security

Graduate Course Descriptions - Current

CNS 450 COMPUTER FORENSICS
This course focuses on the forensic analysis of data from computer systems. This course covers: preservation and interpretation of evidence; file systems, e.g., Ext3 and NTFS; storage behavior of applications; forensic tools; tool development and automation; indexing documents; reporting and testimony. Optional topics include: anti forensics; data mining; data recovery; intrusion detection; software forensics. PREREQUISITES: (CSC212 or CSC224) and (CSC373 or CSC383 or instructor consent)

CNS 455 PHYSICAL AND IT SECURITY CONVERGENCE
This course introduces students to the fundamental processes associated with the Physical Security discipline. This course will present the convergence of IT Security and Corporate Physical Security, focusing on where convergence takes place - at the technology, process and function level. Students will look at real-world illustrations of implementation and analyze perceived efficiencies and cost-savings. This course is designed for students who desire to understand physical and IT security in the framework of Enterprise Risk Management.

CNS 466 CRITICAL INFRASTRUCTURE AND CONTROL SYSTEMS CYBERSECURITY
This course is an introduction to the cybersecurity challenges for control systems present in industry, homes
This course is an introduction to the cybersecurity challenges for control systems present in industry, homes and traditional businesses such as manufacturing. Topics covered include the design and setup of Supervisory Control and Data Acquisition (SCADA) systems, Distributed Control Systems (DCS), and Programmable Logic Controller (PLC) systems. As these systems are typically designed without any intrinsic security mechanism, we will study the challenges of protecting them and how to employ a defense-in-depth methodology to secure them. This class will focus on the security risks of critical infrastructure systems (such as Electrical, Pipelines, Water/Wastewater and transportation) and methods to protect them. PREREQUISITE(S): CNS 340 or TDC 377 or IT 263 or IS 433 or TDC 477

CNS 477 LEGAL ISSUES IN INFORMATION ASSURANCE
This graduate course is a survey of legal issues arising under information security and control frameworks such as COBIT and ISO17799. Topics include the basics of trademark, copyright, patent and trade secrets and protection strategies for each of them; software licensing issues; data privacy under state, federal and international law; evidence and digital forensic practices; ethics; the Computer Fraud and Abuse Act’s boundaries for illegal access to computers; electronic surveillance and cyber traps; information security measures mandated by select federal statutes (HIPAA, Gramm-Leach-Bliley and Sarbanes-Oxley); and practical techniques on how to find and keep abreast of legal issues affecting information security. PREREQUISITE(S): IS 433

CNS 594 COMPUTER INFORMATION AND NETWORK SECURITY CAPSTONE
Design, setup and configuration of realistic enterprise computing and networking environments. Securing the infrastructure and integration of different services and technology in efficient, secured and redundant manners. Technologies will include: open-source and commercial products, firewalls, Virtual Private Networks (VPNs), authentication systems, Intrusion Detection Systems (IDS), advanced routing mechanisms (OSPF, BGP, IS-IS), highly redundant and robust networking. PREREQUISITE(S): TDC 477 or TDC 572

CNS 599 TOPICS IN COMPUTER, INFORMATION AND NETWORK SECURITY
Independent study form required. PREREQUISITE(S): Consent of instructor.

Composition

Graduate Course Descriptions - Current, Composition

COM 404 ANALYTICAL STUDIES
(4 credits) The study and practice of specific analytical techniques as related to specific works from the common practice period through the present day.

COM 405 GRADUATE ANALYTICAL STUDIES
(4 credits) The study and practice of specific analytical techniques as related to specific works from the common practice period through the present day.

COM 415 COMPOSITION
The study of advanced compositional issues at the graduate level which will culminate in a final composition project.

COM 416 COMPUTER ASSISTED COMPOSITION
(4 credits) The purpose of this course is to offer composition majors an introduction to the use of computers in the implementation of generative and formal strategies for music composition.

COM 421 SEMINAR IN COMPOSITION

COM 441 COMPOSITION I
(4 credits) This course series will focus on advanced compositional issues at the graduate level and culminate in a final composition project.

COM 442 COMPOSITION II
(4 credits) This course series will focus on advanced compositional issues at the graduate level and culminate in a final composition project.

COM 443 COMPOSITION III
(4 credits) This course series will focus on advanced compositional issues at the graduate level and culminate in a final composition project.

**COM 444 NOTATIONAL SEMINAR: NOTATION, COMPOSITION, & SOUND STRUCTURES**
(4 credits) A study of some of the most relevant notational issues that have emerged in western music since WWII.

**COM 445 TWENTIETH CENTURY MUSIC TOPICS**
(4 credits) A review of significant 20th century literature and techniques as partial preparation for the oral comprehensive exam.

**COM 498 INDEPENDENT STUDY**

**COM 499 THESIS COMPOSITION**

Curriculum Studies

Graduate Course Descriptions - Current, Curriculum Studies

**CS 447 CURRICULUM DESIGN FOR THE MIDDLE GRADES**
This course is designed to provide students with a comprehensive understanding of the history of and rationale for middle level education as well as the curricular and pedagogical knowledge needed to meaningfully engage middle level students in learning within and across the content areas. Important considerations and strategies for disciplinary and interdisciplinary learning in the middle school classroom, as well as the importance of reading and writing across the curriculum with regard to these, will be addressed.

**CS 460 LEARNING IN A TECHNOLOGY-SUPPORTED CLASSROOM**
An examination of current theories about instructional technology and of recent literature in the field. Students will become familiar with particular technology appropriate for their areas of interest and will learn to evaluate this software for a variety of instructional purposes. The course includes: frameworks for classifying educational uses of the technology; an analysis of selected research on educational technology; theories and practices of using technology in classrooms; and the advantages and disadvantages of distance learning. Emphasis throughout will be on why and how technology can be used to enhance the learning process. [Assumes a background equivalent to that provided by CS 420].

**CS 461 LITERACY PROCESSES AND PRACTICES**
Foundational theoretical perspectives and practices for teaching and learning language and literacy in a diverse, changing, and political world. Background of knowledge in the area of learning and exposure to the controversies that surround the teaching of literacy will be used to develop an understanding of literacy learning in action. Students will be invited to participate in the current conversations around literacy learning and teaching in order to inform their everyday curricular decisions.

**CS 463 ASSESSMENT, DIAGNOSIS, DEVELOPMENTAL/REMEDIAL MATERIALS & RESOURCES: EMERGENT & DEVELOPING READING**
Assessment, diagnosis and instructional planning for early and emergent learners. Building on a knowledge base of emergent reading processes and literacy practices, teachers will explore the ways in which young learners construct meaning and use language purposefully in their unique social worlds, even before beginning school. Participants in this course will learn to use performance based assessments as well as more formal standardized measures of achievement to support emerging and struggling readers with appropriate materials and theoretically sound instructional practices. (Prerequisite: CS 461 or equivalent).

**CS 464 ASSESSMENT, DIAGNOSIS, DEVELOPMENTAL/REMEDIAL MATERIALS & RESOURCES:MIDDLE SCHOOL/ADOLESCENT READING**
Assessment, diagnosis and instructional planning for middle school students. Building on a knowledge base of reading processes and literacy practices, teachers will explore the ways in which students construct meaning and use language purposefully in their unique social worlds. Participants in this course will learn to use performance based assessments as well as more formal standardized measures of achievement to support middle school and adolescent readers with appropriate materials and theoretically sound instructional practices. (Prerequisite: CS 461 or equivalent).
CS 465 TEACHING READING IN THE CONTENT AREAS
This course focuses on teaching reading in various subject (content) areas and emphasizes non-fiction reading process, strategies, and theories for grades K-9. The course will examine what it means to be literate in the elementary content areas (e.g. science, math, social studies, arts). Emphasis will be placed on learning effective literacy strategies for different subject areas. There will also be a focus on how one uses reading and writing to think, act, speak question and apply the tools of each content/subject area in ways that are unique to that discipline. Additionally, as teachers it is important to remember that students will bring various literacies from their homes and communities. An important emphasis will be on creating learning environments that honor student diversity, and learning about multiple ways of knowing, acting, and communicating. (Pre-requisite: CS 461 or equivalent.)

CS 470 TEACHERS AS LEADERS
Develops skills in designing and implementing collaborative and consultative approaches to instruction; enhances skills needed to communicate effectively with other educators, administrators, and parents. Explores shared decision-making, school restructuring, school-based management, and peer coaching and mentoring.

CS 471 DIVERSITY IN THE CLASSROOM
Examines issues related to diversity that result when students from diverse socioeconomic, cultural, linguistic, and academic backgrounds are in the same classroom. Explores the impact of inclusion, ESL, bilingual, and bicultural programs on instruction. Emphasis on developing strategies to meet individual student needs within the regular classroom.

CS 472 ETHICS, CURRICULUM AND SOCIAL CHANGE
Explores some major issues impacting curriculum, including cultural and socioeconomic factors, legal issues, conflicting values, pressures for assessment, and the push to include technology. Examines the historical development and current state of education in the U.S. as compared to education in other cultures. Emphasis on ways that educators can work as change agents within the competing demands of these forces.

CS 473 ASSESSMENT
Explores current theory and practice regarding alternate forms of assessment, including formal, standardized, and informal tests and inventories; selection, evaluation, and interpretation of tests used in educational settings; portfolio assessment, video performances, and presentations; preparation and use of teacher-made tests; evaluating outcomes; and utilizing data to improve instruction. The critical examination of multiple perspectives of assessment theories, policies and practices center around the emphasis on developing strategies to evaluate student progress.

CS 481 THE STUDY OF TEACHERS AND TEACHING
A selective survey and analysis of research on teachers and teaching. Particular emphasis will be placed on the assumptions which are built into various forms of research and the effect these assumptions have on how results should be interpreted and used in supervision and curriculum development. Each student will be expected to become familiar with alternative ways of studying teachers and the teaching process in his/her area of expertise. While many school settings will be utilized because of the many studies done in this area, research in non-school settings will be given a good deal of emphasis.

CS 482 THE HISTORY OF CURRICULUM PRACTICE
A survey of trends and movements in curriculum practice. Particular emphasis will be placed on the recurrent nature of curriculum practices and the reasons for this. The underlying models of curriculum practice in their historical settings will be considered as possible methods for modern day needs and the assets and liabilities of those models will be used in viewing modern day practices.

CS 484 MULTIMEDIA MATERIALS PRODUCTION
This course will analyze the role of multimedia materials in instruction. A variety of media will be explored (including software, the Internet, audio, video, slides and film). Students will be expected to manipulate a variety of images and produce sample materials for critique and analysis. The primary focus will be on enhancing learning in elementary and secondary schools. PREREQUISITE(S): CS 460 or equivalent.

CS 485 CURRICULUM/PROGRAM EVALUATION
Evaluation is essential for curriculum/program development and implementation. Hence, understanding evaluation methods, technologies, and quality criteria is particularly relevant to educational leaders, curriculum/program designers, and technology specialists. In this course, students will critically examine a variety of current evaluation models, instruments, and resources. Students will also conduct a comprehensive analysis of a significant evaluation study relevant to their specific professional interest. Registration is restricted to students in Advanced Master's programs.
CS 487 INTRODUCTION TO CURRICULUM DELIBERATION
An introduction to systematic and collaborative deliberation on curriculum problems. A pattern for deliberation (including situation analysis, problem discrimination and formulation, development of alternative courses of action, and anticipation of consequences) will be developed and exemplified. This pattern will be contrasted with other descriptions of curriculum planning. Each student will complete a project which describes his/her systematic formulation of a curriculum problem and a plan of action for resolving it.

CS 488 DESIGNING AND INTERPRETING CURRICULUM
An examination of the underlying structures of diverse curricula and of the processes by which they are developed and implemented. Principles and methods for organizing subject matter will be analyzed. The translation of subject matter into curriculum will be examined with particular attention to the assumptions about subject matter built into texts and other curricular materials. Students will analyze curriculum guides and materials to uncover their underlying structures and their explicit and implicit assumptions about subject matter.

CS 489 CREATIVITY AND CRITICAL THINKING - VYGOTSKY, BAKHTIN, MAKIGUCHI, IKEDA
Introduces students to the educational philosophies of Russian thinkers Lev Vygotsky (1896 - 1934) and Mikhail Bakhtin (1895 - 1975) and Japanese thinkers Tsunesaburo Makiguchi (1871 - 1944) and Daisaku Ikeda (1928 - ). Students will locate confluences in these thinkers’ philosophies and apply them to current curriculum or curriculum theorizing in their chosen discipline(s) (e.g., mathematics, social studies, language education, etc.), context(s) (e.g., policy, gender, socioeconomics, identity, etc.) and K-12/adult level(s). Topics covered include, among others, cultural-historical theory, socially constructed meaning making, zone of proximal development, dialogism, carnival, value and value-creating pedagogy, humanitarian competition, and human revolution.

CS 492 CREATING AND SUSTAINING PROFESSIONAL LEARNING COMMUNITIES
This course will provide the framework for the creation, development and sustainability of a professional learning community. Professional learning communities have at their core three guiding principles: 1) a focus on learning, 2) the creation of a collaborative culture and 3) a results-orientation. Within the professional learning community, members are committed to working collaboratively in an ongoing process of collective inquiry and action research in order to achieve better results for the students and community they serve. Professional Learning Communities operate under the assumption that the key to improved learning for students is continuous, job-embedded learning for educators.

CS 579 RESEARCH IN TEACHING READING: DEVELOPMENTAL & REMEDIAL READING INSTRUCTION & SUPPORT: BEST PRACTICES
In this course, students will explore and analyze current literacy research through the critical lenses of educational practitioners. Students will: identify meaningful questions about literacy practices in their classrooms and schools; create a plan for addressing the identified research question(s); collect and analyze data relevant to the research question(s); and organize and present the research findings. This inquiry project, or an extension of it, may subsequently become the basis for the student's Master's paper or thesis. (Pre-requisites: CS 461 or equivalent and the assessment and practice required for endorsement.)

CS 580 RESEARCH SEMINAR IN CURRICULUM STUDIES
This course is designed to help graduate students in Curriculum Studies through the difficult process of planning, organizing, drafting, and revising their Master's papers. Students will be expected to complete a literature review and to develop a strong proposal for an integrative paper as a prelude to selecting an advisor for their Master's papers. For M.Ed. students only. PREREQUISITE(S): Six graduate courses including SCG 410 or equivalent.

CS 582 PRACTICUM IN CURRICULUM STUDIES: READING
This course provides directed experiences in decision-making for curriculum, participation, and leadership in the planning and management of reading curricula. Students will: assess students' reading capabilities; make informed curricular choices to address students' needs; identify and implement short and long-term learning goals for students; manage instructional materials needed to guide students; develop curriculum based on assessments of the needs of students. It is designed to offer students an opportunity to put into practice, in a summer school classroom, previous learning about the teaching of reading, especially their beliefs and understandings regarding literacy as social practice. Provides students with multiple opportunities to share their thinking with each other in a supportive community of learners. (Pre-requisites: CS 461 or equivalent and the assessment and practice required for endorsement.)

CS 588 INDEPENDENT STUDY IN CURRICULUM STUDIES
Independent Study in Curriculum Studies. PREREQUISITE(S): Permission of instructor, department chair and associate dean.
CS 589 THESIS RESEARCH IN CURRICULUM STUDIES
A student writing a thesis registers for this course for four quarter hours of credit. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. PREREQUISITE(S): SCG 410 and approved thesis proposal.

CS 591 CURRICULUM THEORIZING: MULTIPLE LENSES
This course examines diverse curriculum discourses, historical as well as contemporary, within a broader context of issues related to education and schooling. It is designed to engage students critically in the study of curricular frameworks, their assumptions, values, and implications for education, schooling, teaching and learning. Major topics include frameworks for defining and conceptualizing curriculum and curricular visions; social, political, and historical contexts of curriculum construction; issues of gender, race, class, and the media; and the curriculum as socially constructed and historically contextualized discourse(s) about what is and what should be taught. Particular content areas will be used as examples.

CS 600 REGISTERED STUDENT IN GOOD STANDING
(0 credit) Registration is this course is open to students who are not registered for any other courses but need to complete requirements/assignments for previously taken courses. It provides access to University facilities. Permission of advisor required. $50 per quarter.

CS 606 REVIEW OF LITERATURE
Review of Literature. This paper will give students the opportunity to develop and demonstrate written competence in a subfield of their disciplines and to enhance life-long learning. Specifically, they will broaden their knowledge base and inform themselves about a topic, issue, theory, etc., reviewing and synthesizing existing literature. To do so, students will need a variety of bibliographic skills including searching data bases. (See the student handbook for additional information about completing Master's papers.)

CS 607 INTEGRATIVE PAPER
Integrative Paper. Non-credit. Students will observe and/or participate in the reciprocal interaction of theory and practice, by investigating actual practice in the field as it relates to theory. This might take the form of investigating how a particular theory is applied in the field, developing a practical application of a theory, or, conversely, developing/refining a theory based on investigations made in the field. (See the student handbook for additional information about completing Master's papers.)

CS 608 CAPSTONE IN CURRICULUM STUDIES
Culminating experience(s) that help(s) students acquire the qualities of professionalism and leadership needed to play a significant role in one's professional education community. Students are expected to situate and understand educational issues in a larger context; keep current in and be able to organize and present a body of research on an education-related question; connect research with practical, professional activity; demonstrate mastery of a sub-field of a discipline; write in a format that meets accepted scholarly criteria and participate in an ongoing professional conversation. A final product such as master's paper(s), comprehensive exam, or collection of professional work products is required.

CS 625 CANDIDACY CULMINATING PROJECT (STUDENT IN GOOD STANDING)
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing culminating projects for their program of study, including theses, papers, and final portfolios. It provides access to university facilities. Permission of advisor required. Registration limited to three terms. $50 per quarter.

CS 700 REGISTERED DOCTORAL STUDENT IN GOOD STANDING
Non-credit. This registration is required of all doctoral students who are not enrolled in a doctoral course, but are completing course requirements and/or dissertation research. It provides access to University facilities. Academic advisor approval required. After the third enrollment, dissertation chair approval required.

CS 704 CURRICULUM DISCOURSES/PERSPECTIVES OVER TIME
This course focuses on the examination of the ways in which curriculum as a field has developed over time: attention to changes in terms of how it has been defined, conceptualized; theoretical and philosophical issues; assumptions and values; as well as implications for teaching and learning. These topics will be addressed within different historical and social contexts. Readings will include primary texts by major theorists as well as secondary material including commentary and critique. A primary goal of the course is to provide students with an overview of major movements in curriculum history as a foundation for further study. This course will serve as a prerequisite for all other curriculum courses in the doctoral program.

CS 706 CANDIDACY PAPER
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are
CURRICULUM AND PROGRAM DESIGN

This course examines theories and practices aimed at: (a) fostering personal integrity and meaningful learning in each individual; (b) promoting productive communications and relations between diverse individuals and communities; (c) constructing environments that are responsive to human needs at the individual, dyadic, group, and systemic levels, and (d) transforming social contexts in ways that promote a greater sense of equity and justice. Topics covered include: the influence of culture, context and experience on interaction patterns, interactions between human and community development, organizational climate, and communication processes such as community building, conflict resolution, and negotiation. Students will engage in self-reflection, story telling, narrative interpretation, and an analysis of instructional and communication processes aimed at promoting individual and community development within and across social organizations. Curriculum programs -- such as those developed from the ideas of James Comer, Seymour Sarason, or John Goodlad -- will be studied as case examples of the impact that fostering development and communication can have on building a learning community.

ASSESSING SCHOOL CURRICULUM

This course develops a framework for assessing the content, characteristics, and outcomes of the curriculum in a school. The framework will include the collection, organization and analysis of both quantitative and qualitative measures of effective instruction. Particular attention will be given to local, state, and national standards for content, teaching and outcomes. Attention will also be given to the qualities of the lived experiences of students in school and thus to the unintended as well as intended outcomes of schooling. Each student will be expected to begin assessing the curriculum in his or her school and to outline a proposal for a more complete assessment of the school's curriculum.

YOUTH DEVELOPMENT, IDEOLOGY, CULTURE, AND SOCIETY

This course examines the ideological significance of "youth" in societies characterized by structural inequalities of power based on class, race, ethnic capability, sexual and/or gender relations of domination and subordination. Texts from a range of academic disciplines -- psychology, sociology, cultural studies, social work -- will be studied to show the influence these texts have had in shaping discourse about youth and youth development. The concept of "youth" will be looked at as a system of statements that produce arguments about young people and that, through these arguments, represent young people as deviant, deficient, perverted or resistant. These metaphors for dealing with crisis in society will be critically analyzed. The course will aim at critical self reflection; students will be challenged to examine their own assumptions about youth.

ENGAGING IN CURRICULUM DELIBERATION

This course engages students in systematic and collaborative deliberation on curriculum problems. A pattern for deliberation -- including situation analysis, problem discrimination and formulation, development of alternative courses of action, and anticipation of consequences -- will be developed, exemplified, and contrasted with other descriptions of curriculum development. The importance and role of alternative conceptions of learners, of situation, and of knowledge structures within disciplines will be emphasized. After engaging in stimulated deliberations, each student will be asked to examine the intellectual commitments underlying this approach to curriculum change, to reconsider his or her role as a curriculum leader in a school or other educational setting, and to develop realistic plans for engaging a particular school community in collaborative curriculum deliberation.

CURRICULUM AND PROGRAM DESIGN

This course studies principles underlying the design of effective, coherent, and comprehensive instructional programs. Topics include: the design and organization of core courses of study and related curricular components; the associated staff development program; and alignment with local, state, and national mandates. Particular attention will be given to planning for diversity, including differences in learning styles,
mandates.

**CS 794 SPECIAL TOPICS IN CURRICULUM**
In order to assure that the program remains flexible, responsive to the needs of students, and inclusive of the areas of interest of both faculty and students, this variable topics course will provide an opportunity for critical examination of compelling topical issues related to education. Topics could include: issues in educational reform; special education; controversies in curricular discourse; current issues such as the education of homeless children; or legal and constitutional issues in education and schooling. The course will be conducted in a seminar format.

**CS 849 SUPERVISED DISSERTATION PROPOSAL DEVELOPMENT**
Students register for this course during the quarter in which they defend their dissertation proposals. PREREQUISITE(S): Permission of dissertation chair.

**CS 859 INDEPENDENT DISSERTATION RESEARCH: CURRICULUM STUDIES**
Students register for this course in the quarter after they successfully defend their dissertation proposals. PREREQUISITE(S): Permission of dissertation chair.

Computer Graphics & Motion Technology

_Graduate Course Descriptions - Current ▸ C ▸ Computer Graphics & Motion Technology_

**GPH 425 SURVEY OF COMPUTER GRAPHICS**
Expression of visual intent through geometry and procedure. A survey of basic 3D techniques, including interaction of light and color. Visual effects of rendering, texturing, and lighting algorithms. Procedural modeling techniques and an introduction to procedurally-based texturing and animation. PREREQUISITE(S): CSC212 or CSC262.

**GPH 436 FUNDAMENTALS OF COMPUTER GRAPHICS**
An accelerated introduction to the graphics development environments and to graphical programming. Provides an in depth discussion of the basic mathematical language of computer graphics: vectors, transformations, homogeneous coordinates and their associated data structures. Advanced topics will include sampling theory and interpolation. Also provides a basic introduction to industry standards in graphics development, including specifying transformations and viewing parameters. PREREQUISITE(S): CSC 393 and MAT 150.

**GPH 438 COMPUTER ANIMATION SURVEY**
Survey of methods used in computer animation. This course uses commercially available software packages to teach techniques for animation and digital video production. The techniques covered include storyboarding, key frames animation, audio and video editing. PREREQUISITE(S): GPH 425 or GPH 469.

**GPH 448 COMPUTER GRAPHICS SCRIPTING**
Covers the use of scripting to generate computer graphics and animation. Emphasis on the benefits and differences of scripting languages compared to conventional graphics programming. Using commercially available scripting environments, students will generate complex graphics and animations that would not be possible with the conventional user interface. PREREQUISITE(S): GPH 438.

**GPH 450 DIGITAL MODELING I**
Introduction to 3D object modeling with an emphasis on visual applications and prototype design. Students will work with basic spatial operations in surface modeling and CAD interfaces and will produce an original object from pattern with computer-aided manufacture. PREREQUISITE(S): HCI 470.

**GPH 465 SURVEY OF VISUALIZATION APPLICATIONS**
An in-depth introduction to a wide range of visualization techniques focusing on medical and scientific and engineering applications. Introduction to programming using a visualization package, use of color for feature extraction and enhancement, false color mapping techniques, reconstruction techniques, isosurface generation, stream lines and ribbons, spatial set operations, volumetric techniques and projections of higher-dimensional datasets. PREREQUISITE(S): GPH 425 or Statistics (IT 223, CSC 423 or MAT 351)

**GPH 469 COMPUTER GRAPHICS DEVELOPMENT**
Basic graphics architecture. Coordinate systems. Three-dimensional representations and transformations.
Texture mapping and elements of animation. Students create a graphics package using a high-level graphics
API such as OpenGL. PREREQUISITE(S): GPH 436 or GPH 321

GPH 487 FORENSIC ANIMATION
Techniques and issues in forensic animation. Application of modeling and rendering to the recreation of time-
based events for legal purposes. Survey of research and interview techniques. Demonstrative recreation and
physically-based recreation. Issues of accuracy, verication, certification and ethics. Students research and
recreate an event with forensic value. Possible project areas include motor vehicle incidents, aviation events,
product liability, medicine, and trademark infringement. PREREQUISITE(S): TBD

GPH 536 SMOOTH SURFACE MODELING FOR GRAPHICS AND ANIMATION
Parametric curves and surfaces. Continuity of curves and surfaces. Hermite, Bezier, B, and Catmull-Rom
splines. Integer, adaptive and interactive generation of curves and surfaces. Surface subdivision. Quadric
surfaces. Surface use in animations. PREREQUISITE(S): GPH 469.

GPH 538 RIGGING FOR ANIMATION
Readying 3D characters and other models for animation. Skeleton chains, joint orientations, and degrees of
freedom. IK solvers, including single chains, rotation and splines. Methods for computing weights for skinning
body and face, including semi-automated approaches. Considerations for mechanical objects, animals and
low-polygon models. PREREQUISITE(S): GPH 438

GPH 539 ADVANCED RENDERING TECHNIQUES
(Formerly CSC 539) Texture and environment mapping. Shadows. Ray tracing. Radiosity. Advanced
illumination models. Elements of animation. (PREREQUISITE(s): GPH 438 or GPH 469 or ANI 439).

GPH 540 PROCEDURAL SHADING
Procedural pattern generation, creating patterns such as marble and wood with noise, Moving beyond the
Phong Illumination model: Gaussian distributions and the Ward anisotropic model, BRDFs. Non-photorealistic
rendering techniques such as “toon” shading and painterly techniques. PREREQUISITE(S): GPH 539

GPH 541 ADVANCED LIGHTING TECHNIQUES
Simple local models such as Phong, extensions to Phong (HDR), ray-traced lighting and shadows, soft shadow
generation using shadow maps, radiosity for producing ambient lighting and photon mapping for calculating
realistic refracted light. Theory, lighting features supported, efficiency, and practical considerations for
choosing the model in production. PREREQUISITE(S): GPH 539

GPH 560 MODELING SPACES
The digital design and modeling of environmental spaces with attention to human use parameters.
PREREQUISITE(S): any GPH 400-level course or consent of instructor.

GPH 565 DESIGNING FOR VISUALIZATION
Sources of graphical integrity and sophistication. Data-Ink maximization. Data density. The use of color to
enhance features in data sets and the communication of information. Effective use of space and time. Use of
3D techniques to display multi-dimensional data. The use of isosurfaces and volumetric techniques to display
features of data sets. Students will use a programmable system to produce their visualizations and will learn
how to use procedural techniques to express graphical intent. (Only one of GPH 570 and GPH 565 may be
taken for credit) Prerequisites GPH 448 and HCI 470

GPH 570 VISUALIZATION
(Formerly CSC 570) Reconstruction techniques. Voxel classification and isosurface generation. Spatial set
operations. Projections of higher-dimensional data sets. Data feature enhancement. False color mapping.
Survey of applications in science, engineering and medicine. PREREQUISITE(S): GPH 469.

GPH 572 PRINCIPLES OF COMPUTER ANIMATION
(Formerly CSC 572) This course will cover a range of topics in introductory 3D Computer Animation. Topics
covered will include key framing, interpolation, hierarchies, inverse kinematics, particle systems, and the
basics of physically based simulation and modeling. PREREQUISITE(S): GPH 469.

GPH 574 COMPUTER GAMES
(Formerly CSC 574) Concept and character development, storyboarding, prototyping, testing and
implementation. Interaction techniques. Optimization of lighting and texturing. Discussion of relevant
hardware and peripherals. PREREQUISITE(S): GPH 469.

GPH 575 ADVANCED GRAPHICS DEVELOPMENT
Survey of standards and current modular technology for 2D and 3D graphics software development. Use of
software development toolkits to create “plug-ins” and other modularly organized functionality enhancements
for selected commercially available graphics packages. PREREQUISITE(S): GPH 448 and GPH 469.
GPH 576 ARTIFICIAL INTELLIGENCE IN COMPUTER GAMES
The course introduces Artificial Intelligence (AI) topics applied to computer games. No previous knowledge of AI will be assumed. The course concentrates of development of applications that guide game objects in 2D (3D) space. Basic AI architectures and techniques are introduced. Implementation of a game AI engine will be discussed. PREREQUISITE(S): GPH 469

GPH 580 HARDWARE SHADING TECHNIQUES
This class explores the current trends in programmable computer graphics hardware. Modern graphics processing units (GPU’s) are becoming increasingly powerful and fully programmable parallel processing units. They make extremely sophisticated effects in computer graphics, such as shadows, displacement maps, skinning, motion blur, reflections and refractions, possible in real-time scenes. In addition these increasingly general programmable units are being used for far more general computing problems from traditional searching and sorting algorithms to computational problems in physics such as the diffusion equation and fluid flow. In this course we will explore the applications of hardware shading to computer graphics, including advanced lighting, shading and surface effects. As time allows, we will explore other applications such as physics and computer science. PREREQUISITE(S): GPH 469

GPH 595 TOPICS IN GRAPHICS
May be repeated for credit. PREREQUISITE(S): Permission of instructor.
autoregressive moving average models), analysis of seasonality, volatility models (GARCH-type, GARCH-M type, etc.), forecasting evaluation and diagnostics checking. The course will emphasize applications to financial data, volatility modeling and risk management. Real examples will be used throughout the course. PREREQUISITE(S): (CSC423 or MAT456) or consent of instructor

**CSC 426 VALUES AND COMPUTER TECHNOLOGY**
The impact of computerized technologies on society with particular attention paid to the ethical issues raised by these social effects. The course will require all of Ph.D. students research leading to a paper of publishable quality. Techniques for this type of research and writing will be discussed. An oral presentation of the research of that paper will also be required. PREREQUISITE(S): Ph.D. status or consent of instructor.

**CSC 428 DATA ANALYSIS FOR EXPERIMENTERS**
The analysis of experiments in the computing science with special emphasis on the use of statistical software and interpretation of generated output. PREREQUISITE(S): CSC 423.

**CSC 431 SCIENTIFIC COMPUTING**
This course presents fundamental numerical algorithms for solving problems in scientific computing and computational finance. Areas covered include: error analysis, computer arithmetic, linear algebra, optimization problems, numerical integration (solvers), ordinary differential equations (ODE). The emphasis of the course is on the design of the algorithms, and their analysis. Algorithms will be implemented using mathematical software. PREREQUISITE(S): CSC212 or CSC262 or CSC242, and 2 course calculus sequence or instructor's permission.

**CSC 435 DISTRIBUTED SYSTEMS I (FORMERLY SE 435)**
An introduction to distributed systems. Topics may include: architecture of distributed systems; networking; datagram-oriented and stream-oriented protocols; network programming (for example, the sockets API); remote procedure call and remote method invocation; processes and threads; code migration; software agents; naming of non-mobile and mobile entities; cryptography and security. PREREQUISITE(S): (CSC 383 or CSC 393) and CSC 374.

**CSC 436 WEB APPLICATIONS**
This course covers the design and development of modern web applications and their interaction with web services. The primary focus is on client-side web applications using AJAX-techniques to access web services. Topics include: JavaScript; programming and security models for browsers; client-side web applications with local storage; offline clients; data synchronization; designing for mobile devices; HTTP, proxies, and caching; RESTful web services. PREREQUISITE(S): CSC 435 and SE 450

**CSC 438 FRAMEWORK FOR WEB APPLICATION DEVELOPMENT**
This course introduces concepts, techniques, technologies and APIs for web application development. The main focus of the course is on the Model-View-Controller design pattern employed by modern full-stack web frameworks. Concepts and techniques covered include client/server programming, database abstraction APIs, and asynchronous javascript. Examples of full-stack MVC frameworks include Ruby-on-Rails (written in Ruby), Django and TurboGears (written in Python). PREREQUISITE: CSC 374

**CSC 439 COMPUTER SECURITY**
This course covers core principles of computer security. Topics include: user authentication; access control (discretionary, mandatory, role-based); security auditing; database security; software security, common vulnerabilities, and secure coding practices; malicious software; and operating system security. Prerequisite(s): CSC 374

**CSC 440 CRYPTOLOGY**
Introduction to the methods of cryptography and cryptanalysis. Topics include classical cryptography (codes, monoalphabetic and polyalphabetic substitution ciphers, transposition ciphers), modern block ciphers (such as DES, AES), and public key cryptography (such as RSA). Optional topics include zero-knowledge protocols, information theory, coding theory, error-correcting codes, steganography, stream ciphers, hashing algorithms, quantum cryptography, elliptic curve cryptography, and history. PREREQUISITE(S): CSC 383 or CSC 393

**CSC 443 INTRODUCTION TO OPERATING SYSTEMS**
An advanced course on operating system design and implementation.

Process management and scheduling, memory management, file systems, device drivers, access control, and virtualization will be covered. The emphasis of the course will be on implementing components of a
functional operating system. PREREQUISITE: CSC373 and CSC374

**CSC 444 AUTOMATA THEORY AND FORMAL GRAMMARS**
An introduction to the most important abstract models of computation and their applications: finite state machines and pushdown automata. Explores the relationship between regular expressions and formal expressions and automata. PREREQUISITE(S): CSC383 and Discrete Math.

**CSC 447 CONCEPTS OF PROGRAMMING LANGUAGES**
Programming paradigms and language concepts: functional programming; comparison of object-oriented languages; type systems for functional and object-oriented languages; runtime systems for functional and object-oriented languages. A variety of programming languages will be used to illustrate concepts, e.g., JavaScript, Ruby, Scala, Scheme. PREREQUISITE(S): (CSC 383 or CSC 393) and CSC373 and CSC374

**CSC 448 COMPILER DESIGN**
Design and structure of high level languages. Lexical scan, top down and bottom up syntactic analysis. Syntax directed translation and LR(k) grammars. PREREQUISITE(S): (CSC 383 or CSC 393) and CSC 373

**CSC 451 DATABASE DESIGN**
Requirement analysis, conceptual design, logical design and implementation of relational databases. Emphasis will be on E-R modeling and E-R mapping, along with basic normalization and SQL for database implementation. PREREQUISITE(S): Graduate Standing.

**CSC 452 DATABASE PROGRAMMING**
Programming in large-scale relational database environment using host languages. Design and implementation of on-line applications. Topics covered in this course include: database programming using open architectures, embedded query languages, dynamic query language, procedural extension of query languages, stored procedures, transaction management, and introduction to extensible markup data definition and retrieval languages. PREREQUISITE(S): (CSC 453 or CSC451) and (CSC 212 or CSC262 or CSC 224 or CSC309).

**CSC 453 DATABASE TECHNOLOGIES**
A core graduate course in database design and implementation. Topics include database implementation and queries in SQL, logical design or relational databases, storage and indexes, database programming, and emerging database models. PREREQUISITE(S): CSC 383 or 393

**CSC 454 DATABASE ADMINISTRATION AND MANAGEMENT**
This course is designed to give students a comprehensive foundation in database administration and management. The course provides a conceptual understanding of the database architecture and how its components work and interact with one another. Topics covered in this course include: database architecture, capacity planning, installation and maintenance, network configuration, security management, utilities and tools, industry standards and guidelines, database management techniques and practices. PREREQUISITE(S): CSC 453 or CSC 451.

**CSC 457 EXPERT SYSTEMS**
A study of the development of expert systems. Students will use commercial packages to develop standalone and embedded expert systems. Topics will include rule-based systems, decision trees, forward and backward chaining, inference, reasoning with uncertainty, and intelligent agents. PREREQUISITE(S): CSC 383 or CSC 393.

**CSC 458 SYMBOLIC PROGRAMMING**
Concepts of symbolic programming as embodied in the language LISP. Basic data and control structures of LISP: symbolic expressions, the interpreter, functions, recursion, iteration. Techniques for prototyping and building conceptually advanced systems in an environment that encourages procedural and data abstraction. Advanced topics may include Prolog, intelligent tutoring systems, intelligent agents, and natural language processing. Assignments will focus on basic AI techniques, but the class is intended for anyone who will need to rapidly develop large complex systems. PREREQUISITE(S): CSC 383 or CSC393.

**CSC 471 MOBILE APPLICATION DEVELOPMENT**
In this course we introduce the core issues associated with development for mobile devices. Students will learn a platform’s IDE, frameworks, view, menus, controllers, graphics audio and more. Understanding the device’s taps, touch, multi-touch, gestures, and accelerometers are just few of the interactions the class will cover. This course is design to be prerequisite for advanced mobile development classes. Every offering of the course will be explicitly targeting a specific device platform, (i.e. iPhone, Android, Windows Phone). PREREQUISITE(S): (CSC 383 or CSC 393) and CSC 374
CSC 475 INTRODUCTION TO ROBOTICS
An introduction to the field of Robotics. Topics include history of robotics, kinematics, control theory, and sensor theory. A large portion of class time will be lab based, building and programming robots using the Lego Mindstorms NXT Robotics Kit. The programming will be using a C derivative and knowledge of C and general systems concepts is required. PREREQUISITES: CSC 373 AND CSC 374.

CSC 480 ARTIFICIAL INTELLIGENCE I
An in-depth survey of important concepts, problems, and techniques in artificial intelligence, including search, knowledge representation, logical reasoning, and reasoning with uncertainty. A particular focus and a unifying theme of the course will be the concept of intelligent agents. No prior knowledge of AI is required. The course is particularly suitable for graduate and advanced undergraduate students who want to gain the technical background necessary to build intelligent systems, or who want to prepare for more advanced work in AI. The concepts and techniques learned in this course will be directly applicable to many other areas of computer science including software design, distributed systems, databases, and information management and retrieval. PREREQUISITE(S): CSC 383 or CSC 393.

CSC 481 INTRODUCTION TO IMAGE PROCESSING
The course is a prerequisite for more advanced Visual Computing (VC) courses and the students will be challenged to implement VC algorithms for real world applications. The topics covered in the course include: components of an image processing system and its applications, elements of visual perception, sampling and quantization, image enhancement by histogram equalization, color spaces and transformations, introduction to segmentation (Edge detection), and morphological image processing. PREREQUISITE(S): Calculus or Linear Algebra.

CSC 482 APPLIED IMAGE ANALYSIS
Fundamentals of computational image analysis will be explored in terms of its two most important components, image information extraction and modeling of image patterns. These components will be studied in the context of image representation, segmentation, classification, retrieval and recognition. The course will be useful for students interested in image analysis related to areas such as image databases, multimedia management, animation, GIS, computer graphics, medical imaging, remote sensing and robotics. Specific topics include, but are not limited to segmentation, multi-scale representation, shape analysis, texture analysis, Fourier analysis, wavelets, Gabor and fractal analysis, template matching, and object recognition. PREREQUISITE(S) CSC 481

CSC 485 NUMERICAL ANALYSIS

CSC 486 ADVANCED NUMERICAL ANALYSIS

CSC 487 OPERATIONS RESEARCH I: LINEAR PROGRAMMING
Linear Programming. The Linear Programming problem and its dual; the simplex method; transportation and warehouse problems; computer algorithms and applications to various fields. PREREQUISITE(S): MAT 220 and any introductory programming course.

CSC 488 OPERATIONS RESEARCH II: OPTIMIZATION THEORY
Optimization Theory. Integer programming; nonlinear programming; dynamic programming; game theory. PREREQUISITE(S): CSC 487.

CSC 489 THEORY OF COMPUTATION
Advanced topics in the mathematical foundations of computation. Topics may include random access and Turing machines, recursive functions, algorithms, computability and computational complexity, intractable problems, NP-complete problems. PREREQUISITE(S): CSC 444 or CSC 421.

CSC 495 INTRODUCTION TO SOCIAL COMPUTING
This course focuses on how social groups form, interact, and change, and how such groups can be modeled and augmented with computer systems. Social computing is an interdisciplinary field drawing from the fields of computer science, psychology, sociology, and economics. This course introduces three ideas from social computing: the collaborative computation of preferences, the modeling of social groups as networks, and the representation of social choices as games. We will examine applications of these ideas in areas such as collaborative recommendation, social networks, web search and auctions. Mathematical topics in linear
algebra, graph theory and game theory will be introduced as necessary. PREREQUISITE(S): CSC 383 or CSC 393

CSC 500 RESEARCH COLLOQUIUM
The research colloquium consists of weekly talks by a variety of speakers including faculty, students, and guests from the academic and business communities. The lectures feature new creative and scholarly work that encompasses the disciplines and areas of interest of the school of computing. Student evaluation is based on attendance as well as an online journal with reflections on each of the presentations. The educational objectives are to expose students to creative and scholarly research at DePaul and elsewhere, and to engage students in the thought process of identifying and solving challenging research problem. PREREQUISITE(S): None

CSC 503 PARALLEL ALGORITHMS
Development, implementation, and applications of parallel algorithms. Models of parallel computation. Parallel sorting, searching and graph algorithms, as well as other parallel algorithms, will be studied and implemented on both simulated and actual parallel machines. PREREQUISITE(S): CSC 421.

CSC 521 MONTE CARLO ALGORITHMS
A course about the use of random numbers for numerical computation with particular emphasis on implementation issues and applications in science and finance. Covered topics include: pseudo random number generators, the inversion method, the accept-reject method, discrete event simulations, multidimensional integration, the Metropolis and the Bootstrap algorithms.

PREREQUISITE(S): CSC262, CSC212, CSC309, or CSC224 and CSC423 or instructor's permission

CSC 525 COMBINATORIAL OPTIMIZATION
This course defines and introduces the concepts and techniques needed to formulate and model optimization problems. A set of fundamental problems in combinatorial optimization will be covered together with their applications. The emphasis will be on the design and analysis of algorithms for such problems. The computational complexity of this set of problems (easy/hard to solve/approximate) will be discussed, and techniques for coping with intractable problems will be introduced. PREREQUISITE(S): CSC 421.

CSC 528 COMPUTER VISION
Computer Vision techniques for analysis of patterns in visual images and videos of 2D and 3D scenes will be explored with the goal of interpreting, understanding, and reconstructing 3D scenes. Topics to be covered include image formation and representation, 2D and 3D feature extraction, camera calibration, reconstruction of depth based on stereo, shading, focus, texture, and geometry, object detection and tracking, motion analysis, analytical performance characterization, and 3D recognition of objects and scenes using statistical and model-based techniques. The course will be useful for students interested in computer vision related areas such as robotics, remote sensing, and medical imaging. A significant part of the course will be dedicated to the discussion of articles recently published in the literature. PREREQUISITE(S): CSC 381 or CSC 481

CSC 531 INTRODUCTION TO BIOINFORMATICS
An introduction to the field of Bioinformatics, which is computational modeling of biological and biochemical processes. Some programming in Java will be involved. Little biological knowledge will be assumed: any required will be taught in the course. Topics will include genomics, biological databases, sequence alignment (longest common subsequence), phylogenetic trees, and protein folding. PREREQUISITE(S): CSC 421 and SE 450

CSC 534 SOFTWARE DEVELOPMENT FOR LIMITED AND EMBEDDED DEVICES (Formerly 542)
This course will focus on the unique aspects, tools, and techniques of developing software applications for limited and embedded devices, such as set-top boxes and smart cards. PREREQUISITE(S): SE 450.

CSC 535 FORMAL SEMANTICS OF PROGRAMMING LANGUAGES

CSC 536 DISTRIBUTED SYSTEMS II (FORMERLY SE 536)
An intermediate course on distributed systems. Topics may include: clock synchronization; mutual exclusion; distributed transactions; consistency models; distribution and consistency protocols; failure models; achieving fault tolerance; distributed object-based systems; distributed file systems. PREREQUISITE(S): CSC 435 and CSC 309.
CSC 538 VISION SYSTEMS
Visions Systems will cover the geometry of computer vision as well as a survey of working vision systems to include 1) Content-based Image Retrieval Systems; 2) Object Detection and Tracking Systems; 3) Medical Visual Systems; 4) Robotic Navigation Systems. PREREQUISITE(S): CSC 528

CSC 540 MOBILE APPLICATION DEVELOPMENT II
This course will cover advanced topics in mobile and wireless application development. The topics covered will be made explicit by the course instructor when the course is offered. PREREQUISITE(S): CSC 471

CSC 541 INTRODUCTION TO PROTEOMICS
Catalog description: An introduction to the field of Proteomics, continuing in more depth and detail from the prerequisite course Introduction to Bioinformatics. Proteomics is computational modeling of biological and biochemical processes related to the Proteome. The Proteome is the set of proteins expressed by a cell in a specific tissue at a specific point in its life. Some programming in Java will be involved. The only biological knowledge required is that taught in the prerequisite course. Topics will include mass spectrometry analysis of proteins, protein folding, and proteomic databases PREREQUISITE(S): CSC531

CSC 542 RESEARCH PRACTICUM IN COMPUTATIONAL BIOLOGY
Catalog description: An advanced course in Bioinformatics that draws on and enhances the information learned in CSC 531 Introduction to Bioinformatics, CSC 541 Introduction to Proteomics, and on all computer science classes. The student will spend 15 hours each week during the quarter in the laboratory of a biological or biochemical research scientist at a suitable research laboratory determined by the instructor. The student will work in the biology research group performing the computational components. The student will be able to take this course several times, working in different types of laboratories. The course title in the transcript will reflect the work performed, and will be different each time this course is taken. PREREQUISITE(S): CSC531, CSC 541 AND permission of instructor

CSC 543 SPATIAL DATABASES & GEOGRAPHIC INFORMATION SYSTEMS
This course considers how spatial databases work within a GIS, how data is structured, stored, indexed, retrieved, and displayed. Other topics may include fuzzy spatial databases, temporal spatial databases, and multiple criteria spatial decision making. The class will consist of hands-on work with commercial products, as well as investigating the state-of-the-art research in the field. PREREQUISITE(S): CSC531.

CSC 545 ADVANCED COMPUTER ORGANIZATION
Note: This course is no longer offered.

Parallel, array and pipeline processors and other topics of current interest. PREREQUISITE(S): CSC445.

CSC 546 OPERATING SYSTEMS DESIGN
A project/seminar oriented course examining the details of the design of operating systems. The ideas from CSC 446 will be extended and incorporated into the design details. PREREQUISITE(S): CSC443.

CSC 547 ADVANCED TOPICS IN PROGRAM LANGUAGES
A project-based course on advanced topics related to programming languages and programming environments. The course does not have any formal exams or homework assignments, but participants are expected to read papers on current research, actively participate in discussions, and complete a significant course project. PREREQUISITE(S): Permission of the instructor.

CSC 548 ADVANCED COMPILER DESIGN
Emphasis on practical problems in implementing compilers, data flow analysis, code optimization, error analysis. Discussion of compiler generators. As a class project, students will write a compiler. PREREQUISITE(S): CSC 448.

CSC 549 DATABASE SYSTEM IMPLEMENTATION
This is an advanced database course that covers issues in DBMS implementation. Topics covered in this course include: physical data organizations, indexing and hashing, query processing and optimization, database recovery techniques, transaction management, concurrency control, and security. PREREQUISITE(S): CSC 453

CSC 550 OBJECT-ORIENTED DATABASES
CSC 551 DISTRIBUTED DATABASE SYSTEMS
Distributed database architecture, distributed database design, distributed query processing, query decomposition and optimization of distributed queries, distributed transaction management and concurrency control, distributed DBMS reliability, distributed database operating systems. Distributed multibase systems. Client/Server database systems. PREREQUISITE(S): CSC 453 and (CSC 435 or TDC 425 or TDC 463)

CSC 552 CONCURRENT SOFTWARE DEVELOPMENT (Formerly SE 552)
Fundamentals and techniques of developing concurrent object-oriented applications, using a patterns-based approach. Concepts covered include: threads, synchronization and object locking, thread blocking and deadlock, safety and liveness, state-dependent action and concurrency control. PREREQUISITE(S): SE 450 and CSC 374.

CSC 553 ADVANCED DATABASE CONCEPTS
An introduction to advanced selected topics in databases. The topics include: intelligent and deductive databases, temporal databases, multimedia databases, spatial and geographic databases, fuzzy databases, mobile databases, data mining and data warehousing, as well as emerging issues and concepts in database design, implementation and management. PREREQUISITE(S): CSC 453.

CSC 554 ADVANCED DATABASE MANAGEMENT
In this class, we will discuss concepts, technologies, guiding principles, processes and best practices in managing database environment to meet high availability, scalability, and compliance needs. Organizations with business critical applications must reduce their risk of downtime, manage database environment efficiently and ensure data meets compliance requirements effectively. IT now has additional responsibilities to secure and manage information in alignment with legal, records management and regulations.

This class explores methods and techniques to achieve the availability needs and also focuses on how to protect the database against disasters by maintaining multiple copies of the databases in separate locations, synchronized in real-time. Students learn to design and manage key business resumption functions including disaster recovery plans and business continuity plans. Data governance challenges will be discussed along with solutions including data life cycle management, preservation, retention, and disposition. Prerequisite(s): CSC 453 or CSC 454

CSC 557 FOUNDATIONS OF COMPUTER SECURITY (Formerly SE 547)
This course provides an overview of foundational techniques in the specification and verification of computer systems in the presence of malicious attackers. Topics may include: formal models of interaction, attacker models, robust safety properties such as confidentiality and authenticity, information flow properties such as noninterference, and tools such as model checkers, type checkers and theorem provers. PREREQUISITE(S): CSC 390 and CSC 416.

CSC 559 SOFTWARE ENGINEERING FOR FINANCIAL MARKETS
This course focuses on software engineering issues in creating a financial engine that drives automation and execution in a financial market. The course will cover different types of financial engines from back-office to front-office, exchange matching engines, data gathering engines, trading engines and straight through processing. The emphasis will be on the engines themselves rather than the financial models beneath them. Students will be required to work individually and/or in teams and create a financial engine. This is a project course and it will put students in the role of a domain architect who will need the skills required to communicate with financial traders and software engineers at the same time. PREREQUISITE(S): (CSC309 or CSC262) and (CSC431 or CSC521 or CSC425)

CSC 575 INTELLIGENT INFORMATION RETRIEVAL
Examination of the design, implementation, and evaluation of information retrieval systems. The focus is on the underlying retrieval models, algorithms, and system implementations. Also examined is how an effective information search and retrieval is interrelated with the organization and description of information to be retrieved. Topics include: automatic indexing; thesaurus generation; Boolean, vector-space, and probabilistic models; clustering and classification; information filtering; distributed IR on the WWW; intelligent information agents; IR system evaluation; information visualization; and natural language processing in IR. Throughout the course, current literature from the viewpoints of both research and practical retrieval technologies both on and off the World Wide Web will be examined. PREREQUISITE(S): (CSC 374 and CSC 383) OR Permission of Instructor.

CSC 578 NEURAL NETWORKS AND MACHINE LEARNING
A study of the basic structure of neural networks and how machines may learn. This will include analyses of
A study of the basic structure of neural networks and how machines may learn. Neural networks to be studied include Hopfield, backpropagation, Kohonen, ART, and Neuro-Fuzzy. Students will explore current applications and design several learning systems. No prior background in artificial intelligence is assumed. PREREQUISITE(S): MAT 220 or MAT 262 or MAT 151.

CSC 580 DESIGN OF OBJECT-ORIENTED LANGUAGES (Formerly SE 580)
This course covers issues in the design and specification of object-oriented programming languages. Sample topics include the use of patterns in program representation, static and dynamic semantics, subject reduction, subtyping, inheritance, polymorphism, genericity and concurrency. PREREQUISITE(S): SE 450.

CSC 582 MACHINE LEARNING

CSC 583 ARTIFICIAL INTELLIGENCE II
The course provides an in-depth coverage of advanced topics in Artificial Intelligence, including planning, reasoning with uncertainty, decision theoretic agents, constraint satisfaction and optimization problems, as well as selected topics of interest in knowledge representation, machine learning, and natural language processing. These topics are discussed in the context of design and implementation of real-world intelligent agents. This course is suitable for advanced students with interest in further study in artificial intelligence and related topics, as well as those interested in the application of AI techniques in building systems with intelligent components. PREREQUISITE(S): CSC 480

CSC 587 COGNITIVE SCIENCE
A study of the relationships between our knowledge of human and computer intelligence. Levels of analysis of intelligent system, examples of cognitive models, and exposure to current publications, with an emphasis on those related to human computer interaction. Students will participate in the design and testing of models of human intelligence, both experimentally and using computer models. PREREQUISITE(S): CSC383 Or HCI460.

CSC 589 TOPICS IN DATABASE
This is an independent study course. PREREQUISITE(S): Consent of the instructor.

CSC 590 TOPICS IN USER INTERFACES
This is an independent study course. May be repeated for credit. PREREQUISITE(S): Completion of the corresponding visual computing core sequence or consent of instructor.

CSC 591 TOPICS IN ALGORITHMS
An in-depth discussion of one or more of the following topics: algorithms for integer operations, polynomial arithmetic including applications of the fast Fourier transform, matrix operations, pattern matching algorithms, proving lower bounds on the complexity of algorithms, parallel algorithms, approximation algorithms. PREREQUISITE(S): CSC 421.

CSC 592 TOPICS IN COMPUTER VISION AND PATTERN RECOGNITION
This is an independent study course. May be repeated for credit. PREREQUISITE(S): Completion of the corresponding visual computing core sequence or consent of instructor.

CSC 594 TOPICS IN ARTIFICIAL INTELLIGENCE
This is an independent study course. PREREQUISITE(S): Consent of the instructor.

CSC 597 COMPUTER SCIENCE CAPSTONE
In this class students will synthesize knowledge from previous courses to design, build, test, and demonstrate a sophisticated software project as members of a project team. Topics introduced or reviewed, and used in completing the project, will include software engineering (including requirements analysis and negotiation), planning, design, rapid prototyping, project management (and PM tools), implementation, system documentation, security, testing, and web presence. Other topics include reasoning about uncertain futures, negotiation, online meeting techniques, and group dynamics.

CSC 598 TOPICS IN DATA ANALYSIS
This is an independent study course. PREREQUISITE(S): Consent of the instructor.

CSC 599 TOPICS IN COMPUTER SCIENCE
Independent study form required. PREREQUISITE(S): Consent of instructor.

CSC 601 MASTER’S RESEARCH CONTINUATION
CSC 601 MASTER'S RESEARCH CONTINUATION
Non-credit. This course is intended for master's degree students who have completed all course registration requirements and who are regularly using the facilities of the University for study and research, thesis or project completion. These students are required to be registered in this course each quarter of the academic year until all requirements have been completed. PREREQUISITE(S): Completion of required courses. Independent Study form required.

CSC 610 COMPUTER SCIENCE I
An introduction to structured programming using PASCAL. Topics include: elementary data types, program control structures, character strings, array processing, procedures and functions, and an introduction to user-defined data types.

CSC 611 PROGRAMMING IN JAVA I
Introduction to object-oriented programming using Java. Topics include variables, data types, control structures, arrays, method invocation and parameter passing, predefined classes and programmer-defined classes. Introduction to Java interfaces and inheritance. Simple graphical user interfaces, events, and listeners.

CSC 615 INTRODUCTION TO STRUCTURED PROGRAMMING USING C
Introduction To Structured Programming Using C (crosslist 215)(coreq Mat140)

CSC 611 PROGRAMMING IN JAVA I
Introduction to object-oriented programming using Java. Topics include variables, data types, control structures, arrays, method invocation and parameter passing, predefined classes and programmer-defined classes. Introduction to Java interfaces and inheritance. Simple graphical user interfaces, events, and listeners.

CSC 612 PROGRAMMING IN JAVA II
Intermediate object-oriented programming using Java. Implementation of programmer-defined classes including stacks and queues. Java collection classes. Introduction to class diagrams. Exception handling. Simple network programming including applets, JDBC, and URL access. PREREQUISITE(S): CSC 611

CSC 624 JAVA FOR PROGRAMMERS
Object-oriented programming in Java. Simple graphical user interfaces, events, and listeners. Implementation of programmer-defined classes including stacks and queues. Java collection classes. Introduction to class diagrams. Exception handling. Simple network programming including applets, JDBC, and URL access. PREREQUISITE(S): Experience in at least one high-level programming language

CSC 630 COMPUTERS IN EDUCATION

CSC 640 TEACHING COMPUTER SCIENCE
This course guides students to identify, evaluate and assimilate pedagogical techniques (instruction and assessment) to teach Computer Science (CS), with particular attention to various implementations of cooperative learning strategies. Students develop, evaluate, critique and deliver a learning unit on fundamental aspects of CS. Students learn how to structure, teach and assess an Advanced Placement CS course according to the current guidelines of the College Board. They also learn to identify, locate and evaluate various resources (publications, web resources, dedicated software, and professional societies) that enrich their role as educators. Throughout the course attention is given to the diversity of learning styles and special needs of students within the CS curriculum. N.B. For students enrolled in the Teaching and Learning Graduate program offered by the School of Education (SOE), and for students seeking certification for grades 9-12 or 5-12, this course requires 35 clinical hours of type II in a local high school according to the specification of the SOE Student Handbook. PREREQUISITE(S): CSC 383 or CSC 393 or instructor consent.

CSC 670 COMPUTER-ASSISTED INSTRUCTION
Study and analysis of the use of the computer as an aid in instruction. Use of CAI languages such as PILOT. PREREQUISITE(S): CSC 630.

CSC 671 QUANTITATIVE COMPUTING WORKSHOP
Quantitative computing background needed for graduate study complemented with application to useful problems using appropriate software tools.

CSC 672 DATA ANALYSIS WORKSHOP
Statistical background needed for graduate study complemented with experience in data analysis using SAS.
PREREQUISITE(S): CSC 671 or equivalent.

**CSC 680 PROGRAMMING WITH LOGO**
An introduction to LOGO, a powerful yet easy-to-learn language that both adults and children can use to express ideas.

**CSC 690 RESEARCH SEMINAR**
Readings and discussion on current research topics. PREREQUISITE(S): Consent of the instructor.

**CSC 695 MASTER'S INDEPENDENT STUDY (1 - 4 CREDITS)**
Students interested in a more in-depth study of a particular area will register for this course and work with a faculty member (not necessarily their academic advisor) on a research project. The work involved may include system development, empirical studies, or theoretical work. 4 credit-hours of CSC695 replace one 500-level CS elective course in the MS in CS program and can be taken for up to 8 credit-hours.

PREREQUISITE(S): Consent of research advisor. Independent study form required. Students must successfully complete the Core Knowledge Phase courses prior to their first enrollment in CSC 695.

**CSC 696 MASTER'S RESEARCH**
A student who has made a significant contribution to a research project, through work done in two quarters of CSC 695 (8 credit-hours), may choose to complete the Master's Research option. At the end of the two quarters, the student must submit a technical report detailing the results of the research project. This report must be approved by the student's research supervisor and the faculty advisor, at which point it will be made available to the public as a CDM Departmental Master's Research Technical Report. In that case, the student will be allowed to register for this course. The transcript will show the Research project title as the course topic.

PREREQUISITE(S): CSC 695 taken twice and approval of report by student's research supervisor and faculty advisor.

**CSC 697 GRADUATE INTERNSHIP**
In cooperation with local employers, the graduate program offers students the opportunity to integrate their academic experience with on-the-job training in computer related work areas. This course is offered for one credit and admission to the program requires consent of a Student Services Advisor. International students may complete curricular practical training through this class.

**CSC 698 MASTER'S THESIS**
A student who has made an original contribution to the area (through work done in CSC 695 typically but not necessarily) may choose to complete a Master's Thesis. The student and the student's research advisor should form a Master's Thesis Committee of 3 faculty. The student will need submit to the committee a thesis detailing the results of the research project. After a public defense, the committee will decide whether to accept the thesis. In that case, the student will be allowed to register for this course and the transcript will show the thesis title as the course topic. The thesis will be made available to the public as a CDM Departmental Master's Thesis Technical Report. PREREQUISITE(S): Successful defense of a Master's Thesis.

**CSC 699 RESEARCH**
PREREQUISITE(S): One to 12 hours per quarter. A total of 12 hours is required.

**CSC 701 RESIDENT CANDIDACY CONTINUATION**
Non-credit. Students admitted to candidacy for the doctoral degree who have completed all course and dissertation registration requirements and who are regularly using the facilities of the University for study and research are required to be registered each quarter of the academic year until the dissertation and final examination have been completed. PREREQUISITE(S): Admission to Candidacy. Independent Study form required.

**CSC 702 NON-RESIDENT CANDIDACY CONTINUATION (PREREQUISITE:ADMISSION TO CANDIDACY)**
Non-credit. This registration provides for doctoral candidates who have been admitted to candidacy who are not in residence and need only occasional use of University facilities, including the libraries. PREREQUISITE(S): Admission to Candidacy. Independent Study form required.
Counseling

Graduate Course Descriptions - Current Counseling

**CSL 95 CLINICAL ORIENTATION**
Students will be oriented to the expectations and requirements of the practicum and internship experiences in Human Services and Counseling.

**CSL 96 CLINICAL APPLICATION**
This milestone course ensures that all students have met the requirements clinical placement.

**CSL 97 CLINICAL PLACEMENT**
This milestone course ensures that students have secured a clinical placement that fulfills all requirements for Human Services and Counseling Program.

**CSL 451 LEGAL AND ETHICAL ISSUES IN COUNSELING**
Professional counseling involves an interplay of ethics, personal values and legal implications of practice. This course initially attempts to focus on personal values and allows for the student to reflect upon his/her personal value systems. Several ethical codes related to the profession are studied so that the students will have the knowledge of professional ethical practice. An examination of local and federal laws regarding the interplay of these three components will be examined. The students, in the course, will engage in small groups, value clarification exercises, role-playing with lectures, video technology and guest speakers.

**CSL 452 INTRODUCTION TO THE COUNSELING PROFESSION**
Upon completion of this course each student will be able to: 1) analyze human service organizations in terms of their mission, vision, beliefs, current goals and strategies, organizational culture, organizational structures and leadership; 2) utilize visionary, strategic and operational planning processes to develop and organize a human services organization; 3) design various assessments of service outcomes of human services organizations; and 4) judge his or her effectiveness as a member of both a learning community and planning team.

**CSL 454 CAREER COUNSELING**
Ways to assist the individual to choose, prepare for and progress in a career. Vocational testing, sources for occupational information are described. Computer guidance programs designed for career exploration will be studied. Also, the study of vocational behavior in relation to career patterns with special attention to the analysis of empirical data and theories pertaining to vocational choice will be considered. (Prerequisite: CSL 501).

**CSL 458 GROUP COUNSELING**
Study and ethics of group process, group theories, problems such as conflict resolution, leadership and membership styles re-examined. The class engages in a regular group experience. Opportunity to observe and participate in group work is provided. Criteria and formulation for conducting workshops with group process is considered. (Prerequisite: CSL 510).

**CSL 461 TESTING AND APPRAISAL**
Detailed analysis of intelligence, aptitude, personality, and achievement tests used with groups and individuals. The course is intended to familiarize students with various appraisal procedures and their utilization. Attention is given to the development of the institutional testing program. (Prerequisite: SCG 410)

**CSL 466 ASSESSMENT AND TREATMENT OF CHEMICAL DEPENDENCY**
This course seeks to develop skills and understandings relevant to the assessment and treatment of chemical dependency. The major alternative assessment approaches and treatment interventions for chemical dependency are surveyed and analyzed. (Prerequisite: CSL 489)

**CSL 467 COUNSELING THEORIES**
The purpose of this course is to review counseling theories from affective, non-directive approaches to cognitive and behavioral approaches. The humanistic and existential frameworks in counseling will be reviewed. Techniques and process derived from these various counseling frameworks will be used in classroom laboratory experiences with use of follow-up videotaping assignments. Models of normalcy as well as knowledge and use of the DSM IV-R (2000) and review of psychopathology, highlighting neurotic personality disorders will be considered. In counseling children, play and art therapy processes will be applied. (PREREQUISITE(S): CSL 451 and CSL 452).
CSL 475 CAREER COUNSELING FOR SCHOOL COUNSELORS
This course will provide an introduction to career counseling in a school context. Focus will be on increasing students' knowledge of the world of work, career theories, and related life influences. The ASCA model for K-12 programs and interventions will be integrated throughout this course. (Prerequisite: CSL 501).

CSL 489 PSYCHOPATHOLOGY
This course will focus on a continuum of mental health with an emphasis on neurotic and psychotic deviations. Specific models and methods for assessing mental status, identification of abnormal, deviant or psychopathological behavior will be presented. The use of DSMIV-R (2000) ad Zero to Three Diagnostic Classification with its diagnostic categories will be utilized for assessment methodology. Specific attention will be given to diverse cultural perspectives in diagnosis and assessment. (Prerequisite: CSL 510).

CSL 490 FOUNDATIONS OF STUDENT AFFAIRS
The course examines historical and philosophical elements relative to the role of student affairs in higher education as well as the impact of changing demographics on current trends pertinent to the management of student affairs. The course also provides students with theoretical and practical knowledge about organization structure, services, and faculty/staff/administrative functions in student affairs. (Prerequisite: CSL 451 and CSL 452).

CSL 491 CONTEXTUAL DIMENSIONS OF COLLEGE STUDENT DEVELOPMENT
This course will examine the impact of institution mission and state and national policies on access, retention and graduation rates. Organizational change, decision making and conflict resolution strategies will be explored within the context of strategic planning, organizational structure and leadership styles and management. Personnel selection, management theories and performance evaluations will also be studied. Various assessment practices will be reviewed and analyzed. Within this framework, student demographics, campus culture and student development theory (traditional and contemporary) will be examined. (Prerequisite: CSL 490).

CSL 492 PROGRAM DEVELOPMENT IN STUDENT AFFAIRS
This course will explore models for designing, managing, and evaluating student affairs programs, including the use of technological applications. Students will become familiar with models and methodologies of program development and implementation in higher education and will understand how to use professional standards and other resources for program development. (Prerequisite: CSL 491).

CSL 500 LEADERSHIP AND SOCIAL CHANGE
This is an advanced course exploring how leadership theory interacts with organizational structures, advocacy, and social justice. The class is structured to expand from the individual to the group/organization/school level to the societal macro view of leadership. The topics of leadership development and leadership education in P-16 settings will be included. Contemporary topics in leadership will be addressed to coincide with social change and leadership. (Cross listed with CSL 200 & 500)

CSL 501 COUNSELING SKILLS
This course examines oral communication skills as a dynamic in human relations. Through videotapes, role-playing and a variety of activities and experiences, students will explore ways to improve their own communication and counseling skills using the Ivey intentional interviewing approach. Feedback is given to the students, both in laboratory classroom exercises and in viewing videotape sessions. Skills emphasized include perception, verbal and nonverbal language, accurate and empathetic listening skills, focusing, thematizations, confrontation, conflict resolution and a process of directionality for change. (PREREQUISITE(S): CSL 451 and CSL 452).

CSL 510 MULTICULTURAL COUNSELING
This course will assist students in understanding the need for formulating and implementing counselor/consultant roles with diverse communities. Attention will be on the students' integration of awareness, knowledge, attitudes, insights, and cultural identities. Moreover, students will develop the skills and expertise necessary for effective counseling and collaboration in a multicultural milieu. (PREREQUISITE(S): CSL 467 or HSC 467 AND CSL 501 or HSC 501).

CSL 511 SUPERVISION
This course will be an introduction to the theory and practice of supervision in the counseling profession. There will be a focus on the basic skills necessary for effective supervision of counselors. (Prerequisite: CSL 458).

CSL 512 CRISIS INTERVENTION
This course will provide students with an understanding of the individual in crisis. Focus will be on the common characteristics and manifestations of crisis and address methods and techniques of crisis
CSL 513 CONSULTATION FOR COUNSELORS
This course will focus on the theory, techniques, practice and skill development needed to effectively provide consultation in communities and schools. Emphasis will be on the application of consultation and the role of the consultant. (Prerequisite: CSL 458).

CSL 514 CRISIS INTERVENTION FOR SCHOOL COUNSELING
This course will provide students with an understanding of principles of crisis intervention and crisis management with a focus on the school setting. Working with individuals and groups in crisis is significantly different than typical counseling situations, both in the characteristics of the clients and in the types of intervention strategies employed. Graduates working in community, school, and higher education settings will encounter many situations where crisis intervention skills are necessary. This training will increase their knowledge and skills of crisis intervention strategies. (Prerequisite: CSL 458).

CSL 519 SPECIAL EDUCATION: LEGAL AND PROFESSIONAL ISSUES FOR SCHOOL COUNSELORS
This course will introduce students to special education law including relevant statutes, cases, and regulations. Students will also learn about the development, monitoring, and implementation of IEPs. In addition, this course will address the student counselor's potential role in the evaluation, referral, monitoring, and consultation of student with special needs. (PREREQUISITE(S): CSL 451 and CSL 452).

CSL 520 COUNSELING CHILDREN AND ADOLESCENTS
This course will consider the theoretical foundations of working with children and adolescents. It will address developmentally appropriate counseling perspectives and interventions. Emphasis will be on the child/adolescent in various systemic contexts, family as consultant and collaborator, multicultural factors, specific child/adolescent problems, and resiliency. In addition, professional issues will be addressed. (Prerequisite: CSL 458).

CSL 521 CONTEXTUAL DIMENSIONS OF SCHOOL COUNSELING
This course will address the role of the school counselor and provide an understanding of the coordination of counseling program components as they relate to the school and the wider communities. Students will explore the various roles of the school counselor as advocate, coordinator, teacher, programmer, consultant, information and referral agent, and counselor. The ASCA developmental approach to school counseling will be introduced and integrated throughout. (Prerequisite: CSL 451 and CSL 452).

CSL 522 DELIVERY OF COMPREHENSIVE DEVELOPMENTAL SCHOOL COUNSELING PROGRAMS
This course will focus on the comprehensive development, delivery, and evaluation of school counseling programs based on the "Best Practices" model of the state and the three ASCA model domains: academic development, career development, and personal/social development. Students will learn strategies to integrate school counseling programs into the total school curriculum, to promote the use of counseling activities and programs, to plan for and present school counseling-related educational programs, and to gain knowledge of prevention and crisis intervention strategies. (Prerequisite: CSL 521)

CSL 523 LEARNING AND CLASSROOM MANAGEMENT FOR SCHOOL COUNSELORS
This course will explore learning frameworks in education such as constructivist approaches, social-cultural learning, and the zone of proximal development as well as behavioral learning contracts. The history of learning approaches will be covered particularly in the 19th and 20th centuries to assist the school counselor in relationship to educators in the school community. Classroom management models and theories of inner discipline and consistency management will be discussed so that the school counselor will be able to assist educators and parents in home-school management of youth.

CSL 552 PRACTICUM IN COUNSELING
The practicum course is the initial clinical experience for the CSL student. The student begins to see her- or himself as a counselor-in-training in an actual counseling setting and will develop and continue to work on mastery of counseling skills in a clinical setting. The practicum requires a minimum of 100 clock hours during the quarter.

CSL 553 INTERNSHIP IN COUNSELING I
After the completion of fifteen courses, and consultation with one's advisor, the student-intern is assigned to an early childhood setting including schools, agencies, centers for young children. The student-intern functions under the joint supervision of a professionally qualified setting supervisor and a University clinical experience director for 150-300 clock hours of internship experience. A structured contract will include structured experiences expected of the student from both the setting and the University, signed by all parties, and used as an evaluative tool for the internship. During the internship the student-intern will complete a
thesis/research project as part of the requirement for the Master of Arts degree. The thesis/research project is approved jointly by the internship supervisor and clinical experiences director. Ongoing reflective seminars will be part of the internship experience related to early childhood topics and counseling skills and processes. (Prerequisite: CSL 552).

**CSL 554 INTERNSHIP IN COUNSELING II**
This course is a continuation of Internship I. The student-intern continues with 150-300 clock hours experience under supervision of the setting supervisor and University clinical experience director using a structured contract. The thesis/research project using action-oriented research processes is completed and orals are required for the student seeking an M.A. degree. (Prerequisite: CSL 553).

**CSL 556 COUPLES AND FAMILY COUNSELING**
This course focuses on providing theoretical formulations and practical illustrations applicable to the practice of marriage and family counseling. Students engage in role-playing, case study, and observation of counseling techniques. Skills expected in this course include understanding the process of marriage and family counseling and understanding the role of the counselor in the marriage and family setting. Students will learn to develop effective marriage and family strategies, and to conduct complete case analysis. (Prerequisite: CSL 489).

**CSL 558 INDEPENDENT STUDY IN COUNSELING**
PREREQUISITE(S): Permission of instructor, department chair and associate dean.

**CSL 559 THESIS RESEARCH IN COUNSELING**
A student writing a thesis registers for this non-credit course. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. PREREQUISITE(S): SCG 410 and approved thesis proposal.

**CSL 600 REGISTERED STUDENT IN GOOD STANDING**
(0 credit) Registration in this course is open to students who are not registered for any other courses but need to complete requirements/assignments for previously taken courses. It provides access to University facilities. Permission of advisor required. $50 per quarter.

**CSL 625 CANDIDACY CULMINATING PROJECT (STUDENT IN GOOD STANDING)**
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing culminating projects for their program of study, including theses, papers, and final portfolios. It provides access to university facilities. Permission of advisor required. Registration limited to three terms. $50 per quarter.
Digital Cinema

Graduate Course Descriptions - Current

Subjects beginning with the letter D are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

Digital Cinema
Design
Distributed Systems

DC 401 WRITING THE SHORT MOTION PICTURE
The essential elements and conventions for writing the short film including, character, plot structure, subplots, surprise, inevitability, and resolution. Students will complete a screenplay for a 30-minute film.

DC 402 WRITING THE FEATURE I
In this course, students study and analyze produced motion picture scripts. This course emphasizes the use of traditional storytelling, classical mythology and how these devices apply to contemporary screenplays. Students will move from concept/treatment to a completed first act of a feature length screenplay of their own. This script will be completed, revised, and polished in DC 403 and DC 404. PREREQUISITE(S): DC 201

DC 403 WRITING THE FEATURE II
This course focuses on the writing of the second and third acts of feature length screenplays. Students finish and begin revising the first draft of the script started in DC 402. Emphasis is placed on proper character development, effective use of conflict, and adherence to the three act structure. PREREQUISITE(S): DC 402

DC 404 WRITING THE FEATURE FILM III
This class focuses on practical ways to approach the rewriting process for feature film screenplays. Through group workshops and assignments, students isolate issues with plot, character development, dialogue and pacing in their script and work on addressing them in a full draft rewrite. Student must possess a complete feature length script in order to enroll in the course. PREREQUISITE(S): DC 403

DC 405 TOPICS IN SCREENWRITING
Advanced study in screenwriting focusing on a specific genre each quarter such as: Science Fiction, Film Noir, Comedy, Action-Adventure, Nonfiction, etc. May be repeated for credit. PREREQUISITE(S): DC 201

DC 406 WRITING THE SITCOM
In this course, students study, analyze and produce original half hour situational comedy teleplays. This course will feature a specific focus on story-telling styles and techniques of successful sitcom predecessors, various formats of sitcom teleplays, a brief overview of the "business of television," the different expectations of "cable" and "network" sitcoms, the definition and significance of "show bibles," the importance and process of crafting a speculative teleplay of an existing show and methods for pushing original projects out into the world. PREREQUISITE(S): DC 201

DC 407 WRITING THE EPISODIC DRAMA
In this course, students study, analyze, and produce original hour-long dramatic teleplays. This course features a specific focus on story-telling styles and techniques of successful dramatic predecessors, various formats of hour-long drama teleplays, a brief overview of the "business of television," the different expectations of "cable" and "network" dramas, the definition and significance of "show bibles," the importance and process of crafting a speculative teleplay of an existing show and methods for pushing original projects out into the world. PREREQUISITE(S): DC 201
DC 408 WRITING ON ASSIGNMENT
Modeled after professional writing assignments, this advanced course challenges students to write a feature length screenplay in ten weeks. Lectures and strict weekly page submission deadlines provide a practical framework on how to write quickly without sacrificing quality. Constructive analysis will be used in discussing produced scripts, weekly assignments and group workshops to reveal the writer's unique voice and perspective. It is imperative students possess a viable concept and outline before enrolling. PREREQUISITE(S): DC 403

DC 409 FEATURE FILM DEVELOPMENT
This course offers a practical approach to the screenwriter's role in the development of a feature film. Emphasis will be placed on obtaining a greater understanding of narrative conventions, script analysis and the film market. From agents to studio executives, we will examine the varying points of view that comprise the development process. Constructive analysis will be used to break down feature length produced screenplays and student work. The assignments and classroom discussions are designed to expose the inner working of Hollywood and provide a framework of what it takes to succeed in the entertainment industry. PREREQUISITE(S): DC 201

DC 410 DIGITAL CINEMA PRODUCTION II
This course expands on topics covered in DC 210 Production I. Students will refine their skills in the areas of line-producing, pre-production, cinematography, lighting, sound recording, post production workflow. PREREQUISITES: DC 210, DC 220, DC 275

DC 411 MUSIC VIDEO PRODUCTION
In this course, we will analyze ways in which artists combine visual imagery with music as with MTV-style music videos. The music business and how it relates/effects music videos. Each student will develop his or her own music video project from script to final edit with a local band of their choice, through their own scheduling process. PREREQUISITE(S): DC 210, DC 220

DC 412 MUSIC FOR FILM AND VIDEO
Students are introduced to elements of music and ways in which these elements may be used to create a musical style that enhances the visual statement. Course emphasizes understanding the function of the score and how it relates to texture, color, and drama in music. Students explore their creativity using the tools available, work on projects of increasing complexity, and complete a score of their own film or video as a final project. Listening skills, music vocabulary, and business and legal aspects of the profession are also studied. PREREQUISITE(S): DC 215

DC 413 PRODUCTION SOUND
This workshop based course offers production recording and mixing techniques. Subjects include microphone selection, basic acoustics, boom techniques, dual system recording practices, and mixing. Several projects will be completed throughout the quarter. PREREQUISITE(S): DC 215

DC 415 SOUND DESIGN
This course expands on topics covered in DC 215. Emphasis will be on mixing and editing techniques for music and sound effects. Coursework also includes the recording of natural sounds and special effects to reinforce images and the story. The course is intended for advanced students who wish to develop their skills and gain more experience in preparing and mixing sound tracks for traditional as well as interactive narratives. PREREQUISITE(S): DC 215

DC 417 ADVANCE SOUND MIXING FOR CINEMA
This workshop based course offers advanced mixing techniques for Stereo and Surround Sound. Subjects include mixing philosophies, techniques, advanced digital signal processing, and monitoring. A history of Surround Sound and contemporary surround techniques will be covered. Several projects will be completed throughout the quarter. PREREQUISITE(S): DC 315

DC 418 ADVANCED DIALOGUE RECORDING AND EDITING
This workshop based course offers dialogue recording and editing techniques. Subjects include voice processing, basic acoustics, room tone matching, proximity processing, frequency analysis and dialogue mixing. Several projects will be completed throughout the quarter. PREREQUISITE(S): DC 315

DC 419 ADVANCED SOUND EFFECTS RECORDING AND EDITING
This workshop based course offers sound effects recording and editing techniques. Subjects include hard effects, backgrounds, room tone, Foley, basic acoustics, sound processing, layering and mixing. Several projects will be completed throughout the quarter.

PREREQUISITE(S): DC 315

DC 420 EDITING II
This course expands on topics covered in DC 220. Emphasis is on developing the student's understanding of the art of cinematic storytelling and montage. Work on more advanced projects is integrated into the class as a means of mastering advanced editing tools and techniques. PREREQUISITE(S): DC 220

DC 421 PRODUCTION DESIGN
Analysis of production design and art direction in motion pictures.

DC 422 EDITING STYLES AND TECHNIQUES
This course is designed for editors looking for innovative ways to tell stories, by exploring how editing techniques have been pushed by artists working in the margins. Cutting edge editing techniques are a co-opting of historical and experimental styles, repackaged and used in a narrative context. A series of practical exercises and a freeform final project using found footage allow editors to explore the array of editing techniques adopted from experimental work while discovering their personal style as editors and storytellers. Editors will consider how form affects content and will reinvent techniques in ways to surprise modern audiences. PREREQUISITE(S): DC 220

DC 423 PRE-PRODUCTION FOR CINEMA
This course will cover the pre-production phase of short and feature-length filmmaking, including fundraising, breaking down scripts, scheduling, budgeting and pre-visualizing. Professional scheduling, budgeting and pre-visualization software will be utilized. Additionally, the rules of the creative producer, line producer and assistant director will be examined. Prerequisite(s): DC 210

DC 425 COLOR CORRECTION
Students acquire a working knowledge of the aesthetics and technical aspects of the post-production phase of color correction. Content addresses theory and application of color correction, image control, and manipulation techniques. Principles of color theory and the tools available to filmmakers engaged in the processes of electronic media and image manipulation are explored through lecture, interactive computer exercises, and hands-on experience with professional color correction software. PREREQUISITE(S): DC 420

DC 426 ADVANCED COLOR CORRECTION
This class expands on topics covered in DC 425. Students will refine their skills in the areas of Primary, Secondary and Color FX room advanced grading techniques used by professional colorists. This class will explore more in detail colorist strategies, grading workflows, aesthetics and technical aspects of color correction for the digital cinema. Students will explore color correcting trends that are popular in feature films and national television commercials. Through a series of three short projects and a final project, students will practice using the techniques they study in class. PREREQUISITE(S): DC 425

DC 430 VISUAL EFFECTS
Exploration of the expanding field of visual effects. Students explore contemporary concepts and approaches to production in the current stage of film and video effects work. Digital and traditional methodologies will be covered, with a concentration on digital exercises illustrating modern techniques.

DC 431 CINEMA MOVEMENTS AND MANIFESTOS
A study of film movements or periods that have articulated their own theoretical origins, and then implemented or investigated these theories through cinema praxis. Movements as diverse as Soviet montage, neo-realist, French New Wave, feminist film, Dogme 95 and punk cinema will be explored. In the same mode of these historical movements, students will make a film or animation rooted in one of these theoretical frameworks.

DC 433 CINEMATIC SPACE
This seminar mixes theory and practice to expose students to an in-depth exploration of different techniques and possibilities concerning cinematic space. Beginning with an introduction to the fundamental differences between montage and mise-en-scene, the course will teach students the art and craft of designing, blocking and executing plan sequences, starting with static camera shots and ending in complex 3D camera moves. PREREQUISITE(S), DC 460

DC 440 EDITING III
This course provides an advanced workshop for students to edit their own narrative or documentary projects.
This course provides an advanced workshop for students to edit their own narrative or documentary projects. Students will be expected to bring in their own footage, and will take their projects from logging, through rough cut, to picture lock. Post-production workflow, and basic sound design and color correction for picture editors will also be emphasized. **PREREQUISITE(S):** DC 320

**DC 441 STORYTELLING FOR VIDEO GAMES**
This course examines the writer's role in the game development process and how storytelling conventions like character, conflict, and plot are utilized to enhance gameplay. Emphasis will be placed on building an understanding of game narratives, interactivity, and working with design teams. Students will develop a design document highlighting characters, locations, dialogue scripting, and overall gameplay for an original video game idea.

**DC 449 ACTING FOR FILMMAKERS**
This course is designed to provide students who plan to work with actors in any aspect of cinema or interactive media, with a foundation in the actor's craft. This will be a hands-on, practical class in which all students will be required to participate fully in the exercises and scene work. Topics to be covered include: relaxation, concentration, trust, listening, sensory work, physical actions, improvisation, imagination, needs, circumstances, objectives, obstacles, scene analysis and scene work. The course will culminate in a staged scene to be presented in class. **PREREQUISITE(S):** None

**DC 450 DIRECTING ACTORS FOR THE CAMERA**
This course will consist of scene studies emphasizing the actor/director relationship, the relationship between the camera and performer, casting, blocking for the camera, and scene analysis. Each week students will shoot and edit short dialogue scenes. The scenes will be analyzed for the quality of the performance and effectiveness of direction. Students will work toward the creation of a final, polished short film. Digital Cinema students are expected to enter the class with a shoot-able five to ten minute script they can use as their final project. **PREREQUISITE(S):** None

**DC 451 MODES OF DIGITAL DISTRIBUTION**
This course deals with the process of creating video for multiple modes of distribution, i.e.: DVD authoring, compression and streaming. It also covers the various outlets available for content distribution. Students will learn content creation, authoring, capture, encoding and serving with an emphasis on video compression and encoding. Students will also come to have a working understanding of codecs, DVD chapters, Easter eggs, region coding, and be able to create a working web page with embedded streaming content. **PREREQUISITE(S):** DC 460, DC 461, DC 462

**DC 455 WORKING WITH ACTORS**
This course is an introduction and examination of the collaborative process between the actor and director. The class will examine the fundamentals of the craft of acting, provide students with a basic understanding of acting terminology, script analysis, the creative process, and explore effective ways to communicate with the actor. Methods of study include lecture, discussion, assignments, and in-class acting exercises. **PREREQUISITE(S):** None

**DC 460 DIGITAL CINEMA PROSEMINAR**
Introduces the field of Digital Cinema and the faculty who teach in it. Each week a different DC faculty member will present his or her research and relate that topic to the wider field of Cinema. Encourages students to clarify their course of study and build alliances with faculty and students with similar interests.

**DC 461 PRODUCTION WORKSHOP**
Students work in teams to produce a completed project every two weeks. Each team will be assigned a specific genre or medium of cinema/media production. Students will be exposed to every aspect of media production from live action shooting to visual effects. Students will also learn how to work well in a team environment and be forced to adhere to deadlines, time constraints and medium limitations.

**DC 462 DIRECTING WORKSHOP**
Emphasis on directing actors, with production skills such as camera, lighting, editing and sound used in service of the performance. Topics covered include objectives, beats, script analysis, casting, rehearsal, and actor/director relationships. Students will cast working actors or actors from the Theatre School, in short films from adapted screenplays, and produce sample reel material for both actors and directors. **PREREQUISITE(S):** DC 461

**DC 470 ADVANCED TOPICS IN CINEMA**
This class will be an in-depth examination of a filmmaker, film genre, or film movement that has had a significant influence on the development of cinematic storytelling and expression. Through lectures, screenings, readings, discussions, and critical writing assignments, students will analyze the distinctive traits of the selected topic within the broader context of cinema history and culture. Specific topics will be selected
by the instructor and will vary with each quarter. PREREQUISITE(S): None

**DC 471 DOCUMENTARY PRODUCTION**
This course covers all phases of documentary filmmaking including interview techniques, storytelling with interviews and B roll, and documentary cinematography. For the final project each student will produce a completed documentary film. PREREQUISITE(S): DC 210, DC 220

**DC 472 TOPICS IN TELEVISION PRODUCTION**
This course is a hands-on experience in television production of news and public affairs programs. Students learn through theory and practice the role TV Producers and their teams play in creating various TV programs.

**DC 473 ADVANCED DOCUMENTARY PRODUCTION**
This advanced course in documentary production is designed for students who already have experience with making documentaries. In this course, each student will direct and produce a substantial short subject documentary and serve as a crew member on at least one other student project. Topics covered will include choice of subject matter, filmmaker's POV, dramatic structure, proposal writing, and a variety of technical, aesthetic, practical, and ethical concerns related to producing professional documentary projects.
PREREQUISITE(S): DC 371/471

**DC 475 ADVANCED CINEMATOGRAPHY**
This course explores the emerging HDTV/HDV technologies along with advanced production techniques of camera movement, lighting, rigging, camera filtration and shot composition. Students will be given hands on training in the use of the latest High Definition Video cameras and then create a short script which they will shoot and edit in High Definition. PREREQUISITE(S): DC 275

**DC 476 VISUAL DESIGN**
Definition, analysis, and structure of visual components that cinema employs to support and emphasize the story. Theory of visual design will be applied through student still photos, as well as an original, visually-oriented, narrative or documentary short film, animation or game design. PREREQUISITE(S): DC 460 or Permission of Instructor

**DC 477 ADVANCED LIGHTING AND CAMERA MOTION**
This class centers on lighting/camera movement in storytelling and explores advanced lighting/cinematography techniques for both studio and field. Students will operate light meters, determine set and lighting needs, set lights, operate a jib and/or dollies, block scenes, and become familiar with topics including filmspace, continuity, lenses, color, filters, and camera control. Over the course of the quarter, students will work together to produce a number of short stories in both field and studio environments. Besides the aesthetic component of the class, students will also learn set electrical breakdown, lighting control tools, basic grip equipment and procedures to use them safely and effectively.
PREREQUISITE(S): DC275

**DC 478 SPECIAL EFFECTS AND COMPOSITING**
Special effects for motion pictures including stop motion, motion control, green screen, and compositing.

**DC 479 PRE-PRODUCTION WORKSHOP**
This two-credit course will provide valuable pre-production work on targeted productions, such as Project Bluelight (faculty or student-led), large-scale class projects, faculty creative projects, or independent and/or professional productions. Professional scheduling, budgeting and pre-visualization software may be utilized. PREREQUISITE(S): By instructor permission only.

**DC 480 PROJECT BLUELIGHT**
Production of a feature-length digital motion picture written by students or faculty within the Digital Cinema program. Students will work as crew under supervision of faculty members heading each of the various production areas. Goal is to produce a completed digital motion picture suitable for festivals or distribution. In addition to production work, graduate students are required will write a 7-10 page paper which analyzes the experience and how it relates to their MS/MFA course of study.

**DC 481 DISTRIBUTION AND EXHIBITION**
Conventional and emerging modes of motion picture distribution with special emphasis on digital streaming and exhibition.
DC 482 POST-PRODUCTION WORKSHOP
This two-credit course will provide an opportunity for students to apply their post-production skills and work collaboratively on projects happening during the academic year. These projects can be Project Bluelight (faculty or student-led), large-scale class projects, faculty creative projects, or independent and/or professional productions. Students will work under faculty supervision and gain valuable experience collaborating as part of post-production team. Professional post-production applications, equipment, and facilities will be utilized. PREREQUISITE(S): By instructor permission only.

DC 485 PRODUCING
This course focuses on the role of the contemporary producer from idea origination and script development to financing and physical production and, finally, to distribution and exhibition. Students master the concepts of revenue streams, constructing deals (gross and net point participation), copyright, marketing, and box office analysis. Production management and line producing are also covered. From script breakdown and production preparation to post-production supervision and delivery, the physical production process is defined.

DC 487 HOLLYWOOD HISTORY
Students will gain a deep understanding of the history and foundation of the film industry through behind-the-scenes access to working studios, historical readings and discussions of the material, and the unique opportunity to have access to the Warner Brothers Archives, the largest single studio collection in the world, housing all of the WB materials from 1918 (the release of the studio's first feature film) through 1968 (when the studio was sold to Seven Arts.

Note: Students must be participating in the DePaul LA program to be eligible to enroll.

DC 488 FILMMAKERS SEMINAR
Each week, students will be given the rare opportunity to speak directly with some of the industry's biggest players. Hollywood directors, writers, cinematographers, editors, producers, agents, managers, entertainment lawyers, development executives and others will come to class, discuss their journeys, offer advice, and answer questions. The class will culminate with an industry mixer, where these professionals, along with dozens more, will join the students for a relaxed evening of networking. This is an invaluable opportunity for students to begin to form meaningful relationships that can help them as they transition from student to filmmaker.

Note: Students must be participating in the DePaul LA program to be eligible to enroll.

DC 489 THE BIG PICTURE: THE ENTERTAINMENT INDUSTRY
This course introduces students to vital information about the industry in which they will work. Students will learn industrial analysis of production, distribution, and exhibition sectors, including mastering concepts of revenue streams, constructing deals (gross points and net point participation), copyright, marketing, and box office analysis. Students will also study the structure of organizations and groups crucial to the entertainment industry: studios, talent, agents, exhibition (markets: theatrical, virtual and ancillary), professional organizations including guilds like ASC, and media licensing firms like ASCAP and BMI. There will be an emphasis on global industry.

DC 490 DIRECTING
This is a course in directing motion pictures. Topics include casting, rehearsals, the basic relationship between the director, actor, and script, script breakdown, camera placement, and shooting for continuity editing. Each student will produce and direct a scene study and a short narrative film. PREREQUISITE(S): DC 220, DC 310

DC 493 FILM FESTIVALS WORKSHOP
An introduction to film festivals and their role in independent cinema and the Hollywood studio system. The global proliferation of film festivals will be examined from the perspectives of both film studies scholars and film making professionals. Students will research the history of major festivals, develop festival strategies for student or independent films, and attend film festival screenings, panels, and/or networking events. PREREQUISITE(S): None

DC 495 DIRECTING THE SHORT MOTION PICTURE
Blocking for the camera, the action axis, 180-degree principle, moving the camera, directing actors, working with crew, and delegating responsibilities.

DC 499 INTERNSHIP
In consultation with DC faculty, students design a field experience under the direction of a project director in the field. The field experience may be derived from issues raised in courses, from thesis research, or from personal research interests.
**DC 501 STORYTELLING FOR THE SCREENWRITER**
Students begin their screenwriting journey with a strong foundation in the basic building blocks of solid, engaging storytelling. Students will mine their own lives in order to create memorable stories, characters, and settings. Additionally, students will learn basic screenwriting skills such as character development, constructing atmosphere, and the fundamental components of a scene. PREREQUISITE(S): None

**DC 502 STORY STRUCTURES**
Advanced critical analysis of multiple film structures beginning with a solid understanding of classically structured linear narratives told in three acts and ultimately exploring non-traditional feature film structures including but not limited to: ensemble, multiple protagonist, non-linear and episodic. Films will range from classic Hollywood films to contemporary independent films. Students will learn various theorists’ approaches to terminology (which may include Snyder, Field, Campbell, and Howard) in order to develop a language with which to discuss scripts and finished films, both other people’s work as well as in developing their own. PREREQUISITE(S): None

**DC 503 FEATURE FILM DEVELOPMENT**
This advanced course examines the development process that enables the screenplay's journey from draft to screen. By crafting professional coverage and development notes, the class will deconstruct feature length scripts and student work in an effort to forge them into cinematically viable properties. The assignments and class discussions are designed to expose the inner workings of Hollywood and provide a framework for what it takes to succeed in the entertainment industry. Enrollment is only open to MFA students. PREREQUISITE(S): None

**DC 504 REWRITING YOUR FEATURE OR TV SCRIPT**
This class will focus on rewriting one completed feature film script, or rewriting one television pilot plus an additional future episode. Students will walk away from this class with a polished writing sample ready to be shown to agents, managers, and producers as they enter the professional screenwriting world. PREREQUISITE(S): DC 402, DC 403, DC 408

**DC 505 INDUSTRY SEMINAR**
Students will have the opportunity to hear weekly speakers representing the wide spectrum of roles in the business of making movies. Speakers may include agents, managers, entertainment lawyers, producers, writers, directors, and development executives. Students will have the opportunity to hear the speakers' stories, as well as to ask questions. Additionally, students will prepare, practice, and perfect their own pitches in preparation for "Pitch Fest." PREREQUISITE(S): None

**DC 525 DIGITAL MEDIA PRACTICUM**
Digital Media Practicum
This practicum provides all students with a foundation in digital media practices. Students work with still images, moving images and sound using integrated digital media applications. Students learn how to use different media forms to express creativity and ideas across interactive media settings. The course focuses on the technical, social and cultural competencies required to traverse media in online convergence environments.

**DC 561 THESIS I**
In this class, students complete a feature length outline and first act of their thesis script. Extensive feedback from in-class workshops and thesis advisors provide a viable framework for the completion of the project, which is completed in Thesis II and III. PREREQUISITE(S): Instructor permission

**DC 562 THESIS II**
In this class, students complete the second and third acts of their thesis script. Extensive feedback from in-class workshops and thesis advisors provide a viable framework for the completion of the project, which is completed in Thesis III. PREREQUISITE(S): DC 561

**DC 563 THESIS III**
In this class, students complete a polish of their thesis script. Extensive feedback from in-class workshops and thesis advisors provide a viable framework for the completion of the project. PREREQUISITE(S): DC 562

**DC 565 THESIS DEVELOPMENT**
In this class, students work intensively on a thesis project proposal based on responses from the instructor, their classmates, and from graduate faculty readers. For narrative work, the goal is to generate a well-developed dramatic treatment and then a 1st draft script of the thesis project (20mins) and secure 2 thesis advisers from the DC faculty with producing experience.
**DC 566 THESIS PRODUCTION**
The production of the finalized thesis project proposal. Students will have 2 thesis advisors from the DC faculty with significant production experience.

**DC 567 THESIS POST-PRODUCTION**
The post-production of the finalized thesis project proposal. Students will have 2 thesis advisors from the DC faculty with significant post-production experience.

**DC 599 INDEPENDENT STUDY**
Independent study form required. PREREQUISITE(S): Consent of instructor.

**DC 701 THESIS CONTINUATION**
Non-credit. Students admitted to MFA program who have completed all the required coursework and who are regularly using the facilities of the University for thesis production and/or post-production are required to be registered each quarter of the academic year until the thesis and defense have been completed. Prerequisite(s): Completion of DC 565, DC 566, and DC 567

**Design**

**DES 408 SOUND DESIGN III**
This course incorporates the full design of a show using the students' own compositions. The students will complete an entire play start to finish without using any found music.

**DES 641 THEATRICAL COLLABORATION**
Theatrical Collaboration (3 quarter hours) An investigation, through research and discussion, of the conceptual problems of physically mounting specific, assigned scripts from the classic and modern theatre, covering a broad stylistic range. Students will submit proposals for designs and justify their ideas through literary and pictorial research. The directorial and collaborative problems of arriving at a production concept, up to, but not including fully-realized design documentation, is emphasized through a series of projects. PREREQUISITE(S): Open to 3rd and 4th year BFA Lighting, Scenery, Costume Design and Dramaturgy students, in addition to MFA students.

**DES 642 THEATRICAL COLLABORATION**
Theatrical Collaboration (3 quarter hours) An investigation, through research and discussion, of the conceptual problems of physically mounting specific, assigned scripts from the classic and modern theatre, covering a broad stylistic range. Students will submit proposals for designs and justify their ideas through literary and pictorial research. The directorial and collaborative problems of arriving at a production concept, up to, but not including fully-realized design documentation, is emphasized through a series of projects. PREREQUISITE(S): Open to 3rd and 4th year BFA Lighting, Scenery, Costume Design and Dramaturgy students, in addition to MFA students.

**Distributed Systems**

**DS 425 DISTRIBUTED SYSTEMS FUNDAMENTALS**
This course covers a variety of fundamental topics in distributed systems, including communication protocols, sockets, operating system support, threads, remote invocation, security in a distributed environment, time in a distributed environment, naming services, coordination and agreement and transactions. This course is intended as a service course. Students with the appropriate technical prerequisites should select DS420. PREREQUISITE(S): CSC 212 or CSC 224.
**DS 432 CLUSTER COMPUTING**

**DS 520 SYSTEM DESIGN AND IMPLEMENTATION WITH DISTRIBUTED OBJECT FRAMEWORKS**
This course will look in depth at the capabilities provided by Distributed Object Frameworks (such as CORBA) and how these capabilities make the design and implementation of distributed systems more efficient. Students will gain familiarity with the concepts involved (including distributed object references, naming services, error handling, and interoperability) by designing and implementing a system of distributed objects within such a framework. PREREQUISITE(S): DS421 or SE550.

**DS 591 DISTRIBUTED ALGORITHMS**
Design and analysis of algorithms for solving problems arising in distributed computing, such as resource allocation, distributed agreement, and management of shared data. Distributed computation models and their relationships: synchronous vs. asynchronous vs. partially synchronous, shared memory vs. network models. Algorithms for leader election, graph problems, mutual exclusion, and synchronization in reliable and unreliable networks will be covered. PREREQUISITE(S): CSC 491.

**DS 594 DISTRIBUTED SYSTEMS PROJECT**
Design, justification, implementation, and performance analysis of a distributed system. Team-based projects that use a variety of tools are encouraged. PREREQUISITE(S): DS 520, SE 450.

**DS 599 TOPICS IN DISTRIBUTED SYSTEMS**
This is an independent study course. (PREREQUISITE(S): Consent of instructor. Independent Study form required).
Subjects beginning with the letter E are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 25, 2011. For the most up-to-date descriptions, please visit Campus Connection.

Economics

E-Commerce Technology
Educating Adults
Education
English
Environmental Science

Economics

**ECO 435 REAL ANALYSIS I**
This course covers real number system, completeness, supremum, and infimum, sequences and their limits, lim inf, lim sup, limits of functions, continuity. **PREQUISITE(S): MAT 149 or 152 or 162 or 172 or equivalent AND MAT 141 or 215 or equivalent**

**ECO 436 REAL ANALYSIS II**
This course follows ECO 435 and covers properties of continuous functions, uniform continuity, sequences of functions, differentiation, integration. **PREREQUISITE(S): ECO 435 or MAT 335 or equivalent**

**ECO 500 MONEY AND FINANCIAL SYSTEMS (FORMERLY GSB 513)**
This course examines both the role of money in the economy from a functional and macroeconomic perspective as well as the structure and function of the most important financial institutions and financial markets. Topics covered include the role of the Federal Reserve as monetary policymaker, interest rate and exchange rate determination, the relationship between money and economic activity, and the organization and importance of money markets, capital markets, markets for derivative securities, commercial banks and other intermediaries in a well-functioning financial system.

**ECO 501 CONCEPTS OF MICRO AND MACRO ECONOMICS**
This course investigates the basic elements of the economic way of thinking. Students will begin with models of the consumer and the producer, looking specifically at demand and supply, elasticity, measures of efficiency, production and cost theory, and the determination of price and quantity under different market structures. The remainder of the course is devoted to analyzing the economy as a whole, focusing on the determination of Gross Domestic Product, the role of money and monetary policy, labor markets and unemployment, price stability, and short-run fluctuations in output.

**ECO 505 ADVANCED MICROECONOMICS**
An advanced course in microeconomic theory. This course will present a systematic and rigorous analysis of price determination and the allocation of specific resources to particular uses. **PREREQUISITE(S): ECO 555 or equivalent or admission to the MS-EPA program.**

**ECO 506 ADVANCED MACROECONOMICS**
An advanced course in macroeconomic theory that examines the determination of income, employment, and prices, and their interrelations. Covers traditional Keynesian as well as alternative models of output, consumption, investment, money demand, inflation and unemployment. The dynamic character of income determination is emphasized, along with effects of government policy, economic institutions, and social goals. **PREREQUISITE(S): ECO 509 or equivalent or admission to the MS-EPA program**
ECO 507 RESEARCH METHODS FOR POLICY ANALYSIS I
This course focuses on the tools and techniques used to statistically analyze economic data. We will focus on both theoretical understanding (why do we use such tools and how do they work) and applied understanding (the ability to carry on a research project using these tools). Students will learn Stata, which is the most widely used statistical analysis programming language in Economics. Students will learn the practical skills of how to choose the right tools for the analysis, how to prepare and inspect the data, and how to run an analysis that is robust, can be replicated, and can be understood and used by others - all extremely valuable qualities in real life work. PREREQUISITE(S): ECO 505 or ECO 555

ECO 508 RESEARCH METHODS FOR POLICY ANALYSIS II
This course focuses on advanced techniques used to statistically analyze economic data. We will focus on both theoretical understanding (why do we use such tools and how do they work) and applied understanding (the ability to carry on a research project using these tools). Topics to be covered include the analysis of time series and panel data, discrete choice models, simultaneous equations, forecasting and experimental methods. Students will learn statistical Stata commands that apply to the advanced topics covered. PREREQUISITE(S): ECO 505 or ECO 555

ECO 509 BUSINESS CONDITIONS ANALYSIS
This course teaches students how to use available economic data to assess business conditions. This is done by: (1) evaluating the sources and usefulness of data periodically released by government and private sources and (2) developing a macroeconomic framework that the student can use to analyze business conditions. Completion of this course will allow students to understand economic news and relate it to their business or job.

ECO 510 ECONOMETRIC METHODS FOR BUSINESS ANALYSIS
This course is designed to provide the student with more advanced methods in quantitative analysis. Topics covered include hypothesis testing, probability, correlation analysis and multiple regression. This course will be offered every Winter quarter. PREREQUISITE(S): ECO 555 or equivalent

ECO 511 BUSINESS AND ECONOMIC FORECASTING
This course surveys a number of quantitative techniques commonly used to forecast business and economic variables. Emphasis will be on techniques, their relative strengths and weaknesses and real-world economic applications. Topics include smoothing techniques, regression and econometric analysis and Box-Jenkins time series. PREREQUISITE(S): ECO 509 or equivalent and ECO 506 or equivalent.

ECO 512 APPLIED TIME SERIES FORECASTING (CROSS-LISTED AS MATH 512/MATH 358)
Theory and computer implementation of the Box-Jenkins Techniques with emphasis on forecasting business and industrial activity. Crosslisted as MAT 512. PREREQUISITE(S): ECO 509 or equivalent and ECO 510 or equivalent.

ECO 514 INDUSTRIAL ORGANIZATION
This course is concerned with how the market system directs production decisions under varying deviations from the competitive environment. The links between market structure, conduct and performance are examined. Topics include determinants of market structure, various theories of imperfect competition, price discrimination, predatory pricing, and antitrust policy. PREREQUISITE(S): ECO 555 or ECO 505

ECO 515 MICROECONOMICS OF MARKET ORGANIZATION
Imperfectly competitive markets are more common than perfectly competitive markets. This course is about the effects of imperfectly competitive market structure on the organization, pricing, product choice, and entry of firms. We will study the acquisition and use of market power, strategic competition across firms, private sector sources of market failure, and the role of government competition policy. Factor markets will also be discussed. PREREQUISITE(S): ECO 505 or ECO 555

ECO 516 ECONOMICS OF THE PUBLIC SECTOR I
Application of microeconomic analysis to the role of government in society. The theoretical foundation for the design of an efficient and equitable tax and expenditure program is presented and the impact of such a program on the economy is explored through general equilibrium analysis. Students must have a solid foundation in basic calculus. PREREQUISITE(S): ECO 505 or ECO 555

ECO 517 THE PUBLIC POLICY, BUSINESS, AND ETHICAL ENVIRONMENT OF GOVERNMENT
Businesses are becoming more involved in deal making both in the public and private sector. Individuals now sit on the boards of public and private companies and are being asked to provide business analysis and networking skills. Moreover, many firms have established PACS and have set-up governmental practice sections. These firms are also becoming more dependent on the government for business opportunities and
are more involved in fundraising on behalf of public officials in order to gain access and to influence the regulatory and legislative process. In fact, many business people have raised money for both political parties with the hope of leveraging their contributions for future work or political appointments. PREREQUISITE(S): ECO 555

**ECO 518 LABOR ECONOMICS AND LABOR RELATIONS (CROSS-LISTED AS MGT 518)**
A study of the American labor force: measurement, characteristics and behavior under changing income, employment, and technology. An examination of recent labor market developments provides the basis for a critical analysis and appraisal of contemporary wage theory. Topics include changes in the labor force, unemployment, wage determination, the minimum wage, internal labor markets, productivity, discrimination, unions, and collective bargaining. Cross-listed as MGT 518. PREREQUISITE(S): ECO 555 or ECO 505

**ECO 520 ECONOMICS OF THE PUBLIC SECTOR II**
This course covers public finance and is the second course in a two course sequence on public Economics. Its focus is on the role of government in public expenditure and taxation. It is assumed that previous course work in economics has been satisfactorily completed, and the student has a basic understanding of basic microeconomic theory. PREREQUISITE(S): ECO 516

**ECO 521 POLICY & REGULATION IN FINANCIAL MARKETS**
This course focuses on the economic rationale and consequences of U.S. financial regulation. We will emphasize the implications of regulation for future public policy. We will approach this topic by giving a rationale for financial regulation and then go into regulation associated with particular financial institutions. We concentrate on commercial banks and investment banks, although we will touch on insurance and life assurance companies, stock markets, bond markets, and hedge funds. Because of systemic risk (the main focus of financial regulation) associated with commercial banking, we spend most of the course dealing with banking regulation. PREREQUISITE(S): ECO 505 or ECO 555

**ECO 522 CURRENT POLICY ISSUES**
This course focuses on current policy issues in the United States. Specific topics depend on current legislative issues facing the country and bills being debated in Congress. There will typically be detailed coverage of two main policy issues. The analysis will include an economics analysis as well as extensive reading of political and legal documents. PREREQUISITE(S): ECO 505 or ECO 555

**ECO 525 STRATEGIC DECISION MAKING AND GAME THEORY**
The goal of this course is to introduce students to game-theoretic way of thinking and show its usefulness in understanding various problems arising in business, economics, as well as many other disciplines and everyday life. The tools used in game theory are analytical in nature, and hence the building blocks of the course will necessarily draw on analytics. The instructor's job will be to make these analytics accessible to students without using too much mathematics. Once students grasp these tools, a variety of applications will be presented, discussed, and illustrated using experiments. These applications will be mainly in the fields of business and economics, but will often span to other areas like law, politics, biology, and ethics. In this way, students will get a broad perspective of the multiple applications of game-theoretic reasoning. PREREQUISITE(S): ECO 505 or ECO 555

**ECO 526 BUSINESS STRATEGY**
This class deals with firms' business plans and policies and how they change in response to various incentives and stimuli. We will discuss frameworks used to analyze and formulate business strategies. We will introduce tools and techniques for diagnosing a firm's competitive position, identifying managerial and organizational issues, evaluating plans of action, and anticipating the consequences of alternative decisions.

**ECO 527 BUSINESS REGULATION AND ANTITRUST**
This course examines the rationale for and efficiency of government regulation of business in the United States. Various forms of government regulation are evaluated to determine their effectiveness in promoting market efficiency. We will emphasize the importance of market structure and industrial performance, including the strategic interaction of firms. We will examine the behavior of individual markets in some detail, focusing on cost analysis, the determinants of market demand, investment behavior, market power, and the implications of government regulatory behavior.

**ECO 530 HISTORY OF ECONOMIC THOUGHT**
A study of the evolution of the science of economics. Emphasis is on the important contributions made to the field by the great thinkers, starting with the Physiocrats and extending to the work of contemporary institutional and post-Keynesian economists. PREREQUISITE(S): ECO 555 or ECO 505

**ECO 550 REGIONAL AND URBAN ECONOMICS**
The course investigates the spatial character of an economic system. The first part of the course is concerned
with theories in regional economics, including business and household location theory, urbanization, and regional development. The latter part of the course deals with urban economics, a specialized area concerned with the economic forces behind many urban problems. Topics include the economics of housing, transportation, poverty, crime and urban public finance. PREREQUISITE(S): ECO 555 or ECO 505

ECO 555 ECONOMICS FOR DECISION-MAKING
This course provides students with an opportunity to apply microeconomic principles to managerial decision-making. These principles include those underlying the theories of consumer choice, production and cost as they relate to decisions made by firms and households. Specific topics include consumer demand analysis and estimation; elasticity; production theory; cost structure and estimation; profit maximization; and the effect of market structure on pricing, output and profit. PREREQUISITE(S): GSB 420

ECO 557 INTERNATIONAL TRADE THEORY & POLICY (CROSS-LISTED WITH IB 520)
Modern theories of international trade: classical theory of comparative advantage, factor proportions theory, factor price equalization, application of welfare economics to international trade, including regional economic integration, commercial policy and tariff problems. Cross-listed with IB 520. PREREQUISITE(S): ECO 555 or ECO 505

ECO 558 INTERNATIONAL MACROECONOMICS (CROSS-LISTED AS IB 521)
Analyzes traditional macroeconomic issues in a framework that allows for international trade and capital flows. Cross-listed as IB 521. PREREQUISITE(S): ECO 509 or ECO 506

ECO 560 DEVELOPMENT OF THE AMERICAN ECONOMY
This course describes the economic development of the United States by examining topics such as: colonial settlement patterns, the impact of the railroad, the development of the financial system and the Great Depression. PREREQUISITE(S): ECO 505 or ECO 506 or 509

ECO 561 ECONOMICS OF DEVELOPING COUNTRIES (CROSS-LISTED WITH IB 525)
Introduction to the economist's analytical skills applied to problems of developing and newly industrialized countries. Studies economic theory of development, development policy, and decision-making in the developing world; several case studies are examined. PREREQUISITE(S): ECO 555 or ECO 505

ECO 576 ADVANCED ECONOMETRICS
The fundamental problems in the application of statistical procedures to econometric estimation will be studied: multicollinearity, identification, serial correlation, and nonhomogeneity of error variance. In addition, more sophisticated estimation techniques will be studied, e.g., reduced-form and multiple-stage regression techniques. PREREQUISITE(S): ECO 510 or ECO 507 and ECO 508

ECO 600 THESIS RESEARCH
Thesis Research

ECO 798 SPECIAL TOPICS
Content and format of this course are variable. An in-depth study of current issues in economics. Subject matter will be indicated in class schedule.

ECO 799 INDEPENDENT STUDY
Available to graduate students of demonstrated capability for intensive independent work in economics. PREREQUISITE(S): Written permission.

E-Commerce Technology

ECT 423 INTERNET MULTIMEDIA
ECT 424 ENTERPRISE INFRASTRUCTURE
Introduction to modern infrastructure and the evolving technology environment. Major topics include: computer networks, Internet infrastructure, Web 2.0, Enterprise 2.0, social media and networking, software as a service, content management systems, cloud computing, and portal.

ECT 425 TECHNICAL FUNDAMENTALS OF DISTRIBUTED INFORMATION SYSTEMS
The course is an introduction to distributed information systems, including architecture of distributed information systems, networking, communication protocols, operating system support, remote method invocation, web service, and security in distributed information systems. PREREQUISITE(S): CSC212

ECT 433 SURVEY OF WEB PROGRAMMING TECHNOLOGIES
Survey of server-side scripting technology with emphasis on information search in a Web site. Projects include development of product catalogs and information search system of a Web site. For non-ECT and non-IS major only. PREREQUISITE(S): HCI 430 for HCI majors; Completion of Prerequisite phase for other majors.

ECT 435 SURVEY OF E-COMMERCE STRATEGIES AND TECHNOLOGY
A survey of business models, value propositions, and e-commerce value chains for consumer-oriented, business-to-business, and collaborative e-commerce applications. Marketing, security, digital money, e-business infrastructure, basics of Web site engineering process, e-commerce technology and tools. This is a service course. Students with server-side programming skills should take ECT 455. PREREQUISITE(S): ECT 250 and IS 421.

ECT 436 SOCIAL MARKETING AND SOCIAL NETWORKING APPLICATIONS
Online social media and culture, online social marketing concepts, online social networking applications and their design/development. Student develop dynamic web sites and applications on social networking platforms using server-side programming technology to meet strategic marketing goals. PREREQUISITE(S): None

ECT 441 USABILITY ISSUES FOR ELECTRONIC COMMERCE
(Cross-listed with HCI 441) Design, prototyping and evaluation of e-commerce web sites. Context of usability in the project development life cycle. User/task analysis with emphasis on the first time and the infrequent user. Content organization. User testing with low fidelity prototypes. Issues of perceived privacy and security. Student's projects involve design and/or evaluation of actual electronic commerce sites. PREREQUISITE(S): ECT 455.

ECT 455 E-COMMERCE WEB SITE ENGINEERING
(Formerly ECT 555, cross-listed with HCI 513) An introduction to Web site engineering methods and processes to support e-commerce development. Web site engineering life cycle and user-centered design, including site goals, business models, value propositions, user analysis, information architecture, interface and navigation design, usability guidelines, database, testing, hosting strategies, usage metrics, and collaborative development. Technologies for e-commerce, shopping cart, digital payments, promotion strategies, and security issues. Students will build fully functional Web sites using database and client- and server-side technologies. PREREQUISITE(S): ECT 310 or HCI 430 or proficiency in programming.

ECT 480 INTRANETS AND PORTALS
Intranet development methodology. Data warehousing concept and On-Line analytic processing (OLAP) for information management. Enterprise information portals (EIP). Transforming information into knowledge. Major applications involve: decision support, customer applications and content personalization for intranet. Students will conduct case studies and projects. PREREQUISITE(S): ECT 424

ECT 481 INTERNET SUPPLY CHAIN MANAGEMENT
This course examines system architectures, technologies, approaches, and infrastructure requirements in the context of supply chain systems. The focus is on the design, development and implementation of systems that facilitate the collaboration of an enterprise with its buyers and suppliers. Topics include development of messaging-based collaboration framework with web services. Students will design and implement a collaborative extranet system component in team projects. PREREQUISITE(S): ECT 310

ECT 556 ENTERPRISE ARCHITECTURE AND DESIGN
This is an advanced course on the design and planning of enterprise architecture that enables intra-/multi-enterprise collaboration and interoperability. The emphasis is on the alignment between IT and organizational objectives through the integration of business architectures, data and information architecture, application architecture, technology architecture, interfaces and infrastructure. Topics include: frameworks, tools, and methodologies for enterprise architecture design; data and process modeling, application integration, implementation fundamentals, adaptability to changing organizational needs, and managing costs of implementation. Students will conduct case studies and develop architecture plans. PREREQUISITE(S): ECT
ECT 557 PEER-TO-PEER TECHNOLOGY
Peer-to-Peer (P2P) e-commerce is a paradigm for programming distributed e-commerce systems characterized by an increasing decentralization and autonomy of components. This course reviews the technical and business issues regarding P2P e-commerce. Topics include: P2P architecture and interoperability; P2P systems in use today; P2P content management issues; P2P collaboration applications: chat, white boards, file sharing, games, and synchronization; and P2P security and monitoring. Also addressed are: P2P application and business models for business to business and to consumer e-commerce; supply chain and collaborative planning, forecasting and replenishment; intellectual property concerns, management issues, and programming P2P applications. PREREQUISITE(S): ECT 425, ECT 480, and ECT 481.

ECT 565 MOBILE ENTERPRISE
Mobile enterprise information systems are becoming increasingly complex and consist of existing systems with enabling middleware to achieve end-to-end enterprise mobile solutions. Mobile infrastructure performs content adaptation, data synchronization, bridging corporate and mobile messaging systems and support mobile information portals. The course will discuss web services oriented component architecture and system integration with Adaptive Application Architecture (AAA) with Wireless application gateway (WAG) and Multi-channel Access Gateways (MAG) supporting mobile and wireless access for heterogeneous devices. Such concepts as content distribution, connectivity and security, scalability and load balancing, device management will be discussed. Additional topics include Location-aware applications supporting mobile knowledge workers, business process for value contribution, and investment decisions on mobile technologies. Students will become familiar with mobile enterprise tool suites, mobile messaging delivery platforms, wireless Web portals. Students will be implementing mobile enterprise solution components. PREREQUISITE(S): Completed foundation phase.

ECT 582 SECURE ELECTRONIC COMMERCE
This course studies security requirements, threat modeling, and appropriate safeguards for e-commerce systems. Major topics include web application security, web service security, and web server security. PREREQUISITE(S): ECT 424

ECT 583 ADVANCED SCRIPTING TECHNOLOGIES
This course focuses on applying advanced scripting technologies in the design and development of large Web applications. Major topics include tiered application design, transacted Web applications, components, and Web services. PREREQUISITE(S): Proficiency in programming.

ECT 584 WEB DATA MINING FOR BUSINESS INTELLIGENCE
An in-depth study of the knowledge discovery process and its applications in Web mining, Web analytics and business intelligence. The course provides coverage of various aspects of data collection and preprocessing, as well as basic data mining techniques for segmentation, classification, predictive modeling, association analysis, and sequential pattern discovery. The primary focus of the course is the application of these techniques to Web analytics, user behavior modeling, e-metrics for business intelligence, Web personalization and recommender systems. Also addressed are privacy and ethical issues related to Web data mining. Students can choose from three types of final course projects: implementation projects, research papers, or data analysis projects. Throughout the course, the students will learn and use a variety of data mining tools to analyze sample data sets as part of class assignments. PREREQUISITE(S): (IT 223 or CSC 383 and (CSC 451 or CSC 453)

ECT 585 LEGAL ASPECTS OF E-COMMERCE
This course is focused on how the law affects e-commerce. Topics include: electronic contracts, privacy issues associated with the use of the Internet, security issues including digital signatures, encryption and biometrics, intellectual property issues including trademark/domain name conflicts, copyrights, patents for business methods, taxation of internet transactions. Students will also gain an understanding of the issues involved in taking a company public (IPO), what information venture capitalists (VC) require in order to make decisions regarding financing startup companies. Prerequisite: ECT 455.

ECT 586 CUSTOMER RELATIONSHIP MANAGEMENT TECHNOLOGIES
An in-depth study of customer relationship management (CRM) technologies and applications. The special focus will be on the application of CRM technologies for managing the customer lifecycle across Internet and offline channels. Topics include customer identification, data integration, personalization technologies, web and email interaction techniques; sales force automation applications; call centers, field service and logistics applications; customer self-service and customer knowledge management technologies. Students will review and compare specific eCRM technologies and develop an Internet customer interaction system to support an eCRM strategy in group project. PREREQUISITE(S): ECT 424
ECT 587 MOBILE COMMERCE TECHNOLOGY
This course examines leading wireless and mobile technologies for consumer and enterprise mobile commerce. Topics include wireless standards and technologies, the impact of bandwidth, platforms, form factors, mobile data services, security and transaction models. Wireless Web development issues concern Web synchronization, server-side content management, Wireless Application Protocol (WAP), Wireless Markup Language (WML), Handheld Device Markup Language (HDML), wireless user interface design, and wireless Web development tools. Mobile commerce applications include personalization, customer relationship management, mobile portals, and wireless enterprise solutions for business process and workflow. Students will develop mobile commerce applications. (PREREQUISITE(S): ECT 455).

ECT 588 E-MARKETPLACE TECHNOLOGY
This course concentrates on system development for online trading applications supporting complex interactions and transactions. Theoretical models of online information exchanges supporting negotiations such as: auctions, brokerages and exchanges/marketplaces will be discussed. Server/client side applications utilizing the models and distributed data access will be developed. Assignments will include system design as well as application development projects using Java. PREREQUISITE(S): ECT425.

ECT 589 E-BUSINESS STRATEGIES
Designed for ECT majors and IS majors in ECT concentration, this course focuses on the deployment of Internet and enterprise technologies to support organization's e-business initiatives and collaborative commerce. Conducted in the format of seminar, case analysis, and dialogue with industry practitioners, this course requires students to actively participate in the study of models and approaches for e-business technology implementation and transformation. Topics include: the impact of Internet on industry structure and organizational transformation, enterprise application architecture, planning and implementation of technology and process to support an increasingly collaborative and integrated environment for e-commerce. Students have to complete an organization case study of e-business technology implementation to fulfill the requirement of this capstone course. This course should be taken at the conclusion of the ECT program. PREREQUISITE(S): Completion of all other required courses.

ECT 590 E-BUSINESS TECHNOLOGY PRACTICUM
This practicum course is aiming at exposing e-commerce students to distributed multi-platform, multi-language, multi-tier application development. Besides the heavy programming emphasis, the students will analyze design and implementation issues in such an environment. The course content involves design and development of an e-commerce system that includes business to business, customer facing, and information portal applications. Students will work on projects using different platforms and different programming languages in a lab environment. Topics include design of e-commerce systems, distributed database development, multi-web server environment development, application of distributed object technologies. This course fulfills the capstone/practicum requirement for ECT majors and should be taken at the conclusion of the program. PREREQUISITE(S): ECT 480 or ECT 481 or consent.

ECT 596 TOPICS IN E-COMMERCE TECHNOLOGY
Independent study form required. PREREQUISITE(S): Consent of instructor.

ECT 690 RESEARCH SEMINAR
Readings and discussion on current research topics. Students may register for this course no more than twice. PREREQUISITE(S): Consent of the instructor.

ECT 696 MASTER'S PROJECT
Four credit hours. Students may register for this course only after their advisor has approved a written proposal for their project. Independent study form required. (PREREQUISITE(S):Consent of advisor).

ECT 698 MASTER'S THESIS
(2 credit hours) Students may register for this course only after their advisor has approved a written proposal for their thesis. Students must continue to register for this course every quarter after their first registration in it until they complete their project or thesis to the satisfaction of their advisor. They earn two hours of credit for each such registration but only four hours of credit will apply for degree credit. Independent study form required. PREREQUISITE(S): Consent of advisor.
**EA 507 APPLIED INQUIRY PROJECT PROPOSAL I**
Each student will design his/her SNL 628 Applied Inquiry Project, in consultation with the faculty mentor and a project Advisor. Proposal I emphasizes selecting a project topic/focus and conducting a literature review.

**EA 508 APPLIED INQUIRY PROJECT PROPOSAL II**
Each student will design his/her SNL 628 Applied Inquiry Project, in consultation with the faculty mentor and a project Advisor. Proposal II emphasizes the purpose and design of the inquiry project, and audience(s) for dissemination.

**EA 515 DEVELOPING PROFESSIONAL IDENTITY**
Practitioners in the field of formal and informal adult education, start the program with an examination of their professional interests, experiences and work environments. Within the context of the body of knowledge within adult education, learners will explore questions about competencies, expectations, beliefs, and assumptions that will guide them to analyze the various historical, cultural, philosophical, theoretical, and social contexts.

**EA 516 DESIGNING EDUCATIONAL OFFERINGS**
This course builds competencies in designing educational offerings. It emphasizes pre-design assessment models and practices to prepare practitioners for designing a variety of education events and processes with the learner's needs in mind.

**EA 517 FACILITATING ADULTS LEARNING**
The intersection of design, learning outcomes, and assessment processes passes through the medium of facilitation in educational settings. This course expands the practitioners' repertoire of effective delivery of facilitation/instruction strategies and techniques, and integrating the use of technology in instruction (including Internet-based teaching).

**EA 518 ENHANCING PRACTICE WITH THEORY**
This course aims to ground practitioners' experiences and praxis within relevant adult learning theories and developmental theories. Students will connect researching to the creation and/or application of best practices in their respective niche of adult education.

**EA 525 PRACTICE-BASED INQUIRY**
This course lays the groundwork for the applied inquiry project (SNL 627). Students will learn to connect their professional and personal interests to one or more forms of research: traditional, innovative, theoretical, applied, and/or evaluative.

**EA 526 ASSESSING LEARNING AND EVALUATING PROGRAMS**
This course presents approaches for selecting and applying assessment and evaluation models and strategies. It focuses on assessing individuals' learning in the context of evaluating programs and actions intended to meet learners' needs. Participants will gain skills in evaluation instrument design, selection of assessment methods and instruments, assessment of short-term effects, and report writing.

**EA 527 FINDING AND MANAGING INFORMATION**
This foundational course provides participants with skills of collection, analysis, and synthesis of literature and resources in their respective area(s) of practice. Among these skills are: searching and accessing various sources; discerning credibility of sources; storing and retrieving information for oneself; constructing thematic literature reviews; and, citing sources APA style.

**EA 528 APPLIED INQUIRY PROJECT**
Students will be able to inquire into particular areas of their professional interest within the field of adult learning/adult education. This course is individualized and supported by mentors.

**EA 536 REFLECTIVE PRACTICE SEMINAR II**
After the third quarter, students come together for group reflection and analysis and review of their progress in the program. This seminar assists students in focusing their capstone inquiry project.

**EA 537 REFLECTIVE PRACTICE SEMINAR III**
After the fifth quarter, this seminar offers an opportunity for program review and collaborative review of capstone project process.

**EA 538 REFLECTIVE PRACTICE SEMINAR IV**
At the end of the program, students join in a summit to review their program, engage in discussion on their next steps, and review their credo of adult education. It is also a preliminary graduation review to ensure that any "loose ends" are recognized and appropriate action is clarified for students.

**Education**

**EDU 499 LANGUAGE AND LITERACY PRACTICES ACROSS THE ACADEMY**
This course addresses issues related to the use of English in the Academy, particularly (1) in classrooms where English is not the native language of the instructor or students but is the language of instruction and/or (2) in scholarship written in English by non-native speakers of English. Topics include but are not limited to academic writing, curriculum development, classroom pedagogy, content pedagogical knowledge, globalization and international education, 21st century technologies, and English as a medium of instruction. Registration with permission of instructor only.

**English**

**ENG 400 STRUCTURE OF MODERN ENGLISH [FORMERLY ENG 416]**
A systematic outline of modern English from both traditional and contemporary linguistic perspectives. Examines descriptive grammars, word and phrase structure, syntax and semantics, and formal issues of style and rhetoric. Formerly ENG 416.

**ENG 401 HISTORY OF THE ENGLISH LANGUAGE**
A systematic study of the nature, history and usage of the English language. The course traces the language from its origin to its present status in England and America.

**ENG 402 HISTORY OF ENGLISH PROSE STYLE**
A survey of alternative theoretical approaches to the study of style, followed by intensive study of changes in the conventions of English prose from the Renaissance to the present.

**ENG 407 LANGUAGE AND STYLE FOR WRITERS**
A comprehensive examination of structural elements and stylistic devices that experienced writers use across a number of creative and professional genres. Topics include components of style, sentence rhythm and prosody, diction choices, rhetorical punctuation, and the development of one's personal writing voice.

**ENG 408 STYLISTICS**
Theory and practice in examining features of prose style, including linguistic, rhetorical and literary perspectives on style.

**ENG 411 CHAUCER**
Chaucer's works in context of his milieu.

**ENG 412 STUDIES IN ARTHURIAN LITERATURE**
Geoffrey of Monmouth, Wace, Layamon and Malory.

**ENG 413 STUDIES IN MEDIEVAL LITERARY FORMS**
Alternating emphasis on poetic, narrative and dramatic genres of the 14th and 15th centuries.

**ENG 419 TOPICS IN MEDIEVAL LITERATURE**
See schedule for current offering.
ENG 421 STUDIES IN ENGLISH RENAISSANCE PROSE
Major prose works, including More's Utopia, Sidney's Apology for Poetry, Bacon's Essays, and Milton's Areopagitica.

ENG 422 STUDIES IN ENGLISH RENAISSANCE POETRY
Alternating emphasis on the English epic, the 16th-century lyric, and the 17th-century lyric.

ENG 423 STUDIES IN ENGLISH RENAISSANCE DRAMA
Tudor-Stuart drama, including works by Kyd, Marlowe, Jonson, Webster and Ford.

ENG 426 THE ESSAY: HISTORY, THEORY, PRACTICE (FORMERLY ENG 488)
Explores the history of the essay as genre from the Renaissance to the present, compares and contrasts literary essays with those written in most school settings, and offers students the opportunity to write their own extended essays on personal and professional topics.

ENG 427 MILTON
Major poems and selected prose.

ENG 428 STUDIES IN SHAKESPEARE
Study of selected plays through various critical and scholarly perspectives.

ENG 429 TOPICS IN RENAISSANCE LITERATURE
See schedule for current offering.

ENG 431 STUDIES IN THE EIGHTEENTH CENTURY NOVEL
Representative English prose fiction, including Defoe, Richardson, Fielding, Sterne and the Gothic novel.

ENG 432 STUDIES IN RESTORATION AND 18TH CENTURY DRAMA
Studies in the comedy of manners, sentimental comedy, heroic drama, and bourgeois tragedy.

ENG 434 STUDIES IN RESTORATION AND EIGHTEENTH CENTURY AUTHORS
Alternating emphasis on, for example, Dryden, Pope, Swift, Johnson or other authors.

ENG 439 TOPICS IN RESTORATION AND EIGHTEENTH CENTURY LITERATURE
See schedule for current offerings.

ENG 441 STUDIES IN ENGLISH ROMANTIC PROSE
Major Romantic nonfiction prose writers, including Burke, Coleridge, Hazlitt, DeQuincey and Lamb.

ENG 442 STUDIES IN ENGLISH ROMANTIC POETRY
Alternating emphasis on major Romantic poets, including Blake, Wordsworth, Coleridge, Byron, Shelley and Keats.

ENG 443 STUDIES IN VICTORIAN PROSE
Major Victorian nonfiction prose writers, including Carlyle, Newman, Ruskin, Mill, Arnold and Pater.

ENG 444 STUDIES IN VICTORIAN POETRY
Major Victorian poets, including Tennyson, Browning and Arnold.

ENG 445 STUDIES IN 19TH CENTURY BRITISH FICTION
Alternating emphasis on major novelists including Dickens, Thackeray, the Brontes, Eliot, Trollope and Hardy.

ENG 446 NINETEENTH CENTURY IRISH LITERATURE
This course surveys a broad range of literature from nineteenth-century Ireland. It reads literature within the social and historical context of its day; in terms of the formation of individual, social and national identities; and within today's debate about Ireland's status at the time.

ENG 449 TOPICS IN 19TH CENTURY BRITISH LITERATURE
See schedule for current offering.

ENG 451 STUDIES IN THE MODERN BRITISH NOVEL
Alternating areas of emphasis, including Woolf, Joyce, Forster and Conrad.

ENG 452 STUDIES IN MODERN BRITISH POETRY
Alternating areas of emphasis, including Yeats, Auden, Lawrence, Dylan Thomas, Eliot and Larkin.
ENG 453 STUDIES IN MODERN BRITISH DRAMA
Representative British and Irish plays from World War I to contemporary times.

ENG 455 MODERN IRISH LITERATURE
This course uses both historical and theoretical approaches to Irish literature written from the Literary Revival to the late twentieth century. It emphasizes the transition from a colonized to a postcolonial society and the slow validation of the voices of Irish women writers.

ENG 456 CONTEMPORARY IRISH LITERATURE
This course relates contemporary Irish literature to recent Irish history and to social and cultural change. It charts the ways in which patterns of individual, social and national identity have been challenged and renegotiated.

ENG 459 TOPICS IN MODERN BRITISH LITERATURE
See schedule for current offering.

ENG 464 STUDIES IN AMERICAN AUTHORS
Alternating emphasis on major writers, including Hawthorne, Melville, Poe, Whitman, Dickinson, Twain, Chopin, Crane, James, Wharton and Cather.

ENG 465 STUDIES IN THE MODERN AMERICAN NOVEL
Alternating emphasis on major 20th-century writers, including Fitzgerald, Hemingway, Stein, Faulkner, Steinbeck, Porter, Penn Warren, Bellow, O'Connor, Oates and Morrison.

ENG 466 STUDIES IN MODERN AMERICAN POETRY
Introduction to a wide range of twentieth-century American poetries, with alternating emphasis on modernists such as Frost, Eliot, Pound, Stevens, Williams, Moore, HD., Hughes, and Rukeyser as well as more recent figures and trends.

ENG 467 STUDIES IN AMERICAN DRAMA
American dramatists and dramatic movements.

ENG 469 TOPICS IN AMERICAN LITERATURE
See schedule for current offering.

ENG 471 BIBLIOGRAPHY AND LITERARY RESEARCH
Principles and methods of literary research.

ENG 472 STUDIES IN LITERARY CRITICISM
Study of the theoretical foundations of literary criticism, exemplified by major texts from ancient Greece to the present.

ENG 473 TEACHING CREATIVE WRITING [FORMERLY ENG 485]
Prepares English teachers to teach creative writing at the secondary and college undergraduate levels. Models the planning and directing of effective workshops in poetry and fiction writing. Formerly ENG 485.

ENG 474 TEACHING LITERATURE
Prepares English teachers to teach literature at the secondary and college undergraduate levels. The course develops methods of teaching all literary genres, addresses problems in literacy, and focuses on the transactional nature of reading and writing.

ENG 475 TOPICS IN LITERATURE
See schedule for current offering.

ENG 477 TOPICS IN PUBLISHING
See schedule for current offerings.

ENG 478 TOPICS IN TEACHING
See schedule for current offerings.

ENG 479 TOPICS IN LANGUAGE AND FORM
See schedule for current offerings.

ENG 484 WRITING WORKSHOP TOPICS
See schedule for current offerings.
ENG 487 TRAVEL WRITING
Writing travel essays: history and forms of the literary travel essay; writing about travel for the book and magazine market.

ENG 488 WRITING THE PERSONAL ESSAY
Focuses on studying and writing creative nonfiction essays, with particular attention paid to voice, style, form and structure, narration and exposition, scene, and narrative distance

ENG 489 SCREENWRITING
An introduction to the craft of screenwriting. Covers principles of plot, dramatic conflict, characterization, dialogue, and screenplay form. Students develop short dramatic and documentary screenplays.

ENG 490 WRITING FOR MAGAZINES
Covers the range of skills necessary for magazine writing. Discussion of the elements of style, humor, research, concept and imagery that characterize the literature of fact. Students investigate, compose and edit finished magazine articles to be submitted for publication.

ENG 491 SCIENCE WRITING
An introduction to the creative career of science writing. Students research, write, and market articles on such subjects as astronomy, genetics, health, and technology for newspapers, magazines, e-zines, and innovative journals. No prior science background required.

ENG 492 WRITING FICTION
A course in writing short stories. Emphasis is placed on class discussion of student writing.

ENG 493 WRITING POETRY (CROSS-LISTED AS MLS 479)
A course in writing and reading poetry. Emphasis is placed on class discussion of student writing.

ENG 496 EDITING
An introduction to editing principles and practices in professional and technical fields.

ENG 497 WRITING THE LITERATURE OF FACT
An advanced course in reading and writing true-life stories in the nonfiction tradition exemplified by such writers as Dickens, Agee, McPhee, and Didion.

ENG 498 INDEPENDENT STUDY
Independent Study

ENG 499 THESIS RESEARCH
Thesis Research

ENG 500 INDEPENDENT STUDY
Written permission of supervising faculty member and of the program director is necessary before registration. Variable credit.

ENG 501 THESIS RESEARCH
Written permission of supervising faculty member and of the program director is necessary before registration. Limited to four credits.

ENG 502 CANDIDACY CONTINUATION
Non-credit. Required of all students who are not registered for regular courses but who occasionally utilize University facilities during completion of course requirements and/or research. $40.00 per quarter.

ENG 509 INTERNSHIP
Internship PREREQUISITE(S): Written permission

Environmental Science
This course will provide an overview of the relationship between the growing human population worldwide, the natural resources required to sustain this population, and the consequences of resource exploitation for environmental quality. We will integrate the ecological, economic and policy factors involved in natural resource management.
French

Graduate Course Descriptions - Current

Subjects beginning with the letter F are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

French
Finance

F

FCH 404 FRENCH CIVILIZATION I
Intellectual, political and social background from early times through the revolution. PREREQUISITE(S): Graduate standing required.

FCH 405 RENAISSANCE
LaPleiade, Rabelais, Montaigne, Marguerite de Navarre. PREREQUISITE(S): Graduate standing required.

FCH 407 AGE OF ENLIGHTENMENT
Contributions of 18th-century French thinkers. PREREQUISITE(S): Graduate standing required.

FCH 409 THE FRENCH NOVEL
Topics include: 17th- and 18th-century novel; world of Balzac; Flaubert and Stendhal; Realism and Naturalism; contemporary novelists; survey of the novel. PREREQUISITE(S): Graduate standing required.

FCH 410 FRENCH DRAMA
Topics include: classical drama; romantic drama; contemporary drama. Cross-listed with FCH 310. Prerequisite(s): Graduate standing required.

FCH 411 FRENCH POETRY
Topics include: form and substance; Baudelaire, Rimbaud, Verlaine, Mallarme; contemporary poets. PREREQUISITE(S): Graduate standing required.

FCH 412 TWENTIETH CENTURY WRITERS
Proust, Gide, Malraux, Camus, Sartre. PREREQUISITE(S): Graduate standing required.

FCH 413 THE SURREALIST REVOLUTION
Nerval, Lautreamont, Breton, Aragon; Films of Man Ray and Bunuel. PREREQUISITE(S): Graduate standing required.

FCH 416 FRANCOPHONE LITERATURE OF AFRICA AND THE CARIBBEAN
Classic and emerging writers of these regions. Cross-listed with FCH 316. Prerequisite(s): Gradate standing required.

FCH 419 FRENCH WOMEN WRITERS
Studies in literary, cultural and social issues. PREREQUISITE(S): Graduate standing required.

FCH 423 TRANSLATION II
Continues introduction to fundamental principles of translation and acquisition of techniques for translating a range of texts from French into English. Continuation of FCH 321. PREREQUISITE(S): Graduate standing required.
FCH 429 FRENCH CINEMA
Topics in French film from its origins to the present day. PREREQUISITE(S): Graduate standing required.

FCH 432 FRENCH CIVILIZATION II
Intellectual, political and social background from the rise of Napoleon to the current time. PREREQUISITE(S): Graduate standing required.

FCH 441 INTRODUCTION TO FRENCH LITERATURE I
Survey of French literature from its beginnings through the 17th century. PREREQUISITE(S): Graduate standing required.

FCH 442 INTRODUCTION TO FRENCH LITERATURE II
Survey of French literature of the 18th and 19th centuries. PREREQUISITE(S): Graduate standing required. Cross-listed with FCH 342.

FCH 450 FRENCH PHONOLOGY AND PHONETICS
An in-depth study of the language's sound system and intensive pronunciation practice. Advanced knowledge of French is a prerequisite. PREREQUISITE(S): Graduate standing required.

FCH 491 FRENCH FOR READING
Intensive review of basics of French grammar, vocabulary and sentence structure, for reading knowledge of scholarly articles in French.

FCH 497 SPECIAL TOPICS IN FRENCH
See schedule for current offerings. PREREQUISITE(S): Graduate standing required.

FCH 498 STUDY ABROAD
Variable credit. PREREQUISITE(S): Permission and graduate standing required.

FCH 499 INDEPENDENT STUDY
Variable credit. Permission of chair and instructor required. Graduate standing required.

Finance

Graduate Course Descriptions - Current

FIN 501 ETHICS IN FINANCIAL MARKETS
This seminar course will examine both ethical issues and conflicts of interest that face financial decision makers in today's business world. The class will feature case studies and guest speakers as the key teaching tools, supplemented by short lectures and student simulations/exercises. Each class period will be devoted to a different contest in which to consider topical issues. We will look at and discuss ethical issues facing financial services companies, corporates (both public and private), as well as not for profits. We will examine these issues, where applicable and relevant, from multiple perspectives: Board of Directors, Executive Management, Shareholders, Regulators, Suppliers and Customers, Competitors, Employees and Communities. Some of the discussion will purposefully consider the additional realities of differing culture and values in the international context. PREREQUISITE(S): FIN 523

FIN 501 ETHICS AND FINANCIAL MARKETS
This seminar course will examine both ethical issues and conflicts of interest that face financial decision makers in today's business world. The class will feature case studies and guest speakers as the key teaching tools, supplemented by short lectures and student simulations/exercises. Each class period will be devoted to a different contest in which to consider topical issues. We will look at and discuss ethical issues facing financial services companies, corporates (both public and private), as well as not for profits. We will examine these issues, where applicable and relevant, from multiple perspectives: Board of Directors, Executive Management, Shareholders, Regulators, Suppliers and Customers, Competitors, Employees and Communities. Some of the discussion will purposefully consider the additional realities of differing culture and values in the international context. PREREQUISITE(S): FIN 523

FIN 510 ADVANCED MONETARY THEORY AND POLICY
This course is designed to provide the analytical tools for a critical examination of monetary and fiscal policies together with their impact on economic activity in general, and on the commercial banking system in particular. Problems involving interest rates, the value of money and qualitative portfolio changes are examined in detail in the light of current theoretical contributions. PREREQUISITE(S): FIN 555

FIN 512 COMMERCIAL BANKING
The purpose of the course is to analyze the role of commercial banks in the financial system. The present structure of banking will be studied with particular emphasis on the relationship between commercial banking practices and economic stabilization goals. Issues in bank asset management, liability management and capital adequacy will be presented. Finally, new dimensions in banking will be considered. PREREQUISITE(S): FIN 555 and GSB 420.

FIN 513 MONEY AND CAPITAL MARKETS
This course is designed to study money, capital markets, and banking as a means to understanding how financial markets determine interest rates and why different assets earn different rates of returns; the economic functions of financial services firms (especially commercial banks); the role commercial banks play in financial markets and how their operations affect the functioning of our economic system; the role of regulation of financial services firms (including thrifts and commercial banks in influencing their behavior; and the role and function of central banks in the economy and how central banks actions interact with asset markets to affects the macro economy. PREREQUISITE(S): FIN 555 and GSB 420

FIN 523 INVESTMENT ANALYSIS
This course provides an overview of the investment environment for the institutional money manager. The market mechanism, market equilibrium, the relationship between risk and return and the valuation of various investment instruments are investigated. PREREQUISITE(S): FIN 555 and GSB 420

FIN 524 FINANCIAL STATEMENT ANALYSIS
This course develops financial analysis skills from the view of an outsider using a corporations publicly available financial statements. Techniques such as commonsizing, ration analysis, decomposition and the use of a comprehensive DuPont Model are used as a basis to teach analytical thought processes necessary to make projections for a company based on its financial statements. The use of spreadsheets as an analytical tool will be strongly emphasized. PREREQUISITE(S): FIN 555 and GSB 420

FIN 525 PORTFOLIO MANAGEMENT
This course analyzes contemporary theories and techniques of security selection and management available to the institution portfolio manager. Significant literature which emphasizes the role of the modern portfolio manager in achieving diversification and client investment goals is reviewed and evaluated. PREREQUISITE(S): FIN 523

FIN 526 ADVANCED TOPICS IN INVESTMENTS
This course is designated to provide students with knowledge of alternative investments such as real estate, venture capital and hedge funds. This knowledge will help prepare students to pass the alternative investments sections of the CFA examinations. PREREQUISITE(S): FIN 523

FIN 530 REAL ESTATE INVESTMENT AND FINANCE
Analysis of real estate investment opportunities and the characteristics that distinguish them from other assets. Emphasis is upon forecasting cash flows and estimating risk. Case analysis is an integral part of the course technique. PREREQUISITE(S): FIN 555

FIN 551 PROBLEMS IN CORPORATE FINANCIAL POLICY
Theoretical and practical tools in financial decision-making are discussed using cases studies. Covers investment analysis as this relates to the risk and timing of cash flows, capital structure and dividend policy. PREREQUISITE(S): FIN 555 and GSB 420.

FIN 553 ADVANCED CORPORATE FINANCE
The analytical methods and quantitative decision models applicable to special areas of corporate finance are examined and studied in this course. These topic areas could include current asset management, convertible bonds, warrants, lease financing, mergers and consolidations or other current financial issues. PREREQUISITE(S): FIN 555 and GSB 420.

FIN 555 FINANCIAL MANAGEMENT
A study of the major decision areas faced by the corporate financial manager and their relationship to the goals of the firm’s owners. Specific topics include capital budgeting, capital structure and the cost of capital, dividend policy, and current asset management. PREREQUISITE(S): ACC 500 and ECO 555 or equivalents and GSB 420
FIN 557 INTERNATIONAL FINANCE
International Finance integrates the financial activities, institutions, and multinationals of the global finance arena. In addition to extending the tools of financial analysis to an international setting, the course studies the strategies available to a multinational because of operations in a multiple of countries. Topics include foreign currency and political risk, capital budgeting in a multinational setting, and cash flow management between countries. PREREQUISITE(S): FIN 555 and GSB 420

FIN 558 MERGERS AND ACQUISITIONS
This course focuses on the pragmatic issues and relevant research studies on mergers, acquisitions and corporate restructuring. The field of mergers and acquisitions continues to experience dramatic growth. Although many companies pursue and expansionary strategy that include mergers and acquisitions, many others rely on corporate restructuring to become more efficient, such as spin-offs, equity, carve-outs and divestitures. This course will also cover leverage buyouts, merger strategy, employee stock ownership plans, antitakeover measures and valuations of businesses, including the valuation of privately held firms. PREREQUISITE(S): FIN 555 AND GSB 420

FIN 562 RISK MANAGEMENT
This course is designed as an introduction to derivative instruments; their characteristics, their pricing, the market's infrastructure, trading mechanics, and applications. The course introduces the binomial pricing model, the Black & Scholes continuous time pricing model, the associated properties i.e. "the Greeks." and forward pricing. The course examines the characteristics and market infrastructure for each of the four derivative instruments: forward, futures, options, and swaps. Then trading strategies and hedging applications for each of these instruments are discussed. The course concludes with an introduction to Value at Risk. PREREQUISITE(S): FIN 555 and GSB 420

FIN 571 FINANCING NEW VENTURES (CROSS-LISTED WITH MGT 571)
This course will focus on identifying, examining and evaluating various sources of original and growth capital. Emphasis will be on legal, financial and tax issues related to capital formation as well as specific problems experienced by the small-to-medium-sized firm undergoing rapid growth. Topics discussed will include financing startups, financial planning and strategy, going public, selling out and bankruptcy. A formal proposal for capital acquisition developed through field research will be required of each student. Cross-listed with MGT 571. PREREQUISITE(S): FIN 555

FIN 581 THE PSYCHOLOGY OF FINANCIAL DECISION MAKING
This course reviews current behavioral research on intuitive judgment, belief formation, risk attitudes, and emotion. The findings help to explain financial decisions made by individual investors, households and money managers. This course is a prerequisite for FIN 582 and FIN 583. It is especially useful for students who plan a career as financial advisors. PREREQUISITE(S): GSB 420

FIN 582 THE PSYCHOLOGY OF FINANCIAL MARKETS
This course studies the behavior of world equity markets from a psychological perspective. Topics include equity portfolio management, investor sentiment, value and growth investing, market under- and overreaction to news and the quality of analysts' earnings forecasts and stock recommendations. Selected aspects of bond, derivative, and currency markets are also discussed. PREREQUISITE(S): FIN 581

FIN 583 BEHAVIORAL ASPECTS OF CORPORATE FINANCE
This course asks how psychological, sociological and organizational forces shape the strategic investment, restructuring, and financing decisions made by top managers in corporations. Topics include capital budgeting, earnings management, investor relations, executive compensation and the role of corporate boards. PREREQUISITES: FIN 581, GSB 420

FIN 595 INVESTMENT SEMINAR
Construction and management of an actual portfolio fund in a nine month seminar setting. Registration requires approval of the seminar director based on applications due in the Spring quarter. PREREQUISITE(S): Permission of instructor

FIN 617 QUANTITATIVE METHODS
A survey of mathematical and statistical techniques used in finance and representative applications. PREREQUISITE(S): FIN 555

FIN 662 DERIVATIVES VALUATION
This course is designed to be an advanced course that focuses on the pricing models for the four derivative instruments: forwards, futures, options and swaps. Fixed income modeling as it is related to swaps and caps also will be considered. The first part of the course is devoted to an in depth examination of the various
pricing models: discrete, continuous time, as well as Monte Carlo simulation. Each model's properties are derived and discussed in detail. These models are then applied to a range of realistic pricing situations which include swaps, exotic options, credit derivatives and complex Value at Risk problems. PREREQUISITE(S): FIN 555

FIN 675 CASES IN INVESTMENTS AND FINANCIAL ENGINEERING
This course primarily uses case studies to illustrate the application of concepts learned in Fin 523 (Investments Analysis) and in Fin 662 (Derivatives Valuation). The topics covered in the course include:
- the term structure of interest rates
- portfolio management, asset pricing, and market efficiency
- portfolio performance evaluation
- option pricing
- management of interest-rate risk, credit risk, foreign-exchange risk, and liquidity & basis risk with options, forwards, futures, and swaps
- enterprise risk management
The course will hone the student's analytical and writing skills through group analyses of case studies and preparation of (case) write-ups. PREREQUISITE(S): GSB 420, FIN 555, FIN 523, FIN 617, FIN 662

FIN 798 SPECIAL TOPICS
Content and format of this course are variable. In-depth study of current issues in finance. Subject matter will be indicated in class schedule. Offered variably. PREREQUISITE(S): Determined by instructor

FIN 799 INDEPENDENT STUDY
Available to graduate students of demonstrated capability for intensive independent work in finance. PREREQUISITE(S): Determined by instructor.
Game Development

GAM 424 GAME DESIGN WORKSHOP
This course is an introduction to both the theory and practice of game design. Students will explore fundamental elements of game design and put these concepts to work in designing, prototyping, playtesting, and developing both physical and computer games. The course will cover formal elements of games, game dynamics, game narratives, and the dramatic components of games. Students will study the game design process including brainstorming, conceptualization, creation of design documentation, and play-testing. PREREQUISITE(S): none

GAM 450 PHYSICS FOR GAME DEVELOPERS
The course concentrates on Newton's Laws of Motion, kinematics and kinetics. This theory will be applied to problems that a game programmer must understand e.g. collisions between objects, projectiles and their trajectories, real-time simulation of motion. Special objects such as cars, aircraft and ships will be discussed. Students will apply and implement laws of physics. PREREQUISITE(S): CSC 262 and MAT 150

GAM 453 TOOL PROGRAMMING FOR GAME DEVELOPMENT
Today's games are built with large amounts of data. The stability, usability, efficiency, and flexibility of the tools that process game data plays an enabling and critical role in game development. Topics include the content pipeline, processing or standard file formats, integration of external tools, file format design, command line and graphical user interfaces, and procedural content generation. PREREQUISITE(S): CSC 373

GAM 474 FUNDAMENTALS OF GAME PROGRAMMING I
Many computer games are based on physical interactions between game objects e.g. collisions, evasions, pursuit, etc. Design and implementation of these actions is not an easy problem. Concept and character development, storyboarding, prototyping, testing and implementation will be discussed. Students will gain hands on experience in game programming using a low level graphical library. PREREQUISITE(S): CSC 262 or CSC 309

GAM 475 GAME ENGINE PROGRAMMING I
Game engines provide an integrated programming platform for today's high performance games. This class explores C/C++ game engine programming, data structures, and practices. Topics include memory management, input devices, video rendering, file access, debugging, and application interface development. Prerequisite(s): CSC 374 and (CSC 383 or CSC 393)

GAM 476 ARTIFICIAL INTELLIGENCE FOR COMPUTER GAMES
Artificial Intelligence (AI) is one of the essential components of a computer game. The course introduces basic concepts of AI. Emphasis will be place on applications of AI in various genres of computer games. In the implementation component of this course students will be exposed to the existing AI game engines (middleware), which contain implemented AI algorithms that are ready to be applied into game code. These
algorithms include: decision trees, pathfinding, neural networks, script-driven game object behaviors.
PREREQUISITE(S): CSC 383 or CSC 393

GAM 477 FUNDAMENTALS OF GAME PROGRAMMING II
The class moves beyond the basics of game programming and into advanced programming, architecture, and integration techniques. Topics include working with a production-quality content pipeline, integration of external digital content creation tools, scalability, complex animations, shaders, environment construction, gameplay techniques, controllers, camera theory, and collisions. PREREQUISITE(S): GAM 474

GAM 486 GAME DEVELOPMENT FOR MOBILE DEVICES
Mobile devices are becoming one of the most important hardware for game players. In this course we introduce major mobile hardware platforms and their operating systems. Issues related to game design for handheld devices will be presented. The strong technical component of this course includes game programming for a handheld device with a wireless internet connection enabling multiplayer game architecture. Such concepts as: building a custom game library, multiplayer game programming, infrared, wireless and socket communication between devices will be discussed. PREREQUISITE(S): GAM 474

GAM 490 MULTIPLAYER GAME DEVELOPMENT
Multiplayer games were made possible by the advances in networking technology, increases in processor speed and data storage. Today, the majority of successful game titles are equipped with a multiplayer capability. This technical course discusses the fundamental aspects of multiplayer game development such as: design techniques, architectures, client and server side implementation, databases. PREREQUISITE(S): GAM 474

GAM 491 GAME PERFORMANCE OPTIMIZATION
This game programming class will focus on developing software to efficiently use the fixed CPU power and resources that are found in today's console and mobile devices. This course will use real-world game examples that demonstrate performance and optimization issues that software architects face in game development. These problems include: performance enhancements through extended matrix instruction set, dynamic memory usages, performance related to increasing run-time systems to very large scale, C++ language enhancements and extensions, algorithms, streaming and profiling. PREREQUISITE(S): CSC 374 and (CSC 383 or CSC 393)

GAM 499 TOPICS IN COMPUTER GAME DESIGN AND DEVELOPMENT
Variable topics course in computer game design and development. May be repeated for credit. PREREQUISITE(S): Permission of instructor

GAM 575 GAME ENGINE PROGRAMMING II
This class continues to explore C/C++ game engine programming, data structures, and practices. Topics include audio, network access, threads and multi-processor systems, profiling, scripting, content libraries, animation, and a survey of gam engines. Prerequisite(s): GAM 475

GAM 594 GAMING AND ENTERTAINMENT TECHNOLOGY CAPSTONE
This course gives students an opportunity to utilize knowledge obtained in this degree program in developing a computer game, from conceptualization, design, to implementation. Issues in project management and configuration management will also be addressed. This work will constitute a major part of the project portfolio that students have developed during their study. PREREQUISITE(S): Completion Of Foundation Courses.

GAM 598 INDEPENDENT STUDY
Variable credit. PREREQUISITE(S): Consent of Dean

GAM 599 TOPICS IN COMPUTER GAME DESIGN AND DEVELOPMENT
Variable topics course in computer game design and development. May be repeated for credit. PREREQUISITE(S): Permission of instructor

GAM 690 GAME DEVELOPMENT STUDIO I
In this course and its continuation GAM 691, students will work in small teams to design and implement a computer game. The courses must be taken consecutively. PREREQUISITE: GAM 475 or SE 456

GAM 691 GAME DEVELOPMENT STUDIO II
Continuation of GAM 690. PREREQUISITE: GAM 690
**Geography**

Graduate Course Descriptions - Current  G  Geography

**GEO 441 GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR COMMUNITY DEVELOPMENT**
This course will focus on applications of Geographic Information Systems (GIS) to community studies and community development. As an amalgam of information technologies (e.g. database management, Web 2.0) and earth measurement technologies (e.g. global positioning systems, remote sensing), GIS is rapidly entering the realm of community development. The course will explain how GIS works; enable students to learn techniques including mapping, spatial analysis, and data management; and provide students with the opportunity to rethink community development through the use of geospatial information. Prerequisite(s): Bachelor's Degree.

**GEO 499 INDEPENDENT STUDY**
Intensive study of a topic of special interest. Private conferences with instructor of supervised reading and research. Variable credit. Instructor consent required.

**German**

Graduate Course Descriptions - Current  G  German

**GER 497 SPECIAL TOPICS IN GERMAN**
See schedule for current offerings. Graduate standing required.

**GER 498 STUDY ABROAD**
Variable credit. PREREQUISITE(S): Permission and Graduate standing required.

**GER 499 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Permission of chair and instructor and Graduate standing required.

**Graduate School of Business**

Graduate Course Descriptions - Current  G  Graduate School of Business

**GSB 420 APPLIED QUANTITATIVE ANALYSIS**
This course provides a comprehensive review of some basic mathematical and statistical methods and stresses their practical applications in business and economics. The course will equip the student with the quantitative skills required in the MBA program and will also provide a good foundation for addressing typical problems that arise in business. Additionally, the skills acquired in the course will also help the student prepare for the quantitative sections of professional exams, such as the CFA, the CPA and the CMA exams.

This course will stress learning through applications/problem-solving using Excel and/or Minitab software for data analyses. However, the course must be analytical and theoretical to the extent that is necessary to develop a correct understanding of the topics presented. The topics covered in the course include relevant mathematical concepts: use of relevant functions and solving equations in unknowns, elementary calculus and graphing functions. It also focuses on relevant statistical concepts: probability theory, hypothesis testing, regression analysis and forecasting.

**GSB 599 STRATEGIC ANALYSIS FOR COMPETING GLOBALLY**
This capstone course views the impact of contemporary issues on corporate strategy. Competitive, cultural,
social and ethical issues are examined within the context of a global business environment. The course content emphasizes identifying strategic alternatives, developing corporate and business strategies, and understanding the role of functional activities and organizational processes from a strategic viewpoint. The process of the course involves team interaction, problem-solving, group decision-making, written reports and oral presentations. PREREQUISITE(S): ACC 500, GSB 420, MGT 500, MGT 502, ECO 509, ACC 555, ECO 555, FIN 555, MGT 555, MIS 555 & MKT 555.

GSB 600 CANDIDACY CONTINUATION
A non-credit registration that allows students to continue to use DePaul facilities such as the library, Career Development Center and the computer lab while not registered for credit-earning courses.

GSB 631 STRATEGIC FINANCIAL ANALYSIS
This course is designed for all MBA students seeking to develop skills in strategic financial analysis. The course provides a deep, unabashed evaluation of corporate performance with a focus on traditional and cash-based measures, and strategic applications. Understanding the strengths and weaknesses of various types of financial analyses is a requirement for designing and developing business strategy, business execution systems, and understanding of the performance of the company.

Key managerial questions will be investigated in the course: When should a business grow? When is growth meaningless to investors? Why does an increase in net income, even over decades, still result in stock price drops? Why do companies report record Return On Equity amidst abysmal stock returns? Why and when is stock price BAD for measuring managerial performance? Corporate managers today are plagued by these questions, leaving them to believe in market irrationality, or simply "the market doesn't understand my company".

The course will be driven by actual review and evaluation of company financial statements, using of several types of practical financial analysis methods and tools. The course provides deep insights into the world of investment analysis, corporate performance measurement, and strategic planning. This course will be useful for MBA candidates destined for higher levers of corporate management, management consulting, investment banking, equity research, or money management.

This seminar-driven course is co-designed and co-taught by Dr. Mark L. Frigo, Eichenbaum Foundation Distinguished Professor of Strategy and Leadership, Dr. Keith M. Howe, Scholl Professor of Finance, and Joel Litman, Executive in Residence in The Center for Strategy, Execution and Valuation in the Kellstadt Graduate School of Business and Vice-President in Equity Research at Credit Suisse First Boston. PREREQUISITE(S): ACC 500, ACC 555, FIN 555 or instructor consent.

GSB 640 PROBLEMS IN ETHICS: ISSUES IN BUSINESS (CROSS-LISTED AS PHL 640)
A seminar in business ethics that centers on theoretical, practical and pedagogical issues. Cross-listed with PHL 640. Offered variably. PREREQUISITE(S): Graduate standing

GSB 650 RELIGIOUS ETHICS AND ECONOMICS (CROSS-LISTED AS PHL 650 & MLS 442)
This course will examine the thinking of social scientists, philosophers and theologians on the impact of religious values and institutions, on the origin and development of American capitalism and its relevance to contemporary business ethics. Cross-listed with PHL 650 and MLS 442. Offered variably. PREREQUISITE(S): Graduate standing

GSB 793 INTERNSHIP
This is a unique opportunity in which knowledge gained in the classroom can be applied to an actual business environment. The intern will be immersed in a stimulating environment with a pool of established resources in industry or government. PREREQUISITE(S): Permission.

GSB 798 SPECIAL TOPICS
Content and format of this course is variable. An in-depth study of current issues. Subject matter will be indicated in class schedule. PREREQUISITE(S): As indicated in class schedule

Graphics and Motion Technology
GPH 425 SURVEY OF COMPUTER GRAPHICS
Expression of visual intent through geometry and procedure. A survey of basic 3D techniques, including interaction of light and color. Visual effects of rendering, texturing, and lighting algorithms. Procedural modeling techniques and an introduction to procedurally-based texturing and animation. PREREQUISITE(S): CSC212 or CSC262.

GPH 436 FUNDAMENTALS OF COMPUTER GRAPHICS
An accelerated introduction to the graphics development environments and to graphical programming. Provides an in depth discussion of the basic mathematical language of computer graphics: vectors, transformations, homogeneous coordinates and their associated data structures. Advanced topics will include sampling theory and interpolation. Also provides a basic introduction to industry standards in graphics development, including specifying transformations and viewing parameters. PREREQUISITE(S): CSC 393 and MAT 150.

GPH 438 COMPUTER ANIMATION SURVEY
Survey of methods used in computer animation. This course uses commercially available software packages to teach techniques for animation and digital video production. The techniques covered include storyboarding, key frame animation, audio and video editing. PREREQUISITE(S): GPH 425 or GPH 469.

GPH 448 COMPUTER GRAPHICS SCRIPTING
Covers the use of scripting to generate computer graphics and animation. Emphasis on the benefits and differences of scripting languages compared to conventional graphics programming. Using commercially available scripting environments, students will generate complex graphics and animations that would not be possible with the conventional user interface. PREREQUISITE(S): GPH 438.

GPH 450 DIGITAL MODELING I
Introduction to 3D object modeling with an emphasis on visual applications and prototype design. Students will work with basic spatial operations in surface modeling and CAD interfaces and will produce an original object from pattern with computer-aided manufacture. Prerequisite: HCI 470.

GPH 465 SURVEY OF VISUALIZATION APPLICATIONS
An in-depth introduction to a wide range of visualization techniques focusing on medical and scientific and engineering applications. Introduction to programming using a visualization package, use of color for feature extraction and enhancement, false color mapping techniques, reconstruction techniques, isosurface generation, stream lines and ribbons, spatial set operations, volumetric techniques and projections of higher-dimensional datasets. PREREQUISITE(S): GPH 425 or Statistics (IT 223, CSC 423 or MAT 351)

GPH 469 COMPUTER GRAPHICS DEVELOPMENT
Basic graphics architecture. Coordinate systems. Three-dimensional representations and transformations. Simple visible-surface algorithms. Introduction to illumination. Gouraud and Phong shading. Antialiasing. Texture mapping and elements of animation. Students create a graphics package using a high-level graphics API such as OpenGL. PREREQUISITE(S): GPH 436 or GPH 321

GPH 487 FORENSIC ANIMATION
Techniques and issues in forensic animation. Application of modeling and rendering to the recreation of time-based events for legal purposes. Survey of research and interview techniques. Demonstrative recreation and physically-based recreation. Issues of accuracy, verification, certification and ethics. Students research and recreate an event with forensic value. Possible project areas include motor vehicle incidents, aviation events, product liability, medicine, and trademark infringement. Prerequisite: TBD

GPH 536 SMOOTH SURFACE MODELING FOR GRAPHICS AND ANIMATION

GPH 538 RIGGING FOR ANIMATION
Readying 3D characters and other models for animation. Skeleton chains, joint orientations, and degrees of freedom. IK solvers, including single chains, rotation and splines. Methods for computing weights for skinning body and face, including semi-automated approaches. Considerations for mechanical objects, animals and low-polygon models. PREREQUISITE(S): GPH 438

GPH 539 ADVANCED RENDERING TECHNIQUES
An in-depth examination of texturing techniques for highly realistic computer generated imagery. Design and implementation of layered textures to produce realistic dirt and aged surfaces. Cost analysis of advanced
implementation of layered textures to produce realistic dirt and aged surfaces. Shader development using an industry standard. Prototyping for both offline and real-time rendering environments. Students work in teams to produce convincingly organic environments. PREREQUISITE(S): GPH 425 or GPH 436 or (ANI 439 and GPH 355)

GPH 540 PROCEDURAL SHADING
Procedural pattern generation, creating patterns such as marble and wood with noise. Moving beyond the Phong Illumination model: Gaussian distributions and the Ward anisotropic model, BRDFs. Non-photorealistic rendering techniques such as "toon" shading and painterly techniques. PREREQUISITE(S): GPH 539

GPH 541 ADVANCED LIGHTING TECHNIQUES
Simple local models such as Phong, extensions to Phong (HDRI), ray-traced lighting and shadows, soft shadow generation using shadow maps, radiosity for producing ambient lighting and photon mapping for calculating realistic refracted light. Theory, lighting features supported, efficiency, and practical considerations for choosing the model in production. PREREQUISITE(S): GPH 539

GPH 560 MODELING SPACES
The digital design and modeling of environmental spaces with attention to human use parameters. PREREQUISITE(S): any GPH 400-level course or consent of instructor.

GPH 565 DESIGNING FOR VISUALIZATION
Sources of graphical integrity and sophistication. Data-Ink maximization. Data density. The use of color to enhance features in data sets and the communication of information. Effective use of space and time. Use of 3D techniques to display multi-dimensional data. The use of isosurfaces and volumetric techniques to display features of data sets. Students will use a programmable system to produce their visualizations and will learn how to use procedural techniques to express graphical intent. (Only one of GPH 570 and GPH 565 may be taken for credit) PREREQUISITE(S) GPH 448 and HCI 470

GPH 570 VISUALIZATION
(Formerly CSC 570) Reconstruction techniques. Voxel classification and isosurface generation. Spatial set operations. Projections of higher-dimensional data sets. Data feature enhancement. False color mapping. Survey of applications in science, engineering and medicine. PREREQUISITE(S): GPH 469.

GPH 572 PRINCIPLES OF COMPUTER ANIMATION
(Formerly CSC 572) This course will cover a range of topics in introductory 3D Computer Animation. Topics covered will include key framing, interpolation, hierarchies, inverse kinematics, particle systems, and the basics of physically based simulation and modeling. PREREQUISITE(S): GPH 469.

GPH 574 COMPUTER GAMES
(Formerly CSC 574) Concept and character development, storyboarding, prototyping, testing and implementation. Interaction techniques. Optimization of lighting and texturing. Discussion of relevant hardware and peripherals. PREREQUISITE(S): GPH 469.

GPH 575 ADVANCED GRAPHICS DEVELOPMENT
Survey of standards and current modular technology for 2D and 3D graphics software development. Use of software development toolkits to create "plug-ins" and other modularly organized functionality enhancements for selected commercially available graphics packages. PREREQUISITE(S): GPH 448 and GPH 469.

GPH 576 ARTIFICIAL INTELLIGENCE IN COMPUTER GAMES
The course introduces Artificial Intelligence (AI) topics applied to computer games. No previous knowledge of AI will be assumed. The course concentrates of development of applications that guide game objects in 2D (3D) space. Basic AI architectures and techniques are introduced. Implementation of a game AI engine will be discussed. PREREQUISITE(S): GPH 469

GPH 580 HARDWARE SHADING TECHNIQUES
This class explores the current trends in programmable computer graphics hardware. Modern graphics processing units (GPU's) are becoming increasingly powerful and fully programmable parallel processing units. They make extremely sophisticated effects in computer graphics, such as shadows, displacement maps, skinning, motion blur, reflections and refractions, possible in real-time scenes. In addition these increasingly general programmable units are being used for far more general computing problems from traditional searching and sorting algorithms to computational problems in physics such as the diffusion equation and fluid flow.
In this course we will explore the applications of hardware shading to computer graphics, including advanced lighting, shading and surface effects. As time allows, we will explore other applications such as physics and
computer science. PREREQUISITE(S): GPH 469

**GPH 595 TOPICS IN GRAPHICS**
May be repeated for credit. PREREQUISITE(S): Permission of instructor.

Greek

*Graduate Course Descriptions - Current G Greek*

**GRK 497 SPECIAL TOPICS IN GREEK**
See schedule for current offerings. Graduate standing required.

**GRK 498 STUDY ABROAD**
Variable credit. PREREQUISITE(S): Permission and Graduate standing required.

**GRK 499 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Permission of chair and instructor and Graduate standing required.
Health Communication

HTHC 515 INTRO TO HEALTH COMMUNICATION
Because of the increasing degree of health consciousness in our society, individuals not only interact more frequently with health care providers, but health care organizations play more active roles in their surrounding communities. In addition, health care cultures are changing. Health care organizations play active social and political roles when responding to national health issues or crises. Hence, it is important that we, as consumers of health care, understand the communication challenges that are inherent within health care organizations, and how those can impact the effectiveness of our communication as a participant in health care contexts.

HTHC 516 RESEARCH METHODS FOR HEALTH CARE PRACTITIONERS
This course focuses on health care methodologies relevant to health care administration — including a cross section of both qualitative and quantitative methodologies. Designing questionnaires and surveys, the analysis and presentation of survey data, interviewing strategies, the analysis and presentation of qualitative data. Students will also be provided with skilled technical writing assignments geared toward providing an understanding of how to most effectively present data within the contexts of reports, visuals for meeting or memoranda.

HTHC 517 HEALTH CARE LITERACY
The U.S. Department of Health and Human services included improved consumer health literacy as Objective 11-2, and identified health literacy as an important component of health communication, medical product safety and oral health. Health Literacy refers to obtaining, processing and understanding basic health information. This course examines how the consumer can be not only informed more effectively and efficiently, but also how health information should inform decision making in multiple health contexts.

HTHC 519 ASSESSMENT AND INTERVENTION FOR HEALTH CARE ADMINISTRATORS
Health care practitioners must acquire management consulting skills necessary to identify areas in need of change within health care organizations. Problem identification, data collection, intervention and implementation phases of assessment and intervention are taught from the perspective of the health care organization. The course probes common management problems in health care, internal working relationship challenges as well as organizational structure issues that arise.

HTHC 520 HEALTH CARE CAMPAIGNS AND COMMUNITY ACTION
This course will focus on the use of communication strategies to inform and influence individual and community decisions regarding health in the following contexts: the multidimensional nature of health communication; understanding empirical research in health communication; behavioral theories in health communication; rhetorical theories in health communication; legal and ethical concerns in health communication; the communication of risk and uncertainty; and the design of health campaigns.

HTHC 521 HEALTH AND FAMILY COMMUNICATION
The course, Family and Health Communication, addresses health-related issues that families may experience,
while situating them within a theoretical context. Using theories such as Family Systems Theory and Communication Privacy Management Theory, this course will take a Lifespan Approach to better understand family health issues. Some of the topics that will be covered in this course may include care giving responsibilities, long-term disease, disability, addiction, psychological disruption, sexual health, and end of life issues as affects the family system. Cultural and social norms, in addition to public and health policies are also addressed, as they provide insight into the larger scope of understanding family and health communication, as ultimately, the health of family members impact the functioning of the family system.

**HTHC 522 MANAGERIAL COMMUNICATION IN HEALTH CARE CONTEXTS**
This course will equip students to more effectively understand and manage the dynamic communicative systems, processes, and interactions of people and messages within healthcare environments. This course will explore interpersonal differences with a focus on the role communication plays with various organizational stakeholders, superior-subordinate relationships, internal-external customer relations, managerial problem solving, decision-making, facilitation of change and use of appropriate leadership strategies, as well as organizational structure and ethical and legal requirements. Additionally, this course also focuses on understanding the relationship between designing, managing, and disseminating messages, data, information, and knowledge that health care facilities and professionals have to deal with on a daily basis; appropriate performance feedback principles; and presentational speaking and writing.

**HTHC 523 TOPICS IN HEALTH COMMUNICATION**
Topics will include: Gay, Lesbian and Transgender Health Care Issues, Patient Advocacy, Communication and Constraint, Multicultural Communication in Health Care Contexts and Advance Care Planning

**HTHC 524 HEALTH CARE TEAMS & LEADERSHIP**
Modern organizations are increasingly interested in shifting their organizational structures towards the goal of creating self-managed work teams. Much of the health care delivery system is already structured formally or informally around the team concept, whether these be surgery teams, consulting office staff, or other health and wellness delivery personnel. Therefore, those pursuing a career in health care greatly benefits from knowledge and experience with two interdependent aspects of group dynamics: decision-making under conditions of uncertainty, and the philosophy and practice of developing groups into self-managed teams. This course will combine a lecture/discussion with a teamwork intensive action learning component towards the goal of making the student competent to either create or optimize the results of self-managed work teams in their own organization (if called upon to do so), or to understand and thrive in this work mode without stress.

**HTHC 525 NARRATIVES IN HEALTH CARE**
Focusing on the performance and narrative paradigms of communication studies, the course would survey uses of performance and narrative methods to consider health communication relationships. Narrative and narrative performance are sites of health communication issues for marginalized populations, difficult conversations, and alternate means of reporting. For example, narrative and narrative performance are increasingly being used as part of medical curriculum, as a means to train health care professionals to understand the experiences of their patients, encourage deep listening, and foster different professional-patient relations. For cancer, HIV/AIDS, and other patients, performance becomes a means of speaking into mainstream and dominant discourses of health and to actively shape discourses from their own subjectivities. This increases the visibility of health care experiences in its gendered, sexualized, and racialized dimensions. Finally, narrative and narrative performance offers an additional means of visibility in catalyzing change in public, legislative, scholarly and relational arenas.

**History**

**HST 421 THE HISTORICAL DISCIPLINE**
This course introduces students to the fundamental concerns and skills necessary for the study of history at the graduate level. It does this by providing a “history of history,” giving students an overview of the growth and development of the academic discipline of history, by addressing issues of methodology, historiography and historical philosophy, and by providing students with an awareness of current concerns, controversies, and debates in the discipline. Restricted to students in the MA in History program.
HST 422 SEMINAR IN PRIMARY SOURCE ANALYSIS
This course builds upon HST 421. It focuses on issues raised by the analysis of historical evidence, and exposes students to the many practical and theoretical tools by which historians construct historical knowledge out of this "raw" material. The course will include study of primary sources, methods of analysis and authentication, and ways in which different kinds of sources are integrated into coherent historical narratives. PREREQUISITE(S): HST 421.

HST 431 COLLOQUIUM IN AMERICAN HISTORY
PREREQUISITE(S): HST 421 or consent of the instructor.

HST 432 COLLOQUIUM IN LATIN AMERICAN HISTORY
PREREQUISITE(S): HST 421 or consent of instructor.

HST 433 COLLOQUIUM IN AFRICAN HISTORY
PREREQUISITE(S): HST 421 or consent of the instructor.

HST 434 COLLOQUIUM IN ASIAN HISTORY
PREREQUISITE(S): HST 421 or consent of instructor.

HST 435 COLLOQUIUM IN EUROPEAN HISTORY
PREREQUISITE(S): HST 421 or consent of instructor.

HST 436 COLLOQUIUM IN ISLAMIC HISTORY
PREREQUISITE(S): HST 421 or consent of the instructor.

HST 437 COLLOQUIUM IN WORLD HISTORY
PREREQUISITE(S): HST 421 or consent of the instructor.

HST 438 COLLOQUIUM: SPECIAL TOPICS IN HISTORY
PREREQUISITE(S): HST 421 or consent of the instructor.

HST 489 GRADUATE CAPSTONE
This is an intensive seminar in which students are asked to analyze a number of important works of scholarship drawn from the breadth and complexity of the historical discipline. The course allows students to synthesize the many skills they have learned in their earlier classes, notably the ability to read and assess historical monographs. They will thereby demonstrate their competence in analyzing historical arguments, their knowledge of both historiography and historical content, and their proficiency in understanding the variety of primary sources and methods of interpreting them. PREREQUISITE(S): HST 421.

HST 492 GRADUATE INTERNSHIP
Internship. PREREQUISITE(S): HST 421 and permission.

HST 497 INDEPENDENT STUDY
PREREQUISITE(S): HST 421, approval of instructor and graduate director.

HST 499 THESIS RESEARCH
Between four and eight hours credit to be determined by the department. PREREQUISITE(S): HST 421.

HST 500 CANDIDACY CONTINUATION
Required of all students who are not registered for regular courses but who occasionally utilize University facilities during completion of course requirements and/or research. Non-credit. $40.00 per quarter.

HST 501 CANDIDACY MAINTENANCE
This zero-credit hour course is for MA in History students who are not actively working on their theses or final projects, but who wish to maintain university status. Candidacy Maintenance does not allow borrowing or deferment of loans, but does grant student access to DePaul resources such as labs, libraries and the gym. PREREQUISITE: Permission of Graduate Director required.

History of Art & Architecture
HAA 400 CHICAGO ARCHITECTURE AND URBANISM (FORMERLY ART 400)
Chicago Architecture And Urbanism. Formerly ART 400.

HAA 401 GRADUATE TOPICS/HISTORY OF ART & ARCHITECTURE
Graduate-level, intensively researched investigations into topics from the history of art and architecture taught by an instructor with a research specialty in that topic. Formerly ART 401. PREREQUISITE(S): Graduate standing or consent of the instructor.

HAA 495 ADVANCED TOPICS/HISTORY OF ART & ARCHITECTURE (FORMERLY ART 495)
Advanced Topics In the History of Art & Architecture. Formerly ART 495. PREREQUISITE(S): Graduate standing or consent of the instructor.

Hospitality Leadership

HSP 503 ADVANCED HOSPITALITY LEADERSHIP AND PERFORMANCE
The goal of this course is to examine advanced hospitality leadership practices within the various industry segments. Leadership principles and hospitality management approaches will be examined through the lens of financial and human capital performance. Topics include: critical decision-making, hospitality team dynamics and service performance, financial feasibility in operational delivery, brand and marketplace competency, ethics and values. PREREQUISITE(S): MGT 500, MGT 502

HSP 504 MANAGING THE GUEST/EMPLOYEE EXPERIENCE
This course is designed to examine highly developed principles of the guest experience, the guest/employee interface, and the role employee development and service delivery plays within the hospitality industry. Leadership of various hospitality service operations will be studied in the context of realms of experience and guest quality assurance. Experience realms will be grounded in the constructs of unique hospitality experiences that engage guests in an inherently personal way. Topics will include: customer care and loyalty programs, creativity and innovation, employee skill development, service operation strategies, product design, capturing guest identity, and customer co-creation. PREREQUISITE(S): HSP 503

HSP 550 NON-PROFIT FOODSERVICE AND SHELTER MANAGEMENT
Non-profit hospitality foodservice and shelter management encompasses a broad array of institutions, associations and organizations on a local, regional and national level. The leadership requirements associated with disaster relief response, national philanthropic, and local grass-roots community organizations will be examined. Non-profit organizational frameworks and governance components that are necessary to successfully lead a non-profit enterprise are explored. Topics include: leadership and logistical support/readiness, emergency relief services, international regulatory and procedural issues, volunteer workforce planning and acquisition, food sourcing and distribution, foodservice outlets and delivery mechanisms, shelter accommodations, and community alliance networking. PREREQUISITE(S): MGT 500, MGT 502

HSP 551 NON-PROFIT EVENT MANAGEMENT
Non-profit event management is evolving into a complex and dynamic discipline within the hospitality industry. This course examines the nature and structural components of event management within the non-profit sector. The course design will incorporate event conceptualization and evaluation techniques unique to the non-profit hospitality product delivery. Topics will include: market segmentation, strategic analysis for event planning, financial literacy, managerial and operational logistics, governmental and non-govermental advocacy, sponsorship development and fund raising, contract execution and contract administration. PREREQUISITE(S): MGT 500, MGT 502

HSP 561 REVENUE MANAGEMENT
This course explores revenue management within the hospitality industry from a comprehensive perspective as it pertains to the importance of generating business revenues and contributions to the overall service-firm financial performance. The evolution of revenue management principles and practices within the hospitality sector has advanced in both sophistication and complexity, increasing the need for enhanced development of
human capital, investments in data analytics, and systems integrated approaches to successful revenue generation. Topics include: Data mining and predictive analytics, inventory and price management, consumer behavior, social media and e-commerce, and demand based forecasting. Simulation software is used in this course to apply the principles of revenue management to practical situations. PREREQUISITE(S): MKT 555, GSB 420

HSP 562 HOSPITALITY DISTRIBUTION CHANNELS
This course examines advanced principles and applied hospitality revenue management strategies associated with service distribution channels. Topics include an introduction to the global distribution networks, branding perspectives and channel management, corporate reservations systems, travel intermediary relationships, advanced pricing theory-price parity, product marketing and content consistency, search engine optimization, competitive positioning and analysis, systems processing, human capital resources and organizational processes. PREREQUISITE(S): HSP 561

HSP 793 PRACTICUM IN APPLIED HOSPITALITY LEADERSHIP
Experiential learning plays an important role in applying academic knowledge to real-world business challenges and opportunities. This practicum in applied hospitality leadership engages students in a practical, experiential, multidisciplinary approach to learning, which fosters development of personal and professional skills. Under the direction of the course faculty, students assume the role of researchers/advisors to key Chicago hospitality organizations that seek guidance on business strategy or challenging operational issues. Projects might include: leadership assessments service-process improvements, service innovation, event planning, club management and others. Students work closely with sponsoring organizations and supervising faculty to identify the scope of the projects, collect information and conduct analysis, and then report findings and/or recommendations. Major outcomes include an oral presentation to faculty and a written report for management. PREREQUISITE(S): INSTRUCTOR APPROVAL

Human-Computer Interaction

Graduate Course Descriptions - Current

HCI 402 FOUNDATIONS OF DIGITAL DESIGN
Shape, line on two-dimensional surfaces. Color. Composition rules as they apply to digitally created documents. Digital manipulation of two-dimensional images. Use of commercially available draw and paint tools to create two-dimensional designs.

HCI 422 MULTIMEDIA
Multimedia interface design. Underlying technological issues including synchronization and coordination of multiple media, file formats for images, animations, sound and text. Hypertext. Information organization. Survey of multimedia authoring software. Topics in long distance multimedia (World Wide Web). Students will critique existing applications and create several multimedia applications. PREREQUISITE(S): HCI 440 or consent of the instructor.

HCI 423 INTERNET MULTIMEDIA
(Cross-listed as ECT 423) Design and prototyping of multimedia applications for delivery via the Internet. Survey of low-bandwidth file formats for images, sound, and animation. Bandwidth reduction techniques and tools. Discussion of client side and server side allocation of responsibility. Authoring tools. Students will create and evaluate several small applications. PREREQUISITE(S): HCI 440 or ECT/HCI 441.

HCI 430 PROTOTYPING AND IMPLEMENTATION
Introduction to creating executable prototypes for interactive systems. Overview of modern user interface programming tools. The emphasis is on creating testable prototypes and evaluating them using technologies such as VB.NET and Access. Both stand-alone and Web-based applications are addressed. Students create a prototype for a predefined system, evaluate the prototype, redesign the system as necessary, and convert it to a final working system. Students prepare written documents describing their activities and present the final results to the class. PREREQUISITE(S): IM 230 and HCI 440.

HCI 432 USER-CENTERED WEB DEVELOPMENT
Analysis, design, and development of interactive web sites. Advanced application of HTML and style sheets for user-centered design. Survey of client-side technologies for interactive Web use. PREREQUISITE(S): IT 130.
HCI 440 USABILITY ENGINEERING
The user-interface development process. Introduction to methods for practicing user-centered design including user and task analysis, user interface design principles and testing using low-fidelity prototypes. PREREQUISITE(S): IT 130 or Graduate Standing.

HCI 445 INQUIRY METHODS AND USE ANALYSIS
This course provides students with the skills necessary to acquire and organize user information for the purpose of developing task and systems analyses. Topics covered include survey construction and administration, structured observation, interviewing, and participatory design. Students learn to evaluate and organize user information toward making analysis and design decisions. Human communication and presentation skills are developed. PREREQUISITE(S): IT 223

HCI 450 FOUNDATIONS OF HUMAN-COMPUTER INTERACTION
Application of engineering and psychological theory to the design of computer systems. Overview of applicable research methods and research on perception, cognition, errors, and screen design. Attention will be given to creating and applying guidelines derived from research. PREREQUISITE(S): IT 223.

HCI 454 INTERACTION DESIGN

HCI 460 USABILITY EVALUATION METHODS
Survey of evaluation methods that can be applied to user interfaces. Methods include expert inspections, walkthroughs, usability testing and analytical approaches. Students evaluate existing systems by applying some of these methods. PREREQUISITE(S): IT 223 and HCI 440.

HCI 470 DIGITAL PAGE FORMATTING I
Problem-based applications of perceptual and communication principles to the presentation of on-line and off-screen pages. Includes experience with industry standard vector, raster and formatting software. PREREQUISITE(S): HCI 402, ART 105, or equivalent.

HCI 471 DIGITAL PAGE FORMATTING II
Client-based applications for formatting in multi-page screen environments. Includes experience with industry standard multi-media software. PREREQUISITE(S): HCI 470.

HCI 511 DESIGNING FOR DISABILITIES
Designing computer-based solutions for problems faced by people with disabilities. Designing for both physical and cognitive disabilities. Solutions include text enlargement, enhanced audio, custom presentation of information, and unique input devices. PREREQUISITE(S): HCI 440 and HCI 460.

HCI 512 DESIGNING FOR VISUALIZATION
Sources of graphical integrity and sophistication. Data-Ink maximization. Data density. Color and information. Effective use of space and time. PREREQUISITE(S): HCI 440 and HCI 460.

HCI 513 DESIGN/STRATEGIES FOR INTERNET COMMERCE
(Cross-listed with ECT 555) An integrated study of design, technical, and strategic issues for Internet commerce. Web analysis, design and publishing. Visual, textual and content organization, response time, usability testing. Authorizing tools and administering web server. Internet database servicing. Internet service providers and pricing. Digital cash and encryption. Impact on the value chain, intermediation, and market structure. Strategies for mass customization, interactive marketing, and support for collaborative work. PREREQUISITE(S): ECT 353 and IS 422, or HCI 430, or advanced standing in another program.

HCI 521 DESIGNING FOR CONTENT MANAGEMENT SYSTEMS
Design and development of Web sites using common database-driven content management systems (CMSs) and publishing tools such as those used to manage blogs, community portals, and other content-heavy websites. Discussions of how familiarity with CMS tools assists the role of the user experience designer. Visual design and theme customization using prior knowledge of CSS. Taxonomy systems, installation of add-on modules, and user management using today's widely used systems.

HCI 530 USABILITY ISSUES FOR HANDHELD DEVICES
This seminar will cover the theoretical and practical issues of usability for handheld devices (cell phones and PDAs). Students will analyze how restricted displays and input modalities constrain applications on these
platforms, and how these constraints factor into the design process. PREREQUISITE(S): HCI 440 and HCI 430 or CSC 418.

**HCI 540 USER INTERFACE IMPLEMENTATION I**
Converting prototypes into running systems. The focus is on using a User Interface Management System, learning the underlying programming language, and the underlying programming environment. Students work on a project that requires pushing the UIIMS beyond its normal limits. TAE+, Galaxy, DevGuide, C, C++, Tcl/tk. Students present their final results to the class. PREREQUISITE(S): CSC 418 or HCI 430.

**HCI 580 USER EXPERIENCE DESIGN PRACTICUM**
Working with clients, students choose and practice appropriate methods learned in the HCI foundational courses to address business goals and user needs. Course coverage includes best practices for consulting, effective communication with clients and coworkers, understanding business and organizational needs, and setting realistic goals and expectations. PREREQUISITE(S): HCI 445 and HCI 454

**HCI 590 TOPICS IN HUMAN-COMPUTER INTERACTION**
HCI topic varies with offering. Contact instructor for more information. PREREQUISITE(S): Completion of the HCI core courses or consent of the instructor. May be repeated for credit.

**HCI 594 HUMAN-COMPUTER INTERACTION CAPSTONE**
HCI 594 provides an opportunity for students to apply all of the skills they have learned on one comprehensive project. Multidisciplinary teams design, evaluate, and implement a user interface intensive project. Students prepare written documents describing their activities and present the final results to the class. PREREQUISITE(S): Completion of the HCI core courses or consent of the instructor.

**HCI 599 INDEPENDENT STUDY**
This is an independent study course. PREREQUISITE(S): Completion of the HCI core courses and consent of the instructor. May be repeated for credit.

**HCI 690 RESEARCH SEMINAR**
PREREQUISITE(S): Instructor consent.
Subjects beginning with the letter I are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

Information Systems
Information Technology
Institute for Professional Development
Instructional Technology System
Interdisciplinary Studies Program
International Business
International Studies
Italian

Information Systems

Graduate Course Descriptions - Current

IS 421 SYSTEMS ANALYSIS
Course focus is on both traditional and object oriented systems analysis, with an emphasis upon developing competency in a wide range of modeling techniques. Specific topics include: overview of the software development environment and project management; project selection, initiation, and planning; determining requirements; process modeling, including DFDs and use cases; logic modeling, including decision tables, sequence diagrams, and activity diagrams; introduction to Entity-Relationship Diagrams. PREREQUISITE(S): Completion of Prerequisite Phase

IS 422 SYSTEM DESIGN, IMPLEMENTATION, AND MAINTENANCE
Course focus is on both traditional and object oriented systems design. Specific topics include: database design, including logical and physical design; Entity-Relationship diagrams, class diagrams, form and report design; interface and dialogue design; design specifications, including structure charts and prototypes; designing for LANs and distributed systems, as well as the Internet; system implementation, including parallel and phased implementation, testing, documentation, and user training; system maintenance, including types of maintenance, controlling and coordinating maintenance requests, and configuration management. Course ends with a multi-week case study applying the principles from both this course and IS 421, Systems Analysis. PREREQUISITE(S): IS 421, Systems Analysis

IS 425 ENTERPRISE INFORMATION
This course focuses on the interrelationships and methods used by information systems groups to meet the information needs of enterprises. The course starts with an examination of the basics of enterprises information needs: the role of the value chain, the profit paradigm, and information infrastructure flows are explored. Then attention turns role of software methods, programming and security as supporting technologies. Topics include enterprise systems, commerce systems, project management, sourcing decisions, IT risk management, services and operations performed. PREREQUISITE(S): IT 215 or SE 325.

IS 430 FUNDAMENTALS OF IT PROJECT MANAGEMENT
This course concentrates on monitoring, managing and controlling assets and resources on a single IT project. Topics covered are risk management; procurement and contract management; time and cost estimating; controlling and tracking techniques; quality assurance; testing and audit. Students will use common project management software for resource allocation and balancing. NO PREREQUISITES.

IS 433 INFORMATION SECURITY MANAGEMENT
Survey of security considerations as they apply to information systems analysis and design. Vulnerability

**IS 435 ORGANIZATIONAL MODELING**
The course explores contemporary approaches to analyzing and modeling organizational problems, processes, workflow, users and data. The emphasis is on the initial stages of analysis where the root cause of problems are identified, formulated and modeled. Students will acquire an array of modeling skills and be able to prestructure the proper modeling approach based on a variety of organizational and contextual factors. Business process modeling, management and metrics will be covered. Object-oriented and user-centered approaches will be introduced. PREREQUISITE(S): IS 421 or any Systems Analysis and Design course.

**IS 440 COLLABORATIVE TECHNOLOGIES FOR LEADING PROJECTS**
Study of the process of virtual teaming with emphasis on facilitation of different time project activities and facilitation of same time meetings. Students will learn how small group psychology and group communication theories inform specific behaviors in the design and leadership of meetings. Several meeting types including information briefing, focus group, document writing, decision making, requirements gathering, and teaching/ training will be explored. In addition, the course surveys current collaboration technologies and discusses how to select among those technologies usability and fit to purpose of a meeting agenda. DL students may be required to schedule same time sessions with the instructor and other DL students; see current quarter syllabus for more information on this point. PREREQUISITE(S): NONE

**IS 444 IT AUDITING**
Management and boards continue to recognize the importance of effectively managing information technology (IT) assets - to meet business objectives and to thoughtfully manage IT related business risks. This course examines the key principles related to auditing information technology processes and related controls and is designed to meet the ever increasing needs of IT audit and IT governance professionals. In addition, this course aids in the preparation for the Certified Information Systems Auditor (CISA) exam. PREREQUISITE(S): None

**IS 455 ELECTRONIC BUSINESS**
An introduction to electronic business. The topics include business models, technologies, business and social impact of e-business. It explores the tools, skills, business and social implications of emerging electronic business. In addition to acquiring basic skills for identifying electronic business opportunities and creating a presence in the online marketplace, the student reexamines fundamental processes of business as they are performed in cyberspace in contrast to the marketplace. This helps them understand changes as the cyberspace grows increasingly important in the global economy. PREREQUISITE(S): None. For Kellstadt students or students pursuing the MS in Business Information Technology only.

**IS 456 KNOWLEDGE MANAGEMENT SYSTEMS**
Survey of emerging technologies supporting organizational knowledge processes including capture, codification, structure, storage, dissemination and reuse. The course will critically examine how organizations may leverage these technologies toward competitive advantage. Students will experiment with contemporary knowledge management (KM) tools. Some theoretical perspectives on knowledge management (KM) and organizational learning (OL) will be introduced. PREREQUISITE(S): completion of foundation or core phase.

**IS 475 INFORMATION SYSTEMS ANALYSIS AND DESIGN**
Information systems development emphasizing the application of structured techniques in a case and 4Gl environment. Topics and team project tasks include case tools, entity-relationship diagramming, data-flow diagramming, structure chart, action diagram, joint application design, prototyping, design of relational database, and testing. PREREQUISITE(S): CSC 315 or instructor consent.

**IS 481 SOFTWARE AND SYSTEMS DOCUMENTATION**
Creating documentation for software, systems, or telecommunications projects. Development and delivery of documents (paper and Web-based) that present products and systems effectively to complex audiences. Documents include planning documents, vision statements, requirements specifications, status and milestone reports, user test plans, and user documentation. Emphasis on constructing electronic documents, appropriate content and hyperstructures for specific purposes and readers, and textual interactivity. Discussions on versioning and intellectual property issues. Presenting highly technical issues to business audiences. PREREQUISITE(S): Graduate Standing.

**IS 482 LEGAL ASPECTS OF INFORMATION TECHNOLOGY**
A practical survey of computer and information technology law arising in a high tech environment. Topics
A practical survey of computer and information technology law arising in a high tech environment. Topics covered include: employment contracts, civil and criminal law, fraud and abuse, contracts, e-commerce, intellectual property, privacy, security, harmful communications, constitutional and First Amendment issues, and internal law and trade. PREREQUISITE(S): NONE.

**IS 483 INFORMATION SERVICES AND OPERATIONS**

This course focuses on the operational aspects of information systems in organizations by examining the concepts, tools and techniques available to IS professionals responsible for the delivery of IT services. Topics include the organization of the IT services; the procurement of hardware, software and vendor services; operation of data centers, help desks and user training, the development and use of RFPs (Request for Proposals) and SLAs (Service Level Agreements), the integration of services and operations with application development project needs, and the role of capital and operating budgets. PREREQUISITE(S): Completion of foundation or core phase

**IS 484 COMPUTERIZED ACCOUNTING SYSTEMS**

Responsibility accounting systems. Profitability accounting systems. Customer invoicing, cash receipts and accounts receivable information processing. Customer order entry, finished goods inventory, purchasing and receiving information processing. Accounts Payable, fixed assets and employee payroll systems. General ledger, budget and profit planning, sales analysis and market planning systems. PREREQUISITE(S): GSB 504 or ACC 103.

**IS 485 REQUIREMENTS ELICITATION, ANALYSIS, AND SPECIFICATION**

This course focuses on the concepts and skills needed to elicit, analyze, specify, and manage requirements for a software or systems level project. Students will learn to identify and work with stakeholders through conducting a variety of requirements gathering techniques including interviewing, surveying, ethnography, and Joint Application Design (JAD) sessions, to identify and analyze requirements conflicts and negotiate solutions, to model requirements and specify them in unambiguous ways, and to manage requirements throughout the software lifecycle using change controls, traceability, and impact analysis techniques. The requirements process will be examined in both traditional and agile environments. Current topics such as requirements for product lines or distributed development teams will also be explored as time permits. Prerequisite(s): IS 422 or IS 430 or PM 430. A student may not take both SE 482 and IS 485 for credit toward a degree.

**IS 500 EFFECTIVELY MANAGING AND LEADING IN INFORMATION TECHNOLOGY**

Managing people ethically and effectively by applying a broad range of creative approaches to individual and team leadership within an Information Technology context. Leadership methods studied include trait-based, skills-based, situational, contingency theory, path-goal theory, leader-member exchange theory, transformational, psychodynamic, and authentic leadership, as well as team leadership and the international, cultural, and ethical dimensions of leadership. Students assess their leadership styles and design individualized development plans to strengthen existing skills and expand IT leadership capabilities by incorporating additional leadership dimensions. PREREQUISITE(S): IS 430, PM 430, OR SE 477

**IS 505 BUSINESS CONTINUITY/DISASTER RECOVERY THEORIES AND STRATEGIES**

This course focuses on the knowledge necessary for an organization to prepare for a variety of major disruptions (floods, earthquakes, terrorist attacks, etc.). The goal is survival of the organization and its daily workflow despite major disruption. Students learn to analyze and prioritize risks and determine criticality ratings that are used to determine survival strategies. Students also learn how to organize employees to respond to a major disruption and how to document recovery plans. Course content includes coverage of current industry trends, as well as planning for the survival of Information Technology functions within an organization.

**IS 506 BUSINESS CONTINUITY/DISASTER RECOVERY MANAGEMENT AND TACTICS**

The course prepares students to lead an organization's business continuity and disaster recovery plans. Students learn the methodology needed to organize this function within an organization, evaluate an organization's business continuity and disaster recovery program according to established industry standards, and conduct a variety of quick-recovery drills. Students also focus upon industry-related human resources issues, crisis communications, and policies and procedures for setting up a command center. Course content includes coverage of current industry trends, as well as managing the survival of Information Technology functions within an organization. Prerequisite(s): IS 505

**IS 511 SOCIAL ISSUES OF COMPUTING**

This course aims to provide a broad survey of the individual, organizational, and cultural impacts of computers and to stimulate reflection upon the social and ethical issues provoked by current and projected uses of computers. Some topics include an in-depth look at computers as they relate to workplaces,
IS 533 ENTERPRISE SECURITY INFRASTRUCTURE CONTROLS AND REGULATORY COMPLIANCE
Design, implementation, support and management of control methods in enterprise environments. Focus is on how these controls can help organizations achieve regulatory compliance. Review of Sarbanes-Oxley and its impact on IT systems. Detailed study of how risk assessment methods, information security program management and ERP systems can be used to fulfill regulatory and legal requirements. Control Objectives for Information and related Technology (COBIT) guidelines and best practices for SOX compliance. Security management standards (ISO 17799, BS 7799 and ISO 27001). PREREQUISITE(S): IS433

IS 535 INFORMATION TECHNOLOGY INVESTMENT FINANCIAL ANALYSIS
This course focuses on the application of financial analysis and decision-making approaches to aid information technology investment decisions at the operational, project, tactical and strategic levels. Students will learn how to apply a variety of financial methods -- breakeven analysis, present value analysis, profitability index, and return on investment to various IT investment decisions. The course will also address cost benefit analysis, outsourcing, balanced scorecard, and multi-factor scoring, benchmarking, and IT investment portfolio methods. These techniques will prepare students to manage capital budgets, acquisition of system and application software, hardware, personnel, and professional services at project and system levels as well as enterprise investment portfolio. PREREQUISITE(S): SE 477 or IS 565 or ACCT 500 or IS 430 or PM 430 or ECT 455

IS 536 ENTERPRISE CLOUD COMPUTING
Cloud concepts, architecture, and service management, with particular emphasis upon identifying and analyzing potential business applications of cloud computing. Students will conduct feasibility studies, detailing the advantages and disadvantages of implementing a cloud computing platform for specific applications, with particular emphasis upon financial considerations, business benefits, and security risks. Students will develop the ability to evaluate alternatives and effectively argue in favor of their choices within the cloud computing knowledge domain. They will be able to define, apply, and defend the need for standards and best practices. Students will work within a project team following the principles of project management to design, build, and implement cloud applications.

IS 540 GLOBAL INFORMATION TECHNOLOGY
A study of the hardware, software, and techniques for using virtual information technologies to support teams working in a distributed, virtual, or global environments. Topics include software survey and evaluation, software deployment within organizational and trans-organizational contexts, trans-national vendor relationships, trans-border data flow, geographically dispersed software development, and integration of diverse technologies. PREREQUISITE(S): Completion of foundation or core phase

IS 549 DATA WAREHOUSING AND DATA MINING
Introduction to data warehousing and the foundations of understanding the issues involved in building a successful data warehouse. Data warehouse development methodology and issues surrounding the planning of the data warehouse. Data quality and metadata in the data warehouse. Analysis, transformation and loading of data into a data warehouse. Development of the data architecture and physical design. Implementation and administration of the data warehouse. Introduction to data mining. (PREREQUISITE(S): CSC 449 or CSC 451 or CSC 453).

IS 553 ADVANCED TOPICS FOR SYSTEMS DEVELOPMENT
Planning and implementation of enterprise systems in the context of enterprise transformation and new market dynamics. Networked enterprise and virtual organizations. Internet and intranet applications for electronic commerce, mass customization and information empowerment. Enterprise-wide systems, business process reengineering. Interorganizational systems, sourcing options, and transformational information technologies. Value-chain analysis and competitive strategies. Case studies examine various planning and implementation approaches and impacts. PREREQUISITE(S): IS 422 or ECT 555 or SE 430.

IS 554 INFORMATION ENGINEERING
Application of structured techniques on enterprise-wide data models, information architecture, and cross-functional models. Stages for information strategy planning, business area analysis, joint requirement planning, and I.E. methodology. CASE tools, organizational strategies and economics of financial justification. Case studies. (PREREQUISITE(S): IS 422 and CSC 449).

IS 556 ENTERPRISE PROJECT MANAGEMENT
This course covers how an enterprise coordinates and effectively manages all its IT projects and programs through program management and the IT program management office. Students will learn the role of the IT program management office in establishing and maintaining the project and program infrastructure and in
assisting project managers, program managers, and the executive steering committee. Students will analyze the role of program management in coordinating the delivery of expected program benefits, in managing stakeholder expectations, and in establishing program governance. PREREQUISITE(S): IS 430 or PM 430 or completion of foundation phase.

**IS 560 ENTERPRISE SYSTEMS**
An introduction to enterprise systems for data and process integration, including ERP systems. Topics include the requirements of enterprise systems, application architecture, tools, and functionality of leading enterprise systems, life cycle and methodologies for systems integration, selection, and implementation strategies. Also addressed are emerging trends for enterprise systems and relationship among component systems. PREREQUISITE(S): Advanced Standing

**IS 565 IT OUTSOURCING**
The course focuses on how organizations can use leverage of scale as a source for cost reduction; leverage of expertise for improved superior IT performance; leverage of access (e.g. location) to develop new strategies. Other topics covered include different types of sourcing strategies, sourcing maturity levels and best practices. PREREQUISITE(S): Completion of foundation or core phase

**IS 567 KNOWLEDGE DISCOVERY TECHNOLOGIES**
An introduction to the Knowledge Discovery Technologies covering all stages of a data mining process: domain understanding, data collection and selection, data cleaning and transformation, dimensionality reduction, pattern discovery, evaluation, and knowledge extraction. The course provides a comprehensive overview of data mining techniques used to realize these stages, including traditional statistical analysis and machine learning techniques. Students will analyze large datasets and develop modeling solutions to support decision making in various domains such as healthcare, finance, security, marketing, customer relationship management (CRM), and multimedia. PREREQUISITE(S): IT 223

**IS 570 ENTERPRISE SYSTEM IMPLEMENTATION**
Formerly IS 450. This course is targeted towards information systems professionals who are involved in the planning and implementation of large scale, cross-functional enterprise systems. Students will examine the characteristics of technology efforts that change and transform the way people perform their tasks and how the new technology structures the flows of information and decision making using workflow modeling methods. Through case studies and exercises students gain insights into the elements of successful implementations leading to the preparation of a change management plan. Emphasis is placed on developing mechanisms for communicating and training all affected agents. PREREQUISITE(S): IS 430 or PM 430 or completion of foundation or core phase

**IS 571 SOFTWARE MAINTENANCE**
Software Maintenance

**IS 574 BUSINESS INTELLIGENCE**
Introduction to the concepts of business intelligence (BI) as components and functionality of information systems. How business problems can be solved effectively by using operational data to create data warehouses, and then applying data mining tools and analytics to gain new insights into organizational operations. Detailed discussion of the analysis, design and implementation of systems for BI, including: data management systems, decision support systems, group support systems, knowledge engineering, expert systems, and Web 2.0 tools. Case studies of application software, web tools, success and limitation as well as technical and social issues. (PREREQUISITE(S): (SE 430 or IS 435 or PM 430 or MIS 674) and (CSC 449 or CSC451).

**IS 575 INTELLIGENT INFORMATION RETRIEVAL**
Examination of the design, implementation, and evaluation of information retrieval systems. The focus is on the underlying retrieval models, algorithms, and system implementations. Also examined is how an effective information search and retrieval is interrelated with the organization and description of information to be retrieved. Topics include: automatic indexing; thesaurus generation; Boolean, vector-space, and probabilistic models; clustering and classification; information filtering; distributed IR on the WWW; intelligent information agents; IR system evaluation; information visualization; and natural language processing in IR. Throughout the course, current literature from the viewpoints of both research and practical retrieval technologies both on and off the World Wide Web will be examined. PREREQUISITE(S): CSC383.

**IS 577 INFORMATION SYSTEMS POLICIES AND STRATEGIES**
This capstone course emphasizes the planning and management of information technologies and related resources at the corporate level. Topics covered include assessment of information technologies, tracking emerging technologies and trends, managing portfolio resources and matching them to business needs,
technology transfer, end-user computing, outsourcing, theoretical models, strategic applications and strategic IT planning. Students are encouraged to take this course toward the end of their study. PREREQUISITE(S): Ten or more CDM MS level courses.

**IS 578 INFORMATION TECHNOLOGY CONSULTING**
This course is for the IT professional. The emphasis is on examining the models, techniques, and skill development for providing effective IT consulting services. The course examines the structure of IT consulting markets; leading IT consulting practices; models and approaches for providing internal IT consulting services; sourcing strategies, evaluation of RFPs and response process contract formulation, client relations and project management; knowledge management and collaboration and IT strategies. PREREQUISITE(S): Completion of foundation or core phase.

**IS 590 INFORMATION SYSTEMS RESEARCH METHODS**
Introduction of information systems (IS) research methods and theories. The course is taught as a seminar course. Both quantitative and qualitative methods are discussed. PREREQUISITES: At least two statistics courses among IT 223 and (CSC 424 or CSC 428)

**IS 596 TOPICS IN INFORMATION SYSTEMS**
Independent study form required. (PREREQUISITE(S): Consent of instructor).

**IS 599 INDEPENDENT STUDY**
Independent study form and consent of instructor required.

**IS 690 RESEARCH SEMINAR**
Readings and discussion on current research topics. Students may register for this course no more than twice. (PREREQUISITE(S): Consent of advisor).

**IS 696 MASTER'S PROJECT**
Four credit hours. Students may register for this course only after their advisor has approved a written proposal for their project. Independent study form required. (PREREQUISITE(S): Consent of advisor).

**IS 698 MASTER'S THESIS**
Two credit hours. Students may register for this course only after their advisor has approved a written proposal for their thesis. Students must continue to register for this course every quarter after their first registration in it until they complete their project or thesis to the satisfaction of their advisor. They earn two hours of credit for each such registration but only four hours of credit will apply for degree credit. Independent study form required. PREREQUISITE(S): Consent of advisor.

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Information Technology

**IT 430 BUILDING INTERNET APPLICATIONS**
This course presents the design and development of interactive Web applications for e-commerce. Major topics include Web server architecture; server-side programming including events and controls; application and database integration; and security issues. Students will engage in a course project to build a dynamic Web application. PREREQUISITE(S): IS 440 or PM 440

**IT 432 WEB ARCHITECTURE FOR NON-PROGRAMMERS**
Overview of Web application development for non-programmers. Hands-on exposure to the Model, View, Controller (MVC) framework using a common web framework. Topics include HTML/CSS, data modeling, authentication, AJAX and security issues. Students create and modify dynamic web sites. PREREQUISITE(S): Graduate Standing.

**IT 590 TOPICS IN INFORMATION TECHNOLOGY**
Advanced study focusing on a specific area of information technology each quarter. May be repeated for credit. PREREQUISITE(S): Consent of the instructor

**IT 599 TOPICS IN GLOBAL INFORMATION TECHNOLOGY**
IT 599 TOPICS IN GLOBAL INFORMATION TECHNOLOGY

Course Description: This course focuses on current topics in the information and communications technologies that together support the "networked world". Samples topics are global software development and deployment, global data and information management, and cross-cultural project management for information systems. The course may be offered for variable (1 to 4) credit hours. PREREQUISITE(S): None

IT 698 MASTER'S THESIS

2 credit hours) Students may register for this course only after their advisor has approved a written proposal for their thesis. Students must continue to register for this course every quarter after their first registration in it until they complete their project or thesis to the satisfaction of their advisor. They earn two hours of credit for each such registration but only four hours of credit will apply for degree credit. PREREQUISITE(S): Consent of advisor.

Institute for Professional Development

Graduate Course Descriptions - Current

IPD 452 IPV6 PROGRAM
A 10-week online program providing comprehensive coverage of IPv6 technologies and strategies for transitioning enterprise networks to IPv6

IPD 460 SQL SERVER BUSINESS INTELLIGENCE PROGRAM
An 11-week in-depth program covering SQL Server 2005 analysis services, integration services, and reporting services.

IPD 461 SQL SERVER DATABASE HIGH AVAILABILITY PROGRAM
An 11-week program designed to provide a comprehensive overview of the various high availability solutions available with the latest edition of Microsoft's SQL Server.

IPD 468 .NET MOBILE APP. DEV. PROGRAM
An 11-week focused program covering the basic skills and techniques for successfully building

IPD 530 ADVENTURE OF THE AMERICAN MIND
The Adventure of the American Mind (AAM) is the course component of a project designed to teach in-service classroom teachers to access, use and produce curriculum utilizing the Internet and the digitized primary source materials from the collections of the Library of Congress.

Instructional Technology System

Graduate Course Descriptions - Current

ITS 427 LEARNING AND TECHNOLOGY
This course will focus on computer systems which are meant to help people learn something, so the primary concern is how well they support learning. We will start by looking at the state of the art in the scientific understanding of how people learn. Then we will apply these principles to evaluating designs of learning systems and to creating effective designs. Projects will involve evaluation of existing learning systems, and the creation of a simple learning system which follows design principles for effective learning. PREREQUISITE(S): NONE.

ITS 431 INSTRUCTIONAL DELIVERY AND COURSE MANAGEMENT SYSTEMS
This is an applications course in which participants will examine instructional delivery systems such as Internet-based applications, and other voice, video and data systems and course management systems such as Black Board, cu Hear me, Lectra, and Net Meeting. The course will be grounded in learning theory, management practices and organizational structures. PREREQUISITE(S): ITS 427
ITS 440 DISTANCE LEARNING TECHNOLOGIES
This course is designed to enable students to design and evaluate Internet-based distance learning (IDL) systems. The course focuses on three major themes: IDL scenarios and requirements, multimedia technology and its impact in IDP systems, and network and collaboration support for IDL. PREREQUISITE(S): TDC 361 or DS 420.

ITS 560 TRAINING AND USER SUPPORT

ITS 584 ARTIFICIAL INTELLIGENCE IN LEARNING ENVIRONMENTS
Al techniques play a natural role in learning environments by allowing technological artifacts to interact with learners in an intelligent manner, and by helping us better understand the processes that are involved in learning. This course will look at Artificial Intelligence in Learning Environments (AILE) from three viewpoints. The first is the research in human learning that relates to AI techniques. Methods like scaffolding, self-explanation, constructivism, and learning-by-doing have been used by Al systems to increase learning in a wide range of settings. The second viewpoint comes from the AI techniques that have played an important role in AILE systems. Some of these come directly from "mainstream" AI, like cognitive modeling, natural language processing, machine language, and bayesian networks. Others have been developed primarily for use in AILE systems, for example, student modeling, model tracing, knowledge tracing, and methods for evaluating learning. We will ground all of these topics by looking at particular AILE systems that have been influential by pushing the state of art and/or demonstrating substantial benefits in learning environments. PREREQUISITE(S): CS 457 OR CS 480 OR INSTRUCTOR PERMISSION.

ITS 589 ITS CAPSTONE PROJECTS COURSE
This practicum projects course provides an opportunity for students to apply all of the skills they have learned on one comprehensive project. Multidisciplinary teams work with educational domain experts to plan, design, implement, and evaluate an intensive instruction technology systems project. PREREQUISITE(S): Completion of the ITS Fundamental courses or consent of the instructor.

Interdisciplinary Studies Program

IDS 497 INDEPENDENT STUDY (NON-CAPSTONE)
Independent study in an area that does not lead directly into the thesis or capstone. Students may also register for this course on a topic indirectly related to their thesis or capstone if they will subsequently take IDS 498, in which the student directly prepares to write the Integrating Project/Thesis. The MALS and IDS Program requires that students taking independent studies follow a specified format of meeting frequency, activities, and scholarly production. This format is available on the program web site or from the MALS and IDS office. Registration is by permission of the Director of the MALS and IDS Program and the instructor of the independent study.

IDS 498 INDEPENDENT STUDY [CAPSTONE]
Independent study undertaken as preparation for thesis or practicum capstone options. This course is optional preparation for IDS 499, Capstone. The MALS and IDS Program requires that students taking this course follow a specified format of meeting frequency, that they produce a review of literature related to their thesis or practicum, an annotated bibliography, and the required Formal Proposal for the thesis or practicum. Registration is by permission of the Director of the MALS and IDS Program and the permission of the instructor who serves as the thesis or practicum director.

IDS 499 CAPSTONE
Capstone for students doing a thesis, practicum or enhanced portfolio essay. Students may register for this course after the Formal Proposal for the thesis or practicum, or the Enhanced Portfolio Essay Proposal, has been approved. Students are normally expected to complete their capstone projects within the quarter in which they take this course. This course carries four hours of credit. Registration is by permission of the
Director of the MALS and IDS Program and the permission of the instructor who serves as the student's capstone director.

**IDS 501 ACTIVE STATUS**
Students register for this course during periods when they are not registered for courses but wish to have access to university facilities. Ordinarily students will not use this course once they have been admitted to candidacy during the thesis or capstone. PREREQUISITE(S): Permission of department

**IDS 502 CANDIDACY CONTINUATION**
Students who have completed ISP 499 Thesis/Capstone may register for this course in order to have continued access to university facilities. Students may register for this course no more than three times. PREREQUISITE(S): Permission

**IDS 602 CANDIDACY CONTINUATION**
This registration is required of all students who are not registered for courses but who occasionally use University facilities during completion of course requirements or research projects. Non-credit. $40.00 per quarter.

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**International Business**

Graduate Course Descriptions - Current

**IB 500 GLOBAL ECONOMY (FORMERLY ECO 556)**
This course is designed to be an introduction to the economic environment in which businesses operate. With the increasing interdependence of national economies and the growing role of global enterprises, the understanding of international economic issues is vital to decision-makers. The material covered will include both socio-cultural aspects and economic and financial dimensions of global business. Students should obtain a grasp of the basic theory as well as a knowledge of the major current issues in the global economy. PREREQUISITE(S): Graduate standing

**IB 505 GEOPOLITICAL AND CULTURAL ISSUES IN INTERNATIONAL BUSINESS**
Analysis of major geographical and cultural conditions in those countries most involved in U.S. foreign trade. Guest lectures, comprehensive maps and pertinent media presentations supplement weekly class discussion.

**IB 520 INTERNATIONAL TRADE THEORY AND POLICY**
Modern theories of international trade: classical theory of comparative advantage, factor proportions theory, factor price equalization, application of welfare economics to international trade, including regional economic integration, commercial policy and tariff problems. PREREQUISITE(S): ECO 555 or equivalent.

**IB 521 INTERNATIONAL MACROECONOMICS (CROSS-LISTED AS ECO 558)**
This course analyzes traditional macroeconomic issues in a framework that explicitly allows for international trade and capital flows. Topics covered include exchange rate and balance of payments determination, the impact of international trade and capital mobility on domestic monetary and fiscal policy, fixed vs. floating exchange rate systems, exchange rate overshooting and other topics. Cross-listed as ECO 558. PREREQUISITE(S): ECO 509 or equivalent

**IB 525 ECONOMICS OF DEVELOPING COUNTRIES**
This course reviews models of economics development and some of the key issues in economic development including agricultural and rural development, population, economic growth, the role of government, health, education, income distribution, trade regime and policy, international capital flows and the environment, international trade and foreign resource flows. The course integrates country studies of selected developing economies and regions, cross-country statistical studies and theoretical tools drawn from the fields of microeconomics, macroeconomics, and international trade. PREREQUISITE(S): ECO 555 or equivalent

**IB 526 COMPARATIVE ECONOMIC SYSTEMS**
A study of the contrasting theories of socialism and capitalism. PREREQUISITE(S): ECO 555 or equivalent

**IB 530 INTERNATIONAL FINANCE**
International Finance integrates the financial activities, institutions, and multinationals of the global finance
International Finance integrates the financial activities, institutions, and multinationals of the global finance arena. In addition to extending the tools of financial analysis to an international setting, the course studies the strategies available to a multinational because of operations in a multiple of countries. Topics include foreign currency and political risk, capital budgeting in a multinational setting, and cash flow management between countries. PREREQUISITE(S): FIN 555

IB 540 INTERNATIONAL MANAGEMENT
The objective of this course is to develop clear awareness of the international business operations, practices and environment. It provides the concepts, methods and tools necessary to face the global challenges in international management. The objective is met through lectures, classroom discussions, library assignments and research work. Students will learn the effective use of the international business references. By the end of the course, they are expected to have developed a high level of competency in acquiring, understanding, analyzing and synthesizing international management information from international business directories, databases and CD-ROMs.

IB 545 AREA STUDIES IN INTERNATIONAL MANAGEMENT
In-depth analysis of the economic and cultural aspects of doing business in a particular region, e.g. Western Europe, Middle East, Japan, etc. The course focuses on the region's business relations with the United States, its trade and management practices and the successful conduct of business negotiations. The area under consideration will vary from quarter to quarter in order to cover regions of particular interest to our students and the business community of Chicago.

IB 550 INTERNATIONAL MARKETING
The differences between markets and distribution systems in various countries are explored. By emphasizing the social and economic factors causing these differences a sound understanding of and empathy with different international marketing problems are developed. Analyses are made of the organization of trade channels in various cultures, of typical government policies towards international trade in countries at different stages of development, and of international marketing research, advertising, and exporting. Offered Variably. PREREQUISITE(S): MKT 555 or equivalent.

IB 750 INTERNATIONAL BUSINESS SEMINAR I
Off-campus seminar, usually one to three weeks, providing exposure to international business cultures. COREQUISITE(S): IB 755

IB 755 INTERNATIONAL BUSINESS SEMINAR II
Some of the International Business Seminars offered eight rather than four credits. Students are ordinarily required to complete an in-depth research paper in an international business area approved by the director of the seminar. Information gathered during the seminars with business and governmental organizations must be incorporated into the research paper. COREQUISITE(S): IB 750

IB 760 PROBLEMS AND PRACTICES I: MARKETING AND FINANCE, AN INTRODUCTION
An introduction to the issues in the management of marketing and financial activities in a global business environment. The course seeks to integrate marketing and finance as the driving forces of corporate strategy. Topics include the time value of money; the determinants of corporate financial strategies, including dividend policy, capital structure, and capital budgeting; and the role of agency costs and information in the formulation of financial policy. The course will also introduce students to consumer behavior, product and pricing strategy, new product development, and distribution strategy. PREREQUISITE(S): MBA/IMF only.

IB 770 PROBLEMS AND PRACTICES II: INTEGRATED SIMULATION
This course is designed to integrate multiple areas of specialization within an international business environment. Students will formulate, develop, and implement strategic issues and concepts for a "simulated" company. Decisions will include: product positioning, pricing promotion, and sales budgets, new product introduction, production, labor versus capital investment, and capital structure. Some of the factors that will be explored include defining the mission statement of an organization, environment analysis and appropriate reactions, setting objectives and targets, and formulating organizational and functional strategies. PREREQUISITE(S): MBA/IMF only

IB 775 PROBLEMS AND PRACTICES III: FINANCIAL MANAGEMENT
This course is designed to integrate the finance function into issues involving marketing strategies and marketing research. Through an analysis of the financial consequences of selected corporate missions and strategic objectives, the financial elements of a marketing plan are developed and analyzed. The course seeks to compare and contrast the analytical methods and applications used in marketing research with the types of problems and solution techniques developed for the finance function. Through a discussion of the strategic process and the corporation's analytical framework for decision-making, the course focuses on the interaction of finance and marketing in the global operations of the corporation. PREREQUISITE(S): MBA/IMF
IB 780 PROBLEMS/PRACTICE IV: MARKETING & FINANCE STRATEGIC ISSUES & INDUSTRY PRACTICES
This course addresses the use of marketing and financial decision-making in the development of the firm’s strategic plan. Topics examined include the process of strategy development and implementation, decision-making under uncertainty and change, and an examination of the contemporary marketing and finance environment as it applies to a specific firm. The student is challenged to integrate the marketing and finance issues facing the firm with the total corporate environment. The impact of recent developments in financial markets and of rapidly changing consumer preferences is emphasized. In a term project, students will develop a strategic plan for selected international firms and propose their plan to the firm. PREREQUISITE(S): MBA/IMF only

IB 798 SPECIAL TOPICS
Content and format of the course are variable. An in-depth study of current issues. Subject mater will be indicated in class schedule. Offered Variable. PREREQUISITE(S): As indicated in schedule.

IB 799 INDEPENDENT STUDY
Available to graduate students of demonstrated capability for intensive independent work in international business. PREREQUISITE(S): Written permission.

International Studies

Graduate Course Descriptions - Current: International Studies

INT 401 PROSEMINAR IN INTERNATIONAL STUDIES
The seminar defines the methodology of international studies in three ways: as a theory of institutional interactions between people separated by distance and/or culture, as a problem-based research agenda aimed at discovering more effective mechanisms for these institutional interactions, and a collection of methods that employ historical, political, economic and cultural research techniques, simultaneously or sequentially, to uncover solutions to international problems. The objectives of this seminar are accomplished by studying a series of cases, most of which require library research, with students. These serve as model thesis projects, thereby introducing students to the methodology of the field and the program requirements simultaneously. Faculty from the various disciplines offer lectures in the seminar, introducing students to a wider range of approaches and potential advisors in the Autumn term. PREREQUISITE(S): Permission of the director

INT 402 COMPLEX SOCIAL ORGANIZATION
The seminar will work through a series of cases that show students how to connect the surface events of a contemporary economic or political situation to the underlying social and cultural structures and processes that precipitate it. Theories that attempt to validate assumptions about these underlying structures and processes are examined. Through this seminar students acquire a fundamental knowledge of social theory and the methodology of organizational analysis. PREREQUISITE(S): INT 401 or permission of the instructor

INT 403 MOVEMENTS, REGIMES, AND IDEOLOGIES
The seminar focuses on the organization of power in contemporary societies and the processes that legitimize or impeach authority. Students examine cases from both historical movements and contemporary movements. Through this seminar students acquire a fundamental knowledge of the agendas of modern political movements and the ideological supports for existing regimes. PREREQUISITE(S): INT 401

INT 404 CULTURES IN THE INTERNATIONAL CONTEXT
An examination of contemporary issues in cultural analysis of global processes. Topics may include local-global linkages, transnational identities and communities, diasporas, Orientalism, the post-colonial condition, the post-socialist condition, commodification and consumption, meanings of gender and sexuality, globalized spaces and places, and technological transformation.

INT 405 ECONOMIES IN THE INTERNATIONAL CONTEXT
Examines the historical development of the contemporary international economy. The principle channels of interaction in this economy are examined: trade and investment, diffusion of technology, and institutional borrowing and adaptation. Students encounter classical, marxian, and neoclassical (political) theories of the
interaction between national economies. PREREQUISITE(S): INT 401

**INT 406 GLOBALIZATION**
This seminar explores the cultural, economic, and political dimensions of current globalization processes. Topics may include flows of people, goods, ideas, or capital and how these flows impact states, movements, regimes, and localities. PREREQUISITE(S): INT 401

**INT 490 SPECIAL TOPICS IN INTERNATIONAL STUDIES**
Special courses will be offered as students and faculty identify selected topics of common interest. This number is also used for students taking 300-level courses in the undergraduate International Studies program. In this case, students must have the approval of their thesis advisor and the director of the International Studies program before registering for the course.

**INT 500 TOPICS IN GLOBAL CULTURAL ANALYSIS**
Provides students writing theses in the area of global culture with opportunities to read contemporary works in the field, including the fragmentation of identity, postcolonial historiography, and transnationalism. Students develop analytical skills that can be applied to their projects. The seminar is offered in the Spring of the first year; the course focuses on different topics under different instructors.

**INT 502 TOPICS IN INTERNATIONAL POLITICAL ECONOMY**
Provides students writing theses in the area of international political economy with opportunities to read contemporary works in the field, including growth theories, capital and labor flows, and transformation of regimes. Students develop analytical skills that can be applied to their projects. The seminar is offered in the Spring of the first year; the course focuses on different topics under different instructors.

**INT 504 TOPICS IN INTERNATIONAL LAW**
Course offers students the opportunity to engage in an examination of recent developments in international treaties, legal process and international organization. Topics have included refugees, trade law, criminal law and the establishment of the international criminal court, international labor law, environmental law, theories of international law, human rights and the relationship between international law and local economic development. Students work on the international law and institutional aspects of their theses.

**INT 506 ETHICS IN INTERNATIONAL POLITICS**
Provides a detailed review of the ethical writings on international politics from a number of philosophical positions.

**INT 508 ETHNIC CONFLICT**
Course offers students the opportunity to engage in comparative examination of recent ethnic conflicts. Theories of the national/nationalism, ethnicity, race and gender are applied to case studies of conflicts involving group-based sociopolitical identification. International political legal forms of prevention and amelioration are studied and evaluated in light of theories and histories of group-based conflict. Conflicts studies have included: Northern Ireland, Rwanda, Israel/Palestine, the former Yugoslavia, Nigeria, E.Timor, Chiapas, France, Tibet, Cyprus, Kurdistan, Sri Lanka, and the U.S. Students work on the theory portion of their theses, developing a conception of group-based social identification.

**INT 509 INTERNATIONAL MIGRATION**
Course examines historical, political economic, sociocultural and legal aspects of the migration of people across borders. Students gain a critical understanding of the development of the world labor market from early modernity through the present, as well as the structural context of recent anti-immigrant/anti-immigration politics in Europe, North America and Australia. Cultural studies concepts of diaspora, mestiza, "the new ethnicity," and hybridity are used to explore the possible formation of unique migrant subjectives. Finally we look at the consequences for the nation-state of migration-driven transnational subject and community formation. Students work on the theory portion of their theses, developing a conception of population shifts, transnational identity and their implications for social organization.

**INT 510 GLOBAL CITIES**
Global Cities

**INT 532 INTERNATIONAL MEDIA**
Explores the growth in the scope and power of international media to distribute images and ideas. Topics covered include First World monopolization of media, analysis of ties between media and capital, and Third World resistance to media influence.

**INT 540 UNITED NATIONS PEACEKEEPING**
Peacekeeping. Explores the history of UN. peacekeeping efforts and the effectiveness of these efforts in
Peacekeeping. Explores the history of UN peacekeeping efforts and the effectiveness of these efforts in different conflicts. Topics vary with the interests of the students.

**INT 570 FIELD RESEARCH IN INTERNATIONAL STUDIES**
Supervised independent research aimed at acquiring primary data for the thesis. PREREQUISITE(S): Approval of the thesis advisor and the director of the program.

**INT 580 INTERNSHIP/PRACTICUM**
Supervised participation in a professional activity outside of the student's current employment, that further deepens the student's understanding of his or her research area. PREREQUISITE(S): Approval of the thesis advisor and the director of the program.

**INT 588 INTERNATIONAL SOCIAL ENGAGEMENT**
This course provides 20-25 hours of service learning opportunities for students in organizations that are pursuing local activities based on international missions or globally-informed policies. The course meetings are focused on student experiences and a discussion of state, sub-state, and non-state organizational structures in the international context.

**INT 590 THESIS RESEARCH I: DIRECTED RESEARCH**
The workshop extends the opportunity for students to discuss their thesis research activities with faculty and to learn various techniques and strategies of effective research. Ordinarily, students register for this course in Spring term. PREREQUISITE(S): INT 401

**INT 592 THESIS RESEARCH II: THESIS WRITING**
The workshop extends the opportunity for students to discuss their thesis writing activities with faculty and to learn various techniques and strategies of effective scholarly writing. The culmination of this course is the defense of the thesis. Ordinarily, students register for this course in Winter term. PREREQUISITE(S): INT 401

**INT 601 CANDIDACY CONTINUATION**
Students who must take extra time to complete the requirements for the first or second year must enroll in candidacy continuation or must apply for readmission to the program.

**INT 699 CANDIDACY MAINTENANCE**
Placeholder course for students NOT actively working on their thesis. This course is meant only to maintain university student status, it will not give the student full- or part-time student status and will not permit deferment of student loans. PREREQUISITE(S): Permission of Program Director.

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**Italian**

Graduate Course Descriptions - Current

**ITA 405 TOWARDS UNIFICATION: ROMANTICS, REVOLUTIONARIES AND REALISTS**
Authors will include Foscolo, Leopardi, Manzoni, Verga, Carducci and Pascoli. PREREQUISITE(S): ITA 106 or equivalent; ITA 201-203 generally recommended. Graduate standing required.

**ITA 406 FUTURISM AND BEYOND: LITERATURE OF THE NOVECENTO**
Topics will include issues of modernity in the works of Svevo, Marinetti, D'Annunzio, Pirandello and others. PREREQUISITE(S): ITA 106 or equivalent; ITA 201-203 generally recommended; graduate standing required. Cross-listed with ITA 306.

**ITA 432 ITALIAN CIVILIZATION II**
Overview of artistic, social and political developments from the Baroque to the Risorgimento. PREREQUISITE(S): ITA 106 or equivalent; ITA 201-203 generally recommended. Graduate standing required.

**ITA 497 SPECIAL TOPICS IN ITALIAN**
See schedule for current offerings. PREREQUISITE(S): Graduate standing required.

**ITA 498 STUDY ABROAD**
Variable credit. PREREQUISITE(S): Permission and graduate standing required.

**ITA 499 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Permission of chair and instructor and graduate standing required.
Subjects beginning with the letters J and K are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

Japanese

JPN 497 SPECIAL TOPICS IN JAPANESE
See schedule for current offerings. Graduate standing required.

JPN 498 STUDY ABROAD
Variable credit. PREREQUISITE(S): Permission and graduate standing required.

JPN 499 INDEPENDENT STUDY
Variable credit. PREREQUISITE(S): Permission of chair and instructor and graduate standing required.

Jazz Studies

JZZ 400 JAZZ ENSEMBLE
(1 credit) Current performance styles for large ensemble; new arrangements and compositions are emphasized; performances are presented both on and off campus. Audition required. All MEN courses are repeatable courses.

JZZ 401 JAZZ CHAMBER ENSEMBLE
(1 credit) Study, rehearsal and performance of literature for jazz chamber groups. All MEN courses are repeatable courses. Placement audition required.

JZZ 402 ADVANCED JAZZ COMPOSITION I
(4 credits) Composition of works for jazz chamber groups and big bands.

JZZ 403 JAZZ ANALYSIS AND APPLICATION
(4 credits) Studies of major jazz composers in transcription. Application of styles in compositional projects.

JZZ 404 ADVANCED JAZZ COMPOSITION II
(4 credits) Advanced topics in jazz composition. Composing for jazz chamber groups and big bands. PREREQUISITE(S): MUS 440.

JZZ 405 JAZZ HISTORY
This course will be centered around study of the bebop period, which is the foundation of modern jazz. The
swing era will be studied, which is the period immediately preceding bebo, to understand the reasons bebop came about. The substyles that developed after the bebop period are called the cool school and the hard bop periods. The reasons these periods came about will also be discussed. With regard to these periods, significant recordings, musicians, and style development will be discussed.

**JZZ 406 JAZZ STYLE AND ANALYSIS**
At the completion of this course, students will demonstrate a theoretical and aural understanding of the process of jazz improvisation, including song forms and structures, chord/scale relationships, chord notation and phrasing; transcribe, analyze, and perform select solo jazz improvisations by recorded jazz artists; have made two class presentations that will incorporate the student's performance and written analysis of select solo jazz improvisations, and a historical biography of the recorded solo artist. Open to all graduate music students.

**JZZ 407 JAZZ GRADUATE RECITAL**
A full 60 minute, public recital performance of solo and/or chamber repertoire to be completed during the graduate residence. This recital is required as partial fulfillment of the degree of Master of Music in Jazz Studies. COREQUISITE: Students must be registered for 2 or 4 credits of applied lessons during the quarter the recital is presented.

**JZZ 408 JAZZ ENSEMBLE**
(0 credit) Current performance styles for large ensemble; new arrangements and compositions are emphasized; performances are presented both on and off campus. Audition required.

**JZZ 409 APPLIED JAZZ COMPOSITION**
Private instruction exploring advanced techniques and methods of jazz composition and arranging. PREREQUISITE(S): JZZ 404.

**JZZ 410 JAZZ COMPOSITION FINAL PROJECT**
Completion of a 7-10 minute original composition for standard jazz ensemble instrumentation (5 reeds, 4 trumpets, 4 trombones, and rhythm section). This project is required as partial fulfillment of the degree of Masters of Music in Jazz Studies (Composition emphasis only). PREREQUISITE(S): JZZ 404.

**JZZ 411 JAZZ PEDAGOGY**
(2 credits) A study of the methods of teaching jazz improvisation arranging, composition, conducting and rhythm section techniques. Can serve as an elective for music education majors.

**JZZ 412 APPLIED JAZZ IMPROVISATION**
(2-4 credits) Applied instruction in jazz style and improvisation. The instructor will tailor the content of study to the student and may include fundamentals specific to the instrument. PREREQUISITE: Approval from Director of Jazz Studies.

**JZZ 413 JAZZ GUITAR**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**JZZ 414 JAZZ PERCUSSION**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**JZZ 415 JAZZ PIANO**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**JZZ 416 JAZZ SAXOPHONE**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

**JZZ 417 JAZZ STRING BASS**
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.
JZZ 418 JAZZ TROMBONE
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

JZZ 419 JAZZ TRUMPET
(2 or 4 credits) Open only to music students. Students may not enroll in applied lessons in excess of 4 quarter hours per quarter. All graduate music students may enroll in up to 24 quarter hours of applied study during their graduate career. No student may exceed the 24 quarter hour limit.

JZZ 450 JAZZ CHAMBER ENSEMBLE
(0 credit) Study, rehearsal, and performance of literature for jazz chamber groups. All of the MEN courses are repeatable courses.

JZZ 460 TOPICS IN JAZZ STUDIES
(1-4 credits) In depth investigation of a topic in jazz studies.

JZZ 498 INDEPENDENT STUDY
Independent Study

Journalism

Graduate Course Descriptions - Current J & K Journalism

JOUR 501 THE SOCIAL RESPONSIBILITY OF JOURNALISM
This course introduces students to the historic development of social responsibility theory and its continuing role in defining the obligations of journalists in creating an informed citizenry as a critical part of the democratic process. The course analyzes the ongoing tension between journalistic responsibility and the obligations of news organizations to turn profits for their shareholders and the constitutional imprimatur of journalism to offer the information that makes self-governance possible.

JOUR 502 NEWS NOW: JOURNALISM IN THE INFORMATION AGE
This course offers historic context in critically examining issues now facing journalism. Students will analyze the impact that convergence and digital technologies are having on ethical decisions that must be made by socially responsible journalists during every news shift. Topics include: who is a "reporter" in the digital age and what are the rights and privileges of the online reporter in a converged environment that influence confidentiality, defamation, privacy, gate-keeping, sensationalism, the public's right to know, globalization, corporatization, and public opinion.

JOUR 503 REPORTING FOR CONVERGED NEWSROOMS
This course is designed to equip journalists with the techniques needed in assembling and producing stories that can be published and distributed across integrated media platforms. Students will learn to write and edit reports for online media in ways that add value to stories and encourage readers to drill down into these news narratives for information worth knowing. Students will develop an understanding of how newsgathering practices are evolving through digital media and the role of teamwork in disseminating these stories to an informed citizenry.

JOUR 504 BACKPACK REPORTING
This course gives students the practical experience they need in news gathering and distribution within the converged landscape of electronic newsgathering. This will involve the preparation needed in covering stories, writing reports, shooting pictures and videos, and downloading these files along with links to relevant sites online. This course will prepare students to act independently and with others throughout the digital news gathering cycle, including the production of content in multiple information formats.

JOUR 505 ADVANCED TELEVISION REPORTING
This course will teach students how to be responsible broadcast news reporters, anchors, producers, and editors, who bring added value to stories in today's converged newsroom environment. Students will learn all aspects of the news gathering and distribution process from story conception to the research, interviewing, reporting, writing, shooting, editing, and producing that goes into a successful, must-see story. PREREQ: JOUR
JOUR 506 NEWSCAST PRACTICUM
This course teaches students how to construct a newscast, while fulfilling the social responsibility of the press. Students will learn how to utilize digital technologies to craft stories that empower citizens to participate more fully in public life. Students will rotate through different positions weekly---reporter, anchor, editor, technical director, director, floor director, and producer---in producing a weekly public affairs program. 
PREREQ: JOUR 503

JOUR 507 VISUAL COMMUNICATION
This course gives students a theoretical and practical grounding in the digital world of photo-journalism. Students will be introduced to the wide array of tools available to reporters in illustrating content from their stories on the web. This includes the hardware and software packages now available in digital story-telling and how citizens use the information in interpreting the news of the day.

JOUR 508 NICHE JOURNALISM
The course examines the explosion in magazine and trade publication journalism that is able to target specific audiences with content designed exclusively for them. Students will use the tools now available in reaching reader communities that share common interests and information. This is revolutionizing the ways in which stories are told, while creating communication communities that share common interests and speak a common language.

JOUR 509 JOURNALISM LAW AND ETHICS
This course examines the impact the digital revolution is having on the role of journalists in preserving, protecting, and defending a democratic process, founded on the Enlightenment understanding that giving citizens critical information is central to the democratic process. Twenty-first century technology is furthering the ability of journalists to meet their obligations to an informed public, while greatly complicating that role. This course analyzes the uniquely democratic landscape of the internet and other virtual worlds while probing the role of journalists in that world.

JOUR 510 SPORTS REPORTING
This course gives students an historic understanding of the role of the sports writer and sports section and the impact the online universe is having on sports writing and reporting. Students will the values of modern sports editors and the techniques used by modern sports writers. Students will learn the perspective and context that makes good sports writing truly exceptional.

JOUR 511 ARTS & ENTERTAINMENT REPORTING
Arts and Entertainment reporting is among the most widely read, but often is the most poorly executed aspect of a publication or broadcast. Students taking this course will develop a critical appreciation for the role of arts and entertainment reporting in the history of the press and its current role in creating a culture that appreciates and understands the arts and their profound contribution to human understanding.

JOUR 512 BUSINESS WRITING AND REPORTING
This course will help students better understand the critical role that business and finance reporting plays in the United States and the world economy. Students will develop the techniques that are necessary in responsibly researching, reporting, writing, and editing business and financial news. Segments of the course will be devoted to the history of the discipline, the ethical responsibilities of the business press, and the unique opportunities now available to the digital reporter of business and financial news.

JOUR 513 CHICAGO AND URBAN AFFAIRS REPORTING
This course analyzes what is distinctive about Chicago reporting. Students will be introduced to the rich tradition and history of reporting in this city, and the central role this work has played in the development of urban reporting nationwide. To do this, students will take a close look at the institutions, people, neighborhoods, decision-makers and events that impact Chicago residents in their everyday lives. The emphasis will be on localizing our approach to stories through a beat system that will allow students to regularly report on important areas of municipal life.

JOUR 514 OPINION AND COLUMN WRITING
Students will learn what makes for extraordinary opinion and column writing with an emphasis on strong reporting that enables writers to assemble arguments based on the firm foundation of fact. Also examined will be the new ways in which digital delivery systems both empower and threaten the free flow of ideas within and across interest communities.

JOUR 515 SPECIAL TOPICS IN JOURNALISM
Topics have included Advanced Reporting; The Chicago Olympics; The Press and The Presidency; Reporting
JOUR 517 EXPERIENTIAL LEARNING IN JOURNALISM
Students learn advanced reporting techniques while developing projects under the direction of a faculty supervisor. This course is designed to take learning out of the classroom and enables students to develop portfolio pieces while gaining critical real world experiences in reporting. PREREQUISITE(S): Instructor Permission Required

JOUR 518 WRITING AND REPORTING
This course teaches foundational journalistic skills in writing and reporting for those students coming into the program without significant previous course work or professional experience in journalism. PREREQ: Instructor consent needed.

JOUR 519 INTERNATIONAL REPORTING
Digital technologies have created a more interdependent world while radically transforming how that world is reported. This course analyzes the current state of foreign affairs reporting and teaches students how to think critically about foreign news reporting, while giving them the skills needed to execute stories in this challenging environment.

JOUR 520 DIGITAL EDITING
This class will examine how journalists can effectively find personal accounts of news events online and evaluate their credibility. It will look at a variety of related issues on the web, including ethical reporting, gathering story ideas, reliable sourcing, and social media experimentation. Students will experience working at a live aggregate news site to practice what they’ve learned in socially responsible digital editing.

JOUR 521 SPORTS PRODUCING
This course will focus on producing sports content for broadcast with an emphasis in television production. Students will learn to write and produce compelling stories through the lens of sports, including coverage of DePaul athletics. The best of this work will be featured on DePaul’s broadcast and online outlets as well as university’s athletics website. Instructor permission required for this course. Students must have a working knowledge of television production equipment.

JOUR 522 MULTI-PLATFORM NEWS EDITING
This course introduces students to editing and publishing procedures, including proofreading, copy editing and headline writing for various publications, including newspapers and online media. Skills are emphasized in AP style, grammar, usage, punctuation, story organization, brevity, basic layout, photo editing, cutline writing, news judgment, ethics and print/online headline writing. In addition to editing basics, students learn industry-standard InDesign software to lay out print news pages.

JOUR 523 ONLINE SPORTS REPORTING
Students will report, write, edit and produce online stories about sports issues, features and other topics. Skills are emphasized in game coverage, sports blogging, building a sports community on Twitter, shooting and editing video, recording and editing audio, and building basic web pages in HTML. The course also will explore ethical and legal issues pertaining to video and audio usage rights, athlete branding and other topics in the multimedia sports journalism culture.

JOUR 524 WRITING FOR THE DEPAULIA
This course is designed for the serious Journalism student who wants on-deadline experience writing for The DePaulia newspaper and website. Students will cover stories from each section of the paper (news, features, entertainment, opinion and sports) throughout the quarter. Some assignments will come from DePaulia editors, but students are expected to come up with their own ideas. Stories can be as varied as campus news or news in the Lincoln Park and South Loop communities. Supplementing stories with photos and video is expected.

JOUR 526 POLITICAL COMMUNICATION
This course examines how political communication and related media affect public opinion, civic life, elections, and public policy, and the impact of these communication dynamics on civic institutions and democratic decision-making. Students will study how journalists, elected officials, citizens, and political strategists construct, use, and understand political messages, including how news, advertising, and entertainment media contribute to the shaping of political perceptions, emotions, and behaviors in a variety of circumstances domestically and internationally.

JOUR 527 LIFESTYLE REPORTING
This course will give students the tools to write Lifestyle stories and to think creatively. Assignments will include human-interest stories, health, fitness, design, fashion, food, leisure and social issues. The class will
concentrate on the tools reporters need to create this kind of work, from good quotes to relevant sourcing.

**JOUR 528 REPORTING FOR GOOD DAY DEPAUL**
This course will give students extensive experience doing on-air reporting for the DePaul student television news program, *Good Day DePaul.* Reporters will cover breaking news stories, features, and serious enterprise stories. Students must have experience shooting in the field and editing in Final Cut Pro, either through previous television news courses at DePaul, or from other work. **PREREQ:** JOUR 505 or Instructor Permission.

**JOUR 590 JOURNALISM WORKSHOP**
This course allows students to sample a range of hands on, practical offerings in journalism that can enhance their knowledge and expertise. Workshop topics can include video camera basics, non-linear editing with Final Cut Pro and news page layout and design. **PLEASE NOTE THAT THIS IS A 2-CREDIT COURSE.** Students can take this course a maximum of two times for a total of 4 credits.

**JOUR 592 INDEPENDENT STUDY**
Students will be guided in the development of a special project that furthers their collaboration with an instructor and produces a report that demonstrates their mastery of critical content and competencies. The independent study option is intended for students who have demonstrated a mastery of course content, who would benefit from a sustained, focused collaboration with a relevant faculty member.

**JOUR 602 CANDIDACY CONTINUATION**
This is a 0-credit hour course that requires permission from the graduate director. Students can enroll in 602 if they are finishing a course in which they received an incomplete (IN). If the student does not register for any regular courses in the quarter they plan to finish the incomplete, they can enroll in 602 and access the library and other campus facilities. **No tuition is charged, only student fees (approx. $50).** This course is graded as pass/fail. Not eligible for loan deferment or student loans.
Literacy & Specialized Instruction

LSI 96 FIELD EXPERIENCE FOR DUAL CERTIFICATION
(non-credit) Required of all Dual Certification students. Observations and participatory experience with children and youth in a school or agency. The observation hours are a prerequisite for student teaching and related professional courses. A total of 200 hours are required.

LSI 430 INTRODUCTION TO ASSESSMENT OF READING AND LEARNING DISABILITIES
This course introduces the student to concepts and procedures in assessment of literacy and learning disabilities. Emphasis will be given equally to a theoretical framework for testing and to practical applications with actual tests. Topics to be covered include standardized testing (test construction, reliability and validity, procedures for administering standardized tests, scoring, test interpretation, non-discriminatory testing, and cultural, linguistics, and technical limitations of standardized tests) criterion referenced assessment (informal, curriculum-based, authentic assessment, portfolio assessment) and, other modes of assessment (interviewing and case histories). The course will examine assessment of various cognitive abilities, oral language, and achievement in reading, spelling, and writing. Candidates will also be introduced to analysis and interpretation of tests, profiling and report writing.

LSI 431 FOUNDATIONS OF LITERACY: ASSESSMENT AND INSTRUCTION I
This course focuses on the nature of the reading process, current literacy theory and practices, and research-based instructional strategies to develop literacy skills in emergent and developing readers and students with reading/learning disabilities. Emphasis will be placed on understanding the reading process, analyzing and applying research-based instructional practices, administering, analyzing, and interpreting formal and informal reading assessments, and making informed instructional decisions to meet the unique needs of individual readers. Differences in reading abilities will be examined in light of providing appropriate, effective, and meaningful literacy instruction.

LSI 432 DEVELOPING LITERACY: ASSESSMENT AND INSTRUCTION II
LSI 432 focuses on the reading, writing and literacy development of the middle and high school student (Grades 5-12). Emphasis will be placed on understanding literacy, the reading process, the interaction of reading and learning, and the connections of reading and writing. All of the above will be examined taking into consideration the physical, emotional, social, and cognitive development of the middle level student, in conjunction with the diverse demands placed upon the student by the schools. In order to comprehend these complex relationships, philosophical approaches, theoretical models, assessment measures and practical implications will be analyzed. Finally, the role of technology in literacy will be examined. (PREREQUISITE(S): LSI 431).

LSI 433 DIAGNOSIS AND INTERVENTION FOR READING AND LEARNING DISABILITIES
This course is designed to give the student an understanding of the characteristics of children with reading
and learning disabilities, and of the process of diagnostic evaluation, test interpretation and report writing, and strategies for intervention. It is also designed to give some practical experience with selected tests used in diagnosis. Emphasis will be given to the use of case study material to help the student learn to analyze and interpret assessment data, write diagnostic results, and develop intervention strategies. (PREREQUISITE(S): LSI 430).

**LSI 434 LITERATURE FOR SUCCESSFUL AND STRUGGLING READERS**
This course will familiarize students with different genres of quality children's literature and how to select and use books that are appropriate and meaningful for children and youth with and without reading disabilities. Students will discuss, analyze, and critique literary elements (author's style of writing, character development, setting, mood, and theme), determine estimated readability levels, and engage in reader response activities that promote critical discussion and a personal interaction with text. Students will become familiar with authors, illustrators, and books that represent diverse cultures, races, ethnic and ability groups, and develop meaningful literature extensions that support various curricular areas, develop literacy skills, and promote an enjoyment of reading.

**LSI 435 CURRICULUM, COLLABORATION, ADMINISTRATION AND SUPERVISION OF READING PROGRAMS**
This course will prepare the reading specialist to assume a leadership role within a school or district, to help develop and supervise reading programs, and to be instrumental in integrating good reading practices throughout the curriculum and across grade levels. Students will learn about the leadership role of the reading specialist as they explore the ways in which a reading specialist can be a teacher leader, curriculum developer, and liaison to parents and the community beyond the school.

**LSI 437 LEADERSHIP AND PROFESSIONAL DEVELOPMENT IN READING & LEARNING**
In this course, an emphasis will be placed on developing the necessary skills to provide leadership, professional development and support to school personnel in the area of literacy, particularly for struggling readers and those with learning disabilities. Students will engage in a variety of activities to promote the development of these skills which include but are not limited to planning and executing a professional development event, evaluating published reading programs to determine their alignment with research-based instructional practices, administering and interpreting findings from standardized measures of academic achievement, instructing others how to interpret findings from standardized measures of achievement and mentoring a colleague in the area of literacy instruction. PREREQUISITE(S): LSI 431, and LSI 432

**LSI 438 READING COMPREHENSION FOR STRUGGLING READERS: LITERATURE-BASED AND CONTENT AREA INSTRUCTION**
This course is designed to contextualize comprehension strategy instruction in the framework of high-quality children's literature and content-area expository texts. Students will learn think-aloud strategies to use across genres, as well as explicit, research-based instructional practices in comprehension for struggling readers. Opportunities for students to model integrated strategy use with peers and participate in a service-learning project to engage struggling readers in meaningful interactions with texts will be provided. Students will also learn the characteristics of engaging, quality literature and well-structured, accessible expository texts, and apply this learning to support classroom teachers in selecting books to engage K-12 students of a variety of backgrounds and skill levels. The relationship between comprehension and writing instruction will also be explored.

**LSI 440 SURVEY OF EXCEPTIONAL LEARNERS: PSYCHOLOGY AND EDUCATION**
A survey of exceptional learners and characteristics of students with both high- and low-incidence disabilities, with consideration of placements appropriate for children with such disabilities. Emphasis on historical, theoretical, practical and legal implications and issues. The course also addresses the importance of developing and maintaining collaborative relationships with parents and professionals in order to maximize the academic, social, and emotional benefits of all learners.

**LSI 442 SURVEY AND CHARACTERISTICS OF THE EXCEPTIONAL LEARNER**
A survey of exceptional learners and characteristics of students with both high and low incidence disabilities, with consideration of alternative placements appropriate for children with various disabilities including the learning disabled. Emphasis on historical, theoretical, practical and legal implications and issues, as well as on the roles of special education professionals, including consultation and collaboration, in inclusion of exceptional learners.

**LSI 443 PSYCHOLOGICAL TESTS AND METHODS IN DIAGNOSIS**
Principles of measurement and test construction including an evaluation of standardized test instruments. Principles of broad-based assessment involving case history, criterion-referenced tests and informal assessment. Emphasis on understanding the strengths and limitations of a wide variety of assessment
LSI 446 PSYCHOLOGY AND EDUCATION OF THE EXCEPTIONAL CHILD
Identification, characteristics, programs, schools, curricular variations, techniques for securing maximal development. Includes historical background, current legal and service provision issues including mainstreaming and inclusion.

LSI 456 ADVANCED ISSUES AND STRATEGIES IN SPECIAL EDUCATION
This course will examine current trends, issues, and strategies in the field of special education. This is an advanced course that will consider topics related to inclusion, overrepresentation, and transition services such as modifying curriculum, positive behavioral supports, collaboration and co-teaching, teacher scheduling, student scheduling, behavioral and academic data collection within general education classrooms, communication with families, developing and implementing IEP’s, and managing paraprofessionals. PREREQUISITE(S): LSI 442 or LSI 446 or equivalent.

LSI 457 SEMINAR AND RESEARCH IN SPECIAL EDUCATION
This course examines current research in special education including topics such as the social construction of special education; the assumptions of deficit vs. difference models of educational services; the overrepresentation of students of color and students from lower socioeconomic status backgrounds in special education; placement settings, inclusion, and service delivery models; and issues related to the short and long-term effects of special education on the lives of students with disabilities. Students select and pursue a topic of research interest and complete a professional portfolio. PREREQUISITE(S): LSI 458, LSI 467, LSI 468, LSI 469.

LSI 458 TEACHING STUDENTS WITH HIGH INCIDENCE DISABILITIES I
Introduction to the theoretical and practical approaches to instruction for students with high incidence disabilities across ages and levels of severity. Emphasis on developing an understanding of supportive learning environments, classroom and behavior management; developing collaborative practices with multiple service providers and families to meet the needs of diverse learners with high incidence disabilities. Strategies and materials for improving the social, emotional, and academic adjustment and functioning of students with high incidence disabilities are examined. Includes teaching social and emotional curricula; developing and implementing functional behavioral assessment; and monitoring growth and development in targeted areas. Strategies to increase the individual’s self awareness, self-management, self control, self reliance, and self esteem are considered. (PREREQUISITE(S): LSI 442).

LSI 461 COLLABORATIVE PRACTICE AND SPECIAL EDUCATION
The purpose of this course is to develop pre-service teachers' understanding of the importance of developing and maintaining collaborative relationships with parents and professionals in educational environments. Students will develop an understanding of professional and legal responsibilities, networks, organizations, and services available for students with disabilities and their families. Students will also examine various educational models for working collaboratively with teachers, parents, and support personnel in classrooms and schools. Students will articulate a personal philosophy and strategies for working collaboratively with families, teachers, paraprofessionals, and other professionals within educational environments.

LSI 462 INSTRUCTIONAL STRATEGIES FOR STUDENTS WITH DISABILITIES I:
ACCESSING GENERAL EDUCATION CURRICULUM
This course focuses general theories of learning, instructional modifications, accommodations, grouping strategies, technology, and assessments used for helping to provide students with disabilities access to general education curricula. Course topics will focus on the effectiveness of these strategies for working with students with mild, moderate, and severe disabilities. Students will begin to articulate a personal philosophy and approaches designed to enhance the educational experiences of children and youth with disabilities and they will begin to examine the relationship between schooling and long term outcomes.

LSI 465 INDUCTION INTO THE FIELD OF EDUCATION
Designed primarily as a culminating course experience at the graduate level, this course utilizes a seminar approach to help students clarify their understanding of issues related to special education, general education, and teaching in urban schools. All students will prepare a portfolio based on their experiences within the graduate program. These portfolios will contain evidence of each student's development during the program and students will make connections between their own theoretical, philosophical, and professional orientations and the Urban Professional Multicultural Model.

LSI 467 TEACHING STUDENTS WITH HIGH INCIDENCE DISABILITIES II
Continued study of the theoretical and practical approaches to instruction for students with high incidence disabilities across ages and levels of severity. Translation of diagnostic information into teaching strategies
and development of an instructional plan (IEP) including transition needs. Emphasis on understanding theoretical models of literacy, literacy development, instructional strategies, and adjusting literacy instruction to meet the needs of diverse learners. Principles of diagnostic teaching will be discussed. Specific teaching techniques and materials will be reviewed, including appropriate uses of technology. (PREREQUISITE(S): LSI 442).

**LSI 468 TEACHING STUDENTS WITH LOW INCIDENCE DISABILITIES I**
Introduction to the theoretical and practical approaches to instruction of children with low incidence disabilities including functional assessment and instructional strategies, curricular options and adaptations, as well as levels of participation and accommodation in the general curriculum. Emphasis will be placed on understanding theoretical models of language development and communication, instructional strategies for language and communication, and adjusting language instruction to meet the needs of diverse learners. Candidates will explore individualized planning (IEPs), transition needs, integration of related services into the instructional program, and strategies and materials for improving the social, emotional, and academic functioning of diverse students with low-incidence disabilities. (PREREQUISITE(S): LSI 442).

**LSI 469 TEACHING STUDENTS WITH LOW INCIDENCE DISABILITIES II**
Continued study of the theoretical and practical approaches to instruction for diverse students with low incidence disabilities. Focuses on addressing the intellectual, educational, physical, motor, health, social, and transitional needs of diverse students with more severe low incidence disabilities. Examination of etiological factors, growth, development, and long-term outcomes. Developing collaborative efforts with family and multiple care and service providers is addressed. Provides strategies to facilitate maintenance and generalization of both academic and non-academic skills across learning environments. Includes experiences with assistive technology, community-based instruction, and designing and implementing a functional curriculum when needed. (PREREQUISITE(S): LSI 442).

**LSI 475 METHODS OF TEACHING EARLY CHILDHOOD STUDENTS WITH LOW INCIDENCE DISABILITIES**
This course will focus on examining the developmental and learning characteristics of young children with low incident disabilities. In specific, this course will focus on educating early childhood students with Autism Spectrum Disorders and those with Intellectual Disabilities. One of the primary goals of this course is to understand the learning needs of these children, and examine and evaluate various educational and therapeutic methods of working with them. A major part of this course will be devoted to characteristics associated with and interventions for children with Autism Spectrum Disorders.

**LSI 476 SPECIAL EDUCATION CURRICULUM AND STRATEGIES FOR EARLY CHILDHOOD: HIGH INCIDENCE DISABILITIES**
Study of the theoretical and practical approaches to instruction for young children with high incidence disabilities. Emphasis placed on the development of supportive learning environments, using special curricular and behavioral management strategies for all early childhood settings; application of collaborative practices with multiple service providers and families to meet the needs of diverse learners with high incidence disabilities. Strategies and materials for improving the social, emotional, and academic adjustment and functioning of young children with high incidence disabilities are examined. Includes teaching social and emotional curricula; implementing functional behavioral assessment; and monitoring growth and development in targeted areas. Strategies to increase the young child are self-awareness, self-management, self control, self reliance, and self esteem are considered. Application of diagnostic information into teaching strategies and implementation of an instructional plan (IEP) is a central tenet of the course. (Pre-requisite: SCG 404 and T&L 427) 25 clock hours for Level II Experience.

**LSI 542 TESTING/DIAGNOSIS OF READING & LEARNING DISABILITIES: PRACTICUM I**
Students participate in a clinical setting and evaluate children and adolescents with suspected learning problems. Under close instructor supervision, students will administer and interpret tests, deal with the ethics of testing, interpret and communicate results to parents, schools and other social agencies. (PREREQUISITES: LSI 430, LSI 431, LSI 432, LSI 433, LSI 434, LSI 435, and LSI 436).

**LSI 543 DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITIES: PRACTICUM II**
Clinical observation and practical application of the diagnostic-remedial process by working in a supervised clinical setting with children and adolescents who have specific learning disabilities. (PREREQUISITES: LSI 430, LSI 431, LSI 432, LSI 433, LSI 434, LSI 435, and LSI 436).

**LSI 544 DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITIES: PRACTICUM III**
Clinical observation and practical application of the diagnostic-remedial process by working in a supervised clinical setting with children and adolescents who have specific reading disabilities. (PREREQUISITES: LSI 430, LSI 431, LSI 432, LSI 433, LSI 434, LSI 435, and LSI 436).
LSI 548 INDEPENDENT STUDY IN READING AND OTHER LEARNING DISABILITIES
REREQUISITE(S): Permission of instructor, department chair and associate dean.

LSI 549 THESIS RESEARCH IN SPECIALIZED INSTRUCTION
A Master of Arts candidate conducts original research, writes a thesis, and presents an oral defense before a committee of faculty members. PREREQUISITE(S): SCG 410 and approved thesis proposal.

LSI 552 PRACTICUM EXPERIENCE WITH HIGH INCIDENCE DISABILITIES
Six weeks of supervised field experience in a cooperating school working with students with high incidence disabilities, together with structured opportunities for feedback and discussion of issues and problems encountered. (PREREQUISITE(S): LSI 458, and LSI 467).

LSI 553 PRACTICUM EXPERIENCE WITH LOW INCIDENCE DISABILITIES
Six weeks of supervised field experience in a cooperating school working with low incidence disabilities, together with structured opportunities for feedback and discussion of issues and problems encountered. (PREREQUISITE(S): LSI 468, and LSI 469).

LSI 558 STUDENT TEACHING AND SEMINAR IN SPECIAL EDUCATION-ELEMENTARY EDUCATION
Five school days per week in supervised teaching experience for a full academic quarter. Students will also attend a student teaching seminar one day per week where they will discuss issues related to this experience. Faculty advisors and the Director of Student Teaching, working in conjunction with individual students, will determine appropriate student teaching placements. (PREREQUISITE(S): Permission required).

LSI 597 EARLY CHILDHOOD EDUCATION SPECIAL EDUCATION PRACTICUM
Supervised teaching in a cooperating school serving young children with disabilities for three hundred clock hours; arranged in collaboration with supervising faculty member and the Field Experience Office. Candidates will reflect upon their teaching experiences with young children with disabilities; collaborate with colleagues and instructor to identify alternative strategies for problematic situations. PREREQUISITE(S): Application and approval required. Open only to DePaul students.

LSI 600 REGISTERED STUDENT IN GOOD STANDING
(0 credit) Registration is this course is open to students who are not registered for any other courses but need to complete requirements/assignments for previously taken courses. It provides access to University facilities. Permission of advisor required. $50 per quarter.

LSI 606 REVIEW OF LITERATURE
This paper will give students the opportunity to develop and demonstrate written competence in a subfield of their disciplines and to enhance life-long learning. Specifically, they will broaden their knowledge base and inform themselves about a topic, issue, theory, etc., reviewing and synthesizing existing literature. To do so, students will need a variety of bibliographic skills including searching data bases. In other words, students will need to be able to ask and answer such questions as "What is known about? What are major issues and themes?"

LSI 607 INTEGRATIVE PAPER
Students will observe and/or participate in the reciprocal interaction of theory and practice, by investigating actual practice in the field as it relates to theory. This might take the form of investigating how a particular theory is applied in the field, developing a practical application of a theory, or conversely, developing/refining a theory based on investigations made in the field. In other words, as graduates encounter new theories and practices they will need to be able to investigate and evaluate them, asking and answering questions about "How theories work."

LSI 608 CAPSTONE IN LANGUAGE, LITERACY, AND SPECIALIZED INSTRUCTION
Culminating experience(s) that help(s) students acquire the qualities of professionalism and leadership needed to play a significant role in one's professional education community. Students are expected to situate and understand educational issues in a larger context; keep current in and be able to organize and present a body of research on an education-related question; connect research with practical, professional activity; demonstrate mastery of a sub-field of a discipline; write in a format that meets accepted scholarly criteria and participate in an ongoing professional conversation. A final product such as master's paper(s), comprehensive exam, or collection of professional work products is required.

LSI 625 CANDIDACY CULMINATING PROJECT (STUDENT IN GOOD STANDING)
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing culminating projects for their program of study, including theses, papers, and final portfolios. It provides access to university facilities. Permission of advisor required. Registration limited to three terms. $50 per quarter.
Latin

Graduate Course Descriptions - Current

**LAT 497 SPECIAL TOPICS IN LATIN**
See schedule for current offerings. Graduate standing required.

**LAT 498 STUDY ABROAD**
Variable credit. PREREQUISITE(S): Permission and graduate standing required.

**LAT 499 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Permission of chair and instructor and graduate standing required.

Liberal Learning Seminars

Graduate Course Descriptions - Current

**LLS 425 EXPLORING MODES & PROCESSES OF SYSTEMATIC INQUIRY**
This seminar provides students with an opportunity to develop the Liberal Learning Skills through exploring modes and processes of systematic inquiry. Students develop researchable questions and use these questions to gather and critically evaluate information and identify appropriate research methodologies. In addition, students practice searching, managing and analyzing information sources and building integrative literature reviews.

**LLS 435 UNDERSTANDING PERSONAL AND ORGANIZATIONAL CHANGE SEMINAR**
This seminar provides students with an opportunity to develop the Liberal Learning facilities through understanding personal and organizational change. Multiple dimensions and dynamics of change and the roles and responsibilities of professionals as change agents are explored. Special emphasis is placed on analyzing change processes using both linear and systems models and formulating interventions to facilitate productive change in the workplace (profit and nonprofit).

**LLS 445 IMPROVING INTERPERSONAL DYNAMICS**
This seminar provides students with an opportunity to develop the Liberal Learning Skills through improving interpersonal dynamics. Students are introduced to various models for working collaboratively with diverse constituents over multiple contexts. In addition, students are provided opportunities to strengthen their interpersonal relations and communications skills (per context) by learning and practicing strategies and techniques that foster skill development.

**LLS 475 EXERCISING EFFECTIVE LEADERSHIP SEMINAR**
This final seminar provides students with an opportunity to develop the Liberal Learning facilities through exercising effective leadership. Major themes of each of the previous seminars are integrated within the concept of effective leadership in a changing world. Key theories and principles relative to the management/leadership continuum are examined as well as the implications of current trends for the future of leadership both in general and within students' personal/professional contexts.

Liberal Studies
MLS 401 VISIONS OF THE SELF
A study of the differing visions of the self as presented in significant documents from the history of ideas. Materials selected from classic texts of literature, philosophy, theology, psychology and social science.

MLS 402 PERCEPTIONS OF REALITY
A survey, beginning with ancient Greece and ending with the modern world, of models of universal order as developed by natural scientists and literary and visual artists.

MLS 403 THE AMERICAN EXPERIENCE
A chronological and thematic study of the location of self within American culture. Readings chosen to reflect both dominant and dissenting ideas at specific points of American history.

MLS 404 THE CITY
A topical examination of the urban experience using the methods and sources of both historians and social scientists. Topics include survey of various images of the city, utopian and dystopian visions, and the uniqueness of the modern city.

MLS 405 REPRESENTATIONS OF THE BODY
This course will examine how the human body, which seems to be a natural, universal fact, is also a deeply cultural symbolic construction whose analysis yields insights into structures of power and consciousness.

MLS 406 EXPLORING OTHER CULTURES
Examination of the history, traditions, values and institutions that have shaped the lives of people in another culture. Analysis of the "terms of encounter," that is, the perspectives that students assume as they seek to encounter the "other" Variable to

MLS 407 SELF, CULTURE AND SOCIETY IN CONTEMPORARY JAPAN
Interdisciplinary examination of the political, economic and social order of contemporary Japan. Relationship of individuals and groups to the social order, as they create the reality of diversity and possibilities for change.

MLS 409 ENVIRONMENT AND SOCIETY
"Environment and Society" is a 400-level interdisciplinary core course on the environment. The course might include such topics as cultural diversity in time and place with regard to the human view of the natural world, various approaches to environmental ethics, philosophical and religious influence in conceptions of the earth as environment, the relationship between scientific measurement and the social constructions of the natural world, the science and politics of climate change, race and gender considerations in environmental politics, and environmental consciousness in literature and the arts. The instructor's own disciplinary interests will play a prominent role in the course construction, but the course will draw from the sciences, the social sciences and the humanities. As in all MLS courses, the instructor will use the course assignments to work with students on enhancing graduate-level intellectual skills through reflexive pedagogy.

MLS 419 CHICAGO: THE 21ST CENTURY
Chicago: Towards The 21st Century.

MLS 427 TOPICS IN COMMUNICATION AND CULTURE
Variable topics relating to cross-cultural communication, culture and media, cultural difference in communication, and communication issues in multiculturalism. Consult current course schedule for topic.

MLS 428 TOPICS IN ORGANIZATIONAL COMMUNICATION
Variable topics relating to communication issues in organizational settings, including power, institutional culture and change, training, and multicultural factors. Consult current course schedule for topic.

MLS 440 FEMINIST THEORIES
A discussion and assessment of the various theories concerning the place of women in society, including theories that have advocated a more positive role for and valuation of women than those of the dominant society. The course will take both an historical and a topical approach. Cross-listed as WGS 300 and WGS 400.

MLS 441 WOMEN ACROSS CULTURES
A critical analysis of the roles of women in societies around the world, with special emphasis on economics, politics, and culture. Focus is on African, Asian and Latin American cultures and non-dominant groups within
Western Societies. Topics vary each quarter. Cross-listed as WGS 390 and WGS 490.

**MLS 442 ETHICS AND THE ECONOMY**
This course will present the thinking of social scientists, philosophers and theologians on the impact of religious values on the origin and development of American capitalism, and their possible relevance to contemporary discussions of business ethics. Cross-listed as GSB 650 and PHL 650.

**MLS 443 WORK, LEISURE AND THE QUALITY OF LIFE**
The course examines the nature and meaning of work and leisure in Western culture, and the relationship of work and leisure to contemporary issues associated with the concept "Quality of Life". Cross-listed as SOC 475.

**MLS 445 GENDER AND COMMUNICATION**
A review of the differences in communication patterns between women and men. Topics covered include language and language usage differences, interaction patterns, and perceptions of the sexes generated through language and communication. Cross-listed as CMN 523 and WGS 440.

**MLS 447 GENDER AND SOCIETY**
Attention to the growing literature and empirical research on changing patterns in economic, psychological and social outcomes for women and men. Consideration of various theories of gender differentiation and inequality.

**MLS 448 WORK AND LEISURE IN THE FUTURE**
The latter half of the 20th century has seen great change in the meaning, form and value assigned to work and leisure in society. Many of these changes have come to be characterized as inevitable consequences of life in post-industrial society. This course: 1) speaks to identify the factors that are shaping the future of work and leisure and 2) will explore futuristic scenarios that challenge the position of "work as a central-life meaning." Cross-listed as SOC 476.

**MLS 449 TOPICS IN NON-FICTION WRITING**
Topics addressed in different versions of the course may include writing for magazines, science writing, travel writing, writing in humanities and social science research, etc. Consult current course schedule for topics.

**MLS 450 CHICAGO: ARCHITECTURE & URBAN DEVELOPMENT**
A study of urban architecture in Chicago from 1833 to 1984, including the role of planning, the purpose of open space, the place of tradition, the impact of modern design theories and evaluation of contemporary developments.

**MLS 451 TOPICS IN AMERICAN POLITICS**
Topics In American Politics

**MLS 452 GREAT IDEAS, BUSINESS AND SOCIETY**
A study using primary sources of the basic ideas, aspirations and values which humanity strives to attain and which constitute the basis of fundamental demands on the world of business and its managers, their policies and decisions.

**MLS 453 POLITICS, MEDIA AND EVERYDAY LIFE**
An examination of various ways in which the mass media influence our perceptions of reality. Political, social and cultural implications of media processes are assessed. Cross-listed as PSC 321.

**MLS 455 COMMUNITY AND THE CITY**
The course explores the possibilities for community life within urban settings. It emphasizes the development of network relations and cross-cutting ties.

**MLS 456 THE USES OF AUTOBIOGRAPHY**
Study of selected autobiographical writings to serve as models for self-expression.

**MLS 458 ISLAM AND THE WEST IN THE MODERN WORLD**
An examination of the economic, cultural and political interactions of Europe and the Islamic World.

**MLS 459 WRITING IN THE PROFESSIONS**
Improves writing skills useful in semi- and non-technical professions; emphasis on style, tone, awareness of purpose and audience; effective memo, proposal and report design. Cross-listed with WRD 522.
MLS 460 THE DILEMMA OF THE MODERN AGE
The crisis of the individual’s place in society is exposed through social sciences, philosophy, literature, art and music. The distinctive features of and responses to modern culture-individualism, alienation and depersonalization—are illuminated through multiple perspectives. Cross-listed as SOC 473.

MLS 461 MODERN POETRY

MLS 462 TOPICS IN BUSINESS ETHICS
Seminar In Business Ethics. Cross-listed as PHL 640 and GSB 640.

MLS 463 NATIONALISM AND INTERNATIONAL CONFLICT
This course will explore the social origins and development of national identities. How these identities have been manipulated to serve specific competitive interests in the past two hundred years will also be discussed. Cross-listed as PSC 342 & INT 365.

MLS 464 THE CULTURE OF AMERICAN CATHOLICS
This course will attempt a sociological and historical investigation of the culture of American Catholics, with special attention to the literary works of contemporary American Catholic writers including Flannery O’Connor, Mary Gordon and Eugene Kennedy. Cross-listed as REL 384.

MLS 467 SELECTED TOPICS ON WOMEN IN LITERATURE
Topics vary; see schedule for current offering.

MLS 468 SELECTED TOPICS: WOMEN, SELF AND SOCIETY
Topics vary; see schedule for current offerings.

MLS 473 TOPICS IN LITERATURE
Topics addressed in different versions of the course may include various themes, movements and genres in British, American and World Literature. Consult current course schedule for topic.

MLS 474 WOMEN AND ART
Examines the work of the most significant women artists from the Renaissance to the present. It will also investigate how women have been represented in Western art by both male and female artists. Cross-listed as HAA 366.

MLS 475 TOPICS IN CONTEMPORARY FILM
An examination of recent films and their relation to broader tendencies in contemporary culture. Topics vary, see schedule for current offerings.

MLS 476 CHICAGO IN FICTION AND FILM
This course examines novels and short stories written by Chicagoans during the 20th century. It also includes a few film adaptations of these works.

MLS 477 FEMINIST ETHICS
Critiques of mainstream empirical and philosophical works and of Carol Gilligan’s work on ethics will include discussions on the women’s voice in morality, the nature of theories by women vs. men, the formation of plural positions concerning care versus justice, and alternative ethical stances. Cross-listed as WGS 310/410 and REL 322.

MLS 478 THE PSYCHOLOGY OF WOMEN
A review of research and theory on women including sexist biases and methodology, feminist therapy, violence against women, and gender differences in the development of power and sexuality. Cross-listed as PSY 561 and WGS 470.

MLS 479 WRITING POETRY
Writing Poetry. Cross-listed as ENG 493. PREREQUISITE(S): Permission required.

MLS 480 MAJOR AUTHORS
An examination of major writers in the English and American literary traditions. Topics vary; see schedule for current offerings.
MLS 481 SPECIAL TOPICS IN ART HISTORY
Explorations in the history of art from ancient Egyptians to contemporary art. Topics vary.

MLS 482 ECOLOGY, SPIRITUALITY AND ETHICS
This course explores the ecological crisis from a religious/ethical perspective, examining the dangers posed for humanity and the planet. It considers the new cosmology developing from science, especially physics, and its dialogue with philosophy, myth and religion. Cross-listed as REL 320.

MLS 483 CULTURAL PERSPECTIVES ON HEALTH AND DISEASE
A multidisciplinary examination of the cultural factor that help form notions of the well and sick states of the human body. Included will be such topics as the social/religious history of epidemics, healing in Western and non-Western medicine, etc. Sources will be drawn from the history of medicine, anthropological and sociological works, philosophy and literature. Cross-listed as REL 320.

MLS 484 ZEN MIND
This course examines the philosophy, art, literature and religious practice of Zen Buddhism. It explores Zen's influence in both Japan and America. Cross-listed as REL 342.

MLS 485 INEQUALITY IN AMERICA
This course examines the nature and extent of inequality in American society and explores various psychological, political, social and economic theories which attempt to explain the existence of this phenomenon. Cross-listed as PSC 324.

MLS 486 TOPICS IN POPULAR CULTURE
Examines a specific dimension of popular culture using interdisciplinary theories and methods. Possible topics include Food in Film, The Ideology of Romance, or perhaps the popular culture of a decade like the 1950s or 1960s. Topics vary.

MLS 487 SPECIAL TOPICS IN HISTORY
Topics vary.

MLS 488 TOPICS IN WORLD RELIGIONS
Topics in World Religions

MLS 489 TOPICS IN SOCIOLOGY
Various topics in the field of sociology.

MLS 490 SPECIAL TOPICS AND CONTROVERSIES
Occasional offerings of particular contemporary relevance by visiting professors. Topics vary.

MLS 497 INDEPENDENT STUDY [NON-CAPSTONE]
Independent study in an area that does not lead directly into the thesis or capstone. Students may also register for this course on a topic indirectly related to their thesis or capstone if they will subsequently take MLS 498, in which the student directly prepares to write the Integrating Project/Thesis. The MALS and IDS Program requires that students taking independent studies follow a specified format of meeting frequency, activities, and scholarly production. This format is available on the program web site or from the MALS and IDS office. Registration is by permission of the Director of the MALS and IDS Program and the instructor of the independent study.

MLS 498 INDEPENDENT STUDY
Independent study undertaken as preparation for thesis or practicum capstone options. This course is optional preparation for MLS 499, Capstone. The MALS and IDS Program requires that students taking this course follow a specified format of meeting frequency, that they produce a review of literature related to their thesis or practicum, an annotated bibliography, and the required Formal Proposal for the thesis or practicum. Registration is by permission of the Director of the MALS and IDS Program and the permission of the instructor who serves as the thesis or practicum director.

MLS 499 CAPSTONE
Capstone for students doing a thesis, practicum or enhanced portfolio essay. Students may register for this course after the Formal Proposal for the thesis or practicum, or the Enhanced Portfolio Essay Proposal, has been approved. Students are normally expected to complete their capstone projects within the quarter in which they take this course. This course carries four hours of credit. Registration is by permission of the Director of the MALS and IDS Program and the permission of the instructor who serves as the student's
capstone director.

**MLS 500 CAPSTONE**
A seminar offered occasionally to guide groups of students working on their capstone projects.

**MLS 501 ACTIVE STATUS**
Students register for this course during periods when they are not registered for courses but wish to have access to university facilities. Ordinarily students will not use this course once they have been admitted to candidacy during the thesis or capstone. PREREQUISITE(S): Permission only.

**MLS 502 CANDIDACY CONTINUATION**
Students who have completed MLS 499 Thesis/Capstone may register for this course in order to have continued access to university facilities. Students may register for this course no more than three times. Non-credit. $40.00 per quarter.

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Liberal Studies in Education

**LSE 404 CHILD REARING ACROSS CULTURES**
Study of child-rearing practices, the effects of culture on cognitive development and the implications for teaching strategies for the child whose first language is not English.

**LSE 420 COMPARATIVE EDUCATION**
This course is devoted to the study of historical and contemporary issues related to comparative education—with an emphasis upon early childhood, elementary, and secondary levels. Through a comparative study of educational public policy, we will examine assumptions about the aims and purposes of education and schooling in terms of economic, political and social dimensions. Major topics and issues addressed will include the following: examining what it means to be educated; examining similarities and differences in the ways developed and developing countries educate children and youth; the organization and structure of educational institutions; disconcerning implicit and explicit values in different approaches to teaching and learning; relationships between schools and communities; education and the issues of change and social justice.

**LSE 430 EDUCATION AND SOCIAL JUSTICE**
A variable-topics course designed to examine education within a philosophical framework which focuses upon the relatively great potential of education as an agent for social justice and change. Through the examination of current issues and concerns, students are expected to engage in critical analysis, reflect upon theoretical frameworks, examine public policies and values, and consider ways in which schools and educators can promote the development of social justice. Each time the course is offered it will focus on one of the following topics: gender; ethnicity; language and culture; or social class and economic opportunity. For each topic, attention will be given to the issues of institutional responses to differences, equity, access and outcomes. (CROSS-LISTED with LSE 258)

**LSE 438 GENDER AND EDUCATION**
A variable-topics course designed to actively engage students in examination of the literature and issues related to gender and education. Curriculum, teaching and learning, achievement, and the organization structure and culture of schools are among the key concerns. Gender will be addressed as it intersects with other forms of inequality and difference: race, ethnicity, class, etc. Each time the course is offered it will focus on a particular topic, but for each topic attention will be given to issues about institutional responses to inequality and differences.

**LSE 450 DYNAMICS OF AFRICAN-AMERICAN CULTURE**
This course is intended for those interested in cultural and human relations in order that they may examine the contributions of the black person to American Culture; gain a functional understanding of the social, economic and political development of the black person on America itself. (Cross-listed with SOC 490).

**LSE 460 INTERNATIONAL STUDIES IN EDUCATION**
This variable-topics course will focus upon educational issues in a particular country or region outside of the United States. Through comparative study, a number of issues will be addressed: aims and purposes of education and schooling; economic, political, social and cultural contexts of educational policies; similarities and differences in organization and structure of educational systems; relationships between home, community and educational institutions; education, development and issues of social change.

**LSE 461 INTERNATIONAL STUDIES IN TEACHING AND LEARNING**
This variable-topics course will focus upon aspects of curriculum, teaching and learning in a particular country or region outside of the United States. It requires work in the chosen country or region under the guidance of teachers familiar with its educational practices. The course will examine how curriculum is organized, developed and implemented in classrooms and schools with concentration on particular subjects or levels. From a comparative perspective, particular attention will be paid to the values and assumptions underlying curriculum and teaching.

**LSE 462 INTERNATIONAL FIELD EXPERIENCES IN EDUCATION**
Through clinical experience outside of the United States, students will observe, participate in and reflect upon teaching and learning in cultural settings that differ from their own. This field experience abroad provides an opportunity to develop an understanding of what it means to be educated in the context of another society or culture. The intent of this experience is to add more global perspective to one’s own professional knowledge and practice. Variable credit, ranging from 2-8 quarter hours can be earned, dependent upon the nature and duration of this field experience.
Mathematical Sciences

MAT 400 APPLIED ABSTRACT ALGEBRA I
Applied Abstract Algebra I

MAT 401 APPLIED ABSTRACT ALGEBRA II
Applied Abstract Algebra II PREREQUISITE(S): MAT 400.

MAT 434 TOPOLOGY
An introduction to point-set topology: metric spaces, topological spaces, continuity, connectedness, and compactness. PREREQUISITE(S): MAT 336 or consent of instructor.

MAT 435 MEASURE THEORY
This is a course in Lebesque integration; the study of measure spaces and measurable functions; the basic theorems of Lebesque integration; Egoroff's theorem, the monotone limit theorem, the Lebesgue dominated convergence theorem; an introduction to Lp spaces, Holder's inequality, Minkowski's inequality; Fubini's theorem. PREREQUISITE(S): MAT 336, and either MAT 340 or MAT 434.

MAT 436 FUNCTIONAL ANALYSIS
This course is an introduction to the basic theory of functional analysis. Students will study linear operators and functionals on Hilbert and Banach Spaces including covering three basic theorems; the Hahn Banach theorem, the uniform boundedness principle and the open mapping theorem. Spectral theory will also be studied. PREREQUISITE(S): MAT 435, and either MAT 370 or 470.

MAT 437 COMPLEX ANALYSIS
Course topics: Complex functions; complex differentiation and integration; series and sequences of complex functions. Cross-listed with MAT 337. PREREQUISITE(S): MAT 261, and either MAT 141 or MAT 215.

MAT 441 APPLIED STATISTICS I
Parametric and non-parametric statistical inferential methods for the univariate and bivariate situations using
SAS. Specific topics include classical and exploratory graphical & numerical methods of data descriptions; inference about means, medians, and associations including analysis of variance and linear regression. Data analytic projects are an integral part of the course.

**MAT 442 APPLIED STATISTICS II**
A continuation of MAT 441. Repeated measures design, association, analysis of covariance, and multivariate relationships. Diagnostics and model building. Methods of categorical data analysis. Logistical regression and log-linear models. Data analytical projects using SAS are an integral part of the course. PREREQUISITE(S): MAT 441

**MAT 443 APPLIED STATISTICS III**
A continuation of MAT 442. The course material generalizes univariate methods of inference to multivariate situations using SAS. Specific topics include canonical correlation, discriminate analysis, principal component analysis, factor analysis, and multivariate analysis of variance. Emphasis in the curse is on data analytic projects. PREREQUISITE(S): MAT 442

**MAT 448 STATISTICAL METHODS USING SAS**

**MAT 451 PROBABILITY AND STATISTICS I**
The course covers elements of probability theory; distributions of random variables and linear functions of random variables; moment generating functions; and discrete and continuous probability models. COREQUISITE(S): MAT 260.

**MAT 452 PROBABILITY AND STATISTICS II**

**MAT 453 PROBABILITY AND STATISTICS III**
A continuation of MAT 452. More on hypothesis testing, most powerful, uniformly most powerful, and likelihood ratio tests. Introduction to the analysis of variance; linear regression; categorical data analysis, and nonparametric methods of inference. PREREQUISITE(S): MAT 452

**MAT 454 MULTIVARIATE STATISTICS (CROSS-LISTED 354)**
The multivariate normal distribution. The general linear model. Multivariate regression and analysis of variance; discriminant analysis; principal component and factor analysis; applications and use of statistical software. PREREQUISITE(S): MAT 453.

**MAT 455 STOCHASTIC PROCESSES**
Discrete Markov chains and random walks, birth and death processes, Poisson process, queuing systems, and renewal processes. Cross-listed as MAT 355. PREREQUISITE(S): MAT 453 or consent of instructor.

**MAT 456 APPLIED REGRESSION ANALYSIS**
Simple linear, multiple, polynomial and general linear regression models. Model diagnostics; Model selection and Validation. Cross-listed with MAT 356. Prerequisite(s): MAT 453 or consent of instructor.

**MAT 457 NONPARAMETRIC STATISTICS**
Inference concerning location and scale parameters, goodness of fit tests, association analysis and tests of randomness using distribution free procedures. Bootstrap techniques. Smoothing methodologies. Cross-listed with MAT 357. PREREQUISITE(S): MAT 453 or instructor's consent.

**MAT 458 STATISTICAL QUALITY CONTROL**
History; Deming guide to quality; graphical techniques of process control; Schewhart's control charts for means, ranges, standard deviations, individual measurements, and attributes; process capabilities and statistical tolerance; cumulative-sum charts. product liability; acceptance sampling; product and process design; applications and case studies.

**MAT 459 SIMULATION MODELS AND MONTE CARLO METHOD**
Techniques of computer simulation of the classical univariate and multivariate probability models, and such random processes as random walks, Markov chains, and queues. Cross-listed with MAT 359. PREREQUISITE(S): MAT 453

**MAT 460 TOPICS IN STATISTICS**
One of the following topics: Clinical trials; Reliability and life testing; Categorical data analysis; Bootstrapping; Data Mining; Response Surface Methodology; Meta analysis; Survival Models. PREREQUISITE(S): MAT 453 or consent of instructor.

**MAT 461 ACTUARIAL SCIENCE I: THEORY OF INTEREST**
Theory of Interest: Theory and application of compound interest to annuities, amortization schedules, sinking funds, bonds, and yield rates. Cross-listed as MAT 361. Prerequisite(s): MAT 152 or MAT 162; co-requisite MAT 451.

**MAT 462 ACTUARIAL SCIENCE II: BASIC CONTINGENCIES**
Basic Contingencies: The theory and applications of contingency mathematics in life and health insurance annuities and pensions, from both a probabilistic and a deterministic viewpoint. Topics include survival distribution and life tables, life insurance and life annuities. Cross-listed as MAT 362. PREREQUISITE(S): MAT 461. CO-REQUISITE: MAT 452.

**MAT 463 ACTUARIAL SCIENCE III: ADVANCED CONTINGENCIES**
Advanced Contingencies: A continuation of MAT 462. Topics include net premiums, net premium reserves, multiple life functions, multiple decrement models, and valuation theory for pension plans. Cross-listed with MAT 363. PREREQUISITE(S): MAT 462.

**MAT 464 STOCHASTIC RISK MODELS**
Introduction to risk theory and applications. Economics of insurance, individual risk models for short-term and single-term, collective risk models over an extended period, and applications. Cross-listed with MAT 364. PREREQUISITE(S): MAT 453.

**MAT 465 STOCHASTIC SURVIVAL MODELS**

**MAT 466 MATHEMATICAL DEMOGRAPHY**
Introduction to demography, mortality table construction and methods of population and demographic analysis. PREREQUISITE(S): MAT 453

**MAT 467 CREDIBILITY THEORY**
Credibility theory and loss distributions with applications to casualty insurance classification and ratemaking. PREREQUISITE(S): MAT 462.

**MAT 468 MATHEMATICAL FINANCE**
This course will be required of students in the Financial Mathematics concentration. The main topics will be stochastic calculus and partial differential equations leading up to a derivation of the Black-Scholes option pricing model and its variants, along with discrete methods. This course should also be of interest to students of applied mathematics and physics. There will be opportunity to analyze real option data in conjunction with theory. Possible additional topics would include numerical methods, dividends, options on futures and exotic options. Cross-listed with MAT 368. PREREQUISITE(S): MAT 453 or instructor's consent.

**MAT 470 ADVANCED LINEAR ALGEBRA**
Vector spaces, basis and dimension; matrix representation of linear transformations and change of basis; diagonalization of linear operators; inner product spaces; diagonalization of symmetric linear operators, principal-axis theorem, and applications. Cross-listed as MAT 370. PREREQUISITE(S): MAT 262 and either 141 or 215.

**MAT 471 GROUP THEORY**
Course topics: Classes of groups; actions of groups on sets; Sylow theorems; decomposition of groups; structure of finite abelian groups. PREREQUISITE(S): Approval of the MS in Pure Math program director

**MAT 472 ABSTRACT ALGEBRA II**
Course topics: Commutative rings and fields; irreducible polynomials and field extensions, adjunction of roots, algebraic extensions, splitting and normal fields, cyclic extensions, the Galois group, and the Fundamental theorem of Galois theory. PREREQUISITE(S): MAT 311 and MAT 471. Cross-listed with MAT 312.

**MAT 473 ALGEBRA III**
Course topics: Rings and Algebras; classes of unique factorization domains; modules and principal isomorphism theorems, classes of modules, decomposition of finitely generated modules; Jordan and rational canonical form of a matrix. PREREQUISITE(S): MAT 311 and MAT 471.
MAT 481 FOURIER ANALYSIS AND SPECIAL FUNCTIONS
The course covers the basic principles of discrete and continuous Fourier analysis and some of its applications currently used in scientific modeling. Students will use the computer to implement the computational algorithms developed in the course. Some of the topics covered will include Fourier transforms and their application to signal and image processing, discrete Fourier series, the fast Fourier transform algorithm and applications to digital filtering, and the Radon transforms and its applications to tomography. PREREQUISITE(S): MAT 262 or equivalent.

MAT 484 MATHEMATICAL MODELING (CROSS-LISTED AS MAT 384)
Modeling of real world problems using mathematical methods. Includes a theory of modeling and a study of specific models, selected from deterministic stochastic, continuous and discrete models. PREREQUISITE(S): MAT 220 or 262 and MAT 451 or 348.

MAT 485 NUMERICAL ANALYSIS I
Use of a digital computer for numerical computation. Error analysis, Gaussian elimination and Gauss-Seidel method, solutions of linear and nonlinear equations, function evaluation, cubic splines, approximation of integrals and derivatives, Monte Carlo methods. Cross-listed with MAT 385. PREREQUISITE(S): MAT 262 or MAT 220 or equivalent and a programming course.

MAT 486 NUMERICAL ANALYSIS II (CROSS-LISTED WITH CSC 386/486, MAT 386)

MAT 487 OPERATIONS RESEARCH I: LINEAR PROGRAMMING
The linear programming problem and its dual; the simplex method; transportation and warehouse problems; computer algorithms and applications to various fields. Cross-listed with MAT 387. PREREQUISITE(S): MAT 220 or MAT 262 or equivalent.

MAT 488 OPERATIONS RESEARCH II: OPTIMIZATION THEORY
Integer programming; nonlinear programming; dynamic programming. Cross-listed as MAT 388. PREREQUISITE(S): MAT 487 or by consent of instructor.

MAT 489 QUEUING THEORY WITH APPLICATIONS
Discrete and continuous-time Markov chain models, Queuing systems, and topics from renewal and reliability theory. PREREQUISITE(S): MAT 453.

MAT 494 GRAPH THEORY AND NETWORK FLOWS

MAT 495 DYNAMIC PROGRAMMING

MAT 496 GAME THEORY
The minimax theorem for two-person, zero-sum games. Two-person general-sum games and noncooperative person games; Nash equilibrium.

MAT 498 PROBLEM SOLVING IN MATHEMATICS
Course topics: problem solving in various topics from GRE Subject examination in Mathematics. PREREQUISITE(S); instructor consent.

MAT 512 APPLIED TIME SERIES AND FORECASTING
Development of the Box-Jenkins methodology for the identification, estimation and fitting of ARIMA, and transfer-function stochastic models for the purpose of analyzing and forecasting stationary, non-stationary, and seasonal time series data. The course emphasizes practical time series data analysis, using computer packages and includes applications to economic, business and industrial forecasting. PREREQUISITE(S): MAT 453 or MAT 348 or MAT 341 and consent of instructor.

MAT 526 SAMPLING THEORY AND METHODS

MAT 528 DESIGN AND ANALYSIS OF EXPERIMENTS
Single-factor fixed, random and mixed designs with and without restrictions on randomizations, including randomized block designs, Latin & Graeco-Latin squares. Factorial and fractional factorial experiments. Nested and split-plot designs. Con founding and response surface methodology. PREREQUISITE(S): MAT 453 or consent of instructor.

MAT 596 ADVANCED TOPICS IN ALGEBRA
Consult course schedule for current offerings. Course may be repeated for credit when title and content change. PREREQUISITE(S): instructor consent.

MAT 597 ADVANCED TOPICS IN ANALYSIS
Consult course schedule for current offerings. Course may be repeated for credit when title and content change. PREREQUISITE(S): instructor consent.

MAT 598 ADVANCED PROBLEM SOLVING IN ALGEBRA AND ANALYSIS
Course topics: problem solving in various topics in Algebra and Analysis. PREREQUISITE(S): instructor consent.

MAT 599 INDEPENDENT STUDY
Offered by arrangement. Approval by department chair required.

MAT 602 CANDIDACY CONTINUATION
Non-credit. Required of all students who are not registered for regular courses but who occasionally utilize University facilities during completion of course requirements and/or research. $40.00 per quarter.

MAT 606 MATHEMATICS SOFTWARE FOR TEACHERS
Introduction to various mathematical software packages for the investigation of significant mathematical ideas. Emphasis will be on the use of software in the high school classroom for the enhancement of students' discovery and understanding of fundamental mathematical concepts.

MAT 608 INVESTIGATING HIGH SCHOOL MATHEMATICS
Drawing on high school mathematics content, students will identify and explore the mathematical themes that might form the content of a 12th grade capstone course. In the process, they will reflect on and discuss the major issues encountered when learning the mathematical concepts that form the basis of high school mathematics, identify ways to collaborate in order to improve mathematics learning, and identify ways in which they can take leadership roles in mathematics teaching and learning.

MAT 609 TEACHING AND LEARNING SECONDARY SCHOOL MATHEMATICS
Theories, methods, materials and techniques for teaching and learning mathematics in secondary and upper elementary schools. This course is required for students seeking secondary math certification.

MAT 610 CALCULUS FOR MATHEMATICS TEACHERS I
A review of topics from precalculus using algebraic, numerical, and graphical perspectives including linear functions, exponential functions, logarithms, polynomials, and trigonometric functions. An introduction to limits, continuity, the derivative, and basic properties of real numbers. Introduction to graphing calculators and free graphing software with applications to classroom teaching.

MAT 611 CALCULUS FOR MATHEMATICS TEACHERS II
A continuation of Math 610. The derivative and its applications, including optimization and related rates. Introduction to integration and numerical algorithms using graphing calculators. Offered every Winter. PREREQUISITE(S): 610.

MAT 612 CALCULUS FOR MATHEMATICS TEACHERS III
A continuation of Math 611. Techniques of symbolic and numerical integration with geometric applications. Sequences, series, power series, and Taylor series. Offered every Spring. PREREQUISITE(S): 611.

MAT 615 CALCULUS FOR ADVANCED PLACEMENT TEACHERS - I
Linear, exponential, logarithmic, power, and trigonometric functions from algebraic, numerical, and graphical perspectives. Limits, continuity, and the derivative. Graphing technology will be used. Advanced placement exams will be examined with applications to classroom teaching. PREREQUISITE(S): Approval of the M.A.M.Ed. director.

MAT 616 CALCULUS FOR ADVANCED PLACEMENT TEACHERS - II
A continuation of Math 615 - applications of the derivative, the definite integral, Riemman sums, techniques of integrations, numerical integration using graphing calculators, and applications of the integral. PREREQUISITE(S): MAT 615.
MAT 617 CALCULUS FOR ADVANCED PLACEMENT TEACHERS III
A continuation of MAT 616 - infinite series and sequences, Taylor polynomials and Taylor series, differential equations, and slope fields. PREREQUISITE(S): MAT 616.

MAT 618 TOPICS IN CALCULUS AND DIFFERENTIAL EQUATIONS
Taylor's theorem, parametric equations, slope fields, Euler's method. The second half of the course will look at the history of calculus and the development of ideas such as limits, least upper bounds, convergence of series, countability, and cardinality. PREREQUISITE(S): MAT 612.

MAT 620 GEOMETRY FOR MATHEMATICS TEACHERS
Axiom systems, types of reasoning used in proofs, Euclidean geometry results with concentration on triangles and circles, introduction to non-Euclidean geometry, and introduction to geometry classroom software. Offered every Spring. PREREQUISITE(S): 660.

MAT 625 GEOMETRY
Axiom systems, types of reasoning used in proofs, Euclidean geometry results with concentration on triangles and circles, introduction to non-Euclidean geometry, and introduction to geometry classroom software. PREREQUISITE(S): MAT 665.

MAT 630 HISTORY OF MATHEMATICS THROUGH PROBLEM SOLVING I
Classical problems and techniques in number theory, algebra and geometry from a historical point of view. Stress on both historical aspects of mathematics and on solutions of concrete problems.

MAT 631 HISTORY OF MATHEMATICS THROUGH PROBLEM SOLVING FOR MATHEMATICS TEACHERS
Topics include the development of calculus, probability theory, number theory, non-Euclidean geometry, and set theory. Offered every Winter. PREREQUISITE(S): 620, 670, with 650 as a co requisite.

MAT 635 HISTORY OF MATHEMATICS [PREREQ(S): 665]
Classical problems from number theory, algebra, Euclidean and non-Euclidean geometry, set theory, probability, and the development of calculus. There will an emphasis on the historical aspects of mathematics and the solution of concrete problems. PREREQUISITE(S): MAT 665.

MAT 640 MULTIVARIABLE CALCULUS FOR MATHEMATICS TEACHERS
Functions of several variables, vectors, dot products and cross products, partial differentiation, directional derivatives, optimization, Lagrange multipliers, polar and spherical coordinates. Use of software packages to illustrate three dimensional objects. PREREQUISITE(S): MAT 612.

MAT 645 MULTIVARIABLE CALCULUS FOR ADVANCED PLACEMENT TEACHERS
Functions of several variables, vectors, dot products and cross products, partial differentiation, directional derivatives, optimization, Lagrange multipliers, multiple integrals, polar and spherical coordinates. Computers will be used to illustrate concepts. PREREQUISITE(S): MAT 617.

MAT 650 PROBABILITY & STATISTICS FOR MATHEMATICS TEACHERS I
Combinatorics, sets, probability, random variables, distribution and density functions, multiple integration, standard probability laws, jointly distributed random variables. Use of graphing calculators, applets, and software packages to illustrate concepts. Offered every Winter. PREREQUISITE(S): 640 and 660.

MAT 651 PROBABILITY & STATISTICS FOR MATHEMATICS TEACHERS II
Central limit theorem, point and interval estimation of parameters, hypothesis testing, least squares and regression. Offered every Spring. PREREQUISITE(S): 650.

MAT 655 PROBABILITY AND STATISTICS FOR ADVANCED PLACEMENT TEACHERS I
Combinatorics, sets, probability, random variables, distribution and density functions, standard probability laws, jointly distributed random variables. Advanced placement exams will be examined with applications to classroom teaching. PREREQUISITE(S): MAT 665.

MAT 656 PROBABILITY AND STATISTICS FOR ADVANCED PLACEMENT TEACHERS II
A continuation of MAT 656 - central limit theorem, point and interval estimation of parameters, hypothesis testing, least squares, and regression. PREREQUISITE(S): MAT 655.

MAT 660 DISCRETE STRUCTURES FOR MATHEMATICS TEACHERS
Logic and proof, number theory, sequences and mathematical induction, sets and functions, cardinality
MAT 665 DISCRETE STRUCTURES WITH A TRANSITION TO HIGHER MATHEMATICS
A transition to advanced courses having a greater emphasis on proof and abstraction. Techniques of proof, logic, sets and functions, number theory, recursive sequences, mathematical induction, and an introduction to combinatorics. PREREQUISITE(S): Approval of M.A.M.Ed. director.

MAT 670 ABSTRACT AND LINEAR ALGEBRA FOR TEACHERS
Number systems, polynomial rings, fields, vector spaces, and groups. This course provides the theoretical foundation for many topics covered in high school mathematics courses. PREREQUISITE(S): MAT 612 and MAT 660 or consent of program director.

MAT 671 ABSTRACT AND LINEAR ALGEBRA FOR MATHEMATICS TEACHERS
A continuation of Math 670. Examines the irreducibility of polynomials, criteria for solvability by radicals, rational values of trigonometric functions, difference functions, partial fraction decomposition, and geometric constructions with ruler and compass. Also examines linear independence, spanning sets, and the basis of a vector space. Along with Math 670, it provides the theoretical foundation for many topics covered in high school mathematics courses.

PREREQUISITE(S): MAT 670

MAT 675 ABSTRACT ALGEBRA I
Integers, rational numbers, real numbers, complex numbers, fundamental theorem of algebra, modular arithmetic, polynomials rings, roots of polynomials of small degree, and values of trigonometric functions. This course provides the theoretical foundation for many topics covered in high school mathematics courses. PREREQUISITE(S): MAT 665.

MAT 676 ABSTRACT ALGEBRA II
A continuation of MAT 675 - topics include group theory, vector spaces, difference functions, partial function decomposition, introduction to Galois theory, geometric constructions, and the insolvability of the quintic. PREREQUISITE(S): MAT 675.

MAT 680 FOUNDATIONS OF CALCULUS FOR ADVANCED PLACEMENT TEACHERS
Completeness properties of the real number line, limit theorems, the intermediate value theorem, the existence of the definite integral, differential equations, and slope fields. Students will review problems from recent AP Calculus examinations and each topic will be linked to specific problems on the AP exams.

MAT 685 REAL ANALYSIS
To better prepare teachers of A.P. Calculus, the theoretical foundations of calculus are examined. An in depth look at fundamental results in calculus such as the Intermediate Value Therorem, the Extreme Value Theorem, the Mean Value Theorem, the Fundamental Theorem of Calculus, Taylor's Theorem, and L'Hopital's Rule. PREREQUISITE(S): MAT 617 and MAT 665.

MAT 697 MATHEMATICAL PEDAGOGY: THEORY AND PRACTICE
Introduction to current theories and practices in college mathematics instruction; designed to prepare students to work as consultants in mathematics instruction by helping them develop a deeper understanding of fundamental mathematical concepts and an awareness of how people learn mathematical ideas. Mathematical tutoring practicum is required. Four-credit hour course offered over a two quarter span during the autumn and winter quarters only. PREREQUISITE(S): Permission of instructor. See instructor for further information.

MAT 699 TOPICS IN MATHEMATICS FOR TEACHERS
Diverse topics in mathematical modeling or mathematical appreciation germane to the secondary school classroom. PREREQUISITE(S): Consent of instructor.
MCS 501 FILM AND MEDIA THEORY (FORMERLY MCS 501)
This course will serve as a foundation for students in theories of film, television, and new media. An engagement with areas such as formal analysis, television and film spectatorship, authorship, television flow, and media specificity will provide both a brief historical framework for these disciplines, as well as a survey of major texts. Readings will include scholars/theorists such as Sergei Eisenstein, David Bordwell, Laura Mulvey, Horace Newcomb, Raymond Williams, Nick Browne, and Henry Jenkins. Formerly MCS 501 Introduction to Media Studies.

MCS 502 MEDIA AND CULTURAL STUDIES
This course provides students with a theoretical and methodological background in the interdisciplinary field of cultural studies, which considers media and culture as sites for the construction and contestation of race, class, gender, ethnicity, sexuality and nation. The course provides a foundation in critical cultural studies, ideology critique, critical race and gender studies, transnational media studies and active audience studies.

MCS 503 GLOBAL CINEMA/MEDIA
This course surveys a number of frameworks for understanding the global dynamics that constitute particular media cultures around the world. We will examine historical perspectives and debates concerning the processes of globalization and the media's constitutive role in impacting our conceptions of space and time across local, national and transnational terrains. Students will interrogate how the actions of nation states, civil society and transnational corporations impact media industries and ask how media representations are contested across registers of nation, region, citizenship, class, religion, labor, gender, Diaspora, race, migration and ethnicity.

MCS 504 HISTORIOGRAPHY AND RESEARCH
This course will offer critical perspectives and methods to film and media history and research. Areas of exploration will include how popular history and academic historiography interact, the way certain subjects and facts are emphasized over others, the different forms used to represent historical knowledge, and questions of history and memory. In addition to the assumptions, methods, and purposes of film/media histories, the course will also ask crucial questions regarding the nature of enquiry and the status of data and evidence. Students will learn how to address a specific research question through a variety of methodologies in a cogent and comprehensive manner. Students will also develop competency in writing a research proposal and using research tools such as Endnote and online journal databases.

MCS 519 TOPICS FOR CAREER DEVELOPMENT IN MEDIA
This course introduces students to possible areas for professional advancement in media and cinema. As a rotating topic, it will focus on four areas of development: archiving and curating; community activism; programming series and festivals; the practice of media criticism; and the use of digital media in various contexts. The courses under this rubric may include experiential learning opportunities.

MCS 520 TOPICS IN MEDIA STUDIES
This is a seminar that focuses on a particular area of media studies including, but not limited to, topics such as the contemporary media industries, kids media culture, television studies, music cultures, digital divide, race and media, celebrity culture, radio studies, war and media, gender and media, global television, new media studies and sexuality and media. Students may take this seminar repeatedly in different topic areas.

MCS 521 TOPICS IN CINEMA STUDIES
This is a seminar-level course that provides in-depth examinations of Cinema Studies topics. Topics vary from quarter to quarter and may include studies of film genres, film authorship, national cinemas, global cinema, gender in cinema, animation, film theory, early cinema, film aesthetics, race and representation, film sound studies, or other rotating topics.

MCS 522 TOPICS IN CINEMA/MEDIA HISTORY
Examination of a particular era of film history or national cinema, film movements, or moments in social history and their relationship to film production. Topics currently in rotation include American Films of the 1970s, Latin American Cinema, War and Film, New German Cinema, feminist film, etc. Examination of a particular eras or forms of television/edia from a historical perspective. Topics could include but are not limited to: History of American Broadcasting, International Broadcasting Structures, Television Outside the Box, Public and Community Broadcasting, genre-specific histories, etc.

MCS 530 NEW MEDIA AND CULTURE
This seminar considers the cultural ramifications of new media in shaping life experience and opportunity. As interactive digital media technologies expand opportunities for social networking, text and instant messaging, file sharing, collaborative authoring, blogging, podcasting and mobile communication, this seminar asks how these new technologies impact identity formation, creative participation and concepts of public culture. Issues
of concern include race, gender, class, sexuality, cultural citizenship, fandom, subcultures and democratic participation.

MCS 531 MEDIA POLICY
This seminar considers the regulatory policies that have shaped media culture including those governing ownership, content, labor and intellectual property. The focus is on how citizens, industries, governments and social movements have sought to impact the role of media in public and private life including issues such as civil rights, media conglomeration, sex and violence, free speech, public access, children's media, public radio/TV, fair use in copyright, international governance, commercialization and equal opportunity. Students engage with these issues through investigating historical and contemporary case studies within local and global contexts.

MCS 532 ASIAN CINEMA/MEDIA
This seminar examines the cultural, social and economic contexts to Asian cinema/media. The course focuses on national and regional cinema/media industries and their transnational contexts of production, circulation and reception. Students consider questions of identity and cultural difference, particularly in relation to immigration, Diasporas, transnationalism, youth culture, class, gender, sexuality, race and ethnicity. As well as an historical survey, the course considers recent develops as digital technologies impact Asian media cultures.

MCS 533 LATIN AMERICAN CINEMA/MEDIA
This seminar examines the production, distribution and impact of cinema and media in the Latin American context. We will view a range of works from major and minor industries and investigate how social, economic and political forces have shaped or are presently influencing and transforming national cinemas and their industries. Questions of identity and cultural difference, particularly in relation to immigration, diasporas, transnationalism, youth culture, class, gender, sexuality, race and ethnicity are central to the discussions. We will consider the diversity of styles and topics as much as the discursive and theoretical frameworks that in the past defined, or those that are now redefining, the cinema and media of the region.

MCS 534 DOCUMENTARY STUDIES
This course examines the rise and growth of documentary forms, including audio, film, television, photography, and literary journalism. Students will study representative works from each documentary approach and learn to analyze the techniques of observation and representation at use in these pieces. Students will become familiar with the social, aesthetic, and historical discourses of documentary and understand major theoretical and critical approaches of analyzing documentary forms. Students will become aware of the convergent and divergent qualities that are features of qualitative research, journalism, and documentary practice. Students will learn how documentary functions as a witness to personal and public histories.

MCS 541 AUDIO DOCUMENTARY
This course uses hands-on projects so that students can explore the steps in the process of creating an audio documentary. Through practical application students consider questions that surround the interpretation of cultural experience. Additionally, students analyze a variety of approaches to audio documentary in an effort to understand better this significant form of storytelling.

MCS 542 TOPICS IN PRODUCTION
This course allows students to take production courses from across the university including, but not limited to, Advanced Sound Design, Advanced Non-linear Editing, Documentary Production, Advanced Cinematography, Document Design, Online Documentation, Writing and Technology, Web Design I and Web Design II.

MCS 590 MEDIA & CINEMA STUDIES WORKSHOP (VARIABLE TOPICS)
This course allows students to sample a range of hands on, practical offerings in communication that can enhance their knowledge and expertise. Topics offered include survey design and focus groups.

MCS 592 INDEPENDENT STUDY
This is a class reserved for independent coursework and specialization under the supervision of a faculty member. Students approved to take this class may do so at any point in the program. However, graduate students in the M.A. in Media, Culture and Society, should enroll in MCS 592 Independent Study during the quarter they write and defend the thesis/project proposal. This is a pass/fail 4-credit hour course. Enrollment in this course requires your thesis/project advisor's approval. Tuition is charged. You must complete your thesis/project proposal to be approved for this class.

MCS 599 RESEARCH THESIS
Enroll in 599 during the term you plan to defend your thesis or complete your final project. This is a graded, 4-credit hour course. Tuition is charged and loan deferral is available. You must have a scheduled
defense/completion date to be approved for this class. Your thesis/project advisor needs to communicate this date to the Graduate Studies Director for your program, before you are allowed to enroll.

**MCS 601 ACTIVE DEGREE COMPLETION**
This is a 0-credit hour course that is available to students who are working actively toward the completion of a thesis or project. Enrollment in this course is limited to the two quarters prior to the defense of the thesis/project and requires graduate director approval and proof of work each quarter. No tuition is charged, only student fees (approx. $50), which allows you access to the library and other campus facilities. This course is graded as pass/fail. Eligible for loan deferment and student loans.

**MCS 602 CANDIDACY CONTINUATION**
This is a 0-credit hour course that requires permission from the graduate director. Students can enroll in 602 if they are finishing a course in which they received an incomplete (IN). If the student does not register for any regular courses in the quarter they plan to finish the incomplete, they can enroll in 602 and access the library and other campus facilities. No tuition is charged, only student fees (approx. $50). This course is graded as pass/fail. Not eligible for loan deferment or student loans.

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**Music Education**

Graduate Course Descriptions - Current

**MED 401 SEMINAR IN MUSIC EDUCATION I: HISTORY AND PHILOSOPHY OF MUSIC EDUCATION**
(4 credits) The courses are designed 1) to develop a philosophical and historical perspective of music education; 2) to study the psychology of music; 3) to study topics in curriculum design; 4) to encourage study and research in areas of student interest and need; and 5) to study contemporary issues in music education that can have significant impact on classroom teaching.

**MED 402 SEMINAR IN MUSIC EDUCATION II: PSYCHOLOGY OF MUSIC TEACHING & LEARNING**
(4 credits) The courses are designed 1) to develop a philosophical and historical perspective of music education; 2) to study the psychology of music; 3) to study topics in curriculum design; 4) to encourage study and research in areas of student interest and need; and 5) to study contemporary issues in music education that can have significant impact on classroom teaching. PREREQUISITE(S): Successful completion of MED 401.

**MED 403 SEMINAR IN MUSIC EDUCATION III: CURRICULUM DEVELOPMENT IN MUSIC EDUCATION**
(4 credits) The courses are designed 1) to develop a philosophical and historical perspective of music education; 2) to study the psychology of music; 3) to study topics in curriculum design; 4) to encourage study and research in areas of student interest and need; and 5) to study contemporary issues in music education that can have significant impact on classroom teaching. PREREQUISITE(S): Successful completion of MED 402.

**MED 492 TECHNIQUES OF RESEARCH IN MUSIC EDUCATION**
This course will examine the basic questions, issues and theoretical frameworks central to the purpose, conceptualization, conduct, writing, reading, and the use of educational research as a means for informing educational theory, practice and policy.

**MED 498 MASTERS CANDIDATE RESEARCH**

**MED 499 INDEPENDENT STUDY**

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**Music Ensemble**

Graduate Course Descriptions - Current

**MEN 400 ENSEMBLE 20+**
(0 credit) Study, rehearsal, and performance of living composers' music and 20th century masterpieces, with
focus on music for mixed ensembles of 8-25 players; acquisition of skills and instrumental techniques
necessary for playing contemporary music. PREREQUISITE(S): Placement audition required.

MEN 401 WIND SYMPHONY
(1 credit) Study and rehearsal of basic and new wind repertoire in preparation for concerts presented regularly
each year. All MEN courses are repeatable courses. Placement audition required.

MEN 402 WIND SYMPHONY
(0 credit) Study and rehearsal of traditional and new wind repertoire in preparation for concerts presented
regularly each year. Placement audition required. All MEN courses are repeatable courses.

MEN 406 CONCERT CHOIR
(0 credits) Rehearsal and performance of choral works from a variety of styles and historical periods. All MEN
courses are repeatable courses. Open to graduate students only. Audition required.

MEN 407 SYMPHONY ORCHESTRA
(0 credit) Study, rehearsal, and performance of masterpieces of the orchestral repertoire, both traditional and
contemporary; acquisition of necessary musical and professional skills for playing in an orchestra. Placement
Audition Required.

MEN 408 WIND ENSEMBLE
(0 credit) Study, rehearsal, and performance of masterpieces of wind literature, both traditional and
contemporary, with focus on music for ensembles of 8-30 players; acquisition of necessary musical and
professional skills for playing in such an ensemble. All MEN courses are repeatable courses. PREREQUISITE(S):
Placement audition required.

MEN 409 UNIVERSITY SINGERS
(0 credit) An advanced choral ensemble of selected voices. Placement audition required. All MEN courses are
repeatable courses. Open to graduate students only. Audition required.

MEN 410 CHAMBER MUSIC
(0 credit) A practical application of performance techniques for advanced instrumentalists and vocalists;
repertoire adapted to the instrumentation of the class according to the ability of the class member; public
performance. All MEN courses are repeatable courses.

MEN 411 ENSEMBLE 20+
(0 credit) Study, rehearsal, and performance of living composers' music and 20th century masterpieces, with
focus on music for mixed ensembles of 8-25 players; acquisition of skills and instrumental techniques
necessary for playing contemporary music. PREREQUISITE(S): Placement audition required.

MEN 412 CHAMBER ORCHESTRA
(0 credit) Study, rehearsal, and performance of masterpieces of the smaller orchestra repertoire, both
traditional and contemporary; acquisition of necessary musical and professional skills for playing in an
orchestra, with emphasis on developing good listening and blending abilities. Placement audition required.

MEN 423 CONCERT CHOIR
Rehearsal and performance of choral works from a variety of styles and historical periods. An audition is
required before the first rehearsal of the quarter.

MEN 430 CHAMBER ORCHESTRA
(1 credit) Study, rehearsal, and performance of masterpieces of the smaller orchestra repertoire, both
traditional and contemporary; acquisition of necessary musical and professional skills for playing in an
orchestra, with emphasis on developing good listening and blending abilities. Placement audition required.

MEN 431 SYMPHONY ORCHESTRA
(1 credit) Study, rehearsal, and performance of masterpieces of the orchestral repertoire, both traditional and
contemporary; acquisition of necessary musical and professional skills for playing in an orchestra. All MEN
courses are repeatable courses. Placement audition required.

MEN 437 WIND ENSEMBLE
(1 credit) Study, rehearsal, and performance of masterpieces of wind literature, both traditional and
contemporary, with focus on music for ensembles of 8-30 players; acquisition of necessary musical and
professional skills for playing in such an ensemble. All MEN courses are repeatable courses. Placement
audition required.
MEN 441 CHAMBER MUSIC
(1 credit) A practical application of performance techniques for advanced instrumentalists and vocalists repertoire adapted to the instrumentation of the class, according to the ability of class members; public performance.

MEN 447 UNIVERSITY SINGERS
(1 credit) An advanced choral ensemble of selected voices. All MEN courses are repeatable courses. Placement audition required.

MEN 498 INDEPENDENT STUDY

Management

Graduate Course Descriptions - Current Management

MGT 444 DEVELOPMENTAL ASSESSMENT CENTER
Students participate in a developmental assessment center designed to assess their managerial and interpersonal skills including teamwork, oral and written communication, ethical decision-making, initiative and planning. Students receive extensive feedback regarding their performance. Based upon this feedback, personal development plans are created to be used throughout the curriculum. PREREQUISITE(S): Graduate standing

MGT 500 MANAGING FOR EFFECTIVE AND ETHICAL ORGANIZATIONAL BEHAVIOR
Students will critically examine ethical and creative methods to solve problems related to managing individuals and teams. Students utilize feedback from a developmental assessment center assessing their managerial and interpersonal skills. Personal development plans are created and skills developed throughout the course. Skill development domains include perception, attribution, motivation, learning leadership, communication, team development, managing change and conflict, decision-making, power and politics and business ethics. PREREQUISITE(S): Graduate standing

MGT 501 STRATEGIC SUPPLY CHAIN MANAGEMENT
This course examines how operations related strategic decisions can lead to improved market and competitive performance. We view the supply chain (of products or services) from a strategic point of view. The design of an expedient logistics system is critically linked to the key decisions and objectives of a responsive and efficient supply chain (forecasting, aggregate planning, inventory management, matching supply with demand, transportation, location and information). We cover those topics with cases, spreadsheets and simulations to illustrate and help understand how logistical decisions impact the performance of the firm as well as the entire supply chain. Offered once a year. PREREQUISITE(S): Graduate standing

MGT 502 OPERATIONS MANAGEMENT
At its core, business is about providing a superior product or service. This course analyzes the processes used to deliver products in the marketplace. World class firms have demonstrated that effective operations management can be a potent competitive weapon. This course addresses the key operations and logistical issues in service and manufacturing operations, which have strategic as well as tactical implications. Both quantitative and qualitative techniques and principles used by leading organizations are examined. Offered every quarter. PREREQUISITE(S): GSB 420

MGT 506 DECISION MAKING FOR MANAGERS
This course addresses Simon’s three-phase problem-solving model. Students learn how to improve problem diagnosis through statistical and logical tools, creatively generate alternative solutions, and make effective decisions through decision analysis and by building decision support models. Students will use a various spreadsheet applications to aid in the decision-making process. Offered once per year. PREREQUISITE(S): MGT 502

MGT 508 QUALITY MANAGEMENT SYSTEMS
Organizations seeking to improve their customer satisfaction, operating efficiency, and profitability frequently turn to quality management initiatives--including; Total Quality Management, Business Process Reengineering, Six Sigma. and ISO Quality Standards. The lessons learned through the success and failure of
these programs provide valuable insights to managers seeking to achieve performance excellence within their own organizations. The course relies on the Malcolm Baldrige National Quality Award framework and case analysis to explore successful quality management initiatives. Offered twice a year. PREREQUISITE(S): MGT 502

MGT 518 LABOR ECONOMICS AND LABOR RELATIONS (CROSS-LISTED WITH ECO 518)
A study of the American labor force: measurement, characteristics and behavior under changing income, employment and technology. An examination of recent labor market developments provides the basis for a critical analysis and appraisal of contemporary wage theory. Topics include changes in the labor force, unemployment, wage determination, the minimum wage, internal labor markets, productivity, discrimination, unions and collective bargaining. Cross-listed with ECO 518. PREREQUISITE(S): MGT 555

MGT 519 SPORTS MANAGEMENT
Students will examine the major issues facing sport managers in a variety of sport organization settings through course projects and case studies. Through the lens of organizational theory and behavior, areas explored include professional, Olympic, collegiate, and youth sport. Other areas of focus will include community and fitness centers, sponsorship, technology, legal issues, and emerging issues. Students will be exposed to various disciplines/careers through guest lecturers in the sports industry and learn current management issues from industry experts.

MGT 521 MANAGEMENT OF FAST GROWING FIRMS
Alternative growth strategies for companies in the second stage of their life cycle are examined. After initial start-up, a unique set of problems and constraints confront the firm limiting its growth. Expansion of product line and services, new market development, redefinition of organizations, financial resource allocation, second stage financing using a case study approach, and going public are some issues that are covered. Proposed revisions are critically evaluated. Offered once a year. PREREQUISITE(S): ACC 500 and MGT 500

MGT 523 RECRUITMENT AND SELECTION
An advanced study of current recruitment and selection practices of organizations both public and private. Emphasis is placed on common tests that are used and an examination of these tests for applicability in specific situations. Legislation related to EEO an Affirmative Action programs are discussed. Offered once a year. PREREQUISITE(S): MGT 555

MGT 524 LEADERSHIP IN SPORTS: LESSONS FOR COACHING IN THE WORKPLACE
A framework of leadership and coaching is utilized to critically examine the effectiveness of several sports' coaches and their leadership/coaching styles, as they motivate players to achieve their maximum level of performance. Lessons from leading sports' coaches are then applied to the workplace, where managers motivate employees to perform to their potential. The course also highlights the importance of unique situations in both the sports and workplace arenas. Major topics to be covered include roles of coaches and players, skills of coaching, coaching teams, and "flow" in sports and organizations.

MGT 525 TRAINING AND CAREER DEVELOPMENT
An intensive study of personnel training and development in contemporary organizations. Emphasis is placed upon the identification of training needs, program design, choice of training methods, and evaluation of results. Classroom activities focus on application with students designing and presenting training seminars. Offered once a year. PREREQUISITE(S): MGT 555

MGT 526 COMPENSATION AND BENEFITS
The course addresses the total rewards available in an organization. The first goal is to learn how to design a pay system that is efficient, legally compliant, and fair/ethical. This is done through such topics as pay strategy, internal pay alignment, external competitiveness, pay for performance, and legal compliance. The second goal is to learn how to design a benefits plan that supports company objectives. This is done through such topics as retirement plans, health insurance plans, and legally required benefits. The third goal is to learn about work-life programs.

PREREQUISITE(S): MGT 555

MGT 529 LIFE AND CAREER PLANNING
This course is designed to develop your life and career skills to meet the challenges associated with changing careers and changing jobs. Topics include: enhancing your self-esteem, balancing life and career, tapping interests, aptitudes and values, self-marketing, resumes and interviews and strategic career planning to achieve life and career goals. This is a Human Resource Management and a Leadership and Change Management course. Offered once a year.

MGT 530 LEADERSHIP IN ORGANIZATIONS
This course utilizes a theoretical framework to provide a foundation of understanding of effective leadership in organizations. The opportunity for self-assessment of leadership strengths and management styles, as well as reflection and action planning for individual leadership development, is also provided. To enhance self-assessment, there are questionnaires, as well as classroom exercises, experienced in a supportive group environment. Examples of effective organizational leadership are also critically examined in case studies. Current leadership topics to be covered include values and vision, strategy, organizational culture, management style, leading groups and teams, and coaching, thus providing analysis from both the macro and micro organizational levels. Offered twice a year.

**MGT 535 CHANGE MANAGEMENT**
This course is targeted towards external and internal consultants, as well as managers and other change agents within organizations. Change Management fosters improved competency in the skills necessary during all phases of the change process - from diagnosis, to interventions, through evaluation. Organizational change issues are critically examined, and case studies, exercises, and assessments are utilized, to better understand change from organizational, group, and individual levels. Change models serve as frameworks that emphasize the importance of interactive consultative processes. A major organizational change project is required of all students. Offered twice a year. PREREQUISITE(S): MGT 500

**MGT 545 MANAGING SERVICE OPERATIONS (PREREQ: MGT 502)**
This course provides an examination of operating activities in service industries. Emphasis is on the principles of design, operation and control of service delivery systems. Lectures, cases and assignments focus on such topics as delivery system design, client interfaces, operations control, capacity management and quality control. PREREQUISITE(S): MGT 502. Offered once a year

**MGT 551 GLOBAL HUMAN RESOURCE MANAGEMENT**
Concepts, theories, principles and techniques for effectively managing a workforce in a global organization. Focus on HR strategy, staffing, development, performance management, remuneration management, legal/regulatory compliance and employee labor relations. Recommended: Completion of MGT 555

**MGT 552 MANAGING CULTURAL DIFFERENCES FOR GLOBAL SUCCESS**
"Managing Cultural Differences for Global Success" course is designed to guide and coach participants on how to work and communicate effectively with people from different cultures. The course provides a hands-on approach for developing cross cultural competency. Comparative cultural models will explain how concepts such as culture, values, time, power, mindsets and thinking patterns differ in the world. We will illustrate with real-life cases pertaining to doing business in Europe, Asia and the Americas.

**MGT 555 STRATEGIC MANAGEMENT OF HUMAN RESOURCES**
This course will help students understand how the management of people is influenced by the social, ethical and legal environment; by diversity in the work place; by the organizational culture; and by the business strategy. Students will learn how to effectively perform the following HR activities: selecting employees, developing people, evaluations and rewarding performance, and motivating employees. Offered every quarter. PREREQUISITE(S): MGT 500

**MGT 557 INTERNATIONAL MANAGEMENT**
The object of this course is to develop clear awareness of the international business operations, practices and environment. It provides the concepts, methods and tools necessary to face the global challenges in international management. The objective is met through lectures, classroom discussions, library assignments and research work. Students will learn the effective use of the international business references. By the end of the course, they are expected to have developed a high level of competency in acquiring, understanding, analyzing and synthesizing international management information from international business directories, databases and CD-ROMs.

**MGT 559 HEALTH SECTOR MANAGEMENT**
This graduate level, hands-on course will discuss the evolution and current trends in the delivery and financing of health goods and services in the biotechnology, pharmaceutical, medical device, and health services delivery industries within the health sector. This course will equip students with the ability to use managerial epidemiology as a decision making tool in marketing and operations in the health sector. Ultimately, this course will enable students to apply Michael Porter's Five Forces Model to analyze and manage the various industries within the health sector. This course will use lectures, role plays, simulations, and the case method. Offered once a year.

**MGT 562 RESOLVING CONFLICT IN ORGANIZATIONS**
Comprehensive study and skill building exercises devoted to the development of skills necessary for managers to resolve and manage conflict within their organizations. For illustrative purposes, discussions and
exercises will be in the context of employment disputes, discrimination disputes, and/or labor-management disputes. However, the skills attained in the course may be successfully used to resolve any type of conflict. Included will be a discussion of various dispute resolution methodologies including the mediation, arbitration, and investigation of asserted conflicts, real or perceived, as well as the design of dispute resolution processes and related issues of organizational fairness, justice, and ethics. Offered once a year. PREREQUISITE(S): MGT 500 and MGT 555

**MGT 563 NEGOTIATION SKILLS**
The nontraditional course relies predominantly upon experiential learning to enhance students' ability to get what they want through negotiation. It is a skill-building course designed to help each individual student become persuasive, both personally and professionally. The course makes use of lecture, class discussion, various stress negotiation assignments and a major bargaining exercise. It builds upon failures as well as successes, enabling students to identify their own individual negotiations style. Students completing the course will have developed the ability to compete successfully in future negotiation situations at all levels and to refine the tools and techniques they learned during the quarter. Offered three times a year. PREREQUISITE(S): MGT 555

**MGT 564 HEALTH SECTOR MANAGEMENT: STREETS OF CHICAGO**
This graduate level course will equip management, marketing, finance, and accounting students with the knowledge necessary to apply their specific expertise into one of the fastest growing sectors of the global economy. Upon completing this course, students will be exposed to not only the latest theories, techniques, and best practices but also some of the key players in Chicago's health insurance, biotechnology, pharmaceutical, hospital, and group practice industries.

**MGT 564 STREETS OF CHICAGO: HEALTH SECTOR MANAGEMENT**
This graduate level course will equip management, marketing, finance, and accounting students with the knowledge necessary to apply their specific expertise into one of the fastest growing sectors of the global economy. Upon completing this course, students will be exposed to not only the latest theories, techniques, and best practices but also some of the key players in Chicago's health insurance, biotechnology, pharmaceutical, hospital, and group practice industries.

**MGT 565 EMPLOYMENT LAW**
The purpose of the course is to identify how a supervisor or firm owner is legally regulated in connection with the management of her or his workforce, as well as the management implications of the regulation. In this way, the student will learn of the legal ramifications of human resource management decisions. Topics which will be addressed include discrimination on the basis of age, gender, race, religion, disability and national origin, sexual harassment, drug and other forms of testing, regulation of hiring and firing decisions, privacy rights and regulation of off-work conduct. Class activities may also focus on understanding bias and prejudice in managerial decision-making. PREREQUISITE(S): MGT 555

**MGT 570 ENTREPRENEURSHIP AND NEW VENTURE MANAGEMENT**
The focus of the course is on new venture initiation and the preparation of a business plan that can be used to generate financing and to begin operations in a new business enterprise. It examines the critical factors involved in the conception, initiation and development of new business ventures. Topics covered include the identification of characteristics of prospective entrepreneurs, identifying innovations, market potential analysis for new products or services, acquiring seed capital, obtaining venture capital for growth or purchase of an existing business and organization and operation of the new business. Each student is required to develop a business plan which will be presented to the class. Students wishing to start, develop, acquire, sell or merge a business are encouraged to do so. Offered three times a year. PREREQUISITE(S): ACC 500, MGT 500, MGT 502

**MGT 571 FINANCING NEW VENTURES (CROSS-LISTED WITH FIN 571)**
This course will focus on identifying, examining and evaluating various sources of original and growth capital. Emphasis will be on legal, financial and tax issues related to capital formation as well as specific problems experienced by the small-to-medium-sized firms undergoing rapid growth. Topics discussed will include financing startups, financial planning and strategy, going public, selling out and bankruptcy. A formal proposal for capital acquisition developed through field research will be required of each student. PREREQUISITE(S): FIN 555

**MGT 572 CORPORATE VENTURES AND MANAGEMENT (PREREQ:ACC 500,MGT 500,MGT 502)**
The focus of this course is on how corporations develop new ventures. It critically examines the circumstances that make it possible for employees to contribute their venture ideas to the corporate objectives and describes techniques that stimulate such ideas. Although the primary focus will be on the employee and how the individual can be entrepreneurial within a corporate structure, the course also
examines how the corporation can systematically encourage innovation. Case studies of corporate ventures projects will be reviewed. PREREQUISITE(S): ACC 500, MGT 500, MGT 502. Offered once a year.

MGT 573 CREATIVITY IN BUSINESS
This course explores the nature and role of creativity in organizations. Theories and modes of creative thinking, and the link between creativity and innovation are presented. The course format is largely experiential, with emphasis on group and individual exercises, techniques, simulations and cases, through which students will investigate the creative process in a variety of organizational settings. The role of managers and team members in nurturing and sustaining a creative enterprise is discussed. The course is designed to open students to the creativity within themselves and organizations, and to the tools with which creativity can be managed to promote innovation and enhance organizational effectiveness as well as satisfaction and quality of work life. Offered four times a year.

MGT 589 COACHING FOR LEADERSHIP, PERSONAL SUCCESS & PEAK PERFORMANCE
Coaching for Leadership, Personal Success and Peak Performance, navigates through ideas and opportunities to increase your personal and managerial effectiveness, enhance your career success, and promote life fulfillment. Specific skills will be practiced to create and manage self awareness, build trust, communicate effectively, and enrich relationships with bosses, subordinates and mentors. Working from a place of purpose and intention course participants will harness competitive advantage from performance, diverse and virtual teams. Each person will explore finding flow, managing stress, maintaining optimism, and creating balance in work, health and family.

MGT 590 MANAGEMENT OF INNOVATION AND TECHNOLOGICAL CHANGE
The ability to manage technological innovation has become an increasingly essential requirement for business people regardless of functional specialty. The objective of this course is to explore ways to create environments that are conducive to technological innovation. Throughout the course students examine practices, models, and approaches that established, as well as new, organizations employ to promote innovative practice, technological change, and new technologies. The following topics will be covered: the innovation process, managing technical people, the impact of organizational design on innovation, knowledge management, cross function teams and exploiting new technologies. Students will research new technologies and discuss potential business applications and issues associated with those technologies. Offered once a year. PREREQUISITE(S): MGT 502

MGT 595 SOCIAL ENTREPRENEURSHIP
This course explores principles and applications of social value generation in entrepreneurial contexts. Participants will learn how agile, growing ventures are launched and managed to generate value that transcends commercial and social frontiers. The course material emphasizes concepts from traditional entrepreneurship in the context of the broader social sector environment. Diverse contributions from graduate students in the College of Commerce as well as the School of Public Service ensure deep exploration of the social venture realm. The course experience is enriched by team-based consulting to several actual Chicago social entrepreneurial ventures as a practical complement to classroom activities.

MGT 598 PROJECT MANAGEMENT: SEMINAR IN OPERATIONS MANAGEMENT
This course covers management techniques that are applicable to a wide variety of project types including new product development, business start-ups, marketing campaigns, facility relocations, construction, research programs, and special events. Emphasis is on scheduling, budgeting, and control including the selection and application of project management software. Other topics include project organization, qualifications and roles of the project manager, project leadership, team building, and the management of conflict and stress in projects. Offered three times a year.

MGT 793 MANAGEMENT INTERNSHIP
This is a unique opportunity in which interns gain and develop managerial skills, providing a link to mastering the dynamics of running a business. This hands-on experience allows the intern to apply his or her skill/wisdom to the work place and provides invaluable knowledge that is crucial for future advancement. While building an impressive resume for further job opportunities, the intern will be immersed in a stimulating environment with a pool of established resources. In addition, networking opportunities avail themselves to build future relationships. PREREQUISITE(S): Permission

MGT 798 SPECIAL TOPICS
Content and format of this course are variable. An in-depth study of current issues in management. PREREQUISITE(S): As indicated in schedule.

MGT 799 INDEPENDENT STUDY
Available to graduate students of demonstrated capability for intensive independent work in management.
Management Information Systems

Graduate Course Descriptions - Current

**MIS 555 MANAGEMENT OF INFORMATION TECHNOLOGY**
This course focuses on the management and use of information technology (IT). As the use of IT in society grows, particularly in business, our graduates are likely to become responsible for managing some technology resources and to participate in IT planning and development projects as founders, sponsors, team members, managers of development or end-user developers. Students should become effective users and evaluators of information, IT, and information services. The course explores a number of IT-related topics such as the strategic role of IT, IT planning and architecture, building the telecommunication highway system, management issues in systems development, the expanding universe of computing, group support systems, intelligent systems, electronic document management, and managing the human side of systems.

**MIS 673 DATA MANAGEMENT**
Data has been recognized as an important corporate resource and databases have evolved into a central component of business information systems. Topics include semantic data modeling using entity-relationship and object models; data structuring with normalization; relational database design, implementation and manipulation with SQL (Structured query language); and some evolving technologies such as data warehousing, on-line analytical processing, object-oriented databases, and data visualization. Hands-on exercises include the use of a relational database system with SQL and data modeling CASE (computer-aided software engineering) tools.

**MIS 674 SYSTEMS ANALYSIS AND DESIGN**
The focus of this course is on the early phases of information systems development starting with requirements analysis and specification. Alternative systems development methodologies including conventional structured approaches are reviewed but the emphasis is on distributed processing together with object-oriented analysis and design, rapid application development and prototyping, the use of CASE (computer aided software engineering) tools and GUI (graphical user interface) design with event-driven computing.

**MIS 683 INFORMATION TECHNOLOGY STRATEGY AND ARCHITECTURE**
This course addresses the fundamental aspects of developing an information technology (IT) strategic plan and the enabling IT architecture to support enterprise business processes. Students explore the importance of strategic alignment of business and technology as well as the contribution IT has on the value chain. Students will be able to more effectively use and manage IT from an enterprise view and from an architectural perspective. The course includes lectures, practical case discussions and current events in the industry. It also explores how IT can be leveraged to improve shareholder value, customer satisfaction and the competitive position of the firm. This is intended to be an advanced level managerial course for practitioners who have ambitions to be a senior IT executive, management consultant or a technical analyst.

**MIS 798 SPECIAL TOPICS**
Content and format of this course are variable. It involves an in-depth study of current issues in information systems and technology. Subject matter constantly changes and will be indicated in class schedule.

**MIS 799 INDEPENDENT STUDY**
Available for graduate students of demonstrated capability for intensive independent work in information systems. PREREQUISITE(S): MIS 555 and written permission.

Marketing
MKT 525 MARKETING RESEARCH I
Required for Marketing concentration. This course provides an overview of the nature of marketing research and its role in decision-making with the organization. Specifically the students will concentrate their efforts on understanding the process of research design and implementation. Offered every quarter. PREREQUISITE(S): GSB 420

MKT 526 MARKETING RESEARCH II
Those students interested in more extensive marketing research experience should enroll in this course. The student will begin with a data set and work closely with the instructor in performing multivariate data analysis and developing a format for presentation of results. PREREQUISITE(S): MKT 525

MKT 528 QUALITATIVE RESEARCH METHODS
Qualitative Research Methods will explore non-survey and non-experimental techniques useful in researching issues with marketing implications. Lectures and reading assignments will be punctuated with experimental exercises, videotapes, and student presentations. Topics will include question design, content analysis, and unstructured or simple observation. Projective techniques and other indirect methods, in-depth/in-person interviews, and focus group sessions. Offered variably. PREREQUISITE(S): MKT 525 and MKT 545.

MKT 529 PRECISION MARKETING
Geodemographic systems such as Claritas and Spectra combine publicly available demographic data with commercial databases and mapping software. These tools, which are use by most Fortune 1000 consumer firms, enable marketers to pinpoint target markets and create effective strategies for a variety of marketing activities. Course topics include the strengths and weaknesses of different approaches, identification of a geodemographic target market, and the use of geodemographic data for advertising and promotion, retail site selection, cross-selling opportunities, and other strategic decisions. Offered winter quarter. PREREQUISITE(S): MKT 555

MKT 530 CUSTOMER RELATIONSHIP MANAGEMENT
Students are introduced to a new strategy methodology, CRM, which is currently being adopted by many organizations in efforts to enhance their competitive advantage. Focus is placed on understanding how an enhanced customer relationship environment can differentiate an organization in a highly competitive marketplace. Both the business and consumer markets are examined in multiple vertical markets. New technology demonstrations and their impact will be discussed. Guest speakers provide current best-practice methods. Topics included: Case analysis and projects make up the course assignments. PREREQUISITE(S): Graduate standing

MKT 534 ANALYTICAL TOOLS FOR MARKETERS
This course seeks to provide an in-depth understanding of both qualitative and quantitative analytical tools that are of critical importance to marketers. These tools will help marketers avoid head-to-head competition, understand customer perceptions, understand customer preferences, develope accurate sales forecasts, and financially value marketing strategies. The course is designed to be "hands-on" in that students will develop understanding mainly through conducting application projects and presenting results. The course is also designed to be immediately applicable to marketers' current and future jobs. PREREQUISITE(S): MKT 555

MKT 535 MARKETING STRATEGIES AND PLANNING
The basic elements of planning including the identification of the company's basic purpose and mission and their translation into specific objectives. Strategies to accomplish objectives are fused from marketing, financial, and manufacturing elements but emphasizing marketing elements. This course focuses on the contribution of marketing to the establishment of company policies, objectives, and marketing planning. PREREQUISITE(S): MKT 555

MKT 537 NEW PRODUCT MANAGEMENT
The course has four objectives: first, to familiarize participants with how firms manage the conceptualization, development and launch of new products and services; second, to develop a systematic process for new product development that matches the existing business context; third, to give participants knowledge of some useful and immediately applicable tools that will enable them to participate and lead a team that effectively translates a firm's strategy and customer needs into successful products and services; and finally, help participants understand the impact of company dynamics in affecting the new product development process. PREQUISITE(S): MKT 525

MKT 540 STRATEGIC PLANNING: DEVELOPING SUSTAINABLE BUSINESS MODELS
In today's hyper-competitive business environment, firms find it increasingly difficult to generate sustainable
In today's hyper-competitive business environment, firms find it increasingly difficult to generate sustainable year-on-year revenue growth. This course uses an organic-growth, marketing-based, customer-driven approach for developing sustainable year-on-year revenue growth. Linkages are created between existing benefits-based customer segmentation strategies, changing customer needs, the choice of a firm’s or a business unit’s product/service-line positioning strategy, its chosen business model, and finally its performance. Topics covered include:
- Outcomes-based segmentation
- Price-performance curves
- Market-leader positioning approaches
- Business model visualization and representation
- Dynamic positioning, product-line and business unit adaptation
- Value migration and threats to sustainability

By the end of the course, students will know how to detect signals of change in customer needs and adapt their business models resulting in sustainability. This is a case-based course with a project deliverable due at the end of the course. PREREQUISITE(S): MKT 555

**MKT 541 BRAND MANAGEMENT**
Brand management is an important component of both consumer and business marketing. The course addresses important branding decisions faced by an organization, particularly the role of brands in strategy. Learning objectives are (1) to increase understanding of the important issues in planning and evaluating brand strategies; (2) to provide the appropriate theories, models, and other tools to make better branding decisions; (3) to understand how marketing mix variables can affect brand equity over time; (4) to understand how to build and maintain brand equity; (5) to understand how to adapt brand strategies and tactics to optimize marketplace success. PREREQUISITE(S): MKT 555

**MKT 542 BRAND CULTURE**
Brands are complex socio-cultural entities. They occupy a unique position in modern culture and consumers are increasingly playing a more prominent role in the legacies of brands. Despite these realities, the complex relationship between brands, consumers and culture has typically been ignored. This seminar class will explore the culture of brands, focusing on what consumers do with and to brands instead of what brands do to consumers. Readings will come from a variety of perspectives, including both practitioner and academic sources. Topics covered will include: Sociological aspects of consumers and their brands, brands and status systems, brand and consumption communities, and consumer created marketing content. This class is designed to give you an advantage in being the best brand manager. It will stress critical thinking, creativity, synthesis and application of the newest insights concerning brands. Students will emerge with a better understanding of how to engage in the practice of cultural branding. PREREQUISITE(S): MKT 555 or equivalent

**MKT 545 CONSUMER BEHAVIOR**
Required for Marketing concentration. A review of the various theories, models, and techniques that attempt to explain consumer behavior. The course consists of lecture-discussions of behavioral theories, the empirical findings of contemporary research, and case studies designed to illustrate the salient issues involved in developing consumer-oriented marketing strategies. PREREQUISITE(S): MKT 555.

**MKT 550 BUSINESS TO BUSINESS MARKETING**
The marketing of business goods and services to other businesses (B:B) is more significant in our economy than consumer marketing and is the key to the continued success and productivity of the U.S. economy. In this course, the principles and practices of interindustry marketing will be explored by case analysis. The factors which must be considered before establishing marketing programs manufacturers, service industries and exporters will be examined. Examples will be drawn from varied industries, including equipment, electronics, computer systems, health care and others. New product introduction, distribution, and other marketing strategies will be emphasized. PREREQUISITE(S): MKT 555

**MKT 555 DECISIONS IN MARKETING MANAGEMENT**
Students are provided with an overview of the marketing process for consumer-oriented firms. Focus is placed on decision-making that aligns a firm’s market offerings with the wants and needs of targeted segments of customers within a continuously changing environment. Written cases/projects are part of the course assignment. PREREQUISITE(S): Graduate standing

**MKT 557 INTERNATIONAL MARKETING**
The differences between markets and distribution systems in various countries are explored. By emphasizing the social and economic factors causing these differences a sound understanding of and empathy with different international marketing problems are developed. Analyses are made of the organization of trade channels in various cultures, of typical government policies towards international trade in countries at different stages of development, and of international marketing research, advertising, and exporting. Offered Variably. PREREQUISITE(S): MKT 555 or equivalent.
MKT 558 MARKETING ACROSS CULTURES: A GLOBAL PERSPECTIVE
The course is structured to examine culture from two dimensions: a cross-cultural view, which compares local culture customs across various national marketing environments; and an intercultural approach where the focus is to exam the interaction between foreign firms and a host-country culture.
Learning objectives:
- Students will gain an understanding of cultural variables from a global perspective.
- Students will gain the ability to compare and analyze national cultural similarities and differences across national, regional and global environments.
- Students will gain the ability to recognize and analyze the interaction in marketing approaches between people and business groups who have different national/cultural backgrounds.
PREREQUISITE(S): Graduate standing

MKT 575 ADVERTISING AND SALES PROMOTION MANAGEMENT
A study of the theories and techniques applicable to the development of the promotional mix. Class consists of analysis and development of objectives, budgets, message design and media selection, and measuring the effectiveness of these for mass design and direct promotional vehicles. PREREQUISITE(S): MKT 545 & MKT 555

MKT 576 EFFECTIVE BUSINESS COMMUNICATION
This course is designed to expand the participant’s communication skills through application of the principles of communication science and the psychology of persuasion in a contemporary business setting. Personal ethics and credibility are explored as important components of effective communication, both as individual’s and as team members. Students are shown how to develop successful communication and message packaging strategies useful in a variety of communication venues including memos, meetings, briefings, interviews and individual and team presentations. Oral presentations and written communication techniques are explored including use of visuals, computer graphics, and layout techniques. The mechanisms of Speech Apprehension (stage fright) are presented as well as techniques for management and reduction of this common, debilitating phenomenon. Personal ethics and credibility are explored as important components of effective communication.

MKT 577 LEADING BUSINESS DEVELOPMENT
This is a course designed for managers or future team leaders seeking to maximize their resources to achieve sound business results for their organizations and customers. Utilizing current practices, processes, and proven in-market techniques, students will learn to create and maintain a customer team that achieves results with the internal as well as external customer. Emphasis will be placed on: Team Leadership Skills, Profiling and Segmenting Customers, Managing Team Performance, Developing Business Plans and Relationships, internally and externally.

MKT 578 SALES STRATEGY & TECHNOLOGY
Students taking this course will be provided with a comprehensive understanding of sales strategy and an appreciation of sales technology used today to optimally organize and deploy sales resources. At the heart of this course is an introduction to the principles of customer relationship marketing and customer acquisition programming. Students will learn via lecture, text, guest lectures, exposure to the latest technological tools and current case study. This course will benefit participants by providing a true perspective as to what role sales plays today and will play in the future of customer-centric organizations. PREREQUISITE(S): MKT 555

MKT 590 MARKETING OF SERVICES
This course examines service organizations' distinctive approach to marketing strategy development and execution. Differences and similarities between the marketing of services and that of manufactured goods will be discussed. Other topics include measurement of quality and customer satisfaction, customer behavior and expectations, roles of service providers and customers, service competitive advantages, relationship management, overlap of service marketing with other organizational disciplines (e.g. H.R., operations, finance), organization design and value-chain impacts, outsourcing challenges and opportunities, global issues, macro environmental impacts, Business to Business and Business to Consumer examples and strategies in multiple vertical markets (e.g. financial services, technology, retail catalog, manufacturing, health care, hospitality and entertainment, automotive, government). Student groups will maintain service encounter journals which will be used as input to the group's analysis paper assignment. Two abbreviated exams will measure the student's grasp of service marketing concepts. Group case analysis work will reinforce the course concepts. PREREQUISITE(S): MKT 555

MKT 595 INTERNET AND INTERACTIVE MARKETING
Explores the emerging business models, rules, tactics, and strategies associated with this medium. Integration with other channels and marketing operations is stressed. Classes are discussion-based, drawing on current applied readings and cases from a variety of industries in both the business-to-business and business-consumer markets. PREREQUISITE(S): MKT 555
**MKT 793 MARKETING INTERNSHIP**
Internships provide an opportunity to obtain valuable professional experience and contacts in many areas of marketing e.g. advertising agencies, manufacturing, services, public relations agencies, and communications. The Department's internship coordinator will work with each student to obtain placement, if needed. Student will work for and study the marketing operations of the organization. Marketing internship may be taken, with approval of the coordinator, any quarter after the completion of GSB 555 or its equivalent. **PREREQUISITE(S):** GSB 555 and coordinator approval

**MKT 798 SPECIAL TOPICS**
Content and format of this course is variable. An in-depth study of current issues in marketing.

**MKT 799 INDEPENDENT STUDY**
Available to graduate students of demonstrated capability for intensive independent work in marketing. **PREREQUISITE(S):** Written permission.

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**Masters of Liberal Studies**

Graduate Course Descriptions - Current | Masters of Liberal Studies

**MLS 401 VISIONS OF THE SELF**
A study of the differing visions of the self as presented in significant documents from the history of ideas. Materials selected from classic texts of literature, philosophy, theology, psychology and social science.

**MLS 402 PERCEPTIONS OF REALITY**
A survey, beginning with ancient Greece and ending with the modern world, of models of universal order as developed by natural scientists and literary and visual artists.

**MLS 403 THE AMERICAN EXPERIENCE**
A chronological and thematic study of the location of self within American culture. Readings chosen to reflect both dominant and dissenting ideas at specific points of American history.

**MLS 404 THE CITY**
A topical examination of the urban experience using the methods and sources of both historians and social scientists. Topics include survey of various images of the city, utopian and dystopian visions, and the uniqueness of the modern city.

**MLS 405 REPRESENTATIONS OF THE BODY**
This course will examine how the human body, which seems to be a natural, universal fact, is also a deeply cultural symbolic construction whose analysis yields insights into structures of power and consciousness.

**MLS 406 EXPLORING OTHER CULTURES**
Examination of the history, traditions, values and institutions that have shaped the lives of people in another culture. Analysis of the “terms of encounter,” that is, the perspectives that students assume as they seek to encounter the “other” Variable to

**MLS 407 SELF,CULTURE AND SOCIETY IN CONTEMPORARY JAPAN**
Interdisciplinary examination of the political, economic and social order of contemporary Japan. Relationship of individuals and groups to the social order, as they create the reality of diversity and possibilities for change.

**MLS 409 ENVIRONMENT AND SOCIETY**
"Environment and Society" is a 400-level interdisciplinary core course on the environment. The course might include such topics as cultural diversity in time and place with regard to the human view of the natural world, various approaches to environmental ethics, philosophical and religious influence in conceptions of the earth as environment, the relationship between scientific measurement and the social constructions of the natural world, the science and politics of climate change, race and gender considerations in environmental politics, and environmental consciousness in literature and the arts. The instructor's own disciplinary interests will play a prominent role in the course construction, but the course will draw from the sciences, the social sciences and the humanities. As in all MLS courses, the instructor will use the course assignments to work
with students on enhancing graduate-level intellectual skills through reflexive pedagogy.

MLS 419 CHICAGO: THE 21ST CENTURY
Chicago: Towards The 21st Century.

MLS 427 TOPICS IN COMMUNICATION AND CULTURE
Variable topics relating to cross-cultural communication, culture and media, cultural difference in communication, and communication issues in multiculturalism. Consult current course schedule for topic.

MLS 428 TOPICS IN ORGANIZATIONAL COMMUNICATION
Variable topics relating to communication issues in organizational settings, including power, institutional culture and change, training, and multicultural factors. Consult current course schedule for topic.

MLS 440 FEMINIST THEORIES
A discussion and assessment of the various theories concerning the place of women in society, including theories that have advocated a more positive role for and valuation of women than those of the dominant society. The course will take both an historical and a topical approach. Cross-listed as WGS 300 and WGS 400.

MLS 441 WOMEN ACROSS CULTURES
A critical analysis of the roles of women in societies around the world, with special emphasis on economics, politics, and culture. Focus is on African, Asian and Latin American cultures and non-dominant groups within Western Societies. Topics vary each quarter. Cross-listed as WGS 390 and WGS 490.

MLS 442 ETHICS AND THE ECONOMY
This course will present the thinking of social scientists, philosophers and theologians on the impact of religious values on the origin and development of American capitalism, and their possible relevance to contemporary discussions of business ethics. Cross-listed as GSB 650 and PHL 650.

MLS 443 WORK, LEISURE AND THE QUALITY OF LIFE
The course examines the nature and meaning of work and leisure in Western culture, and the relationship of work and leisure to contemporary issues associated with the concept "Quality of Life". Cross-listed as SOC 475.

MLS 445 GENDER AND COMMUNICATION
A review of the differences in communication patterns between women and men. Topics covered include language and language usage differences, interaction patterns, and perceptions of the sexes generated through language and communication. Cross-listed as CMN 523 and WGS 440.

MLS 447 GENDER AND SOCIETY
Attention to the growing literature and empirical research on changing patterns in economic, psychological and social outcomes for women and men. Consideration of various theories of gender differentiation and inequality.

MLS 448 WORK AND LEISURE IN THE FUTURE
The latter half of the 20th century has seen great change in the meaning, form and value assigned to work and leisure in society. Many of these changes have come to be characterized as inevitable consequences of life in post-industrial society. This course: 1) speaks to identify the factors that are shaping the future of work and leisure and 2) will explore futuristic scenarios that challenge the position of "work as a central-life meaning." Cross-listed as SOC 476.

MLS 449 TOPICS IN NON-FICTION WRITING
Topics addressed in different versions of the course may include writing for magazines, science writing, travel writing, writing in humanities and social science research, etc. Consult current course schedule for topics.

MLS 450 CHICAGO: ARCHITECTURE & URBAN DEVELOPMENT
A study of urban architecture in Chicago from 1833 to 1984, including the role of planning, the purpose of open space, the place of tradition, the impact of modern design theories and evaluation of contemporary developments.

MLS 451 TOPICS IN AMERICAN POLITICS
Topics In American Politics

MLS 452 GREAT IDEAS, BUSINESS AND SOCIETY
A study using primary sources of the basic ideas, aspirations and values which humanity strives to attain and which constitute the basis of fundamental demands on the world of business and its managers, their policies
and decisions.

**MLS 453 POLITICS, MEDIA AND EVERYDAY LIFE**
An examination of various ways in which the mass media influence our perceptions of reality. Political, social and cultural implications of media processes are assessed. Cross-listed as PSC 321.

**MLS 455 COMMUNITY AND THE CITY**
The course explores the possibilities for community life within urban settings. It emphasizes the development of network relations and cross-cutting ties.

**MLS 456 THE USES OF AUTOBIOGRAPHY**
Study of selected autobiographical writings to serve as models for self-expression.

**MLS 458 ISLAM AND THE WEST IN THE MODERN WORLD**
An examination of the economic, cultural and political interactions of Europe and the Islamic World.

**MLS 459 WRITING IN THE PROFESSIONS**
Improves writing skills useful in semi- and non-technical professions; emphasis on style, tone, awareness of purpose and audience; effective memo, proposal and report design. Cross-listed with WRD 522.

**MLS 460 THE DILEMMA OF THE MODERN AGE**
The crisis of the individual's place in society is exposed through social sciences, philosophy, literature, art and music. The distinctive features of and responses to modern culture-individualism, alienation and depersonalization-are illuminated through multiple perspectives. Cross-listed as SOC 473.

**MLS 461 MODERN POETRY**

**MLS 462 TOPICS IN BUSINESS ETHICS**
Seminar in Business Ethics. Cross-listed as PHL 640 and GSB 640.

**MLS 463 NATIONALISM AND INTERNATIONAL CONFLICT**
This course will explore the social origins and development of national identities. How these identities have been manipulated to serve specific competitive interests in the past two hundred years will also be discussed. Cross-listed as PSC 342 & INT 365.

**MLS 464 THE CULTURE OF AMERICAN CATHOLICS**
How has the unique experience of immigration shaped the American Catholic Church from the colonial period to the 21st century? How did the idea of "the Church" as an authoritative hierarchy come about in the mid-20th century, and how has that notion been challenged by immigrant communities, as well as artists and intellectuals? Drawing on the disciplines of history, sociology, anthropology, cultural theory, literature and the arts, this course looks at those who built the church and those who challenged and changed it. (Course is cross-listed as REL 384, CTH 384 and MLS 464.)

**MLS 467 SELECTED TOPICS ON WOMEN IN LITERATURE**
Topics vary; see schedule for current offering.

**MLS 468 SELECTED TOPICS: WOMEN, SELF AND SOCIETY**
Topics vary; see schedule for current offerings.

**MLS 473 TOPICS IN LITERATURE**
Topics addressed in different versions of the course may include various themes, movements and genres in British, American and World Literature. Consult current course schedule for topic.

**MLS 474 WOMEN AND ART**
Examines the work of the most significant women artists from the Renaissance to the present. It will also investigate how women have been represented in Western art by both male and female artists. Cross-listed as HAA 366.

**MLS 475 TOPICS IN CONTEMPORARY FILM**
An examination of recent films and their relation to broader tendencies in contemporary culture. Topics vary, see schedule for current offerings.

**MLS 476 CHICAGO IN FICTION AND FILM**
This course examines novels and short stories written by Chicagoans during the 20th century. It also includes a few film adaptations of these works.
MLS 477 FEMINIST ETHICS
Critiques of mainstream empirical and philosophical works and of Carol Gilligan’s work on ethics will include discussions on the women’s voice in morality, the nature of theories by women vs. men, the formation of plural positions concerning care versus justice, and alternative ethical stances. Cross-listed as WGS 310/410 and REL 322.

MLS 478 THE PSYCHOLOGY OF WOMEN
A review of research and theory on women including sexist biases and methodology, feminist therapy, violence against women, and gender differences in the development of power and sexuality. Cross-listed as PSY 561 and WGS 470.

MLS 479 WRITING POETRY
Writing Poetry. Cross-listed as ENG 493. PREREQUISITE(S): Permission required.

MLS 480 MAJOR AUTHORS
An examination of major writers in the English and American literary traditions. Topics vary; see schedule for current offerings.

MLS 481 SPECIAL TOPICS IN ART HISTORY
Explorations in the history of art from ancient Egyptians to contemporary art. Topics vary.

MLS 482 ECOLOGY, SPIRITUALITY AND ETHICS
This course explores the ecological crisis from a religious/ethical perspective, examining the dangers posed for humanity and the planet. It considers the new cosmology developing from science, especially physics, and its dialogue with philosophy, myth and religion. Cross-listed as REL 320.

MLS 483 CULTURAL PERSPECTIVES ON HEALTH AND DISEASE
A multidisciplinary examination of the cultural factor that help form notions of the well and sick states of the human body. Included will be such topics as the social/religious history of epidemics, healing in Western and non-Western medicine, etc. Sources will be drawn from the history of medicine, anthropological and sociological works, philosophy and literature. Cross-listed as REL 320.

MLS 484 ZEN MIND
This course examines the philosophy, art, literature and religious practice of Zen Buddhism. It explores Zen’s influence in both Japan and America. Cross-listed as REL 342.

MLS 485 INEQUALITY IN AMERICA
This course examines the nature and extent of inequality in American society and explores various psychological, political, social and economic theories which attempt to explain the existence of this phenomenon. Cross-listed as PSC 324.

MLS 486 TOPICS IN POPULAR CULTURE
Examines a specific dimension of popular culture using interdisciplinary theories and methods. Possible topics include Food in Film, The Ideology of Romance, or perhaps the popular culture of a decade like the 1950s or 1960s. Topics vary.

MLS 487 SPECIAL TOPICS IN HISTORY
Topics vary.

MLS 488 TOPICS IN WORLD RELIGIONS
Topics in World Religions

MLS 489 TOPICS IN SOCIOLOGY
Various topics in the field of sociology.

MLS 490 SPECIAL TOPICS AND CONTROVERSIES
Occasional offerings of particular contemporary relevance by visiting professors. Topics vary.

MLS 497 INDEPENDENT STUDY [NON-CAPSTONE]
Independent study in an area that does not lead directly into the thesis or capstone. Students may also register for this course on a topic indirectly related to their thesis or capstone if they will subsequently take MLS 498, in which the student directly prepares to write the Integrating Project/Thesis. The MALS and IDS Program requires that students taking independent studies follow a specified format of meeting frequency, activities, and scholarly production. This format is available on the program web site or from the MALS and
IDS office. Registration is by permission of the Director of the MALS and IDS Program and the instructor of the independent study.

**MLS 498 INDEPENDENT STUDY**
Independent study undertaken as preparation for thesis or practicum capstone options. This course is optional preparation for MLS 499, Capstone. The MALS and IDS Program requires that students taking this course follow a specified format of meeting frequency, that they produce a review of literature related to their thesis or practicum, an annotated bibliography, and the required Formal Proposal for the thesis or practicum. Registration is by permission of the Director of the MALS and IDS Program and the permission of the instructor who serves as the thesis or practicum director.

**MLS 499 CAPSTONE**
Capstone for students doing a thesis, practicum or enhanced portfolio essay. Students may register for this course after the Formal Proposal for the thesis or practicum, or the Enhanced Portfolio Essay Proposal, has been approved. Students are normally expected to complete their capstone projects within the quarter in which they take this course. This course carries four hours of credit. Registration is by permission of the Director of the MALS and IDS Program and the permission of the instructor who serves as the student's capstone director.

**MLS 500 CAPSTONE**
A seminar offered occasionally to guide groups of students working on their capstone projects.

**MLS 501 ACTIVE STATUS**
Students register for this course during periods when they are not registered for courses but wish to have access to university facilities. Ordinarily students will not use this course once they have been admitted to candidacy during the thesis or capstone. PREREQUISITE(S): Permission only.

**MLS 502 CANDIDACY CONTINUATION**
Students who have completed MLS 499 Thesis/Capstone may register for this course in order to have continued access to university facilities. Students may register for this course no more than three times. Non-credit. $40.00 per quarter.

Mathematics for Middle School Teaching

**MMT 400 EXPERIMENTATION, CONJECTURE, AND REASONING WITH NUMBERS**
This course will focus on furthering the participants' number sense together with providing them with opportunities to: 1) Use and discuss the roles of experimentation, conjecture, and logical reasoning in developing mathematical understanding; 2) Appreciate the value of algebraic notation in problem solving by comparing solutions done both with and without algebra; 3) Engage in mathematical speaking and writing with discussion of (a) how to evaluate accurate vs. inaccurate statements, (b) what level of detail is appropriate in an answer given the point of the problem, (c) what ways of presenting solutions are suitable for various audiences; 4) Discuss the distinction between "how" a mathematical strategy works and "why" it works, and articulate the pedagogical value of knowing the "why."

**MMT 401 FOUNDATIONS OF MATHEMATICAL THINKING AND LEARNING IN THE MIDDLE SCHOOL**
This course is designed to help participants construct meaningful connections between being a learner of mathematics (i.e., a person who can solve problems, reason mathematically, communicate findings and thinking, and make connections) and being a teacher of mathematics (i.e., a person who can help others understand, use, and apply mathematical ideas). The course will begin the process (which will be continued throughout the remainder of the Master of Arts in Middle School mathematics Education program) of having students explore the interplay between narratives describing their own classroom experiences as well as literature and research about others' experiences in order to analyze the impact of developmental and interpersonal experiences on the learning and teaching of mathematics.

**MMT 405 GEOMETRY**
An introduction to geometry designed to engage students in the construction, description, and analysis of geometric objects, including three-dimensional objects. These activities will be used to generate questions
and hypotheses that will lead to more abstract concepts and general arguments. Emphasis throughout will be on informal reasoning, experimental methods, inductive as well as deductive arguments, local organization, and the development of mathematical thinking. Appropriate technology will be used to explore hypotheses and support mathematical reasoning. Topics will include: polyhedra, and their nets, cross sections, and projections; triangles, quadrilaterals, and polygons; congruence and similarity; the Pythagorean theorem; perimeter, area, and volume; circles and spheres, symmetry and transformations; and tessellations. The course will also include discussion and reflection on learning mathematics.

**MMT 410 THE DEVELOPMENT OF MIDDLE SCHOOL MATHEMATICS LEARNERS**
Critical to the success of middle school mathematics learners, is their teachers' understanding of the multiple perspectives that research has taught us, as educators, about how people learn. In this course, participants will engage with the history and evolution of how the fields of educational psychology, cognitive science, applied developmental psychology, and mathematics education have contributed to a modern understanding of what constitutes effective practice for middle school mathematics teaching. Major theoretical positions and their seminal architects will be highlighted, examined and discussed. A particular emphasis will be put on each position's impact on curriculum development and classroom pedagogy for middle school mathematics.

**MMT 415 ALGEBRA FOR MIDDLE SCHOOL TEACHERS I**
This course is the first of a 3-quarter sequence designed in part to prepare elementary and middle grade teachers to teach an algebra class to qualified 8th grade students in their schools. It is based on a vision of mathematics instruction throughout the grades that continuously builds students' algebraic skills and thinking. This first course in the sequence emphasizes problem-solving as an entry point into algebra for mathematics learners. Students see algebra as an active process for solving problems and as arising naturally as a way to generalize the laws of arithmetic, analyze patterns, and describe relationships in tables, graphs, and equations. In addition, students review and examine foundational concepts in algebra (variables, equations, relations, graphs, slopes of lines, and equations of lines) and are introduced to research on the development of algebraic thinking in middle grade students.

**MMT 416 ALGEBRA FOR MIDDLE SCHOOL TEACHERS II**
The second course in the algebra sequence builds on the first and maintains emphases on problem-solving, deeper understanding of the central concepts of beginning algebra, and awareness of difficulties students have when encountering the subject for the first time. Topics include systems of linear equations, solving linear inequalities and systems of inequalities, absolute values equations and inequalities, and quadratic functions.

**MMT 417 FUNCTIONS AND MODELING**
Advanced concepts in beginning algebra provide a basis for a deeper treatment of the relationship between functions and data, and lay the groundwork for the development of polynomial, exponential, and logarithmic models. The course will integrate the use of technology such as graphing calculators and spreadsheets.

**MMT 420 TEACHING, LEARNING, AND ASSESSMENT OF MIDDLE SCHOOL MATHEMATICS**
This course will examine, in the context of classroom practice, the following themes: 1) How students can learn mathematics with conceptual understanding; 2) How to teach mathematics so that students learn with understanding; 3) How to assess students' mathematical knowledge to inform instruction and determine their growth; 4) The nature and content of innovative curriculum projects designed to teach mathematics for conceptual understanding.

**MMT 425 DATA ANALYSIS AND PROBABILITY**
This course covers the fundamental concepts of probability that are part of the middle school curriculum and recent research findings on student learning of probability and classroom implications of this research. In addition, it covers the principles of graphically displaying, collecting and analyzing data with and without the use of technology. Topics will include measures of central tendency and dispersion, graphical representations of data (histograms, boxplots, bar charts, pie charts, and line graphs), and the design of experiments and simulations.

**MMT 430 APPLIED PROJECT IN MATHEMATICS EDUCATION**
This course will span the three quarters of the second academic year of the program and will be partnered with the three content-focused courses offered during the second year. Participants will be introduced to the field of educational inquiry through a study of various designs and methods of doing educational research. In addition, this course will help participants consider current issues in mathematics education in relationship to their own teaching and learning of mathematics and what it means to transfer the mathematics learned in other courses into one's practice as a math teacher. They will identify concrete changes they want to implement in their teaching during the years following their completion of the program based on the new content and ideas to which they have been exposed. As part of the course, the teachers will design an action
research project during the first quarter, implement the project during the second quarter, and analyze the data during the third quarter.

**MMT 435 IDEAS OF CALCULUS IN THE MIDDLE SCHOOL CURRICULUM**
The course will introduce students to the "big ideas" of Calculus including limits, derivatives, and integrals. The course will emphasize how the mathematics in the middle school curriculum can lay a foundation for the study of continuous mathematics and to the role that Calculus plays in the sciences. In particular, direct connections to the topics of this course and the middle school curriculum will be made by studying activities from curriculum materials currently used in CPS that are relevant to the topics of Calculus. Trigonometry from the perspective of the middle school classroom will be used as the launching point for introducing the major ideas of the course. The course will also give the students the opportunity to understand the interplay between the concepts and tools they learned in the MMT 415-417 sequence and Calculus.

**MMT 440 HISTORY AND CULTURAL FOUNDATIONS OF MATHEMATICS**
This course is a cross-cultural survey of the history of mathematics, with emphasis placed on the development of concepts encountered by students in elementary and middle school. The course will also serve as a capstone for the program in that it will include references to content from all the earlier courses and will explicitly ask teachers to make connections across the middle school mathematics curriculum. The students will complete a small group research project in which they choose a mathematical concept from the program and use it as a focal point to study the development of mathematical ideas across time and across cultures.

**Modern Languages**

Graduate Course Descriptions - Current

**MOL 400 PROFESSIONAL PRACTICUM**
Supervised experience in teaching, tutoring, interpreting, editing writing or other professional exercise of language skills. PREREQUISITE(S): Application and approval required.

**MOL 441 MEDIA IN THE ARAB WORLD**
Survey of the Arab media - including newspapers, radio, television, and the Internet - as an object of study, and a product of Arab culture. PREREQUISITE(S): Graduate standing required.

**MOL 442 MODERN ARABIC LITERATURE IN TRANSLATION**
Introduction to Arabic literature and an examination of the Arabic modern literature as a product of Arab culture. PREREQUISITE(S): Graduate standing required.

**MOL 449 TEACHING MODERN LANGUAGES**
Graduate Standing required. Cross-listed as SE 349 and T&L 449.

**MOL 450 METHODS OF TEACHING FOREIGN LANGUAGES IN THE ELEMENTARY SCHOOL**
Provides training in the theory and methods of teaching foreign languages in the elementary school (FLES). Designed for both pre-service and in-service teachers. Pre-service teachers include foreign language majors interested in elementary school teaching and elementary majors who are proficient in a foreign language and interested in teaching FLES. In-service teachers include elementary teachers proficient in a foreign language who are teaching or who are interested in teaching FLES and secondary trained teachers who are teaching or who are interested in teaching FLES. In order to meet the objectives of this course and subsequent methods courses, it is expected that all participants be able to demonstrate proficiency in English and a second language before enrolling. Graduate standing required.

**MOL 454 THEORETICAL FOUNDATIONS/CURRENT RESEARCH SECOND/FOREIGN LANGUAGE ACQUISITION**
An overview of major theories and current issues in second/foreign language acquisition in both classroom and natural/non-instructed settings. Graduate standing required.

**MOL 457 TEACHING CULTURE IN THE MODERN LANGUAGE CLASSROOM**
Pedagogical theory and practice in the integration of culture into the language classroom. Graduate standing required.
MOL 460 RUSSIAN DRAMA IN ENGLISH TRANSLATION I
The course presents some of the greatest Russian plays of the 18th and 19th century. In the course, students will read original works in English translation by Von Vizin, Griboedov, Pushkin, Gogol, Lermontov, and Ostrovsky. Some critical works will be included. Students will read, analyze, and interpret the plays, comedies and dramas, both with respect to form and meaning.

MOL 461 RUSSIAN DRAMA IN TRANSLATION II: SOVIET ERA
Russian theater of the 20th century appeared in parallel to realistic novels and contributed to the movement of realism in Russian literature. Realism dominated in Russian literature from approximately 1845 to 1905, followed by Russian theater of the 20th century. To most foreign readers it is the most interesting part in Russian culture. Russian theater of the 20th century, presented by such authors as Chekhov, Gorky, Bulgakov and Teffi, demonstrates tendencies from realism to a vanguard. Some critical works will be included. The student will read, analyze and interpret the plays, comedies and dramas, both with respect to form and meaning. In the process they will develop greater insight into the social and multicultural issues of the time. Graduate standing required.

MOL 464 RUSSIAN SHORT STORY IN ENGLISH TRANSLATION II: SOVIET ERA
This course presents some of the greatest Russian short stories (1880 - 1930) in English translation. Students will read short stories in English translation by four major Russian writers: Chekhov, Kuprin, Bunin and Bulgakov. Students will analyze and interpret short stories of the 1880-1930 period, both with respect to form and meaning, and discuss some critical works.

MOL 466 RUSSIAN NOVEL IN ENGLISH TRANSLATION I: 19TH CENTURY
Major Russian novels of the nineteenth century--Turgenev, Dostoyevsky, Tolstoy--in their cultural and social context. Graduate standing required.

MOL 468 RUSSIAN NOVEL IN ENGLISH TRANSLATION III: CONTEMPORARY
Major Russian prose works of the late 20th century, read in English translation. Authors include Bulgakov, Platonov, Pristavkin, and Bitov. Graduate standing required.

MOL 497 SPECIAL TOPICS IN MODERN LANGUAGES
See schedule for current offerings. Graduate standing required.

MOL 498 STUDY ABROAD
Variable credit. PREREQUISITE(S): Permission and graduate standing required.

MOL 499 INDEPENDENT STUDY
Variable credit. PREREQUISITE(S): Permission of chair and instructor and graduate standing required.

Master of Public Health

Graduate Course Descriptions - Current

MPH 501 INTRODUCTION TO PUBLIC HEALTH CONCEPTS AND PRACTICES
This course introduces students to the concepts, principles, and case outcomes of public health practice. It outlines theories of health, illness behavior, and health education. It considers community health data sources, classical health intervention approaches, the planning and evaluation of community health interventions.

MPH 502 INTRODUCTION TO EPIDEMIOLOGY
This course will focus on the theories and methods used in the field of epidemiology to study the occurrence, distribution and determinants of infectious and non-infectious diseases, other forms of illness (particularly those impacted by social and environmental forces), and injury in human populations. The focus will be on determining the impact, magnitude, and patterns of disease/illness/injury frequency so that causal agents can be identified and effective prevention, treatment and control measures can be designed and implemented. The course will explore variations of disease/illness/injury in relation to such factors as age, sex, race/ethnicity, occupational and social characteristics, place of residence, social inequality, susceptibility, exposure to specific agents, and other pertinent characteristics. Also of concern will be the temporal distribution of disease, examination of trends, cyclical patterns, and intervals between exposure to causative
factors and onset of disease.

**MPH 503 INTRODUCTION TO ENVIRONMENTAL HEALTH**
Study of the environment factors that influence health. Topics include air and water pollution, global population and local community dynamics, toxicology, infectious and chemical agents, radiation, and management. PREREQUISITE(S): BIO 121 or consent of the instructor.

**MPH 511 HEALTH AND BEHAVIOR THEORIES AND COMMUNITY INTERVENTION (CROSS-LISTED WITH PSY 511)**
This course will examine various theories and models that have been developed to identify the range of psychosocial factors that impact participation in both health-threatening and health-enhancing behaviors, and provide guidance for the modification of such behaviors. The theories and models will be explored from multidisciplinary perspectives and will be applied to an array of health issues. Practical applications of these theories to the development and implementations of theory-based public health interventions that can be applied with multiple populations (e.g., women, adolescents, elderly, people of color) within multiple settings (e.g., communities, schools, health care settings) at various levels of change (e.g., individual, community, social, policy) will also be explored. Cross-listed with PSY 511.

**MPH 512 APPLIED COMMUNITY PUBLIC HEALTH RESEARCH METHODS**
This course will provide a critical examination of the relative strengths and limitations of various research designs, data collection methods, and types of existing data. Students will develop an understanding of (a) the relative contributions of a mixed-methods approach to public health research, (b) basic issues related to the measurement of public health concepts, and (c) the relative strengths and limitations of various analytic approaches to studying public health problems. Students will familiarize themselves with peer-reviewed journals, how to search for material on specific topics, how to develop a critical reader's eye, and how to summarize and draw evidence-based conclusions from multiple studies.

**MPH 513 PRINCIPLES OF PUBLIC HEALTH ADMINISTRATION**
This course considers the conceptual and theoretical foundation underlying managerial decision-making. The course introduces students to such basic managerial tools as basic accounting, cost-benefit analysis, budgeting, and marketing. Principles of strategic planning and forecasting are examined. The course goes on to examine the legal framework that governs public health practice, organizations, human resources, research activities, and community as well as individual patient intervention efforts.

**MPH 515 PUBLIC HEALTH ETHICS AND POLICY**
This course is designed to analyze the ethical basis in which public health practice is grounded. It reviews concepts and ideas developed by a number of disciplines including philosophy, law, political science, and economics.

**MPH 522 PROGRAM PLANNING AND EVALUATION IN COMMUNITY HEALTH**
This course is designed to provide students with the background and skills to develop and evaluate community public health programs in a variety of settings. Students will work individually and as members of teams to design measurable goals, objectives, action plans, timelines, and evaluation indicators of community-based public health programs. Application of methods to logic modeling, proposal writing, budget planning, project management, and data management will be examined throughout the course.

**MPH 525 PROGRAM EVALUATION IN PUBLIC HEALTH**
This course will provide students with a comprehensive theoretical, methodological and ethical foundation for conducting public health program evaluation. Students will experience the practice aspects of evaluation including communicating and negotiating with stakeholders, conducting an evaluability assessment, developing logic models and evaluation questions, identifying appropriate data collection methods, gathering reliable and valid evaluation data that are appropriate to the selected design and analysis methods, analyzing data, reporting evaluation results, and ensuring evaluation use. The instructor will facilitate a learning and skill-building environment, drawing on personal experiences and the expertise of others in the field.

**MPH 541 APPLIED STATISTICS FOR PUBLIC HEALTH**
This course emphasizes the application of statistical methods to problems of human health and disease. It covers parametric and nonparametric statistical inferential methods for univariate and bivariate situations using SPSS. Specific topics include but are not limited to the following: Interpretation of graphic and descriptive statistics for both quantitative and categorical data, confidence interval estimation and hypothesis testing methods, linear and multiple regression logistic regression, analysis of categorical data and ANOVA. Course emphasizes the statistical interpretation of the literature and analytic projects based on large data sets from published studies, the internet, or the student's workplace. PREREQUISITE(S): One statistics course.

**MPH 595 SPECIAL TOPICS IN PUBLIC HEALTH**
Special courses will be offered as students and faculty affiliated with the MPH program identify selected topics of common interest.

**MPH 599 INDEPENDENT STUDY IN PUBLIC HEALTH**
This course can be taken in consultation with a supervising faculty member. PREREQUISITE(S): Approval from the MPH Program Director.

**MPH 600 PREPARATION FOR PUBLIC HEALTH PRACTICE**
This year-long course includes a series of skills-based workshops designed to introduce students to the specialized skills and competencies needed in the public health workplace. These workshops are designed to complement the core MPH curriculum and are selected based on regular feedback from faculty, public health practitioners, and students. (0 credits)

**MPH 602 PRACTICUM IN COMMUNITY HEALTH ASSESSMENT AND EVALUATION**
This course is part of a three-course practicum sequence that is designed to provide the student with practical experience in the field based on skills acquired in class. The course introduces students to methods of data collection and analysis of epidemiological data. It focuses on community health indicators and research tools used to assess health data. Emphasis is on the research methods that are employed to identify community assets and goals; this step serves as the basic step in the process of community needs assessment which leads to the final objective, that is, program planning. The fundamentals of various types of community health interventions will be explored.

**MPH 603 APPLIED COMMUNITY HEALTH INTERVENTIONS**
This is the second course of the three-course practicum sequence. Students are expected to engage in the following tasks: (1) assess the community health profile documenting incidence and prevalence of disease and other health problems; (2) use the findings identified in step one to plan a population-specific community-based health program designed to reduce assessed risk; (3) develop an evaluation instrument designed to determine how successful the plan is in reducing health risk. PREREQUISITE(S): MPH 602

**MPH 604 CAPSTONE SEMINAR IN COMMUNITY PUBLIC HEALTH PRACTICE**
This is the third course of the three course practicum sequence. Students are expected to participate in a seminar, which provides the academic counterpart to the practicum experience. This course focuses on questions that arise related the data collection process, data analysis and /or interpretation of findings, and the effort to translate findings into the planning of community-based public health programs. ***The goal of the final capstone project is to integrate the information that has been learned in the students' MPH academic courses with the applied community experience. Therefore, even though the paper will be focused on the applied work that the students are conducting in their community health setting, this document should also incorporate various elements of the didactic courses that have been taken within the MPH program. The exact format and length of the paper may vary depending on the nature of the applied experience, but should include the following general sections:

I. Community Health Profile and Background
II. Statement of the Targeted Health Issue (including specific health determinants and/or risk factors)
III. Description of the Health Intervention or Program
IV. Evaluation or Monitoring Plan and Results
V. Implications of Findings
VI. Future Directions (including future funding of health initiatives)

Students should have an outline project approved by the instructor of the Capstone Seminar prior to writing the final product. This project should demonstrate that the student is able to integrate the knowledge and skills that they have obtained throughout their MPH training to an applied community health issue and setting, and express this integration in a structure written format. PREREQUISITE(S): MPH 602 and MPH 603

**MPH 699 COMMUNITY PUBLIC HEALTH PRACTICUM**
This year-long course includes a series of skills-based workshops designed to introduce students to the specialized skills and competencies needed in the public health workplace. These workshops are designed to complement the core MPH curriculum and are selected based on regular feedback from faculty, public health practitioners, and students. PREREQUISITE(S): MPH 600.

Masters in Social Work
**MSW 401 PROFESSIONAL WRITING AND DEVELOPMENT**

Social work careers are increasingly more challenging and varied. Social workers must be prepared to change assignments, cases, and tasks regularly and must be able to communicate in a manner that transcends singular agencies or organizations. Effective communication strategies are required for successful professionals and efficient organizations. The practice of professional social work requires accurate and persuasive communication in multiple formats. This required, foundation-level course is designed to introduce students to the major possibilities and constraints of professional writing and other forms of communication as well as survey the career paths available to professional social workers. There is an emphasis on writing for professional settings including case studies, mandated reports, summaries, and professional publication.

**PREREQUISITE(S):** Permission to take graduate courses or enrollment in the MSW Program.

**MSW 411 HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT I**

This is the first course of a two-part sequence designed to develop an understanding about human behavior and the social environment. This course offers an ecosystems framework and method for understanding human behavior within the context of personal, family, group and community systems. The focus is on a normative development with an emphasis on the strengths perspective. This course supports the values of diversity in society and social justice.

Throughout this two quarter sequence, students will be introduced to varied theoretical paradigms for explaining and predicting human behavior so students will be exposed to both complexity and controversy within the field. Using a bio-psycho-social theoretical framework, fundamental concepts and theories are introduced with the life cycle serving as the organizational focus. The course covers the first half of the life span: conception, infancy, childhood, adolescence and young adulthood. It explores these life stages within the contexts of biological, psychological, and social systems. As students will learn, each theoretical paradigm is a social construct, uniquely offering strengths and limitations as well as value biases. Therefore, the development of a critical analytical perspective is crucial in the study of each theory. Students are thus encouraged to develop critical thinking skills as they examine the adequacy of the theories and research that they are taught so that they may appreciate the strengths and limitations of the knowledge that they are acquiring.

This course takes into consideration the following factors that influence human behavior: ethnicity, age, culture, race, social class, poverty, gender, sexual orientation, spirituality, genetics, and an urban social environment. These contexts are used to understand the functioning of individual as members of families, groups, communities and larger social organizations, in order to better understand how social workers develop interventions targeting the micro, meso, and macro-systems levels. Special attention is given to the impact of social problems, human diversity, discrimination and oppression on the individual’s ability to access community resources in order to reach optimal health and well-being. The goal of this approach is to help social work students develop an understanding and tolerance for variant family constellations, lifestyles, and life choices. Students are encouraged to develop a professional value system that respects difference.

**PREREQUISITE(S):** Admission to the MSW Program or permission to take graduate level courses.

**MSW 412 HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT II**

This is the second course of a two-part sequence designed to develop an understanding about human behavior and the social environment. This course offers an ecosystems framework and method for understanding human behavior within the context of personal, family, group and community systems, organizations, and institutions. The focus is on a normative development with an emphasis on the strengths perspective.

Using a bio-psycho-social theoretical framework, fundamental concepts and theories are introduced with the life cycle serving as the organizational focus. The course covers the second half of the life span: young adulthood, middle adulthood, later adulthood and end of life. It explores these life stages within the contexts of biological, psychological, and social systems.

This course takes into consideration the following factors that influence human behavior: ethnicity, age, culture, race, social class, poverty, gender, sexual orientation, spirituality, genetics, and an urban social environment. These contexts are used to understand the functioning of individual as members of families, groups, communities and larger social organizations, in order to better understand how social workers develop interventions targeting the micro, meso, and macro-systems levels. Special attention is given to the impact of social problems, human diversity, discrimination and oppression on the individual’s ability to access community resources in order to reach optimal health and well-being. The goal of this approach is to help social work students develop an understanding and tolerance for variant family constellations, lifestyles, and life choices. Students are encouraged to develop a professional value system that respects difference.

**PREREQUISITE(S):** PERMISSION TO TAKE GRADUATE COURSES OR ENROLLED IN MSW PROGRAM; MSW 411.

**MSW 421 INTRODUCTION TO SOCIAL WORK RESEARCH I**

This course presents the conceptual foundations and methods of research needed in order to assist students
with integrating research knowledge and professional social work practice. It presents social justice as an overarching paradigm in the study of social work research. MSW 421 presents the conceptual foundations and methods of research in order to assist students with integrating research knowledge with professional social work practice and ethics. This course focuses primarily on the quantitative method but the qualitative method is also covered. The course covers the research process from problem identification through the conceptualization of research questions, sampling, design, measurement, data collection, analysis, and dissemination of findings. Additionally the course pays specific attention to ethics in research and issues of race, class, gender and sexual orientation. As an alternative to the quantitative research method, the course touches briefly on qualitative methods. The course makes use of examples and readings that focus on conducting research with individuals, families, and communities in urban environments. Students engage in a critical analysis of the quantitative research method and consider alternative methods of developing knowledge as it pertains to social work. Additionally, the course provides a basic coverage of data analysis using both the quantitative and qualitative research methods with the goal of developing student’s conceptual understanding and ability to critically interpret research findings. PREREQUISITE(S): permission to take graduate courses or enrolled in the MSW program.

**MSW 422 ADVANCED SOCIAL WORK RESEARCH II**

The course is the second part in a two part series focusing on quantitative and qualitative methods. It continues the presentation of social justice as an overarching paradigm in the study of social work research. As it did with the first course in the sequence, MSW 422 presents the conceptual foundations and methods of research in order to assist students with integrating research knowledge with professional social work practice and ethics. The first half of the course continues the focus on the quantitative method. The second half of the quarter will examine the qualitative methods in more depth. The first part of the course covers clinical single subject designs, program evaluation, and more advanced statistical analysis. Additionally the course revisits content on ethics in research and issues of diversity. The qualitative method section of the course focuses on the fundamental research tasks found in most qualitative inquiries. The course makes use of examples and readings that focus on conducting research with individuals, families, and communities in urban environments. Students engage in a critical analysis of the quantitative and qualitative research methods and consider alternative methods of developing knowledge as it pertains to social work. PREREQUISITE(S): Permission to take graduate courses or enrolled in the MSW Program; successful completion of MSW 421.

**MSW 431 SOCIAL WELFARE POLICY I**

All of professional social work practice is grounded in policy knowledge and theory. This foundation-level course is designed to provide students with the entry-level knowledge of social work ethics and values, policy formation and analysis, and practice skills necessary to impact and interpret the rules and regulations surrounding social welfare. Emphasis is placed on understanding political processes at the agency, local, regional and federal level and attention is given to economic considerations as well as the unique role of social welfare policy in regulating the lives of clients, particularly those from historically oppressed groups including women, children, poor people, people of color, people with disabilities, the aged, gay, lesbian, bisexual and transgender people, people from various ethno-cultural backgrounds, people with diverse religious beliefs, recently arrived immigrants, people for whom English is a second language and others in the urban environment.

Content covered in this course includes constructs from United States history, political science, and economics, in addition to social work practices and principles. The course focuses on the analysis of social policies utilizing social work ethics and values. This course is the first of two required social welfare policy courses for MSW degree candidates; the assignments for this course relate to assignments in the second policy course, MSW 432. Students who are admitted into the MSW degree program or who are planning to take both policy courses should store their documents electronically so that they may be retrieved for future review and use. PREREQUISITE(S): Permission to take graduate courses or matriculation in the MSW Degree Program.

**MSW 432 ADVANCED SOCIAL WELFARE POLICY II**

This is the second of two required Social Welfare Policy Courses in the MSW curriculum. This concentration course focuses on policy practice (including advocacy) skills in agencies and organizations. While including a review of analytical techniques, there is emphasis in this course on the human interactions which shape policy review and implementation.

Attention will be paid to the unique position of social workers and social work values in impacting those plans and processes which guide services that are based in agencies and institutions, including government. Building on the work begun in MSW 431 (Social Welfare Policy I), students learn those skills and applications which influence social policy using social work values and ethics as a major lens thru which policy practice is facilitated. Emphasis on social justice and human rights will be facilitated in the course as one key responsibility of (all social work) policy practitioners.

As much of the content of the course will center on specific client, agency, and institutional contexts, students will need social work practice experience to ground their observations and work in this course. The course will
focus on how laws and regulations are enacted and on skills in communications, lobbying, advising and other forms of influencing policy decision-makers in the interest of social justice. Only students who have successfully completed MSW 431 and the Foundation Practice and Field Education Sequence (MSW 481 thru 483 and MSW 491 thru 493) can be enrolled.

**MSW 450 SPECIAL TOPICS IN SOCIAL WORK**
See schedule for current offerings. Graduate standing required.

**MSW 481 FOUNDATION PRACTICE I**
This course is the first in a series of three required foundational courses (MSW 481, MSW 482 and MSW 483) designed to equip students with the basic theoretical knowledge, analytical skills, practice skills, and values needed to practice generalist social work with diverse individuals and families in an urban context. The course is grounded in an empowerment model with an emphasis on social justice and the Vincentian values of respect, advocacy, service, and inventiveness. Additionally, the foundation practice sequence gives attention to the importance of diversity within oppressed groups including women, children, poor people, people of color, people with disabilities, the aged, gay, lesbian, bisexual, and transgender people, people from various ethno-cultural backgrounds, people with diverse religious beliefs, recently-arrived immigrants, and people for whom English is a second language. The sequence prepares students for advanced, community practice. The course will explore the implementation of the ecosystems perspective as it applies to a generalist practice. The course will also cover the relationship between professional and personal values, social work ethics, assessment, relationship building, implementing change strategies, and practice evaluation. Experiential exercises and assignments will be utilized to help students apply the practice concepts presented in this course. Students will be asked to share their field experiences in class to link course content to field work. Experiential exercises utilizing role playing and small group work will allow students to practice the skills in a supportive environment. PREREQUISITE(S): Admission to the MSW Program. This course is to be taken concurrently with MSW 491 (Foundation Field Education I) and is required of all students enrolled in the first year field sequence.

**MSW 482 FOUNDATION PRACTICE II**
This course is the second in a series of three required foundational courses (MSW 481, MSW 482 and MSW 483) designed to equip students with the basic theoretical knowledge, analytical skills, practice skills, and values needed to practice generalist social work with groups in an urban context. The course will emphasize the development, implementation, and evaluation of various forms of therapeutic groups along with some content on organizational task groups. Task groups will be covered more thoroughly in MSW 483. Additionally, the foundation practice sequence gives attention to the importance of diversity within oppressed groups including women, children, poor people, people of color, people with disabilities, the aged, gay, lesbian, bisexual, and transgender people, people from various ethno-cultural backgrounds, people with diverse religious beliefs, recently-arrived immigrants, and people for whom English is a second language. The sequence prepares students for advanced, community practice. Course instruction will emphasize didactic lecture, but group-simulation experiential exercises will also be an important part of presenting the content. Students will also be required to conduct an analysis and presentation of a group experience from their internship. The course is grounded in an empowerment model with an emphasis on social justice and the Vincentian values of respect, advocacy, service, and inventiveness. PREREQUISITE(S): Admission to the MSW program. This course is to be taken concurrently with MSW 492 (Foundation Field Education II) and is required of all students enrolled in the first year field sequence.

**MSW 483 FOUNDATION PRACTICE III**
This course is the third in a series of three required foundational courses (MSW 481, MSW 482 and MSW 483) designed to equip students with the basic theoretical knowledge, analytical skills, practice skills, and values needed to practice generalist social work within communities and organizations. Specifically, this course introduces skills associated with task groups which serve to meet client needs in communities and organizations. The course is grounded in the empowerment model with an emphasis on social justice and the Vincentian values of respect, advocacy, service, and inventiveness. Additionally, the foundation practice sequence gives attention to the importance of diversity within oppressed groups including women, children, poor people, people of color, people with disabilities, the aged, gay, lesbian, bisexual, and transgendered people; people from various ethno-cultural backgrounds, people with diverse religious beliefs, recently-arrived immigrants, and people for whom English is a second language. The sequence prepares students for advanced, community practice. PREREQUISITE(S): Admission to the MSW Program and successful completion of MSW 482 & MSW 492. This course is to be taken concurrently with MSW 493 (Foundation Field Education III) and is required of all students enrolled in the first year field sequence.

**MSW 484 ADVANCED STANDING FOUNDATION PRACTICE**
This course is required for all Advanced Standing students and may be taken as an elective (with its co-requisite course, MSW 494) with permission of the Instructor. This course must be taken with MSW 494. This course is designed to equip students with the basic theoretical knowledge, analytical skills, practice skills, and values needed to prepare for advanced, community practice in social work. The course is grounded in the empowerment model with an emphasis on social justice and other Vincentian values. Additionally, it gives particular attention to the importance of diversity, including race/ethnicity, gender, economic class, disability, and sexual orientation in the context of social work macro practice. PREREQUISITE(S): `Advanced Standing' admission to the MSW Program or successful completion of MSW 481 + 491, MSW 482 + 492 & MSW 483+ 493. This course is to be taken concurrently with MSW 494 (Advanced Standing Foundation Field Education).

**MSW 491 FOUNDATION FIELD EDUCATION I**

This course is designed to support students in their Foundation Year of Field Education, and to complement the Foundation Year Sequence. Students will be provided with the opportunity to apply the beginning skills and knowledge needed to professionally aid individuals and families using the bio-psycho-social model and the empowerment approach, and introduce key components of field work and working with community organizations and social service agencies.

This course is the first of three field education courses which are required of all MSW degree students. Students enrolled in this course must also be concurrently enrolled in MSW 481. (Foundation Practice I). The foundation field education course also requires working in an approved field placement for 160 agency contact hours during the autumn quarter. Students should be mindful that they need to complete a minimum of 540 hours during the academic year.

The course will meet several times during the autumn quarter. Issues related to practice will be discussed, including ethics, networking with community organizations, diversity, and supervision. Social work is practiced in agencies and organizations that work directly with people. Students in this course are placed in human service organizations or agencies where they will develop skills in interviewing, data collection, problem identification, and formulating goals with clients within the context of professional social work values and ethics and the auspices of the agency in which the student is based. Students are required to develop an understanding of the agency's history and purposes, its programs and services, and its role in the greater urban community. Students must always be able to demonstrate a professional awareness of self in working with clients as well as an understanding of human diversity as it relates to working with clients and working towards restorative and social justice.

The course provides students the opportunity to explore a range of concepts that support the learning objectives of the Foundation course sequence, and include:
- Exposure of students to a wide range of practice situations
- Provide opportunities for discussion of field related issues
- Provide opportunities for trouble shooting and problem solving of pragmatic and procedural aspects of field instruction
- Provide a forum for the development of the ?professional self? and skills necessary to participate in professional consultation

The process for field placement and supporting policies are further articulated in the student handbook and the field education manual. Each student is required to submit a learning contract specific to their placement agency each quarter. The learning contract should include learning activities which can reasonably be accomplished within the academic quarter and which reflect both student and program learning needs.

PREREQUISITE(S): (1) Admission to the DePaul University MSW Program (2) Concurrent enrollment in MSW 481 (3) Confirmation of field placement for current academic year.

**MSW 492 FOUNDATION FIELD EDUCATION II**

This course is designed to support students in their Foundation Year of Field Education, and to complement the Foundation Year Sequence. Students will be provided with the opportunity to apply the beginning skills and knowledge needed to professionally aid individuals and families using the bio-psycho-social model and the empowerment approach, and introduce key components of field work and working with community organizations and social service agencies.

This course is the second of three field education courses which are required of all MSW degree students. Students enrolled in this course must also be concurrently enrolled in MSW 482. (Foundation Practice II). The foundation field education course also requires interning in an approved field placement for at least 180 agency contact hours during the winter quarter. Students should have completed at least 180 hours at their internship prior to the start of the winter quarter and must complete a minimum of 540 internship hours during the academic year. The course will meet several times during the winter quarter. Issues related to practice will be discussed, including ethics, networking with community organizations, diversity, and supervision.

Social work is practiced in agencies and organizations that work directly with people. Students in this course are placed in human service organizations or agencies where they will develop skills in interviewing, data collection, problem identification, and formulating goals with clients within the context of professional social work values and ethics and the auspices of the agency in which the student is based. Students are required to develop an understanding of the agency's history and purposes, its programs and services, and its role in the
greater urban community. Students must always be able to demonstrate a professional awareness of self in working with clients as well as an understanding of human diversity as it relates to working with clients and working towards restorative and social justice.

The course provides students the opportunity to explore a range of concepts that support the learning objectives of the Foundation course sequence, and include:
- Exposure of students to a wide range of practice situations
- Provide opportunities for discussion of field related issues
- Provide opportunities for trouble shooting and problem solving of pragmatic and procedural aspects of field instruction
- Provide a forum for the development of the "professional self" and skills necessary to participate in professional consultation

The process for field placement and supporting policies are further articulated in the student handbook and the field education manual. Each student is required to submit a learning contract specific to their placement agency each quarter. The learning contract includes learning activities which can reasonably be accomplished within the academic quarter and which reflect both student and program learning needs. PREREQUISITE(S): Successful completion of MSW 492 (2) Concurrent enrollment in MSW 482; confirmation of field placement for current academic year.

**MSW 493 FOUNDATION FIELD EDUCATION III**

This course is designed to support students in their Foundation Year of Field Education, and to complement the Foundation Year Sequence. Students will be provided with the opportunity to apply the beginning skills and knowledge needed to professionally aid individuals, families, and groups using the bio-psycho-social model and the empowerment approach, and introduce key components of field work and working with community organizations and social service agencies.

This course is the third of three foundation field education courses which are required of all MSW degree students. Students enrolled in this course must also be concurrently enrolled in MSW 483. (Foundation Practice III). The foundation field education course requires working in an approved field placement for at least 180 agency contact hours during the spring quarter. Students must complete a total of 540 hours by the end of spring quarter. The student will also be required to actively participate in a meeting with the Field Instructor and the Field Liaison at the end of the quarter to discuss the student's progress and quarterly evaluation. The course will meet several times during the spring quarter. Issues related to practice will be discussed, including ethics, networking with community organizations, diversity, and supervision.

Social work is practiced in agencies and organizations that work directly with people. Students in this course are placed in human service organizations or agencies where they will develop skills in interviewing, data collection, problem identification, and formulating goals with clients within the context of professional social work values and ethics and the auspices of the agency in which the student is based. Students are required to develop an understanding of the agency's history and purposes, its programs and services, and its role in the greater urban community. Students must always be able to demonstrate a professional awareness of self in working with clients as well as an understanding of human diversity as it relates to working with clients and working towards restorative and social justice.

The course provides students the opportunity to explore a range of concepts that support the learning objectives of the Foundation course sequence, and include:
- Exposure of students to a wide range of practice situations
- Provide opportunities for discussion of field related issues
- Provide opportunities for trouble shooting and problem solving of pragmatic and procedural aspects of field instruction
- Provide a forum for the development of the "professional self" and skills necessary to participate in professional consultation

The process for field placement and supporting policies are further articulated in the student handbook and the field education manual. Each student is required to submit a learning contract specific to their placement agency each quarter. The learning contract should include learning activities which can reasonably be accomplished within the academic quarter and which reflect both student and program learning needs. PREREQUISITE(S): (1) Successful completion of MSW 492 (2) Concurrent enrollment in MSW 483 (3) Continuation in field placement for current academic year (4) Successful completion of MSW 481, MSW 482, MSW 491, and MSW 492.

**MSW 494 ADVANCED STANDING FOUNDATION FIELD EDUCATION**

This field education course is required for all Advanced Standing students and may be taken as an elective (with its co-requisite course, MSW 484) with permission of the Instructor. The course must be taken with MSW 484. This course also requires enrollment in an approved field agency placement for the entire summer session. Students are required to complete a minimum of 150 contact hours at the agency. This course is designed to assist students with processing the many theoretical, analytical, and practice skills needed to prepare for community practice, an advanced approach to social work. PREREQUISITE(S): 'Advanced Standing' admission to the MSW Program or successful completion of MSW 481 + 491, MSW 482 + 492 & MSW 483 + 493. This course is to be taken concurrently with MSW 484 (Advanced Foundation Practice).
MSW 499 INDEPENDENT STUDY
(1 to 4 Credit Hours) Individually-supervised learning experience, usually involving extensive research and written analysis. PREREQUISITE(S): Admission into MSW program and permission of Director.

MSW 501 PROGRAM EVALUATION
Administrator and staff of social programs have experienced continued pressure to document the effectiveness of community-based programs. Public agencies, private funders and other external organizations now routinely require program evaluation as part of the funding package. Additionally, agency administrators and staff want to know if their programs are effectively helping their clients. These internal and external demands now make it essential that social workers are skilled in developing, implementing and utilizing program evaluation.

This course offers a comprehensive overview of how program evaluation fits in today's social service environment. It presents social justice as an overarching paradigm in the study of program evaluation. The course will cover three methods of program evaluation: needs assessments, outcome evaluations, and process evaluations. The course will also cover the history of evaluation and ethical considerations related to race, ethnicity and sexual orientation. The course also emphasizes the role of program evaluation with community-based organizations that exist in an urban context. Practical issues related to organizational mission, staff resistance, resource demands and evaluation ethics will be covered in order to offer a reality-based perspective on conducting program evaluation. The course is grounded in the Vincentian values of respect, advocacy, service, and inventiveness. PREREQUISITE(S): Enrollment in the MSW Program and completion of MSW 422 Advanced Social Work Research II.

MSW 521 FUND DEVELOPMENT AND MANAGEMENT I
This two-part course series introduces students to creating, implementing and adjusting budgets within agencies and programs which serve people. This course is the first of two required courses in fund development for MSW students and is taken either concurrently with MSW 582 (Community Practice II) or before advanced field education. MSW 521 emphasizes budget preparation and fund acquisition while MSW 522 focuses on fund distribution. Successful completion of MSW 501 (Program Evaluation) is required for enrollment in this course, as is the successful completion of the MSW research sequence (MSW 421 & 422).

This course introduces students to budgetary operations and the ethical, value-based planning and decision-making processes by which social workers must implement fiscal and administrative decisions. This course also prepares students for MSW 522 (Fund Development & Management II) in which students will practice skills in program marketing and fundraising (including grant-writing). PREREQUISITE(S): MSW 421, MSW 422, MSW 483 or MSW 484, MSW 493 or MSW 494, and MSW 501 or permission from the instructor.

MSW 522 FUND DEVELOPMENT AND MANAGEMENT II
Building upon concepts introduced in MSW 521 (Fund Development and Management I), this course is the second of two required courses in fund development for students in the MSW program. MSW 522 focuses on fund distribution and control. This course also reviews principles of marketing and fund raising in programs and agencies within the context of social services. Attention is given to program development and fundraising which includes grant writing. This course is taken either concurrently with or prior to MSW 583 (Community Practice III).

This course continues review of many topics introduced in MSW 521. MSW 522 will also introduce topics such as budgetary control, allocation, monitoring, and preparation for audits. Students are also introduced to topics such as purchase of services and fees for services.

MSW 581 COMMUNITY PRACTICE I
Using select theoretical approaches, including empowerment practice, this course equips students with the advanced skills and knowledge needed to practice in community-serving agencies and organizations. The emphasis in this course, which represents the first of three consecutive, required (advanced) practice courses, is on leadership and management of human service organizations. This course introduces students to the knowledge, skills and professional values essential to leadership of community-based or community-serving programs and organizations. This course covers leadership theories, styles, and techniques; supervision and facilitation; and the critical role(s) leadership play(s) in agency and program administration. Special attention is paid to the unique considerations of people with diverse backgrounds (and representatives of other marginalized groups) in leadership positions as well as working towards the promotion of social and economic justice. It is required that this course be taken concurrently with MSW 591 (Advanced Field Education I). PREREQUISITE(S): Successful completion of MSW 483 or 484 and MSW 493 or 494.

MSW 582 COMMUNITY PRACTICE II
Using select theoretical approaches, this course equips students with the advanced skills and knowledge needed to practice in community-serving agencies and organizations. The emphasis in this course, which represents the second of three consecutive, required (advanced) practice courses, is on program planning.
This course introduces students to the skills and knowledge needed to plan and design programs in community-based, people-serving organizations, starting with problem analysis and needs assessment. Related topics such as understanding the multiple dimensions of social problems, operationalizing concerns, and the importance of collaboration and addressing diverse groups' needs within a community practice framework are also addressed. Measures for accountability and effectiveness, especially for professional social workers, are also addressed. Attention is also given to the needs of historically-marginalized groups and planning for full social and economic justice. It is required that this course be taken concurrently with MSW 592 (Advanced Field Education II). PREREQUISITE(S): MSW 581.

**MSW 583 COMMUNITY PRACTICE III**

Using select theoretical approaches, this course equips students with the advanced skills and knowledge needed to practice in community-serving agencies and organizations. The emphasis in this course, which represents the final of three consecutive, required (advanced) practice courses is on resource development and marketing. This course continues facilitation in planning and designing programs in community-based or community-serving organizations while also providing students with opportunities to integrate fund development, program evaluation, and effective stewardship of resources to leverage lasting social change, especially on behalf of historically-oppressed communities. Additional related topics include analysis of organizational change, partnerships, strategic planning, and quality assurance. It is required that this course be taken concurrently with MSW 593 (Advanced Field Education III). PREREQUISITE(S): Successful completion of MSW 582.

**MSW 591 ADVANCED FIELD EDUCATION I**

This three-part course is the final, advanced field education sequence which requires concurrent enrollment in MSW 581 (and 582, 583 in subsequent academic quarters). This course also requires enrollment in an approved field agency placement for the entire academic year, where students are required to complete a minimum of 180 contact hours at the agency during the autumn quarter. Students should keep in mind that they must complete 580 hours during the academic year. This course is designed to assist students in processing the many theoretical, analytical, and practice skills needed to practice advanced social work in community settings. Attention is also paid to the unique considerations of women and representatives of other historically-marginalized groups in organizational leadership roles through required learning objectives and tasks. PREREQUISITE(S): Concurrent enrollment in MSW 582 and successful completion of MSW 581 and MSW 591.

**MSW 592 ADVANCED FIELD EDUCATION II**

This course is the second in the final, three-part, advanced field education sequence, and requires concurrent enrollment in MSW 582 as well as successful completion of MSW 581 and MSW 591. This course also requires enrollment in an approved field agency placement for the entire academic year where students are required to complete a minimum of 580 hours over the academic year. Typically, students in MSW 592 are expected to complete a minimum of 190 contact hours at the agency during the Winter Quarter. This course is designed to assist students in processing the many theoretical, analytical, and practice skills needed to practice advanced social work in community settings. Attention is also paid to the unique considerations of women and representatives of other historically-marginalized groups in organizational leadership roles through required learning objectives and tasks. PREREQUISITE(S): Concurrent enrollment in MSW 582 and successful completion of MSW 581 and MSW 591.

**MSW 593 ADVANCED FIELD EDUCATION III**

This course is the second in the final, three-part, advanced field education sequence, and requires concurrent enrollment in MSW 582 as well as successful completion of MSW 581 and MSW 591. This course also requires enrollment in an approved field agency placement for the entire academic year where students are required to complete a minimum of 580 hours over the academic year. Typically, students in MSW 592 are expected to complete a minimum of 190 contact hours at the agency during the Winter Quarter. This course is designed to assist students in processing the many theoretical, analytical, and practice skills needed to practice advanced social work in community settings. Attention is also paid to the unique considerations of women and representatives of other historically-marginalized groups in organizational leadership roles through required learning objectives and tasks.
MUS 400 MUSIC RESEARCH I
(2 credits) Introduction to research types and techniques; bibliography and bibliographical sources; elementary statistics; the development of writing skills; analysis of research examples.

MUS 408 ANALYTICAL TECHNIQUES
(4 credits) Investigation of various analytical approaches to music syntax, structure, style and texture (including timbral and vocal or instrumental configurations) as exhibited in representative compositions from many historical periods.

MUS 420 HISTORY OF THE ORATORIO
An analytical and historical study of oratorio literature from 1600 to the present.

MUS 435 18th & 19th WIND HISTORY AND LITERATURE
(4 credits) There is a consistent historical connection between wind music of the ancient and medieval periods, and the music of today. This course will trace that historical line, focusing on the 18th & 19th Centuries. The development of repertoire as well as the functions and uses of wind music will be explored. It is the intention of this class to address the needs of people who will perform, conduct, or teach "classical" wind music as part of a career. Emphasis will be placed on original music suitable for professional concert performance.

MUS 436 20th CENTURY WIND HISTORY AND LITERATURE
(4 credits) There is a consistent historical connection between the wind music of the ancient periods and the music of today. This course will briefly trace that connection and then focus on the development and function of wind music in the 20th century. It is the intention of this class to address the needs of people who seek to perform, conduct, or teach wind music as part of their career.

MUS 460 TOPICS IN MUSICIANSHP
(2-4 credits) In depth investigation of a topic in musicianship studies.

MUS 475 MEDIEVAL MUSIC
Historical survey of music from the Middle Ages: sacred and secular music as artistic, theoretical, and intellectual expression of the Middle Ages; history of musical styles to 1420; performance pratice issues

MUS 478 RENAISSANCE MUSIC
Historical survey of music from the Renaissance. Musical style, compositional procedures, and performance practice are studied, within the social, political and economic environment in which the composers worked.

MUS 479 BAROQUE MUSIC
Historical survey of Baroque music and performance practice. Representative examples of both vocal and instrumental music are studied, mostly using the analytical techniques of the period, with the aim of becoming familiar with the most significant manners of composition of Baroque composers.

MUS 481 HISTORY OF OPERA
The course surveys the history of opera in western culture from its beginnings in the 17th century through the 20th century. The class materials cover stylistic trends and genres as demonstrated through seminal works. Each class period will contain a relevant analytical study.

MUS 482 WORLD MUSIC CULTURES
This graduate course will provide a global musical perspective and widen the lens through which students experience music. Through lectures, listening, guest performances, and engaging discussion students will gain rich insights into new worlds of music.

MUS 484 CLASSICAL MUSIC
Traces the development of musical style during the Classical Era through the analytical study of examples in the main musical forms such as sonata form. Reception and performance practice then and now will be addressed.

MUS 485 ROMANTIC MUSIC
Survey of nineteenth century music through a close analysis of representative Romantic works. The course will cover the expansion of both harmonic language and form leading to their eventual breakdown and reinterpretation.

MUS 486 MUSIC SINCE WORLD WAR II
This course surveys Western art music and related theoretical and technical issues from near the end of World War II to the present focusing on the development of new musical languages, new instruments and new
methods of analysis.

**MUS 487 20TH CENTURY MUSIC BEFORE WWII**
This course surveys Western art music and related theoretical and technical issues from near the end of the 19th century to World War II, focusing on the new musical languages and aesthetics developed from 1890 until 1940.

**MUS 498 INDEPENDENT STUDY**

**MUS 500 CANDIDACY CONTINUATION**
A course for continuing graduate students who have not completed research, course requirements, or comprehensive examinations, but wish to retain their student status. "Candidacy Continuation" will enable students to use the University facilities during the quarter they register. The registration will be for 0 credit, although a $40 fee will be charged per quarter.
Subjects beginning with the letters N and O are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

New Media Studies

NMS 501 PROSEMINAR IN NEW MEDIA STUDIES
Introduces the field of New Media Studies and the faculty who teach in it. Each week a different NMS faculty member will present his or her research and relate that topic to the wider field of NMS. Encourages students to clarify their course of study and build alliances with faculty and students with similar interests.

NMS 502 NEW MEDIA, OLD MEDIA
New Media, Old Media offers a critical examination of the rise of the information age and its impact on old media. This course will situate the NMS program in the historical/critical development of mass media and its relationship to power and meaning-making.

NMS 504 TEXT AND IMAGE
In this course we will explore the increasingly important dynamic between textual information and visual information. In this course we will read about how hypertext has changed the environment and nature of the written word, and we will examine how the Web has "remediated" previous media into a new dynamic. We will use this knowledge to perform analyses of visual and textual artifacts; students may also create their own artifacts.

NMS 505 WORKSHOP/PORTFOLIO SEMINAR
Students will have a choice between a collaborative workshop or a more individually-centered portfolio development seminar. Each group prepares a digital media project for an existing community group, such as a social service organization. Those students preferring to work independently will, under the guidance of the advising professor, develop and defend a complete portfolio of their work within the NMS program. May be repeated for elective credit.

NMS 506 INTERNSHIP
In consultation with the director of NMS, students design a field experience under the direction of a project director in the field. The field experience may be derived from issues raised in courses, from thesis research, or from personal research interests.

NMS 507 INDEPENDENT STUDY
In consultation with the director, advanced students may devise, with the approval of an NMS faculty member, an independent course of study that is related to the field yet does not duplicate a core or elective course already available. PREREQUISITE(S): Department consent

NMS 508 DESIGN RHETORICS
This course provides students with a theoretical foundation and practical skills in the design of rhetorically sophisticated new media objects. We will learn basic principles of visual composition, both by examining existing compositions and building our own. We will also seek to understand the way visual literacies and culture shape the rhetorical choices we make as designers and managers of new media projects.

NMS 509 SPECIAL TOPICS IN NEW MEDIA STUDIES
NMS 509 SPECIAL TOPICS IN NEW MEDIA STUDIES
See schedule for current offerings.

NMS 520 WEB DESIGN I
An introduction to the process of making functional sites for display on the Internet. Students will learn HTML-based development software, and work with imaging software to apply fundamental theories of new media design to the production of working computer-screen applications. PREREQUISITE(S): Instructor permission required.

NMS 521 WEB DESIGN II
An introduction to digital authoring software, such as Macromedia Flash, that allows for the combination of animation, sound, and complex user interaction. Students will design and produce working animations while exploring the balance between purpose, usability, and aesthetic appeal.

NMS 597 CANDIDACY CONTINUATION
Masters candidates who are not enrolled in a course during a given quarter but who want to maintain active university status should register for this course by permission of the graduate director. This course does not maintain student status for purposes of student loans. Non-credit, $40.00 per quarter. PREREQUISITE(S): Permission

Nursing

Graduate Course Descriptions - Current

NSG 400 THEORETICAL COMPONENTS OF NURSING
In this seminar, participants examine the nature, function and development of selected concepts, models and theories for their relevance to advanced nursing practice and nursing research. The structure of theory is analyzed according to the relationship between its components and the type of theoretical statements used. A process for developing a conceptual framework for inquiry and data-based nursing practice is presented. PREREQUISITE(S): Graduate Standing.

NSG 401 NURSING RESEARCH I
A seminar course emphasizing the concepts of the research process though presentation, discussion, and analysis of various research approaches, methodologies, designs, and instrumentation. Critique of published nursing research will enable the students to use concepts presented to evaluate current studies. PREREQUISITE(S): NSG 400 & 480 or equivalent.

NSG 402 NURSING RESEARCH II
The development of a specific research proposal for the graduate synthesis project or thesis is developed. Emphasis is on protection of human subjects and methods for research utilization, evidenced-based evaluation of clinical practice, and theory-based nursing research. PREREQUISITE(S): NSG 401

NSG 422 APPLIED PATHOPHYSIOLOGY FOR ADVANCED PRACTICE
(Formerly NSG 525) A synthesis of organic & inorganic chemistry, molecular biology, and cellular physiology that serves as a foundation for advanced understanding of pathophysiology and pharmacology. PREREQUISITE(S): Organic and Inorganic Chemistry

NSG 424 ADVANCED PHYSIOLOGY & PATHOPHYSIOLOGY
Survey of current advances on human physiology with emphasis on the cellular and microcellular basis of health and disease. Students will engage in intensive study of human anatomy and physiology and complex pathophysiologic processes. Current research findings are reviewed for implications for health promotion, health maintenance and health restoration. PREREQUISITE(S): NSG 422 or equivalent. May be taken concurrently with NSG 484

NSG 425 FISCAL MANAGEMENT IN HEALTH CARE
Fiscal management and budgetary practices in health care institutions are explored. Budget preparation, cost-benefit, analysis, product costing, reimbursement, and analysis of financial status in organizations is emphasized.

NSG 426 PHARMACOLOGY II
Continuation of NSG 322: Basic Pathophysiology and Pharmacology. PREREQUISITE(S): NSG 322.

**NSG 430 POLITICAL AND LEGAL ISSUES IN HEALTH CARE**
Seminars will discuss social, economic, legislative and regulatory mechanisms that influence professional practice and health policy in the United States. Emphasis is on the legal definition of professional practice as well as major issues involved in designing, implementing and evaluating policy decisions including scope, dynamics, and conceptual and practical dilemmas.

**NSG 431 HEALTH PROMOTION FOR FAMILIES AND COMMUNITIES**
Examines issues, frameworks, theories and techniques relevant to health promotion for individuals, families and communities. Health disparities and social & cultural factors impacting health and wellness are examined and methods for assessing and facilitating cultural competence of providers and institutions are studied. The nurse's role as advocate for health promotion in public policy is discussed.

**NSG 432 THEORIES OF HEALTH BEHAVIORS ACROSS THE LIFESPAN**
Analyzes selected theories that predict decision-making in health care issues. Concepts and theories related to prevention and optimal health care as well as social, cultural and economic aspects of wellness and illness are explored.

**NSG 433 NURSING AND BIOMEDICAL ETHICS IN HEALTH CARE**
Seminars and case studies are used to explore issues and frameworks for ethical practice and research in the health professions.

**NSG 439 INTERNATIONAL COMPARATIVE HEALTH CARE SYSTEMS**
NSG 439 provides a comparison between the American and an international country's health care systems including their histories, economics, and methods for the delivery of care. Current challenges and controversies are described. Course is open to Department of Nursing students who have completed NSG 303 or equivalent and includes an experience in that country. Course replaces NSG 430: Political and Legal issues and the leadership/education elective.

**NSG 440 MATERNAL HEALTH NURSING**
The art of childbearing nursing: a didactic and clinical course as presented and discussed in class and implemented in the clinical setting. Focus is on the role of the nurse in caring for healthy newborns, and childbearing women who may be experiencing actual or potential educational needs, illness manifestations, or injury patterns. A variety of clinical settings, both inpatient and outpatient for maternity care will be utilized. Course meets for 3 hours lecture and 8 hours clinical. PREREQUISITE(S): NSG 307; concurrent registration with NSG 441.

**NSG 441 INFANT, CHILD AND ADOLESCENT NURSING**
The art of pediatric nursing: a didactic and clinical course as presented and discussed in class and implemented in the clinical setting. Focus is on the role of the nurse in caring for children ranging from newborns through adolescents. Levels of prevention, health promotion, health maintenance and health restoration will be discussed. Emphasis is placed on the physical, psychosocial, and developmental needs of infants, children and adolescents within the family as well as the alterations that occur during hospitalization. Major causes of morbidity and mortality will also be covered. The influence of health policy, cultural, economic, and ethical issues on the child and family are also addressed. Course meets for 3 hours lecture and 8 hours clinical. PREREQUISITE(S): NSG 307; concurrent registration with NSG 440.

**NSG 442 COMMUNITY HEALTH NURSING**
The emphasis of this course is to provide a theoretical basis for nursing and public health sciences in the field of population health. Emphasis is placed on application of the principles of primary health care, strategies of health promotion, disease prevention and management across the life-span in home and community settings, and nursing practice of community-based families and population. Current trends and professional, legal/ethical, economic, cultural, and environmental issues are examined as they apply to community health nursing. Course meets for 3 hours lecture and 8 hours clinical. PREREQUISITE(S): NSG 440 and NSG 441.

**NSG 443 CLINICAL IMMERSION AND INTERNSHIP**
This is the capstone clinical course in which students, preceptors, and faculty collaborate in application and synthesis of the core concepts of caring, collaboration, communication, cultural sensitivity, community and environment as they relate to the nursing care of clients with complex health care problems throughout the life span. The students will also demonstrate competency in clinical skills, critical thinking, problem solving, and time management. The purpose of the synthesis course is to facilitate the integration of current and prior curricular content so that the student can become an active and productive member of the health care team. PREREQUISITE(S): NSG 442 and NSG 472.
NSG 445 NURSING PROFESSIONALISM, ADVOCACY, AND LEADERSHIP
This course discusses the concepts essential to the development of the professional identity and role of the nurse as a leader. Unique leadership contributions of professional nursing to healthcare in multiple settings will be discussed. The nurse's interactions with nursing colleagues and other health care providers will be addressed with an emphasis on leadership, communication, delegation, conflict resolution, negotiation and team building. The course draws on current knowledge and theory of leadership and the profession of nursing. The course will focus on the role of the professional nurse in relation to lawful, ethical practice and in relation to current health care system needs and expectations. Nursing roles and specialty practices will be discussed with regard to the leadership provided by these nurse experts. The course will also emphasize the development of the collaborative skills and understanding necessary to lead within the complex healthcare system, including the ability to present her/himself as a professional with evidence of leadership abilities. Meets for 4 hours lecture and discussion. CO-REQUISITE(S): NSG 442 and NSG 472.

NSG 448 INDEPENDENT STUDY
This course is reserved for individuals who wish to do focused study at the graduate level.

NSG 450 SELECTED TOPICS IN NURSING
This course is reserved for special seminars organized from time to time to accommodate the needs of groups interested in specific topics.

NSG 451 INTRODUCTION TO NURSING ADMINISTRATION AND LEADERSHIP
This course is an introduction to the nursing leadership concentration as well as an overview of current issues and theory of nursing administration for all advanced practice nurses. As an introduction to the nursing leadership concentration, this course places emphasis on developing master's level skills of critical reading, scholarly writing, analytical discussion, and shared leadership. May also be taken as a health sciences management elective. The expected outcome of the course is a nursing research question and literature review that will form the basis of the students work in their concentration and the final research project.

NSG 452 ORGANIZATIONAL AND FINANCIAL MANAGEMENT IN HEALTH CARE (CROSS-LISTED AS NSG 521)
This course provides insight and reflection on the executive role in advanced practice and organizational administration. Concepts, models, and techniques used to manage systems in a variety of health care organizations or practices are analyzed. Organizational assessment, resource development, and product costing are emphasized. This course provides insight and reflection on the executive role in advanced practice and organizational administration. Concepts, models, and techniques used to manage systems in a variety of health care organizations or practices are analyzed. Organizational assessment, resource development, and product costing are emphasized.

NSG 453 CASE MANAGEMENT AND THE MANAGED CARE ENVIRONMENT
In this course, students engage in analysis of concepts central to an in-depth understanding of the managed care environment and case management as a clinical care system. Emphasis is upon development of skill in organizational and population-based assessment and data analysis, clinical pathway development, and interdisciplinary collaboration. Students develop a database for a clinical project focusing on a client population from their work environment.

NSG 454 INNOVATIONS IN HEALTH CARE DELIVERY
This course provides the instruction and clinical experience for the development of the advanced practice nurse role as case manager and administrator. Learning activities focus on implementing contemporary data-based nursing practice models in a variety of health care settings, and the diffusion of innovation at the individual, family and organizational levels. PREREQUISITE(S): NSG 453.

NSG 455 CURRICULUM DEVELOPMENT FOR HEALTH CARE SYSTEMS
Theories, principles and approaches to curriculum development are explored. Basic elements of curricular design are examined in relation to traditional and evolving paradigms, reflecting development in social and professional dimensions of health care.

NSG 456 PRACTICUM IN NURSING ADMINISTRATION I
Practicum In Nursing Administration I PREREQUISITE(S): NSG 451 and NSG 452

NSG 457 PRACTICUM IN NURSING ADMINISTRATION II
Practicum In Nursing Administration II PREREQUISITE(S): NSG 451, 452 AND 456

NSG 458 TEACHING IN HEALTH CARE SYSTEMS
This course prepares the registered nurse to apply theories, principles and strategies in education. Emphasis is on education as a vehicle for enhancing the health of populations and systems from an ecological
NSG 459 PRACTICUM IN TEACHING IN HEALTH CARE SYSTEMS
Practicum In Teaching In Health Care Systems (PREREQUISITE(S): NSG 455 and NSG 458)

NSG 460 ADVANCED HEALTH ASSESSMENT ACROSS THE LIFESPAN
Lecture focus on the synthesis of scientific knowledge in performing integrated, comprehensive assessments of individuals from infancy through maturity. Emphasis is placed on the child in the context of the family and community. Laboratory practice includes taking the health history and performing the physical examination to evaluate primary health care needs. PREREQUISITE(S): NSG 422 and 424 or concurrent. (Laboratory fee required)

NSG 461 ADVANCED PEDIATRIC ASSESSMENT
Lectures focus on the synthesis of scientific knowledge in performing integrated, comprehensive assessments of children from infancy through early adolescence. Emphasis is placed on the child in the context of the family and community in health and illness. Laboratory practice included taking the health history and performing physical examinations to evaluate primary and clinical care needs. PREREQUISITE(S): NSG 422, NSG 424, NSG 460.

NSG 462 ADVANCED WOMEN’S HEALTH ASSESSMENT
Lectures focus on the synthesis of scientific knowledge in performing integrated, comprehensive assessments of women from late adolescence through maturity. Emphasis is placed on the woman in the context of the family and community in health and illness. Laboratory practice includes taking the health history and performing the physical examination to evaluate primary and reproductive health care needs. PREREQUISITE(S): NSG 422, NSG 424, NSG 460.

NSG 464 ADVANCED HEALTH ACROSS THE LIFESPAN
This course builds on the skills acquired in health assessment and will introduce the skills and knowledge needed to perform a history and physical examination on patients of all ages. Lecture will focus on the synthesis of scientific knowledge in performing integrated, comprehensive assessments of individuals from infancy through maturity. Emphasis is place on the child in the context of the family and community. Laboratory practice includes taking the health history and performing the physical examination to evaluate primary health care needs. Adult Nurse Practitioner students will not participate in the assessment of the infant and child, but instead will participate in more in-depth assessment of the older adult. PREREQUISITE(S): NSG 422 and NSG 424.

NSG 472 CRITICAL CARE NURSING
The art of nursing is practiced within the clinical environment with a focus on the roles of health care provider and coordinator in medical-surgical nursing. Analysis and application of current research in the epidemiology of health and disease is used as the basis for decision-making in performing the nursing assessment, contributing to interdisciplinary treatment planning, and facilitating health promotion and illness prevention. The integrated role of the professional nurse in providing holistic care is emphasized. Prerequisite(s): NSG 303, NSG 460.

NSG 473 PRIMARY CARE OF THE INFANT, CHILD, AND THE ADOLESCENT
The course is designed to explore health promotion, health protection, and disease prevention dimensions in pediatric primary care. It will focus on many of the common issues related to clinical, developmental and behavioral needs of children and adolescents and their families. The dynamics of the pediatric client and nurse practitioner relationship will be analyzed, focusing on life transitions and the impact of health and illness on infants, children, and adolescents and their families. Clinical practice guidelines will be evaluated through epidemiological and research evidence of selected developmental and behavioral disorders, as well as acute and chronic health problems. Also, selected theory-based models relevant to primary care of children will be critiqued. COREQUISITE(S): NSG 484. PREREQUISITE(s): NSG 422. NSG 424, NSG 460, NSG 484.

NSG 474 PRIMARY CARE OF THE ADULT
Lectures focus on synthesis and application of scientific knowledge for family advanced practice nursing in primary care. The emphasis of course content is on building advanced knowledge of chronic and complex health problems in the primary care management of adults. This course examines primary health care needs of adults across the life span, with a focus on health promotion and disease prevention. The integrated role of the advanced practice nurse in providing holistic care and collaborative practice is emphasized. PREREQUISITE(S): NSG 422, NSG 424, NSG 460 COREQUISITE(S): NSG 484.

NSG 475 CLINICAL MANAGEMENT OF PREGNANCY AND CHILDBIRTH
This advanced practice course provides a comprehensive review of both complicated and high-risk obstetrical conditions. Course content builds upon the nurse practitioner student's knowledge of primary care for low-risk
obstetrical patients. Clinical practice guidelines for the advanced practice nurse in a woman's health specialty practice or in a practice devoted largely to the care of women in the family is emphasized. PREREQUISITE(S): NSG 422, NSG 424, NSG 460, NSG 484.

NSG 476 CLINICAL MANAGEMENT OF PEDIATRIC HEALTH AND ILLNESS
Lectures focus on synthesis and application of scientific knowledge for pediatric advanced practice nursing. The integrated role of the advanced practice nurse in providing holistic care and collaborative practice is emphasized. PREREQUISITE(s): NSG 422, NSG 424, NSG 460, NSG 461, NSG 484.

NSG 477 CLINICAL MANAGEMENT OF WOMEN’S HEALTH AND ILLNESS
Lectures focus on synthesis and application of scientific knowledge for gynecologic advanced practice nursing. The integrated role of the advanced practice nurse in providing holistic care and collaborative practice is emphasized. PREREQUISITE(S): NSG 460 or 462.

NSG 478 CLINICAL MANAGEMENT OF ACUTE AND CHRONIC ILLNESSES IN PRIMARY CARE
Lectures focus on synthesis and application of scientific knowledge for adult advanced practice nursing. The integrated role of the advanced practice nurse in providing holistic care and collaborative practice is emphasized. The dynamics of the adult client and nurse practitioner relationship will be analyzed, focusing on life transitions and the impact of health and illness on adults, families, and communities. Clinical practice guidelines will be evaluated through epidemiological and research evidenced of selected acute, emergent and chronic health problems. Prerequisite(s): NSG 422, NSG 424, NSG 460, NSG 484 or equivalent.

NSG 480 STATISTICAL METHODS FOR THE HEALTH SCIENCES
This course is designed to assist students to understand, interpret, and apply statistical methods to address health science research questions. Beginning with a basic understanding of data and data integrity, level of measurement, and statistical concepts and assumptions, students will focus on describing variables using measures of central tendency and measures of dispersion, addressing research questions using appropriate parametric/non parametric, epidemiologic and multivariate statistical models. Students will also practice using statistical software to manage, graphically display, describe and analyze sample data. PREREQUISITE(S): Undergraduate statistics course.

NSG 481 BIOSTATISTICS AND EPIDEMIOLOGY
The application of biostatistics/epidemiology to clinical practice and research is the intent of this seminar. Initial discussions will focus on understanding biostatistics and epidemiological statistics as applied to health and disease in diverse populations. From considering the relationship between measurement and biostatistics to understanding the importance of insuring data integrity throughout the research process, students will examine existing data sets (federal, voluntary agencies, professional/specialty organizations). Then the focus will be on understanding epidemiological statistics (rates, proportions, relative and absolute risk), descriptive statistics, measures of differences, measures of relationships/prediction, and multivariate statistical models as applied to health and disease. PREREQUISITE(S): Undergraduate Statistics.

NSG 482 INTRODUCTION TO EPIDEMIOLOGY
An investigative problem-solving process is used to study the personal and ecological determinants of health and disease frequencies in diverse populations. Data are manipulated to plan, implement and evaluate health promotion and disease control programs for a variety of health care settings. Infectious and chronic disease prevention are emphasized. Students electing to take the course for four credit hours will complete a project using the epidemiologic method. Two credit hours. PREREQUISITE(S): Advanced Health Statistics.

NSG 483 PRACTICUM IN POPULATION BASED NURSING PRACTICE I
This is the first practicum in a sequence of supervised clinical experiences for nurse practitioner students. The focus of NSG 483 is on application of health assessment and examination skills in the clinical setting, identification of health risks, and learning how to manage common illnesses. Analysis and application of current research is used as the basis for decision-making in performing the health history and physical assessment, contributing to interdisciplinary treatment planning, and teaching for health promotion and illness prevention.

NSG 484 PHARMOCOLOGY FOR ADVANCED NURSING PRACTICE
Provides the advanced-practice nurse with the knowledge base necessary to manage pharmacological therapy for acute and chronically ill clients collaboratively with other members of the health care team. Direct and indirect responsibility for clinical decision-making regarding the administration, management and evaluation of drugs are emphasized. PREREQUISITE(S): Physiology for Advanced Nursing Practice or equivalent or concurrent registration, Organic and Inorganic Chemistry, and Microbiology.

NSG 485A FAMILY AND COMMUNITY NURSING I OBSTETRICS
The art of family and community nursing: a didactic and clinical course as presented and discussed in class
and implemented in the clinical setting. Focus is on the role of the nurse in caring for healthy newborns, and childbearing women who may be experiencing actual or potential educational needs, illness manifestations, or injury patterns. A variety of clinical settings, both inpatient and outpatient for maternity care will be utilized. Lecture, video demonstrations, human patient simulations, case studies, and active participation are included in the classroom. PREREQUISITE(S): NSG 472. CO-REQUISITE(S): NSG 485B.

NSG 485B FAMILY AND COMMUNITY NURSING I PEDIATRICS
The art of family and community nursing: a didactic and clinical course presented and discussed in class and implemented in the clinical setting. Focus is on the role of the nurse in caring for healthy newborns, children, and adolescents with a focus on normal growth and development, common acute illness and chronic illnesses in all ages of pediatric patients. The focus is on student learning that contextualizes who may be experiencing actual or potential educational needs, illness manifestations, or injury patterns. A variety of clinical settings, both inpatient and outpatient for pediatrics will be utilized. Lecture, video demonstrations, human patient simulations, case studies, and active participation are included in the classroom. PREREQUISITE(S): NSG 472. CO-REQUISITE(S): NSG 485A.

NSG 486 THE ART OF FAMILY & COMMUNITY NURSING II
The art of nursing is practiced with a focus on integrating the roles of health care provider, teacher, and case manager. Learning experiences focus on adults and families in a variety of settings including the home, hospital, and community. Emphasis is placed on the critical appraisal of individual and community health patterns and mental illness manifestations, and the development and testing of therapeutic nursing interventions in collaboration with other health professionals. PREREQUISITE(S): NSG 485 or NSG 485A and NSG 485B. Ten credit hours.

NSG 487 PRACTICUM IN POPULATION-BASED NURSING PRACTICE II
This is the second practicum in a sequence of supervised clinical experiences for nurse practitioner students in which students demonstrate increasing comprehensive practice of primary care in the context of specialty practice for selected populations. Nurse practitioner student readings, assignments, and clinical experiences in primary care: family, adult, pediatric, or women’s health with an emphasis on health promotion and disease prevention. PREREQUISITE(S)(s): NSG 422, NSG 424, NSG 460, NSG 484, NSG 483, NSG 492. COREQUISITE(S): NSG 493.

NSG 488 PROFESSIONAL ISSUES & RESEARCH IN POPULATION-BASED ADVANCED PRACTICE NURSING
This course introduces the graduate nursing students to a variety of advanced practice nursing roles and the competencies needed for successful practice in those roles. The students explore the conceptual, theoretical, and empirical bases of population based advanced practice nursing. Critical thinking skills are developed through the student’s debate of current local, state, and national laws and analysis of coding case studies. Communication skills are fostered through the use of class discussions and development of various assignments. Scholarly written and verbal presentations enhance the student’s understanding of historical, economical, political, legal, and ethical perspectives of advanced practice nursing.

NSG 490 PRACTICUM IN POPULATION-BASED NURSING PRACTICE III
This is the third clinical practicum in a sequence of supervised clinical experiences for nurse practitioner students in which students demonstrate increasing comprehensive practice of primary care in the context of specialty practice for selected populations. This course provides the opportunity to integrate the multiple professional roles of the advanced practice nurse while refining their skills in the comprehensive practice of primary care and/or specialty practice for selected populations. Emphasis is on health promotion and disease prevention with unitary human beings in mutual process with their environment in the management of health and illness, teaching and health counseling and organizational and role competencies. Students select sites and preceptors in family, adult, pediatric or women's health promotion according to their area of concentration and self-assessed strengths and weaknesses. PREREQUISITE(S): NSG 422, NSG 424, NSG 460, NSG 484, NSG 483, NSG 487, NSG 492, NSG 493. COREQUISITE(S): NSG 494.

NSG 491 PRACTICUM IN ACUTE AND CHRONIC ILLNESS
Six credit hours.

NSG 492 CLINICAL DECISION-MAKING FOR ADVANCE PRACTICE NURSING I
An on-line clinical seminar course designed to introduce the advanced practice nursing student to the clinical reasoning process in primary care and its application in the assessment of health and illness across the lifespan. Interpretation of x-ray and laboratory tests is considered as it illuminates findings from the health history and physical exam. The advanced level practitioner role is stressed with clinical decision making as a central concept. Analysis and application of theory and research in assessment, diagnosis, therapeutic nursing intervention, and clinical evaluation is the basis for exploring the clinical decision making process.
NSG 493 CLINICAL DECISION-MAKING II FOR ADVANCE PRACTICE NURSING
This course builds on and integrates previous courses in the advance practice nursing sequence that focuses on clinical management skills of illness in primary care settings. The advanced level practitioner role is stressed with clinical decision making as a central concept. Analysis and application of theory and research in assessment, diagnosis, therapeutic nursing intervention, and clinical evaluation is the basis for exploring the clinical decision making process. PREREQUISITE(S): NSG 422, NSG 424, NSG 460, NSG 484, NSG 492, NSG 483. CO-REQUISITE(S): NSG 487.

NSG 494 CLINICAL DECISION-MAKING III FOR ADVANCE PRACTICE NURSING
This course builds on and integrates previous courses in the advance practice nursing sequence that focuses on clinical management skills of acute and chronic illness across the lifespan. Students learn to assess, diagnose, and manage acute episodic illness commonly encountered in ambulatory health settings. The advanced level practitioner role is stressed with clinical decision making as a central concept. PREREQUISITE(S): NSG 422, NSG 424, NSG 460, NSG 484, NSG 492, NSG 493, NSG 483 CO-REQUISITE(S): NSG 490.

NSG 498 PROFESSIONAL NURSE ROLE DEVELOPMENT
The nurse as clinician, educator, manager, activist, research coordinator, and entrepreneur are some of the many roles available to professional nurses in contemporary society. This course provides opportunity to explore selected roles of the professional nurse and the advanced practice nurse in diverse practice settings. Students select readings and seminar topics for discussion in class as well as design and implement a project for a selected professional nurse role. Principles of needs assessment, program planning and evaluation provide the framework for the project. Refinement of skills in critical thinking, decision-making, communication, and innovation are emphasized. Co-REQUISITE(S): NSG 486. Two credit hours.

NSG 500 CHEMISTRY AND PHYSICS
Review of principles of physics with emphasis on their application in the clinical practice of anesthesia. Nurse anesthesia residents (NAR) will engage in a comprehensive analysis of cell physiology and biochemistry with emphasis upon metabolism, enzyme function, and protein synthesis. Current research findings and their anesthetic implications will be discussed.

NSG 501 ANATOMY AND PHYSIOLOGY I
An intensive 6 quarter hour course designed to provide the nurse anesthesia resident (NAR) with current knowledge of advanced anatomy and physiology of the gastrointestinal, nervous and endocrine systems. The course is divided into three sections with emphasis placed on the structural and functional role of each system in maintaining homeostasis. Clinical implications of current research findings will be stressed.

NSG 502 ANATOMY AND PHYSIOLOGY II
An intensive 6 quarter hour course designed to provide the nurse anesthesia resident (NAR) with current knowledge of advanced anatomy and physiology of the cardiovascular, respiratory and renal systems. The course is divided into sections with emphasis placed on the structural and functional role of each system in maintaining homeostasis. Clinical implications of current research findings will be stressed.

NSG 503 PATHOPHYSIOLOGY
An intensive 6 quarter hour course designed to provide the nurse anesthesia resident (NAR) with current knowledge of diseases and disorders of the nervous, endocrine, cardiovascular, respiratory, renal, GI/hepatic, and musculoskeletal systems. Implications for the design and implementation of an appropriate anesthesia care plan for individuals with specific system disease/disorders will be discussed in detail. Emphasis will be placed on system-specific diagnostic and therapeutic procedures that require anesthesia services.

NSG 504 PRINCIPLES OF ANESTHESIA PRACTICE I
Designed to introduce the nurse anesthesia resident (NAR) to the advanced practice of nurse anesthesia. Emphasis is placed upon pre-operative patient assessment, anesthesia equipment and technology, airway management, intra-operative management, and postoperative care of patients undergoing general and regional anesthesia. Course includes orientation to clinical practice.

NSG 505 PRINCIPLES OF ANESTHESIA PRACTICE II
An intensive 4 quarter hour course designed to provide the nurse anesthesia resident (NAR) with current knowledge of special populations, including pediatric, obstetric, geriatric and trauma patients, as well as patients requiring pain management. Emphasis will be placed on the anatomical and physiological differences that characterize each population with a focus on the pathological disorders unique to each group. The preparation, implementation and evaluation of an appropriate nurse anesthesia care plan for these populations will be stressed.
NSG 506 PRINCIPLES OF ANESTHESIA PRACTICE III
An in-depth course that places emphasis on perioperative anesthetic management of patients presenting for speciality surgical procedures or requiring management for chronic pain. Implications for the development, implementation, and evaluation of anesthesia care plans will be stressed. The ethical, legal and professional issues that influence the advanced practice of nurse anesthesia will be discussed. Course includes preparation for the Certification Examination for Certified Registered Nurse Anethetists.

NSG 507 ANESTHETIC PHARMACOLOGY
This course is an in depth introduction to anesthetic pharmacology. It covers the pharmacokinetics, pharmacodynamics, and pharmacotherapeutics of drugs used in the administration of general, local, and regional anesthesia and provides the scientific basis for the advanced practice of nurse anesthesia.

NSG 508 ADJUNCTIVE ANESTHETIC
This 4 quarter hour hybrid course (in class and on-line sections) includes the pharmacokinetcs, pharmacodynamics, and pharmacotherapeutics of drugs used in the treatment of a variety of disease states. Implications of current therapy with these agents and use of selected agents as adjunctive therapy in the advanced practice of nurse anesthesia will be stresed.

NSG 509 ADVANCED PHYSICAL ASSESSMENT FOR NURSE ANESTHETISTS
This course will provide strategies that promote effective history-taking along with cognitive and psychomotor skills needed for the advanced physical assessment of the neurological, musculoskeletal, respiratory, cardiac, circulatory, and gastrointestinal systems across the lifespan. The assessment of body systems includes an overview of anatomy and physiology, techniques necessary to perform inspection, palpation, percussion and auscultation; and interpretation of physical findings and laboratory testing relevant to the advanced practice of nurse anesthesia.

NSG 510 ANESTHESIA PRACTICUM I
An introduction to the clinical practice of anesthesia with emphasis on the principles introduced in ANES 500-504, 507 and 508. Includes administration of anesthesia for select patient populations under direct instruction and supervision of a certified registered nurse anesthetist (CRNA,) or anesthesiologist.

NSG 511 ANESTHESIA PRACTICUM II
Expanded application and integration of basic principles applicable to ANES 510. PREREQUISITE(S): NSG 510

NSG 512 ANESTHESIA PRACTICUM III
This practicum provides the nurse anesthesia resident (NAR) with an opportunity to apply and integrate the basic principles of nurse anesthesia practice. Emphasis is on the anesthetic comprehensive management of the adult patient presenting for elective and emergency surgery. PREREQUISITE(S): NSG 510, NSG 511

NSG 513 ANESTHESIA PRACTICUM IV
The first of four advanced anesthesia practicums that allow the third year nurse anesthesia resident (NAR) the opportunity to develop, implement, and evaluate anesthesia care plans for all patient populations undergoing a wide variety of specialty surgical and therapeutic procedures. It is designed to broaden the knowledge and skill base of the NAR. Includes seminar presentations on selected topics or issues relative to the advanced practice of anesthesia and completion of online bimonthly review quizzes. PREREQUISITE(S): NSG 510, NSG 511, NSG 512

NSG 514 ANESTHESIA PRACTICUM V
The second in a series of advanced practicums that provide the third year nurse anesthesia resident (NAR) with the opportunity to develop, implement, and evaluate an anesthesia care plan for all patient populations undergoing a wide variety of surgical and therapeutic procedures. Emphasis is placed on application, integration, and synthesis of knowledge, skills, and attitudes that are representative of the advanced practice of nurse anesthesia. Includes seminar presentations on selected topics and issues relative to the advanced practice of anesthesia and completion of online bimonthly review quizzes. PREREQUISITE(S): NSG 510, 511, 512, 513

NSG 515 ANESTHESIA PRACTICUM VI
The third in a series of advanced practicums that provides the third year nurse anesthesia resident (NAR) with the opportunity to develop, implement, and evaluate an anesthesia care plan for all patient populations undergoing a wide variety of surgical and therapeutic procedures. Emphasis is placed on application, integration, and synthesis of the knowledge, skills, and attitudes representative of the advanced practice of nurse anesthesia. Includes seminar presentations on selected topics or issues relative to the advanced practice of anesthesia and completion of online bimonthly review quizzes. PREREQUISITE(S): NSG 510, 511, 512, 513, 514
**NSG 516 ANESTHESIA PRACTICUM VII**
The final advanced practicum in which the third year nurse anesthesia resident (NAR) demonstrates the knowledge, skills, and attitudes necessary for entry level nurse anesthesia practice: proficiency in providing perioperative nurse anesthesia care for all patient populations; an ethical and culturally sensitive approach to patient care; analysis and synthesis of current research for application into practice; ability to perform a comprehensive self evaluation; and display of a professional attitude toward life long learning. Includes seminar presentations on selected topics or issues relative to the advanced practice of nurse anesthesia.
PREREQUISITE(S): NSG 510, 511, 512, 513, 514, 515

**NSG 521 INNOVATIONS IN HEALTH CARE DELIVERY (CROSS-LISTED AS NSG 452)**
This course provides the laboratory and clinical experiences for the development of the professional nurse role as case manager and administrator. Learning activities focus on implementing contemporary data-based nursing practice models in a variety of health care settings, and the diffusion of innovation at the individual, family and organizational levels.

**NSG 525 SCIENTIFIC FOUNDATIONS FOR ADVANCED PRACTICE NURSING**
Scientific Foundations For Advanced Practice Nursing

**NSG 540 CULTURE, ETHICS, AND POLICY ANALYSIS**
This seminar is designed to explore cultural and ethical perspectives and their relationships to health policy. Health disparities, based on social and cultural difference are clearly linked to major diseases such as heart disease, cancer, diabetes, hypertension and stroke and to access to, and outcomes of health services. Class discussions will focus on the past, current and future health policy needs of multicultural and multifaceted societies. The phenomena of cultural, ethnic, gender, class, and sexual variation in complex societies; notions of diversity and social justice; understandings of cultural conflicts and how cultural differences are managed in healthcare settings will be considered. Students will integrate concepts of all levels of prevention in health care, examine research in health ethics and health policy and discuss legislative processes for their potential to improve the health of the public. Meets for 4 hours lecture and discussion.

**NSG 598 GRADUATE SYNTHESIS**
Students conduct supervised research terminating in a manuscript suitable for publication. The study must be approved by the selected faculty advisor and the Nursing Department Human Subjects Committee prior to registration for credit hours. Students are encouraged to generate research questions from their clinical area of study courses early in their program. PREREQUISITE(S): NSG 400, NSG 401, NSG 402 and NSG 480 and permission of instructor

**NSG 599 THESIS RESEARCH**
Students conduct supervised original research terminating in a completed and bound thesis. The study must be approved by the selected faculty advisor and the thesis committee approved by the department prior to registration for credit hours and must be completed during the term. Formerly NSG 405. PREREQUISITE(S): NSG 400, 401, 402, 480 & permission of instructor
Performance

PRF 511 GRADUATE ACTING I
Four quarter hours. Beginning with a series of exercised and improvisations, the class introduces the acting student to the basic components of the acting process. Scene work forms the backbone of this class. (prereq)

PRF 512 GRADUATE ACTING I
Four quarter hours. Beginning with a series of exercised and improvisations, the class introduces the acting student to the basic components of the acting process. Scene work forms the backbone of this class. (prereq)

PRF 513 GRADUATE ACTING I
Four quarter hours. Beginning with a series of exercised and improvisations, the class introduces the acting student to the basic components of the acting process. Scene work forms the backbone of this class. (prereq)

PRF 521 GRADUATE MOVEMENT I
Two quarter hours. Movement based on the technique of yoga as a means for the discovery of body mechanics, physical alignment, self-use and over-all self-awareness. This class will also meet two extra hours with a different instructor to concentrated on the imaginative use of self, to explore physical improvisation and to explore movement techniques that will aid the student to use themselves more freely and expand their range of expression. (prereq) PRF 521

PRF 522 GRADUATE MOVEMENT I
Two quarter hours. Movement based on the technique of yoga as a means for the discovery of body mechanics, physical alignment, self-use and over-all self-awareness. This class will also meet two extra hours with a different instructor to concentrated on the imaginative use of self, to explore physical improvisation and to explore movement techniques that will aid the student to use themselves more freely and expand their range of expression. (prereq) PRF 521

PRF 523 GRADUATE MOVEMENT I
Two quarter hours. Work focuses on full body awareness through Feldenkrais (R) movement lessons and through the study of anatomy. The emphasis will be place on deepening the actor's kinesthetic awareness
and on developing a more articulate physical instrument, understanding the restrictions of habit, exploring dynamics and increasing the ability to make dynamic choices. (prereq) PRF 522

**PRF 524 GRADUATE MOVEMENT I: FELDENKRAIS**
Graduate Movement I: Feldenkrais (1)

An experiential and demonstration course in better self-use and physical organization. Approaches include Feldenkrais, "Awareness Through Movement" lessons and the study of anatomy.

**PRF 525 GRAD MOVEMENT I: FELDENKRAIS**
Grad Movement I: Feldenkrais (1 quarter hour) An experiential and demonstration course in better self-use and physical organization. Approaches include Feldenkrais, "Awareness Through Movement" lessons and the study of anatomy. Prereq: PRF 524

**PRF 530 MFA I SPEECH**
This course is designed to open awareness regarding the placement of vocal resonance and the shaping of vowels and consonants.

**PRF 531 GRADUATE VOICE AND SPEECH I**
Two quarter hours. Foundation work consists of breathwork, skeletal alignment, and the development of free voice flow. Classes include a regime of intensive group exercises, and attention is paid to the expansion of each actor's individual expressiveness. The fundamental work is inspired by the Feldenkrais(r) and the Lessac System and is further influenced by the writings of Cicely Berry and Patsy Rodenburg. (prereq)

**PRF 532 GRADUATE VOICE AND SPEECH I**
Two quarter hours. Foundation work consists of breathwork, skeletal alignment, and the development of free voice flow. Classes include a regime of intensive group exercises, and attention is paid to the expansion of each actor's individual expressiveness. The fundamental work is inspired by the Feldenkrais(r) and the Lessac System and is further influenced by the writings of Cicely Berry and Patsy Rodenburg. (prereq)

**PRF 533 GRADUATE VOICE AND SPEECH I**
Two quarter hours. Actors will continue to explore fundamental skills acquired during Fall and Winter Quarters. The actors learn the first half of the progression of exercises in Kristin Linklater's Freeing the Natural Voice. The focus is on connecting acting impulses to the voice.

**PRF 540 GRAD SPEECH I: ADVANCED NOTATION**
Objectives are to extend the use of phonetic symbols to describe the speech of self and others, to explore an ever-widening range and flexibility of choice in pronunciation, to develop a more acute "ear" for the music of vowels and consonants and to apply the work to texts.

**PRF 551 MFA I IMPROVISATION**
MFA I Improvisation (2 quarter hours) Intensive work in Spolin-based improvisation in which the issues of creating theatrical reality are addressed through the medium of theatre games.

**PRF 552 MFA I MEISNER**
(2 quarter hours) Sanford Meisner said, "Acting is the ability to live truthfully under imaginary circumstances."
In this first of a two quarter sequence, actors will participate in a sequence of structured improvisational exercises focused on the first half of that sentence: living truthfully. The foundational exercise is called Repetition. Using Repetition as a base, students will explore exercises specifically designed to improve their listening and answering skills and increase their ability to respond to their partner moment to moment.

**PRF 553 MFA I MEISNER**
(2 quarter hours) Building on the work of the winter quarter, students will use their enhanced partner attention skills in order to focus on the second half of Meisner's definition of acting: "living truthfully under imaginary circumstances." Each exercise in the progression is designed to expand the actor's ability to imagine and personalize circumstances that are meaningful to them. We will also explore what the student needs to do to be ready for the first moment of a scene or play: Emotional Preparation. Finally, actors will learn how to carry over what they have learned into a scripted scene.

**PRF 561 REHEARSAL AND PERFORMANCE I**
Five quarter hours. Graduate acting and direction students are continually involved in rehearsal and performance of plays in the Showcase, the Playworks series and workshop productions. Acting students constitute the casting pool for the school. (prereq)

**PRF 562 REHEARSAL AND PERFORMANCE I**
Five quarter hours. Graduate acting and direction students are continually involved in rehearsal and performance of plays in the Showcase, the Playworks series and workshop productions. Acting students constitute the casting pool for the school. (prereq)

**PRF 563 REHEARSAL AND PERFORMANCE I**
Five quarter hours. Graduate acting and direction students are continually involved in rehearsal and performance of plays in the Showcase, the Playworks series and workshop productions. Acting students constitute the casting pool for the school. (prereq)

**PRF 571 MFA WORKSHOP I: ACTOR AS ENTREPRENEUR**
MFA Workshop I (2) is a flexible laboratory time period designed to accommodate a number of possibilities of workshops, lectures, and demonstrations with guest artists mainly from the Chicago theatre community and beyond. MFA Workshop also accommodates a number of projects generated by the MFA Acting students themselves. As MFA Workshop is a process class, projects and workshops may or may not result in a showing. (Some activities in the class will combine MFA I and MFA II students and some will be specific to each class.)

**PRF 572 MFA WORKSHOP I: ACTOR AS ENTREPRENEUR**
MFA Workshop (2) is a flexible laboratory time period designed to accommodate a number of possibilities of workshops, lectures, and demonstrations with guest artists mainly from the Chicago theatre community and beyond. MFA Workshop also accommodates a number of projects generated by the MFA Acting students themselves. As MFA Workshop is a process class, projects and workshops may or may not result in a showing. (Some activities in the class will combine MFA I and MFA II students and some will be specific to each class.)

**PRF 573 MFA WORKSHOP I: ACTOR AS ENTREPRENEUR**
MFA Workshop I (2) is a flexible laboratory time period designed to accommodate a number of possibilities of workshops, lectures, and demonstrations with guest artists mainly from the Chicago theatre community and beyond. MFA Workshop also accommodates a number of projects generated by the MFA Acting students themselves. As MFA Workshop is a process class, projects and workshops may or may not result in a showing. (Some activities in the class will combine MFA I and MFA II students and some will be specific to each class.)

**PRF 580 STAGE COMBAT**
One quarter hour. Students learn the fundamental of hand-to hand combat and weaponry with a focus on developing skills safely and effectively for the stage. (prereq)

**PRF 581 DIRECTING I**
Three quarter hours. This course covers the basics of the directing process with an emphasis on textual analysis. Lecture discussion and performance projects are utilized to develop a common understanding and vocabulary useable in the wide variety of theatrical situations the contemporary director is likely to confront. The final project of the class is the direction of a short play. (prereq)

**PRF 582 DIRECTING I**
Three quarter hours. This course covers the basics of the directing process with an emphasis on textual analysis. Lecture discussion and performance projects are utilized to develop a common understanding and vocabulary useable in the wide variety of theatrical situations the contemporary director is likely to confront. The final project of the class is the direction of a short play. (prereq)

**PRF 583 DIRECTING I**
Three quarter hours. This course covers the basics of the directing process with an emphasis on textual analysis. Lecture discussion and performance projects are utilized to develop a common understanding and vocabulary useable in the wide variety of theatrical situations the contemporary director is likely to confront. The final project of the class is the direction of a short play. (prereq)

**PRF 590 IMPROVISATION**
Four quarter hours. This workshop for graduating and performance students is designed to renew the student’s relationship with the foundation of the training program: Spolin-based improvisational work. There is a particular emphasis on the use of games as a stimulus for spontaneity, strong playing relationships and trouble shooting within the rehearsal process.

**PRF 591 DIRECTING THEORIES**
Directing Theories (4 quarter hours) This course is designed to introduce students to the history of stage directing as an independent art form and to the key directorial thinkers of Western theatre. Through both lecture and practice, student learn the theories and techniques of such innovators as Stanislavaski, Meyerhold, Craig Artaud, Brecht, Clurman, Grotowski, Brook, LeCompte, and Bogart.

**PRF 592 DIRECTING THEORIES**
This course is designed to introduce students to the history of stage directing as an independent art form and to the key directorial thinkers of Western theatre. Through both lecture and practice, student learn the theories and techniques of such innovators as Stanislavaski, Meyerhold, Craig Artaud, Brecht, Clurman, Grotowski, Brook, LeCompte, and Bogart.

PRF 599 INDEPENDENT STUDY
Independent Study

PRF 611 GRADUATE ACTING II: CLASSICAL
Graduate Acting II: Classical (five quarter hours). The goal of this year-long course in Heightened Text/Classical Acting is to join the emotional, physical and imaginative life of a role with the technical skills needed to express that character to its fullest. This is achieved through rigorous foundation work and applying the basic tenets of acting to the acting of plays in verse; making strong choices that are grounded in the text, establishing a connection to the scene partner, listening and responding to what is happening in the scene, and integrating the work done in other voice, speech and movement classes. (PREREQUISITE(S): PRF 513)

PRF 612 GRADUATE ACTING II: CLASSICAL
Graduate Acting II: Classical (five quarter hours). In winter quarter, students work with dramatic monologues, explore and study Shakespeare?s prose and scenes from the Jacobean playwrights John Webster, John Ford and Thomas Middleton. Though prose lacks meter, it has its own rhythm, in part defined by punctuation and rhetorical shape. Finding that rhythm of thought is essential to the clarity and life of the prose. With prose, as with meter, rhetoric, and imagery, we approach the work through both brain and body: balancing analytical and physical techniques for understanding and harnessing the dynamics of Shakespeare?s language. (PREREQUISITE(S): PRF 611)

PRF 613 GRADUATE ACTING II: CLASSICAL
Graduate Acting II: Classical (five quarter hours). The spring quarter will focus on comedies by Shakespeare, Moliere, Sheridan, Wilde and Coward. Students will call upon all of the truth-seeking, risk-taking and relish-making that comedy and heightened language requires. Only farce and commedia are larger. The resulting agility with text provides a firm foundation for confident performance of all classical and modern roles. Exploration of Shakespeare?s comedies will include collaboration with M.F.A. Directors with scenes to be presented as an invited-audience showing. (PREREQUISITE(S): PRF 612)

PRF 614 THE DIRECTOR AND THE ACTING PROCESS
This year-long class focuses on how the director helps the actor. Through both participation and observation in this undergraduate scene study class taught by a senior member of the acting faculty, the directing student acquires the skills and strategies necessary in helping the actor personalize and embody the text.

PRF 615 THE DIRECTOR AND THE ACTING PROCESS
This year-long class focuses on how the director helps the actor. Through both participation and observation in this undergraduate scene study class taught by a senior member of the acting faculty, the directing student acquires the skills and strategies necessary in helping the actor personalize and embody the text.

PRF 616 THE DIRECTOR AND THE ACTING PROCESS
This year-long class focuses on how the director helps the actor. Through both participation and observation in this undergraduate scene study class taught by a senior member of the acting faculty, the directing student acquires the skills and strategies necessary in helping the actor personalize and embody the text.

PRF 617 DIRECTING: SCENE STUDY
This is a two-quarter classic play scene study class. MFA directors will learn a variety of techniques in staging, text analysis, and working with actors. Directors will work with a variety of modern writers including Chekov, Ibsen, Miller, and O'Neill. They will also investigate working with heightened text including Moliere, Shakespeare, and the Greeks. (prereq PRF 583)

PRF 618 DIRECTING: SCENE STUDY
This is a two-quarter classic play scene study class. MFA directors will learn a variety of techniques in staging, text analysis, and working with actors. Directors will work with a variety of modern writers including Chekov, Ibsen, Miller, and O'Neill. They will also investigate working with heightened text including Moliere, Shakespeare, and the Greeks. (prereq PRF 583)

PRF 619 THE DIRECTOR AND THE NEW PLAY DEVELOPMENT PROCESS
This course is offered every other year and explores the director's role in the development of new plays. MFA Directors work with professional playwrights on new work. Directors are introduced to the many ways they may be charged with presenting new work, including table readings, staged readings, workshops, designed workshops and world premieres. Over the course of the quarter, directors rehearse and present one sit-down
workshops and world premieres. Additionally, students rehearse and present a staged reading in a professional situation.

**PRF 621 GRADUATE MOVEMENT II**
Two quarter hours. Movement work focused on the exploration of effort/shape and how to function within the boundaries of form. Period dances, manners, and clothing will be explored and the creation of specific worlds (styles) will be emphasized. (prereq) PRF 523.

**PRF 622 GRADUATE MOVEMENT II**
Two quarter hours. Movement work focused on the exploration of effort/shape and how to function within the boundaries of form. Period dances, manners, and clothing will be explored and the creation of specific worlds (styles) will be emphasized. (prereq) PRF 621

**PRF 623 GRADUATE MOVEMENT II**
Two quarter hours. Movement work designed to further the work in period dances, manners, and the creation of specific worlds (styles) with an emphasis on the student taking greater control of this research and its implementation into action. Full Body awareness through movement lessons is continued. Imaginative use of self is also channeled through character mask work. (prereq) PRF 622

**PRF 631 GRADUATE VOICE AND SPEECH II**
Two quarter hours. Intensive, individualized work on the development of the full range of the actor's voice. The second half of the Linklater progression is explored in depth. Texts are chosen that place greater demands on the actor's growing emotional and vocal capabilities. (prereq) PRF 533

**PRF 632 GRADUATE VOICE AND SPEECH II**
Two quarter hours. Intensive, individualized work on the development of the full range of the actor's voice. The second half of the Linklater progression is explored in depth. Texts are chosen that place greater demands on the actor's growing emotional and vocal capabilities. (prereq) PRF 631

**PRF 633 GRADUATE VOICE AND SPEECH II**
Two quarter hours. Intensive, individualized work on the development of the full range of the actor's voice. The second half of the Linklater progression is explored in depth. Texts are chosen that place greater demands on the actor's growing emotional and vocal capabilities. (prereq) PRF 632

**PRF 641 GRADUATE ACTING II: MYTH, FABLE, & FOLKLORE IN DRAMA**
(2) This course explores the world of archetype, performance and magic in drama across boundaries of time and tradition. Inspired by folktales, myths, oral poetry and rituals from many traditions, the students develop original and play-based theatrical work both solo and ensemble. Resources include the traditional stories of African, Asian, South American, European and American literature, as well as plays from modernity that explore a mythic or folkloric basis.

**PRF 642 GRADUATE ACTING II: TRAGIC FOCUS FROM 1700 TO 1950**
(2) This course explores a broad swath of tragic-focused dramatic material from Restoration through 1950. The students select scenes from plays that follow tragic shape and perform them in scene study form.

**PRF 643 GRADUATE ACTING II: COMIC FOCUS FROM 1700 TO 1950**
(2) This course explores a broad swath of comic-focused dramatic material from Restoration through 1950. The students select scenes from plays that follow comic shape and perform them in scene study form.

**PRF 661 REHEARSAL AND PERFORMANCE II**
Five quarter hours. Graduate acting and directing students are continually involved in rehearsal and performance of plays in the showcase, the Playworks series, and workshop productions. Acting students constitute the casting pool for the school. (prereq)

**PRF 662 REHEARSAL AND PERFORMANCE II**
Five quarter hours. Graduate acting and directing students are continually involved in rehearsal and performance of plays in the showcase, the Playworks series, and workshop productions. Acting students constitute the casting pool for the school. (prereq)

**PRF 663 REHEARSAL AND PERFORMANCE II**
Five quarter hours. Graduate acting and directing students are continually involved in rehearsal and performance of plays in the showcase, the Playworks series, and workshop productions. Acting students constitute the casting pool for the school. (prereq)

**PRF 671 MFA WORKSHOP II: ACTOR AS ENTREPRENEUR**
MFA Workshop II: Actor as Entrepreneur

MFA Workshop is a flexible laboratory time period designed to accommodate a number of possibilities of workshops, lectures, and demonstrations with guest artists mainly from the Chicago theatre community and beyond. MFA Workshop also accommodates a number of projects generated by the MFA Acting students themselves. As MFA Workshop is a process class, projects and workshops may or may not result in a showing. (Some activities in the class will combine MFA I and MFA II students and some will be specific to each class.)

PRF 672 MFA WORKSHOP II: ACTOR AS ENTREPRENEUR

MFA Workshop is a flexible laboratory time period designed to accommodate a number of possibilities of workshops, lectures, and demonstrations with guest artists mainly from the Chicago theatre community and beyond. MFA Workshop also accommodates a number of projects generated by the MFA Acting students themselves. As MFA Workshop is a process class, projects and workshops may or may not result in a showing. (Some activities in the class will combine MFA I and MFA II students and some will be specific to each class.)

PRF 673 MFA WORKSHOP II: ACTOR AS ENTREPRENEUR

MFA Workshop is a flexible laboratory time period designed to accommodate a number of possibilities of workshops, lectures, and demonstrations with guest artists mainly from the Chicago theatre community and beyond. MFA Workshop also accommodates a number of projects generated by the MFA Acting students themselves. As MFA Workshop is a process class, projects and workshops may or may not result in a showing. (Some activities in the class will combine MFA I and MFA II students and some will be specific to each class.)

PRF 680 ADVANCED STAGE COMBAT

In this course students will continue their study of unarmed and rapier-&-dagger techniques, as well as adding a third weapon discipline as taught by The Society of American Fight Directors (past options have included knife, broadsword, quarterstaff, small sword) for use in stage and film performance. The students will perform choreography in all three disciplines, in scenes which they themselves select but which are choreographed by the instructor. The students are then given the opportunity to take the SAFD's Skills Proficiency Test for all three weapons, with an outside adjudicator, in the hope of reaching Actor Combatant status within the SAFD. PREREQUISITE(S): PRF 580

PRF 681 DIRECTING II

Three quarter hours. A laboratory class in which student directed scenes are rehearsed and presented for discussion and criticism. Several cuttings are directed during the year. (prereq) PRF 583

PRF 682 DIRECTING II

Three quarter hours. A laboratory class in which student directed scenes are rehearsed and presented for discussion and criticism. Several cuttings are directed during the year. (prereq) PRF 681

PRF 683 DIRECTING II

Three quarter hours. A laboratory class in which student directed scenes are rehearsed and presented for discussion and criticism. Several cuttings are directed during the year. (prereq) PRF 682

PRF 690 INTERNSHIP

The internship provides the student with an opportunity to learn by working with experienced professionals in an area related to his or her area of study at The Theatre School.

PRF 691 DIRECTING SEMINAR

This course provides the opportunity for all three years of MFA directors and directing faculty to share, discuss and investigate particular and immediate aspects of directing. The course provides a forum for directors to discuss current rehearsal processes and trouble-shoot with their colleagues and instructor. Additionally, directing students reflect on, discuss and receive feedback from their colleagues and instructor on production work. The second half of the course focuses on honing a specific directorial skill or exploring new directorial territory. This component changes quarterly at the discretion of the instructor.

PRF 692 DIRECTING SEMINAR

This course provides the opportunity for all three years of MFA directors and directing faculty to share, discuss and investigate particular and immediate aspects of directing. The course provides a forum for directors to discuss current rehearsal processes and trouble-shoot with their colleagues and instructor. Additionally, directing students reflect on, discuss and receive feedback from their colleagues and instructor on production work. The second half of the course focuses on honing a specific directorial skill or exploring new directorial territory. This component changes quarterly at the discretion of the instructor.

PRF 693 DIRECTING SEMINAR

This course provides the opportunity for all three years of MFA directors and directing faculty to share, discuss and investigate particular and immediate aspects of directing. The course provides a forum for directors to discuss current rehearsal processes and trouble-shoot with their colleagues and instructor. Additionally,
directing students reflect on, discuss and receive feedback from their colleagues and instructor on production work. The second half of the course focuses on honing a specific directorial skill or exploring new directorial territory. This component changes quarterly at the discretion of the instructor.

PRF 711 GRADUATE ACTING III: COMPANY CREATION
Graduate Acting III: Company Creation (four quarter hours). This course is a journey with toolbox through creating and producing ensemble-based theater. Students follow two pathways: creating theater and producing theater. The path of creating follows on the self-generated work of MFA I and II Workshops, empowering the class to imagine and rehearse an original piece of theater through an invented process. Weekly rehearsal meetings build the piece into a "producer's rehearsal" at the end of the quarter. The path of producing introduces the class to tools necessary for mounting theater in Chicago or elsewhere. Using the piece under construction as their example, the students delegate and coordinate work on mission statement, company structure/contracts, by-laws, board formation, not-for-profit/tax-exempt status, grant writing, fundraising, space rental, rehearsal process, press relations, advertising, audience development, festivals, transfers, documentation, and touring. (PREREQUISITE(S): PRF 613)

PRF 712 GRADUATE ACTING III: PROFESSIONAL PREPARATION
Graduate Acting III: Professional Preparation (four quarter hours). This course follows on the Audition class from fall quarter bringing the students into simulated auditions for weekly guests including professional casting directors, casting agents, talent managers, artistic directors, and filmmakers from Chicago and beyond. Feedback will focus on empowering the actors to strengthen their approach, courage, effectiveness and flexibility in the casting process as felt in the "real world." (PREREQUISITE(S): PRF 711)

PRF 713 GRADUATE ACTING III: ADVANCED IMPROVISATION
Graduate Acting III: Advanced Improvisation (three quarter hours). This intensive course capstones the impulse work and Spolin-based work from MFA I Improvisation by updating the class to improvisational forms that extend beyond scenic and sketch. Mining the rich and still-unfolding history of Chicago improvisation, students flex their creative muscles by exploring long-form improvisational models and unique multi-scenic structures. (PREREQUISITE(S): PRF 712)

PRF 714 AUDITION
This studio-based class introduces the student to multiple forms of audition practiced in professional theater as well as those forms practiced in film, television, and commercials. Students train rigorously with monologues, cold readings, callback scenes, copy reading, and reader-style auditions in weekly class simulations. The course will cover methods for researching and attending auditions, finding and preparing suitable material, as well as handling the audition process professionally and successfully. Discussions of "type," "color-blind casting," manager/agent relationships, and ethical concerns of auditions will be included.

PRF 716 GRADUATE SHOWCASE
(2 Quarter Hours). Through the rehearsal process, graduate acting majors prepare monologues and scenes, culminating ultimately in a showcase for an invited audience of casting directors, agents, and directors.

PRF 720 ACTING FOR THE CAMERA
Two quarter hours. "Film acting" prepares the student for the professional world in front of the camera. Working in front of the camera(s), the student learns the different techniques between stage and film techniques and the differences, between soaps, sitcoms, commercials, and features. The student is also exposed to life on the set, contracts, agents, managers and steps to finding work. This class is a bridge for the student from the classroom to the professional world.

PRF 721 GRADUATE MOVEMENT III
Two quarter hours. The technique of movement to music will be used to: stimulate the actor's imagination, experiment with the identification, translation, and articulation of creative impulses, intensify ensemble work, expand the range of expression and strengthen and condition the body. (prereq) PRF 623

PRF 722 GRADUATE MOVEMENT III
Two quarter hours. An independent study of movement for the actor. (prereq) PRF 721

PRF 723 GRADUATE MOVEMENT III: PILATES
Graduate Movement III: Pilates (two quarter hours). This is a finishing level movement class that is taught by certified instructors at a nearby studio. Working on Pilates equipment ("reformers", etc.), this class offers the student a chance to further learn about efficient patterns of motion while creating an evenly conditioned body. Pilates helps the student develop strong core muscles and build strength without "bulking up". This class will draw upon the student's previous movement classes by challenging their awareness, levels of inquiry and physical decisions in a non-theatrical movement class. (PREREQUISITE(S): PRF 722)
PRF 724 GRADUATE MOVEMENT III: PILATES
This is a finishing level movement class that is taught by certified instructors at a nearby studio. Working on Pilates equipment ("reformers", etc.), this class offers the student a chance to further learn about efficient patterns of motion while creating an evenly conditioned body. Pilates helps the student develop strong core muscles and build strength without "bulking up". This class will draw upon the student's previous movement classes by challenging their awareness, levels of inquiry and physical decisions in a non-theatrical movement class.

PRF 731 GRADUATE VOICE AND SPEECH III
Two quarter hours. Students continue to develop professional skills through singing. (prereq) PRF 633

PRF 732 GRADUATE VOICE AND SPEECH III
Two quarter hours. Students acquire flexibility in role development through vocal exploration (prereq) PRF 731

PRF 733 VOICEOVER
Two quarter hours. The course is designed to continue the development of professional skills through the study of voiceover. (prereq) PRF 732

PRF 761 REHEARSAL AND PERFORMANCE III
Five quarter hours. Graduate acting and directing students are continually involved in rehearsal and performance of plays in the Showcase, the Playworks series, and workshop productions. Acting students constitute the casting pool for the school. (prereq)

PRF 762 REHEARSAL AND PERFORMANCE III
Five quarter hours. Graduate acting and directing students are continually involved in rehearsal and performance of plays in the Showcase, the Playworks series, and workshop productions. Acting students constitute the casting pool for the school. (prereq)

PRF 763 REHEARSAL AND PERFORMANCE III
Five quarter hours. Graduate acting and directing students are continually involved in rehearsal and performance of plays in the Showcase, the Playworks series, and workshop productions. Acting students constitute the casting pool for the school. (prereq)

PRF 771 SEMINAR: SPECIAL TOPICS IN DIRECTING
According to the expertise of faculty and the needs and interests of advanced students, this course deals variously with selected topics in stage directing, including the history and development of stage directing as an independent art form, directing theory, and directing methodology.

PRF 781 THESIS PROJECT IN DIRECTING
Nine quarter hours. A year long research and performance project that culminates in a fully supported production and written thesis. The production is part of The New Directors Series presented for the general public. (prereq)

PRF 782 THESIS PROJECT IN DIRECTING
Nine quarter hours. A year long research and performance project that culminates in a fully supported production and written thesis. The production is part of The New Directors Series presented for the general public. (prereq)

PRF 783 THESIS PROJECT IN DIRECTING
Nine quarter hours. A year long research and performance project that culminates in a fully supported production and written thesis. The production is part of The New Directors Series presented for the general public. (prereq)

Philosophy

Graduate Course Descriptions - Current P, Q & R Philosophy

PHL 400 SPECIAL TOPICS IN TRADITIONAL PHILOSOPHERS
Special Topics In Traditional Philosophers
PHL 410 PLATO I
A study of Plato's life and early dialogues.

PHL 411 PLATO II
A study of the middle and later dialogues.

PHL 415 ARISTOTLE I
A study of Aristotle's life and selected topics of his theoretical philosophy: organon, physics, psychology, and metaphysics.

PHL 416 ARISTOTLE II
A study of aspects of Aristotle's practical and productive philosophy: ethics, politics, rhetoric, and poetics.

PHL 420 AUGUSTINE
A study of Augustine's philosophy through an examination of some of his major writings.

PHL 425 AQUINAS
A study of his philosophy, especially its relations to theology, through an examination of selected major works.

PHL 434 HOBBES
An examination of Hobbes' role as the father of modern political philosophy: a study of the Leviathan and the Elements of Law.

PHL 435 DESCARTES
An examination of Descartes' role as the father of modern philosophy; issues of the Regulae, the Discours, and the Meditations.

PHL 436 MALEBRANCHE
Malebranche

PHL 437 LOCKE
A study of the major theoretical works.

PHL 438 LEIBNIZ
A study of the major philosophical works.

PHL 440 SPINOZA
A study of the Ethics and/or the Theologico-Political Treatise.

PHL 441 ROUSSEAU
A study of the major theoretical works.

PHL 443 MEDICAL LEGAL ETHICS
An examination of contemporary problems in the area of medical legal ethics.

PHL 445 HUME
An examination of Hume's place in classical British empiricism; a study of A Treatise of Human Nature.

PHL 451 EARLY AMERICAN PHILOSOPHY
None

PHL 452 CONTEMPORARY AMERICAN PHILOSOPHY
None

PHL 470 PHILOSOPHY OF WITTGENSTEIN
PREREQUISITE(S): Permission of instructor

PHL 495 ADVANCED SYMBOLIC LOGIC
None

PHL 500 SPECIAL TOPICS IN THE HISTORY OF PHILOSOPHY
None

PHL 510 KANT I
An introduction to the critical philosophy of Kant by concentrating on the Critique of Pure Reason.
PHL 511 KANT II
A study of the Critique of Practical Reason or the Critique of Judgment.

PHL 512 KANT III
Kant III: Kant's Political Writings

PHL 513 THEORETICAL FOUNDATIONS OF NORMATIVE ETHICS I
A comparative overview of the ethical writings of Aristotle and Aquinas, with emphasis on the natural law tradition.

PHL 514 THEORETICAL FOUNDATIONS OF NORMATIVE ETHICS II
A comparative overview of Kant's moral theory and Mill's moral theory.

PHL 515 HEGEL I
An Introduction to Hegel: The Phenomenology of Spirit.

PHL 516 HEGEL II
Readings in the Science of Logic or the Philosophy of Right.

PHL 517 HOLDERLIN
An examination of the major theoretical writings, ca. 1797-1804.

PHL 518 SCHELLING
An examination of the treatise on human freedom (1809).

PHL 520 MARX I
An introduction to Marx through a study of selected topics and works.

PHL 521 MARX II
A study of selected topics and works from both Marx/Engels and their disciples.

PHL 522 SOCIAL AND POLITICAL PHILOSOPHY
None

PHL 525 NIETZSCHE
An introduction to the philosophy of Nietzsche through Beyond Good and Evil, Thus Spake Zarathustra and selected topics and works.

PHL 527 PHILOSOPHY, ETHICS, AND ECONOMICS
An examination of classical and contemporary theories from Smith and Marx to Friedman, Held and others.

PHL 535 HUSSERL I
An introduction to Husserl through a study of selected topics and works.

PHL 536 HUSSERL II
Selected topics and works.

PHL 540 SCHELER I
An introduction to Scheler, with emphasis on the phenomenology of value.

PHL 541 SCHELER II
Selected topics and works (Resentment, etc.).

PHL 550 HEIDEGGER I
An introduction to Heidegger through study of a major work and one of the Marburg lectures.

PHL 551 HEIDEGGER II
Selected topics and questions.

PHL 552 HEIDEGGER III
Heidegger III

PHL 557 TOPICS IN CONTINENTAL PHILOSOPHY
None

PHL 559 FOUCAULT
An introduction to Foucault through a study of selected topics and works.

**PHL 560 THE PHILOSOPHY OF GABRIEL MARCEL**
The Philosophy Of Gabriel Marcel

**PHL 561 LYOTARD**
An introduction to Lyotard through a study of selected topics and works.

**PHL 565 MERLEAU-PONTY I**
A study of The Phenomenology of Perception with consideration given to Merleau-Ponty's place in contemporary philosophy.

**PHL 566 MERLEAU-PONTY II**
A study of the themes of his social philosophy and final ontology.

**PHL 570 SARTRE I**
A study of Being and Nothingness with attention given to Sartre's early phenomenological studies as background and to some of his literary works and criticism, such as Nausea and Saint-Genet.

**PHL 571 SARTRE II**
The social thought of Jean-Paul Sartre. A study of A Critique of Dialectic Reason along with appropriate literary works and more recent political writings.

**PHL 575 RESPONSES TO SADE**
An examination of Sade's writings and responses by such thinkers as de Beauvoir, Lacan, Deleuze, Klossowski, and Blanchot.

**PHL 577 DERRIDA I**
An introduction to Derrida through a study of selected topics and works.

**PHL 578 DERRIDA II**
Selected topics and questions.

**PHL 584 RICOEUR NARRATIVE**
Ricoeur Narrative

**PHL 585 RICOEUR**
A study of Ricoeur's philosophy and phenomenology of the will with stress on its background and its place in contemporary French phenomenology.

**PHL 586 METAPHOR AND POETIC LANGUAGE**
An examination of Ricoeur's work in poetics.

**PHL 587 READING LEVINAS I**
Reading Levinas I

**PHL 588 READING LEVINAS II**
Reading Levinas II

**PHL 589 PHILOSOPHY, LITERATURE, COMMUNITY**
Discussion of such thinkers as Bataille, Derrida, Jabes, and Nancy.

**PHL 590 TRENDS IN CONTEMPORARY FRENCH PHILOSOPHY**
A look at the increasing importance of structuralism, deconstruction, philosophy of language, and hermeneutics in contemporary French thought.

**PHL 591 CRITICAL RACE THEORY**
Critical Race Theory.

**PHL 600 SEMINAR ON AMERICAN THOUGHT**
None

**PHL 601 SEMINAR ON AESTHETICS**
SEMINAR ON AESTHETICS

**PHL 629 SEMINAR ON CONTEMPORARY PROBLEMS**
None

**PHL 639 SEMINAR ON RAWLS, NOZICK, AND THE CONTRACTUAL TRADITION**
A study of the contract model from its roots in Locke and Rousseau to the work of Rawls and Nozick.

**PHL 640 PROBLEMS IN ETHICS (CROSS-LISTED AS GSB 640)**
A seminar in business ethics that centers on theoretical, practical, and pedagogical issues.

**PHL 641 SEMINAR ON THE CONTINENTAL TRADITION IN ETHICS**
A comparative discussion of the ethical theories of Scheler, Hartmann, Brentano, Levinas, etc.

**PHL 650 TOPICS IN RELIGIOUS ETHICS (CROSS-LISTED AS MLS 442 & GSB 650)**
A study of religious influences on theoretical and practical ethics.

**PHL 651 TOPICS IN BUSINESS ETHICS**
A seminar in business ethics that centers on theoretical, practical, and pedagogical issues.

**PHL 656 SEMINAR ON SOCIAL AND POLITICAL THOUGHT**
A study of selected writings of key social and political thinkers.

**PHL 657 TOPICS IN SOCIAL AND POLITICAL THOUGHT**
Topics In Social And Political Thought

**PHL 660 SEMINAR IN FEMINIST ETHICS (CROSS-LISTED AS MLS 477/WMS 410)**
Examination of the care perspective as compared to the justice perspective on moral development.

**PHL 661 TOPICS IN FEMINIST THEORY**
Includes such themes as feminist ontologies, theories of discourse and writing, science and technology, etc.

**PHL 697 GRADUATE TEACHING PRACTICUM**
Examination of teaching method concepts.

**PHL 698 MASTER'S THESIS RESEARCH**

**PHL 699 DISSERTATION RESEARCH**

**PHL 700 INDEPENDENT STUDY**
None

**PHL 701 CANDIDACY CONTINUATION**
Students admitted to candidacy who have completed all Ph.D. course requirements and who are actively working on their dissertations during the quarter are to register by permission of the graduate director. Students are required to be registered for either PHL 701: Candidacy Continuation or PHL 799: Candidacy Maintenance each quarter of the academic year until the dissertation has been defended and the degree completed. The latter course, PHL 799, is to be used during quarters when the student is not actively doing dissertation work. Non-credit, $40.00 per quarter.

**PHL 799 CANDIDACY MAINTENANCE**
Ph.D. Candidates who are not actively working on their dissertations during a given quarter but who want to maintain active university status can register for this course by permission of the graduate director. Please note that this course does not maintain student status for purposes of student loans. Non-credit, $40.00 per quarter.

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**Physical Education**

Graduate Course Descriptions - Current ▪ P, Q & R ▪ Physical Education

**PE 450 PSYCHOLOGY OF SPORT BEHAVIOR AND ATHLETIC PERFORMANCE**
A study of the philosophical and psychological concepts pertaining to sports, in general, and competitive
athletic programs specifically. The course will be conducted in a seminar style, analyzing the various coaching
and administrative techniques in sports programs. Emphasis will be given to intercollegiate sports.
Elementary, secondary and professional sports programs will be included.

**PE 451 CURRENT ISSUES AND TRENDS IN ATHLETICS AND PHYSICAL EDUCATION**
An analysis of the current issues, trends and changes in competitive athletic programs and physical education
programs. Major consideration will be given to problems relating to development of goals and objectives,
preparation of program budgets, financial considerations, media input, and legal ramifications of the various
programs.

**PE 452 EXERCISE SCIENCE AND SPORT**
A study of the advanced concepts and theory pertaining to analysis of human movement. Application will be
made for the teaching of fundamental motor skills as well as the specialized analysis made by the coach.
Discussion of the various techniques, sophisticated equipment, and empirical evidence will support the
conclusions determined in the seminar. The course will be designed for professional physical educators and
individuals involved in the coaching profession.

**PE 453 ADVANCED HEALTH CONCEPTS**
This course will present advanced concepts in health for the individual interested in Health Education or the
Allied Health Professions. Emphasis will be placed on instructional methodology, curriculum planning, and
educational evaluation in the health profession.

**PE 454 ADVANCED CARE OF THE ATHLETE**
This course is designed to expand the student's knowledge of athletic injuries, incorporating hands-on
experience. Topics will include current issues in anatomy and physiology; athletic first aid and emergency
situations; standard procedure for diagnosis and treatment; conditioning, prehabilitation and rehabilitation;
heat stress injuries; nutrition and eating disorders; taping, wrapping and bracing; and other related topics in
sports medicine.

**PE 455 INTERNSHIP IN PHYSICAL EDUCATION**
This internship is designed to enrich student understanding of organizational and administrative principles
through practical opportunities working with experienced professionals in the field of Sport and Physical
Education.

**PE 457 ADVANCED COACHING THEORIES & TECHNIQUES**
This course is designed to cover a review of basic coaching theories and techniques of various sports and then
cover advanced theories and application of these theories. The goal of the course is to expose students to
situations that will place the coach in a decision making position and encourage students to examine practical
problems that will influence the quality of an athletic program. (Crosslisted with PE 391)

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Physics

Graduate Course Descriptions - Current P, Q & R Physics

**PHY 400 CLASSICAL MECHANICS FOR TEACHERS**
Concepts and materials for teaching mechanics as part of high school physics. Only offered by arrangement.
PREREQUISITE(S): Permission of instructor

**PHY 401 ELECTRICITY AND MAGNETISM FOR TEACHERS**
The principles of electricity and magnetism, including electric circuits. This level is appropriate for regular and
AP high school Physics teachers. Only offered by arrangement. PREREQUISITE(S): Permission of instructor

**PHY 402 ATOMIC AND NUCLEAR PHYSICS FOR TEACHERS**
This course provides a broad perspective for teachers. It includes atomic, nuclear and some particle physics.
Only offered by arrangement. PREREQUISITE(S): Permission of instructor

**PHY 403 TOPICS IN PHYSICS TEACHING**
Selected topics for high school teachers. May be taken more than once. Only offered by arrangement.
PREREQUISITE(S): Permission of instructor

**PHY 404 OPTICS FOR TEACHERS**
Geometrical and physical optics from the perspective of high school teaching. Applications to photography and holography. Only offered by arrangement. PREREQUISITE(S): Permission of instructor

**PHY 406 VIBRATIONS, WAVES AND SOUND FOR TEACHERS**
Techniques for teaching high school science including musical acoustics and sound reproduction. Only offered by arrangement. PREREQUISITE(S): Permission of instructor

**PHY 410 CHAOS IN PHYSICAL SYSTEMS**
Motion in phasespace, characteristics of chaotic systems, Lyapunov exponents, stability of equilibria, strange attractors, bifurcations, discrete dynamics, applications to lasers, fluids, and other physical systems.

**PHY 411 ELECTRODYNAMICS I**
Electrostatics and magnetostatics in vacuum and in media; electromagnetic induction; Maxwell's equations; the Poynting vector; electromagnetic wave propagation.

**PHY 412 QUANTUM MECHANICS I**
Schroedinger equation, operators, eigenvalues; series of eigenfunctions; physical interpretation; one- and three-dimensional applications.

**PHY 420 ELECTRODYNAMICS II**
Further studies of electromagnetic wave propagation; scattering; dispersion; bounded structures and guided waves; electromagnetic radiation, including multipole radiations and radiation from systems of radiators. PREREQUISITE(S): PHY 411.

**PHY 425 LASER PHYSICS (CROSS-LISTED AS PHY 325)**
Interaction of radiation and matter, pumping mechanisms for lasers, optical resonators, cw and transient laser behavior, laser types, current topics in optical physics.

**PHY 435 NON-EQUILIBRIUM PHYSICS AND SELF-ORGANIZATION**
The spontaneous formation of structure is one of the most interesting phenomenon in nature and arises in fields as diverse as physics, chemistry, biology, management, economics, and sociology. Many self-organizing systems show similarities in the way the structure arises, indicating that there are underlying general principles that govern these systems. This course will investigate these principles. PREREQUISITE(S): PHY 340 or consent.

**PHY 440 CLASSICAL MECHANICS**
Variational principles; Lagrangian and Hamiltonian mechanics; small oscillations; canonical transformations; Hamilton-Jacobi theory.

**PHY 442 COMPUTATIONAL PHYSICS**
Contemporary Topics in physics are examined via numerical solutions. Calculations using an interactive approach and graphical representation are used extensively.

**PHY 445 STATISTICAL MECHANICS**
Principles of statistical mechanics; applications to weakly interacting systems such as the classical plasma and Fermi gas; strongly interacting systems; transport theory; fluctuations and irreversible processes, phase transitions.

**PHY 450 PHASE TRANSITIONS & CRITICAL PHENOMENON**
Applications of equilibrium statistical mechanics to the study of phase transitions and critical phenomena. Topics include the Ising model of magnetism, critical phenomena in fluids, mean field theory, Landau-Ginzburg theory, and the renormalization group. PREREQUISITE(S): PHY 340, PHY 445, or equivalent.

**PHY 454 FOURIER OPTICS**
Fourier Optics and optical processing of information. Topics include diffraction theory, optical transfer functions and holography. The Fourier Transform and Fast Fourier Transform are used extensively.

**PHY 456 FIBER OPTICS (CROSS-LISTED AS PHY 356)**
(Cross-listed as PHY 356) Solution of Maxwell's equations for dialectic wave guides, optical communications, nonlinear effect in dialectic wave guides, and current research.

**PHY 460 QUANTUM MECHANICS II**
Review of basic quantum theory; vector spaces; linear operators; observables; commutators; projection operations; representations; angular momentum theory; systems of identical particles; invariance.
PREREQUISITE(S): PHY 412.

PHY 465 NUCLEAR PHYSICS
Theoretical and phenomenological approaches to nuclear structure and strong, electromagnetic, and weak interactions of nuclei. Topics of study include the theory of scattering and decay of nuclei, resonances, nuclear models. PREREQUISITE(S): PHY 412 or equivalent.

PHY 466 RADIATION PHYSICS (CROSS-LISTED WITH PHY 366)
Interactions of X-rays, nuclear radiations, etc. with matter; radiation detectors; dosimetry; shielding; applications to medical physics. Cross-listed with PHY 366.

PHY 475 INTRODUCTION TO COSMOLOGY
Provides a foundation to the core concepts of cosmology, with an emphasis on developing physical insight. Discusses recent major developments in cosmology, such as the cosmological constant and accelerating universe, and key future developments, including details of the cosmic microwave background and gravitational wave detection.

PHY 478 TOPICS IN APPLIED PHYSICS
This course number is reserved for Individual study at the graduate level. Special seminars organized from time to time to accommodate the needs of groups of students in specialized subjects of topical interest.

PHY 480 THESIS RESEARCH
This course number designates research performed to gather thesis material. Up to two registrations are allowed. No less than four quarter hours; no more than eight quarter hours total credit.

PHY 490 STRUCTURAL PROPERTIES OF MATERIALS
Periodicity, symmetry and classification of crystal structure; X-ray diffraction; reciprocal lattice; crystal binding. Debye theory of heat capacity; anharmonic interactions; point defects; surfaces.

PHY 491 ELECTRONIC PROPERTIES OF MATERIALS
The free-electron gas model; energy band theory; theory of metals and alloys; transport phenomena; diamagnetic, ferromagnetism, and antiferromagnetism; superconductivity.

PHY 495 METHODS OF THEORETICAL PHYSICS (CROSS-LISTED WITH PHY 395)
Special functions, complex integration, calculus of variations, coordinate transformations. Cross-listed with PHY 395. PREREQUISITE(S): PHY 301.

PHY 701 CANDIDACY CONTINUATION
Non-credit. Students who are not registered for regular courses will be permitted to register in this course only if they are actively working on their thesis. $40.00 per quarter. PREREQUISITE(S): Instructor permission.

PHY 702 NON-RESIDENCY CANDIDACY CONTINUATION
Non-Residency Candidacy Continuation

Polish

Graduate Course Descriptions - Current P, Q & R Polish

POL 497 SPECIAL TOPICS IN POLISH
See schedule for current offerings. Graduate standing required.

POL 498 STUDY ABROAD
Variable credit. PREREQUISITE(S): Permission and graduate standing required.

POL 499 INDEPENDENT STUDY
Variable credit. PREREQUISITE(S): Permission of chair and instructor required. Graduate standing required.
PM 430 FUNDAMENTALS OF IT PROJECT MANAGEMENT
This course concentrates on monitoring, managing and controlling assets and resources on a single IT project. Topics covered are risk management; procurement and contract management; time and cost estimating; controlling and tracking techniques; quality assurance; testing and audit. Students will use common project management software for resource allocation and balancing. NO PREREQUISITES.

PM 440 COLLABORATIVE TECHNOLOGIES FOR LEADING PROJECTS
Study of the process of virtual teaming with emphasis on facilitation of different time project activities and facilitation of same time meetings. Students will learn how small group psychology and group communication theories inform specific behaviors in the design and leadership of meetings. Several meeting types including information briefing, focus group, document writing, decision making, requirements gathering, and teaching/training will be explored. In addition, the course surveys current collaboration technologies and discusses how to select among those technologies usability and fit to purpose of a meeting agenda. DL students may be required to schedule same time sessions with the instructor and other DL students; see current quarter syllabus for more information on this point. PREREQUISITE(S): NONE

PM 535 INFORMATION TECHNOLOGY INVESTMENT FINANCIAL ANALYSIS
This course focuses on the application of financial analysis and decision-making approaches to aid information technology investment decisions at the operational, project, tactical and strategic levels. Students will learn how to apply a variety of financial methods -- breakeven analysis, present value analysis, profitability index, and return on investment to various IT investment decisions. The course will also address cost benefit analysis, outsourcing, balanced scorecard, and multi-factor scoring, benchmarking, and IT investment portfolio methods. These techniques will prepare students to manage capital budgets, acquisition of system and application software, hardware, personnel, and professional services at project and system levels as well as enterprise investment portfolio. PREREQUISITE(S): IS 425 or SE 477 or IS 565 or ACCT 500 or IS 430 or PM 430 or ECT 455

PM 556 ENTERPRISE PROJECT MANAGEMENT
This course covers how an enterprise coordinates and effectively manages all its IT projects and programs through program management and the IT program management office. Students will learn the role of the IT program management office in establishing and maintaining the project and program infrastructure and in assisting project managers, program managers, and the executive steering committee. Students will analyze the role of program management in coordinating the delivery of expected program benefits, in managing stakeholder expectations, and in establishing program governance. PREREQUISITE(S): (IS 430 or PM 430 or SE 477 or completion of foundation phase)

PM 570 ENTERPRISE SYSTEM IMPLEMENTATION
This course is targeted towards information systems professionals who are involved in the planning and implementation of large scale, cross-functional enterprise systems. Students will examine the characteristics of technology efforts that change and transform the way people perform their tasks and how the new technology structures the flows of information and decision making using workflow modeling methods. Through case studies and exercises students gain insights into the elements of successful implementations leading to the preparation of a change management plan. Emphasis is placed on developing mechanisms for communicating and training all affected agents. PREREQUISITE(S): IS 430 or PM 430 or SE 477 or completion of foundation or core phase

PM 577 IT PORTFOLIO MANAGEMENT AND STRATEGIES
This capstone course integrates the skills and techniques learned in previous IT Project Management courses. Through in depth analysis of case studies and readings, along with presentations by outside speakers experienced in IT Portfolio Management and IT strategy, students use their skills from previous IT project management courses to solve IT strategic and IT portfolio problems. The course starts with formulating the IT strategy from the corporate strategy. Then the IT Portfolio of initiatives, projects and assets is build and fine tuned. PREREQUISITE(S) IS 556 or PM 556
PSY 402 PERCEPTUAL PROCESSES
Analysis of the variables involved in the determination of perception with particular attention to the problems of space, motion, distance, size, form, aftereffects and constancies.

PSY 404 LEARNING AND COGNITIVE PROCESSES
Survey of classical and instrumental conditioning, biological constraints, attention, memory, cognition, and practical applications. Major theoretical approaches include stimulus-response, early cognitive theories and information processing theory.

PSY 406 PHYSIOLOGICAL PROCESSES
The functional role of neural systems important for the processes of motivation, emotion, sleep, memory, and cognition.

PSY 409 STATISTICS FOR THE BEHAVIORAL SCIENCES
Applied inferential statistics. PREREQUISITE(S): PSY 240.

PSY 410 ADVANCED STATISTICS I
Graphical methods for data display, analysis of variance, multiple comparisons, multifactor analysis of variance, randomized block, repeated measures, and related designs. PREREQUISIT(S): PSY 340, or one semester of undergraduate statistics. Cross-listed as SOC 450.

PSY 411 ADVANCED STATISTICS II
Multiple linear regression, analysis of covariance, and logistic regression. PREREQUISITE(S): PSY 410

PSY 412 ADVANCED STATISTICS III
Advanced Statistics III PREREQUISITE(S): PSY 411

PSY 413 ANALYSIS OF LONGITUDINAL DATA
Analysis of changes and time - dependent data.

PSY 414 CATEGORICAL DATA ANALYSIS
Analysis of contingency tables and count data logit, probit and loglinear models.

PSY 416 METHODS IN QUALITATIVE RESEARCH
Principles and techniques of research design in behavioral, social and clinical research; questionnaires, interview schedules, rating scales involving multivariable analysis. Application of parametric and nonparametric tests. Application of research findings to professional practice.

PSY 418 MULTIVARIATE STATISTICAL ANALYSIS
Multivariate regression, principal component, cluster analysis and multidimensional scaling. Canonical correlation, multivariate analysis of variance, linear discriminant function analysis. PREREQUISITE(S): PSY 411.

PSY 419 FACTOR ANALYSIS AND PATH MODELING
Theoretical foundations, methods of analysis, and comparison of various factor analytic models. Structural equation and measurement models using the Mplus/ LISREL program. PREREQUISITE(S): PSY 411.

PSY 420 ADVANCED RESEARCH METHODOLOGY
Design and analysis of basic and applied psychological research with an emphasis on statistical software. PREREQUISITE(S): PSY 411.

PSY 421 ADVANCED EXPERIMENTAL DESIGN
None

PSY 422 COMPUTING FOR THE BEHAVIORAL SCIENTIST
An introduction to computer programming, web development, and other computer-intensive techniques as applied to behavioral science research.
PSY 425 COGNITIVE PROCESSES
Cognitive Processes

PSY 426 ADVANCED LANGUAGE SEMINAR: PSYCHOLOGY OF BILINGUALISM
This course presents an introduction to how bilinguals produce and understand language by examining theoretical constructs and research in psycholinguistics. It also explores developmental and methodological issues in bilingualism research.

PSY 427 SENSORY PROCESSES
Sensory Processes

PSY 430 ADVANCED SOCIAL PSYCHOLOGY
Advanced study of social psychological methodology, ethics and deception, attitudes, altruism, aggression, and interpersonal processes and attraction.

PSY 432 ATTITUDE ANALYSIS
Theory and research in attitude formation and organization, communication and persuasion, resistance to persuasion, and measurement techniques.

PSY 433 SOCIAL JUDGMENT
Theory and research in judgment of social stimuli, perceiving and evaluating persons, and social comparison processes.

PSY 434 SMALL GROUP BEHAVIOR
Theory and research in goal formation, conformity, power and communication structures, cohesion, and task performance. The emphasis is on the behavior of persons within groups.

PSY 435 PSYCHOLOGY OF INTERPERSONAL RELATIONSHIPS
Theory and research on selected aspects of close relationships. Cross-level with PSY 317.

PSY 437 ADVANCED PERSONALITY
Critical analysis of research in personality with emphasis on the development and testability of major constructs in contemporary research.

PSY 439 ADVANCED DEVELOPMENTAL PSYCHOLOGY
Current research and theories in child development relating to the preschool child, elementary school child, and adolescent. Emphasis on cognitive, language, and social/emotional development.

PSY 440 PSYCHOLOGY OF WORK AND MOTIVATION
Current research and theories in organizational psychology relating to motivation, job satisfaction, work attitudes, employee withdrawal, and counterproductivity.

PSY 441 PSYCHOLOGY OF LEADERSHIP
Current research and theories in organizational psychology relating to leadership, supervision, job performance, and managerial training. Emphasis is on theoretical development and empirical evaluation of constructs in contemporary research.

PSY 442 PERSONNEL PSYCHOLOGY
Major issues in the Human Resource area. Topics include job analysis, job evaluation, pay equity, benefits, incentive systems, and personnel selection methods, focusing on recruitment, biodata, references, testing, interviews.

PSY 443 PSYCHOLOGY OF DESIGN
This course helps students understand how theoretical principles of psychology can be applied to the design of human-centered organizations, environments and technologies. Prior familiarity with psychology and experimental design is strongly recommended. Cross-level with PSY 383.

PSY 444 PERFORMANCE APPRAISAL
Theory of criterion development, the evaluation process, and measurement in performance appraisal. Emphasis on design and development.

PSY 445 ADVANCED TRAINING AND DEVELOPMENT IN ORGANIZATIONS
In-depth exposure to issues related to training in industry and other organizations. Such topics as needs assessment, training program design, program evaluation, and relevant social and economic issues will be covered.
PSY 446 PSYCHOLOGICAL THEORIES OF ORGANIZATIONS
Theory and research in the psychology of organizations relating to organizational design, analysis, systems, processes and change.

PSY 447 ORGANIZATIONAL CONSULTATION
Applies behavioral science and managerial theories and methodologies to organizational consultation and change processes. Prerequisite(s): PSY 446

PSY 448 CONCEPTS, METHODS, AND ETHICS FOR INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY
The major concepts and techniques relevant to I/O psychology. Topics include psychometrics, regression, validity generalization, utility, legal issues, affirmative action, and ethics. Prerequisite(s): permission of instructor required for students not in the graduate psychology program.

PSY 450 PSYCHOLOGICAL MEASUREMENT
Logical and mathematical principles underlying test construction with emphasis on evaluating the reliability and validity of scores.

PSY 451 APPLIED STATISTICAL PREDICTION
Applications of statistics and psychological measurement to the problems of predicting human performance. Several computer programs will be used to analyze data.

PSY 454 BEHAVIOR MODIFICATION
Analysis of principles, practices and research related to learning theory and the modification of human behavior.

PSY 461 HISTORY AND SYSTEMS OF PSYCHOLOGY
A review of the history of modern psychology, including various theoretical systems. Topics covered will include contributions of important leaders in the field, specific trends throughout the history of psychology, and the major philosophical questions underlying psychological science. Cross-level with PSY 361.

PSY 469 EMOTIONS AND EMOTIONAL DEVELOPMENT
Emotions And Emotional Development

PSY 473 THE PSYCHOLOGY OF JUDGMENT AND DECISION-MAKING

PSY 481 INDIVIDUAL INTELLIGENCE TESTING I
Theories of intelligence and cognitive development. Introduction to the administration of verbal and various nonverbal tests including the Stanford Binet, Wechsler Intelligence Scale for Children and Wechsler Adult Intelligence Scale and the clinical use of these instruments. Materials fee $10.00.

PSY 482 PERSONALITY ASSESSMENT
Administration and scoring of the Rorschach and Thematic Aperception Test and other tests. Evaluation of tests and related areas of research and development.

PSY 483 ADVANCED PSYCHODIAGNOSTICS
Advanced study of projective techniques and other assessment methods, with emphasis on analysis, interpretation and integration of all pertinent clinical data, and report writing.

PSY 484 BEHAVIORAL ASSESSMENT
Behavioral observation and recording. Self-report measures. Physiological measurement. Evaluation of behavioral measures and areas of research.

PSY 485 NEUROPSYCHOLOGICAL TESTING
Introduction to theory and assessment techniques related to adult and child neurological functioning.

PSY 486 ADVANCED PSYCHOPATHOLOGY
Review of the major diagnostic categories as outlined by the current Diagnostic and Statistical Manual. Current issues in psychopathology and related research are reviewed.

PSY 487 PSYCHOPATHOLOGY OF THE CHILD
Introduction to the many categories of psychopathology affecting children and adolescents. Emphasis on the developmental and environmental contexts.
PSY 488 PRINCIPLES OF PSYCHOTHERAPY
Analysis of theoretical approaches to psychotherapy.

PSY 489 GROUP PSYCHOTHERAPY
Principles, theories and techniques of group psychotherapy. Problems of selection of group members and evaluation of progress.

PSY 491 TREATMENT METHODS WITH CHILDREN
Consideration of a variety of treatment approaches used to help alleviate the psychological problems of children.

PSY 492 PRINCIPLES OF CONSULTATION
The principles and dynamics involved in the various types of consultative relationships. Techniques of consultation with parents, teachers, agencies, physicians and others in regard to problems and deviancy, methods of management and treatment.

PSY 493 ADVANCED COMMUNITY PSYCHOLOGY
An advanced introduction to community psychology with an emphasis on major historical and contemporary themes such as prevention of psychological problems and promotion of wellness, empowerment and social justice, community research methods, diversity in gender, ethnicity, sexual orientation and disability status, community processes, and collaboration and intervention to address social problems.

PSY 495 GRANT WRITING IN PSYCHOLOGY
This course will facilitate students' ability to transpose psychology principles and theory into practice by preparing them to be psychology entrepreneurs via the grant writing process. Class members will become familiar with public and private funding sources, searching for appropriate funding sources, and reviewing a proposal. Class members will create a grant proposal that can be submitted to a funding organization.

PSY 500 PROFESSIONAL ETHICS
Introduction to ethical issues in the field of clinical psychology. Two quarter hours.

PSY 501 STATISTICAL APPLICATIONS SEMINAR
Introduction to advanced applications of statistical packages for data analysis, data management, and simulation.

PSY 510 BEHAVIORAL MEDICINE
Behavioral medicine approaches are introduced.

PSY 511 HEALTH PSYCHOLOGY
A survey of the psychological factors involved in health and illness. Also explores the psychological issues in prevention of illness, and psychological considerations in treatment. Cross-listed as MPH 511.

PSY 520 PRINCIPLES OF HUMAN DIVERSITY
Considerations related to minority status and issues specific to diagnostics and interventions with minority populations.

PSY 521 PSYCHOLOGY OF THE AFRICAN-AMERICAN CHILD
Development and socialization of African-American child from infancy to adolescence. Emphasis on psychological and cultural factors which influence these processes. Understanding the child, family, language and IQ, education and learning styles, and cultural identity are all emphasized. Cross-level with PSY 346.

PSY 550 SEMINAR IN TEACHING PSYCHOLOGY
This course exposes students to major pedagogical and classroom management considerations in higher education and familiarizes students with instructional support services across the university. This year-long, cohort-based course is required for graduate students prior to becoming instructors in the department. It begins each Winter Quarter and ends Autumn Quarter. Students who enroll should expect to complete all requirements for the master's degree prior to Autumn Quarter. Zero-credit hours.

PSY 551 SEMINAR IN EXPERIMENTAL PSYCHOLOGY
None

PSY 552 SEMINAR IN NEUROPSYCHOLOGY
None

PSY 553 SEMINAR IN PERSONALITY RESEARCH
PSY 554 SEMINAR IN DEVELOPMENTAL PSYCHOLOGY
This course focuses on special topics in developmental psychology and may cover social, emotional, language, and/or cognitive development during selected portions of the lifespan. Relevant theories and empirical research will be analyzed. Cross-level with PSY 378.

PSY 555 SOCIAL AND EMOTIONAL DEVELOPMENT
Focus on development of emotions, social relationships, and social interaction. Both theoretical perspectives and research findings are presented and analyzed. Topics covered may include: primary emotions and their development, nonverbal communication of emotions, socialization within the family, friendship and peer relations, aggression, moral development, sex role development, and attachment. Cross-level with PSY 370.

PSY 556 SEMINAR IN SOCIAL PSYCHOLOGY
None

PSY 557 SEMINAR IN LEARNING AND COGNITIVE PROCESSES
Seminar in current issues in cognitive psychology.

PSY 558 SEMINAR IN ADVANCED STATISTICS
PREREQUISITE(S): PSY 411 and PSY 420.

PSY 559 SEMINAR IN INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY
Four quarter hours. PREREQUISITE(S): PSY 448 or consent.

PSY 560 SOCIAL COGNITION
Theory and research dealing with the major aspects of social cognition and mental control, including social perception, stereotyping, memory and affect. Cross-level with PSY 348.

PSY 561 ADVANCED PSYCHOLOGY OF WOMEN AND GENDER (CROSS-LISTED WITH MLS 478/WGS 470)
A review of research and theory on women, including sexist biases in traditional research, feminist methodology, pedagogy and therapy, violence against women, gender differences in development, relationships, sexuality, and the interplay of gender, race and sexual orientation. Cross-listed with MLS 478 and WGS 470.

PSY 562 SEMINAR IN FAMILY THERAPY
A review of systems theory and the assessment and treatment of families.

PSY 563 MENTAL IMAGERY (CROSS-LISTED AS PSY 362)
Theory, research and practical applications of mental imagery are considered in lecture/discussion/student-report format. Variety of imagery techniques will be reviewed which have been found useful in research and practice. Special attention devoted to the differences between subjective approaches (consciousness and vividness ratings) versus objective approaches (memory measures) of studying imagery. Cross-listed with PSY 362.

PSY 564 SEMINAR IN CLINICAL RESEARCH
PREREQUISITE(S): PSY 488.

PSY 565 PROFESSIONAL DEVELOPMENT SEMINAR
An interactive seminar that provides guidance regarding master's thesis research, comprehensive examination or literature review, and/or dissertation plans. Attention to pathways for success in doctoral education, practica, internship, scientific research and careers. Selected topics vary with student needs and interests.

PSY 566 SEMINAR IN PSYCHOPATHOLOGY
None

PSY 567 SPECIAL TOPICS IN COMMUNITY PSYCHOLOGY
Explores topics of current interest in the area of Community Psychology and related fields for advanced graduate students, with emphases on theory, research and intervention.

PSY 568 SEMINAR IN COMMUNITY PSYCHOLOGY
Analysis of theories of community and human behaviors from the standpoint of general systems principles.

PSY 569 SEMINAR IN PROGRAM EVALUATION
Analysis of major research programs dealing with social and mental health problems with emphasis on epidemiological and socio-clinical research methods. Four quarter hours.

**PSY 570 SEMINAR IN PSYCHOTHERAPY RESEARCH**
None

**PSY 572 PSYCHOBIOLOGY OF SOCIAL COGNITION**
Explores social cognition in the frame of evolutionary, neorophysiologival, and developmental biology. Comparison of human with other animal social-cognitive characteristics will be examined. Neuropsychological data and developmental psychobiology will be studied.

**PSY 574 PRE-PRACTICUM IN CLINICAL PSYCHOLOGY**
Introduction to practica duties. May be repeated three times. No Credit.

**PSY 577 PRACTICUM IN CLINICAL ASSESSMENT**
Supervised experience in intake interviewing, psychological evaluation, and case conference presentation in a clinic, hospital or community agency setting. Zero credit hours.

**PSY 578 PRACTICUM IN CLINICAL PSYCHOLOGY**
Supervised experience in diagnostic assessment, intervention planning, psychotherapy and report writing through varied assignments to campus or community agencies. Zero credit hours.

**PSY 579 PRACTICUM IN CHILD CLINICAL PROCEDURES**
Supervised practice in the diagnosis and treatment process of the problems of children and adolescents. May be repeated twice. Zero credit hours.

**PSY 582 ADVANCED PRACTICUM-CLINICAL PSYCHOLOGY**
Zero credit hours.

**PSY 583 PRACTICUM IN COMMUNITY MENTAL HEALTH**
Zero credit hours.

**PSY 584 PRACTICUM IN SPECIAL AREAS IN PSYCHOLOGY**
Zero credit hours.

**PSY 585 FIELDWORK IN COMMUNITY SETTINGS**
An applied experience which integrates skills of consultation, program development, advocacy, and program evaluation. PREREQUISITE(S): Consent of instructor.

**PSY 586 PRACTICUM IN APPLIED INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**
Supervised experience in the application of I/O Psychology and technical report writing.

**PSY 587 PRACTICUM IN ADVANCED RESEARCH IN INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**
Supervised experience in I/O research and the preparation of research results for publication.

**PSY 588 TOPICS IN EXPERIMENTAL PSYCHOLOGY I**
Consideration of topics of current interest to the faculty and advanced graduate students. Introduction to research methods and data analysis.

**PSY 589 TOPICS IN EXPERIMENTAL PSYCHOLOGY II**
Topics in experimental psychology.

**PSY 590 THESIS SEMINAR**
Zero-credit hours.

**PSY 591 COLLOQUIUM IN INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**
Required of all I/O students. Register in Fall term; continues throughout the year. Presentations on research and other topics by students, faculty, and invited speakers. Zero-credit hours.

**PSY 592 DIRECTED RESEARCH**

**PSY 593 PRE-DOCTORAL RESEARCH**
Graduate students in specific doctoral programs are required to register for this course for at least three quarters prior to registering for Psy 598 (Dissertation Seminar) or Psy 599 (Dissertation Research). This course requires full-time (at least 8-12 hours per week) work on research under the supervision of a faculty mentor. Zero-credit hours.

**PSY 594 PSYCHOLOGICAL RESEARCH**
A course involving intensive readings in contemporary psychological literature. (Arranged by prior consultation with the chair). One to four quarter hours

**PSY 595 COLLOQUIUM**
Required of all graduate students each quarter until graduation. Lectures by psychologists and members of the faculty. Zero-credit hours.

**PSY 596 INTERNSHIP IN CLINICAL PSYCHOLOGY**
Arranged with consent of director of clinical training. Zero-credit hours.

**PSY 597 MASTER'S THESIS RESEARCH**
Original investigation of a specific research problem. Four hours required.

**PSY 598 DISSERTATION RESEARCH SEMINAR**
Seminar for doctoral candidates working on their dissertation. Students will develop their proposals or write their results and discussion sections, depending on status of their dissertation research. Students will also review and critique work of other students. Zero credit hours.

**PSY 599 DISSERTATION RESEARCH**
Four hours total required. One to four hours per quarter.

**PSY 634 ADOLESCENT DEVELOPMENT**
Focus on normal processes in adolescent development as well as risk factors for maladaptive development.

**PSY 639 ADVANCED DEVELOPMENTAL PSYCHOLOGY**
Focus on major theories and research in child development.

**PSY 653 ABNORMAL PSYCHOLOGY**
Focus on the primary psychological diagnoses common today.

**PSY 654 COMMUNITY PSYCHOLOGY**
Focus on systemic and ecological theories of human behavior, diversity, social support, community intervention and evaluation, empowerment, social change, and working with underserved populations. Community service project required. Cross-level with PSY 354.

**PSY 663 ALCOHOLISM, DRUG ADDICTION, AND RECOVERY**
Research and theory on alcoholism, drug addiction, and recovery are the focus of this course. Cross-level with PSY 363.

**PSY 678 CHILD ABUSE AND NEGLECT**
This course surveys the causes, consequences, and contextual factors associated with child maltreatment (abuse and neglect) and interventions for children and families. The course considers maltreatment within an ecological context and works to build sensitivity to diverse families and cultural patterns. It is designed for graduate students with some prior coursework or experience in child psychology, mental health, or child welfare. PREREQUISITE(S): Graduate Standing and Instructor Consent. Cross-level with PSY 368.

**PSY 680 INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY**
Application of theories and methods of psychology to the study of human behavior in business, industry, and other organizations. Cross-level with PSY 380.

**PSY 701 CANDIDACY CONTINUATION**
Students admitted to candidacy for the doctoral degree who have completed all course and dissertation registration requirements are required to be registered each quarter of the academic year until the dissertation and final examination have been completed. Zero-credit hours. PREREQUISITE(S): Admission to candidacy.

**PSY 702 NON-RESIDENT CANDIDACY CONTINUATION**
Non-Resident Candidacy Continuation
Public Relations & Advertising

Graduate Course Descriptions - Current P, Q & R Public Relations & Advertising

PRAD 505 CRITICAL PERSPECTIVES ON PUBLIC RELATIONS AND ADVERTISING
This course examines the ever-increasing influence of public relations and advertising in our society, highlighting issues of power and social responsibility. Students are asked to think critically about the societal effects of public relations and advertising and their roles in the production and maintenance of public opinion. Future practitioners consider the potentially adversarial relationship that exists between public relations and advertising and the media in societies based on a free press. Formerly CMN 505

PRAD 510 SPEECH WRITING AND PRESENTATION
The course will allow students to gain experience writing and delivering speeches and making professional presentations. An emphasis will be placed on the role of speeches and speechwriters and the responsibilities associated with those involved in such an integral part of a democratic society. The multiple uses and value of speeches and presentations as public relations tools will also be addressed. Formerly CMN 510

PRAD 511 CONSUMER INSIGHTS FOR LATINO MARKETS
The course encompasses both the similarities and differences of Latino consumers in the U.S. and focuses on how to uncover key insights about consumer buying and information processing behavior among a diverse group of Latino cultures. The insight process is commonly used in advertising and marketing but is gaining popularity in public relations and employee communications. Students will learn how to develop their own instincts as an information consumer, as well as learn some key consumer psychology and research methodologies to learn why individuals behave as they do in the marketplace. Students will find and distill secondary research data and then utilize some qualitative research techniques, such as focus groups, ethnographic research, projective techniques, and in-depth interviewing to develop a key insight into a target group. PREQ: PRAD 553

PRAD 512 LATINO MARKETING COMMUNICATION
Many organizations and businesses are actively pursuing the Latino market. Yet few PR/advertising programs train students to communicate effectively with this growing target audience. This course covers development of culturally relevant messages and students gain practice in developing strategic campaigns addressing this market and explore the effectiveness of using paid advertising, public relations and events, direct response (coupon redemption) and social media among different Latino cultures.

PRAD 514 CONTEMPORARY ISSUES IN PUBLIC RELATIONS AND ADVERTISING
A seminar devoted to the reading and discussion of contemporary academic and popular works dealing with emerging issues in the fields of public relations and advertising. Students gain advanced knowledge of new industry trends and explore issues central to current professional debates. Formerly CMN 514 PREREQUISITE(S): PRAD 555 or PRAD 553 or permission of instructor

PRAD 515 PUBLIC RELATIONS WRITING (FORMERLY CMN 515)
The goal of this course is to help students develop the professional writing skills needed for success in public relations. Students analyze the process of strategic public relations planning and explore the communication techniques used to establish positive relationships with organizational constituents. They apply what they have learned by developing and presenting a variety of public relations materials, such as program plans, news releases, magazine/report/newsletter copy, video scripts, web copy and speeches. Upon the successful completion of this course, students will have a professional portfolio of public relations writing samples. PREREQUISITE(S): PRAD 555 or permission from instructor

PRAD 520 PUBLIC RELATIONS THEORY (FORMERLY CMN 520)
This course is designed to orient students to the theories that dominate Public relations scholarship, as well as the prevailing theories applied in practice. Students will review the historical evolution of various theories, critiques that have contributed to theory development, and the current status of various theories in the field. PREREQUISITE(S): PRAD 555

PRAD 530 PUBLIC RELATIONS AND ADVERTISING MANAGEMENT
This course focuses on the application of management principles and practices to the effective development of public relations and advertising plans, programs and campaigns. The course examines management practices in organizational and firm settings and considers issues and practices related to planning, budgeting,
new business development and account management. Formerly CMN 530. PREREQUISITE(S): PRAD 555 and PRAD 553

PRAD 535 PUBLIC RELATIONS IN HEALTH CARE
This course will help students understand the organizational impact of health policy in America and prepare students to assume roles in communication management positions in the United States health care industry. Students will explore current issues in health policy such as the problem of the uninsured, the rising cost of health care, and the politics of health. Each student will be responsible for focusing on a particular aspect of health policy and developing a report on the topic. Formerly CMN 535

PRAD 540 CRISIS COMMUNICATION MANAGEMENT (FORMERLY CMN 540)
This course examines institutional crisis communication from a management perspective. Emphasis is on crisis response strategies and organizational approaches for preventing and managing crisis events. Students develop case studies of contemporary crises and participate in simulations designed to develop professional expertise and practical skills in crisis communication management. PREREQUISITE(S): PRAD 555 or permission of instructor

PRAD 550 INTEGRATED COMMUNICATION CAMPAIGNS
The course presents a formal model for the implementation of integrated marketing communication plans across a number of communication functional areas. The course stresses the importance of campaign consistency, expression of unique audience insights, creative leverage, and the establishment of zero-based execution parameters. Case studies are examined as models for understanding elements of successful programs and for the development of team projects. Formerly CMN 550. PREREQUISITE(S): PRAD 553 or PRAD 555 or instructor permission

PRAD 551 ADVERTISING AND COPYWRITING
This course examines the creative, media planning and account executive functions of the advertising field. Special emphasis will be devoted to copywriting. To provide an intensive workshop experience, students will be divided into art director/copywriter teams to develop a campaign for a non-profit organization. Lectures, class discussions and guest speakers will supplement the hands-on experience. Students will complete the course with general advertising and copywriting skills that are broadly applicable to many corporate communication contexts. Formerly CMN 551. PREREQUISITE(S): PRAD 553

PRAD 553 ADVERTISING
This foundational course examines the theories, principles, applications and standards of advertising in multiple contexts, both from the perspectives of the practitioner and the consumer. Formerly CMN 553

PRAD 554 CREATIVE PROCESSES
The course focuses on creative processes critical in integrated marketing communication. Overall, the course is designed to help participants think more creatively. Readings include research and theoretical studies of creative processes and institutional practices, as well as more personal essays by representative figures from several different creative venues. Cases studies are the basis for fashioning directed creative responses, discussions, in-class activities and final projects. Formerly CMN 554

PRAD 555 PUBLIC RELATIONS
This course involves the study of the theory, history, practice and future of public relations in a comprehensive way. It is a course designed to allow public relations students to understand the breadth of the field and to investigate specific areas of public relations (i.e., political, medical, financial, government, corporate, education, etc.). It will also cover the operations and objectives PR practice from both the corporate and non-profit sectors.

PRAD 556 STRATEGIC PLANNING IN PUBLIC RELATIONS
Students will learn how to analyze an organization's initial situation, prior to public relations programs; how to formulate strategies and objectives for proper pre-planning; and how to develop a rich and measurable PR plan. Budgets, tactics and timelines will also be discussed and required as an aspect of the final PR plan project. Formerly CMN 556. PREREQUISITE(S): PRAD 555

PRAD 557 ADVERTISING COMMUNICATION STRATEGY
The course examines the development of advertising communication strategy within the context of an organization's overall marketing objectives. The course emphasizes harmonization of strategies for internal and external audiences and for support of organizational vision. Case studies define the relationship of marketing communication to product and service innovation, pricing and distribution. Particular attention is given to strategies which are imaginative and cost-effective. Formerly CMN 557. PREREQUISITE(S): PRAD 553 or permission from instructor
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>PRAD 560</td>
<td>POLITICAL AND GOVERNMENT PUBLIC RELATIONS</td>
<td>Political Public Relations focuses on the development and delivery of strategic messages by political parties, candidates and officeholders in American politics. Students will be responsible for researching, discussing, and evaluating the effectiveness of these messages. Special emphasis will be placed on the role of the spokesperson in a political campaign and/or serving as a spokesperson for an elected official. Formerly CMN 560. PREREQUISITE(S): PRAD 555 or permission from instructor</td>
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<tr>
<td>PRAD 562</td>
<td>MEDIA RELATIONS</td>
<td>Explores the communication between reporters and organizational spokespeople. Topics include goals of reporters and spokespeople during the transmission of information, interpretation of the various types of corporate media for reporters, techniques for corporate spokespeople for giving effective interviews. Case studies will be analyzed. Formerly CMN 562.</td>
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<tr>
<td>PRAD 563</td>
<td>MEDIA PLANNING</td>
<td>This is an advertising class that focuses on researching and assessing various media and media markets for possible use in advertising campaigns. Traditional print, broadcast, and out-of-home media are explored as well as digital media options and search engine optimization tools. Concepts of audience coverage, reach, frequency, ratings, share, gross rating points, Web page hits and click-throughs, CPM, and other cost and audience factors will be explored. PREREQUISITE(S): PRAD 553</td>
</tr>
<tr>
<td>PRAD 575</td>
<td>COMMUNICATION LAW AND ETHICS</td>
<td>This course covers the aspects of communication law and ethics relevant to communication professionals. Legal topics include First Amendment concepts, libel, privacy, copyright, freedom of information, and regulation of advertising. The ethical component focuses on the professional responsibilities of practitioners in communication fields with special emphasis on public relations and advertising. Formerly CMN 575. PREREQUISITE(S): PRAD 553 and PRAD 555 or permission from instructor</td>
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<tr>
<td>PRAD 585</td>
<td>RESEARCH METHODS FOR THE COMMUNICATION PROFESSIONAL</td>
<td>This course covers core issues involved in the collection and analysis of information to be used in decision-making. Topics covered include the retrieval of archival data, survey design, focus group interviewing, sampling techniques, techniques for analyzing data, and campaign evaluation. Formerly CMN 585. PREREQUISITE(S): PRAD 553 and PRAD 555 or permission from instructor</td>
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<tr>
<td>PRAD 590</td>
<td>PUBLIC RELATION &amp; ADVERTISING WORKSHOP</td>
<td>This course allows students to sample a range of hands on, practical offerings in communication that can enhance their knowledge and expertise. Topics offered include focus groups.</td>
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<tr>
<td>PRAD 592</td>
<td>INDEPENDENT STUDY</td>
<td>Students will be guided in the development of a special research project that furthers their collaboration with an instructor and produces a report that demonstrates their mastery of critical content and competencies. The independent study option is intended for students who have demonstrated a mastery of course content, who would benefit from a sustained, focused collaboration with a relevant faculty member. PREREQUISITE(S): Approval from instructor and department chair</td>
</tr>
<tr>
<td>PRAD 595</td>
<td>SPECIAL TOPICS IN PUBLIC RELATIONS &amp; ADVERTISING</td>
<td>This course examines a broad range of topics related to public relations and advertising processes. The course may address such topics as issues management, consumer behavior, relationship management, strategic planning and program development, or integrated communication campaigns. Formerly CMN 595. PREREQUISITE(S): PRAD 553 or PRAD 555 or permission from instructor</td>
</tr>
<tr>
<td>PRAD 597</td>
<td>COLLOQUIUM ON PUBLIC RELATIONS AND ADVERTISING</td>
<td>This course brings students together with professionals in public relations and advertising to illustrate the diverse nature of work in these fields. Speakers from both corporate and non-profit organizations will be invited to share their professional experiences and to discuss the knowledge competencies and skills required to succeed in these fields. Formerly CMN 597.</td>
</tr>
<tr>
<td>PRAD 599</td>
<td>RESEARCH THESIS</td>
<td>Enroll in 599 during the term you plan to defend your thesis or complete your final project. This is a graded, 4-credit hour course. Tuition is charged. You must have a scheduled defense/completion date to be approved for this class. Your thesis/project advisor needs to communicate this date to the Graduate Studies Director for your program, before you are allowed to enroll. Loan deferment is allowed to those registered for this class.</td>
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</table>
| PRAD 601   | ACTIVE DEGREE COMPLETION                       | This is a 0-credit hour course that is available to students who are working actively toward the completion of a thesis or project. Enrollment in this course is limited to the two quarters prior to the defense of the
thesis/project and requires graduate director approval and proof of work each quarter. No tuition is charged, only student fees (approx. $50), which allows you access to the library and other campus facilities. This course is graded as pass/fail. Eligible for loan deferment and student loans.

**PRAD 602 CANDIDACY CONTINUATION**
This is a 0-credit hour course that requires permission from the graduate director. Students can enroll in 602 if they are finishing a course in which they received an incomplete (IN). If the student does not register for any regular courses in the quarter they plan to finish the incomplete, they can enroll in 602 and access the library and other campus facilities. No tuition is charged, only student fees (approx. $50). This course is graded as pass/fail. Not eligible for loan deferment or student loans.

Public Services

Graduate Course Descriptions - Current

**MPS 490 WRITING SKILLS FOR PUBLIC SERVICE PROFESSIONALS**
This course focuses on developing writing skills (and therefore thinking skills) to meet or exceed MPS Program, professional, academic or management standards. Students receive intensive feedback and coaching on structure, organizing and style. The course is a blend of classroom and individual, online coaching sessions.

**MPS 498 PUBLIC SERVICE IMMERSION**
This course uses experiential, classroom and online (Blackboard) learning methods. Students experience a supervised immersion in nonprofit or government organizations as volunteers for 200 hours with in-class reflection exercises. This course is required for students admitted into degree programs who lack sufficient work experience in public service organizations. It is also useful for students using the Public Service Program to change careers.

**MPS 500 INTRODUCTION TO PUBLIC SERVICE MANAGEMENT**
Introduces students to organizational theories and practices useful to public service managers. Teaches how to use structural, human resource, political and symbolic perspectives to rethink public service organizations. Provides an introduction to managerial issues including workforce diversity, decision making and leadership; stresses critical thinking and writing skills. PREREQUISITE(S): Active student in a School of Public Service program or consent of SPS Director.

**MPS 501 CROSS-SECTOR ANALYSIS**
Covers the examination of the size, scope, capacity, and limitations of the nonprofit, government, and business sectors, in the domestic and international context. Students will be introduced to research and become familiar with print and electronic resources and databases. They will learn to develop meaningful research questions, write literature reviews, and analyze the interrelationships between the three sectors.

**MPS 502 ETHICAL LEADERSHIP**
Ethical and socially responsible leadership are core dimensions in the education of local and global public servants. This course provides students with the essential framework for personal and professional ethical decision making applied in the context of diverse workplaces and international organizations. Through lectures in ethical theories, case studies in applied ethics, and specific assignments, students clarify personal and professional values, assess moral intelligence, and develop ethical leadership integrity. Students learn about economic, political, social and environmental responsibility as applied to contemporary practices of professional and international public service.

**MPS 511 SUSTAINABLE DEVELOPMENT AND NON-GOVERNMENTAL ORGANIZATIONS**
This course provides an overview of theories and approaches to sustainable social and economic development and examines the roles of Non Governmental Organizations as well as methods of evaluating their effect. The course covers the role of NGOs in building and strengthening sustainable communities and societies in developing countries.

**MPS 513 VOLUNTEERISM**
This course examines the concept of volunteerism within global civil society, especially nonprofit organizations and government associations. This includes an analysis of the role of volunteers in American
society, the motivation to volunteer and how to effectively recruit, train, supervise and evaluate volunteers. Students develop an understanding of the role of volunteers in the management of any social program. Assignments include group projects and service learning opportunities.

**MPS 514 GOVERNMENT FINANCIAL ADMINISTRATION**
The concepts of efficiency and equity in taxation are applied to identify the advantages and disadvantages of specific taxes such as income, sales and property. Specific skill sets include present value techniques, interpreting the basic financial reports generated by governments, and evaluating financial performance of a government based upon its financial reports. PREREQUISITE(S): MPS 500

**MPS 515 NONPROFIT FINANCIAL ADMINISTRATION**
This course explores key issues in operations budgeting and capital budgeting. Specific skill sets include cash flow analysis, variance analysis, present value techniques, interpreting financial statements, and evaluating financial performance. PREREQUISITE(S): MPS 500.

**MPS 516 MANAGEMENT OF INFORMATION TECHNOLOGY**
This course focuses on the management and use of information technology (IT). As the use of IT in society grows, particularly in business, graduates are likely to manage technology resources and participate in IT planning and development projects as founders, sponsors, team members, managers of development, or end-user developers. Students should become effective users of information, IT, and information services. The course explores a number of IT-related topics, such as the strategic role of IT, IT planning and architecture, building the telecommunications highway system, management issues on system development, the expanding universe of computing, group support systems, intelligent systems, electronic document management and managing the human side of systems.

**MPS 519 RESOURCE DEVELOPMENT**
This course teaches students the theories and techniques of resource development. We discuss the fundraising tradition in the U.S., principal donor types, theories of donor behavior, and the organizational, legal and ethical contexts of fundraising. Students learn basic fundraising tools, including planning, grant writing, special events, major gifts, planned giving, and capital campaigns. Students work as volunteer consultants with nonprofit partners to analyze their current fundraising strategies and materials and help them develop new ones.

**MPS 520 VALUES-CENTERED LEADERSHIP**
This interdisciplinary course explores service leadership through the lenses of Robert K. Greenleaf, The de Paul Leadership Project, Margaret J. Wheatley and other theorists and practitioners within the leadership field. The course expands our thinking on leadership to include modules dedicated to four topics: Service Leadership, Leadership and Diversity, International Leadership and Ethical Leadership. Students will assess their own leadership practices, develop a leadership action plan and participate in coaching, as coach and client. Student grading will be based on participation in self-reflection, course participation, project teams and a final project.

**MPS 521 LEADERSHIP AND MANAGEMENT**
This course focuses on key factors which affect employee behavior and the nature and purposes of leader and managerial roles. In addition, it addresses recent research in leadership and management and the legal environment of personnel management. In depth analysis of psychological systems, interpersonal relations and the relationship of rewards to performance are addressed through case studies, role playing and readings.

**MPS 522 FUNDAMENTALS OF HUMAN RESOURCE MANAGEMENT**
This course explores human resource issues facing employees with supervisory responsibilities in public service organizations, including those working in the volunteer, non-profit, religious, government, and education sectors. The course considers human resource planning, employee recruiting and selection, and the motivation and evaluation of staff personnel and managers both individually and in teams. Topics include recruiting and selecting employees and managers, fostering team development, managing employee stress, preventing workplace violence, and handling issues pertaining to termination, training, and development. The course also explores progressive discipline, improving performance management of employees and volunteers, and supervising “difficult“ people. PREREQUISITE(S): MPS 500

**MPS 523 GROUP DYNAMICS FOR LEADERS**
This interactive course will explore the relevant theories and methods for understanding the structures and processes of groups. The course will also consider how leaders and managers function effectively within groups. An emphasis is placed on role and function, status, power, leadership, communication, decision-making, problem solving, conflict management, negotiation, and coalition.

**MPS 524 MARKETING FOR SERVICE ORGANIZATIONS**
Explores the objectives, strategies, techniques and contraints of government and non-profit services. 4 quarter hours.

**MPS 525 WORKING WITH NONPROFIT BOARDS**
This course examines the legal and philosophical reasons that nonprofit organizations are governed by an external board of directors. Membership, structure and process for this body are examined, as well as the relationship of employees to the individual board members and the policies established by this group.

**MPS 526 LOCAL GOVERNMENT ADMINISTRATION**
This course analyzes decision-making processes used in local government from the perspective of the chief executive officer such as city manager, township supervisor, special district administrator and park superintendent. It includes operational aspects of municipal administration including the effect of intergovernmental relations on local government, the role of the local government administrator in policy implementation and regional governance of the delivery of services that cross political boundaries. The interaction of the chief executive officer and elected board members with the community are discussed.

**MPS 527 ASSOCIATION MANAGEMENT (FORMERLY MPS 549)**
Examines membership associations as a special type of public service organization, with emphasis on managing both the external policy roles of associations and internal roles related to directly serving constituent members and organizations.

**MPS 528 FOUNDATION MANAGEMENT**
This course examines the concepts, functions and practices of organized philanthropy, with a primary emphasis on corporate, private and community foundations.

**MPS 529 STRATEGIC MANAGEMENT AND PLANNING**
Students learn how to apply strategic management and planning concepts and tools to public and nonprofit including international organizations to achieve goals and objectives in meeting service delivery missions. The course focuses on analyzing the interaction of trends, market forces, stakeholders, and core competencies in developing visions and strategies for alternative scenarios.

**MPS 530 ANALYSIS OF NONPROFIT ORGANIZATIONS**
This course explores the art and science of nonprofit management. Students analyzes nonprofits holistically, combining perspectives from law, governance, resource development, and finance. Students learn through hands-on analysis of existing nonprofit organizations and the analysis of historical case studies. PREREQUISITE(S): MPS 515.

**MPS 531 FINANCING AND COSTING IN HEALTH CARE**
This course focuses on practical examples of financial management of health care institutions. It examines the financial system supporting health care institutions and the financial tools providers and insurers use to keep medical costs in check. Students learn financial management, third party payment methodologies, Medicare and Medicaid, cost accounting, rate setting, budgeting and financial analysis. PREREQUISITE(S): MPS 514 or MPS 515 or MPS 541.

**MPS 534 MEDICAL SOCIOLOGY (FORMERLY MPS 547) (CROSS-LISTED AS SOC 431)**
Overview of social systems of health care in the United States, including the health-seeking behavior of patients, relationships among health care providers and organizational settings in which services are delivered. Cross-listed with SOC 431.

**MPS 535 HEALTH CARE ISSUES**
This seminar focuses on contemporary issues in health care policy and management. Topics covered include public health initiatives, dimensions of health service delivery systems (cost, quality and access), and health policy reforms with a special emphasis on the opportunities to reduce disparities in health care. Students conduct an independent secondary research project on a health care topic of their choosing. Classes include discussions of the challenges of developing expertise in a subfield within the health care sector.

**MPS 537 HEALTH CARE DELIVERY SYSTEMS (CROSS-LISTED AS SOC 437)**
Overview of the structure of the U.S. health systems followed by a selective international comparison of other health delivery systems including their relationships to social policies and economic factors. 4 quarter hours. Cross-listed with SOC 437.

**MPS 539 MACROECONOMICS**
Topics covered include: determinants of output, employment, price levels, income distribution, international trade, exchange rates, and how government policies affect these variables. Related topics receiving attention are: globalization, development and international philanthropy.
MPS 541 ECONOMIC FOUNDATIONS OF PUBLIC SERVICE
This course introduces students to the branches of economics known as microeconomics, public finance, and welfare economics. Students learn to apply standard economic tools to identify policy issues and to analyze them. Specific skill set includes present value techniques. PREREQUISITE(S): MPS 500.

MPS 542 POLICY DESIGN AND ANALYSIS
Focuses on processes and techniques of analyzing and designing public policies. Students are introduced to an analytical way of thinking that includes: defining and modeling policy problems; designing policy alternatives; evaluating policy alternatives using ethical, legal, economic, organizational, and political criteria; and anticipating problems of policy implementation. PREREQUISITE(S): MPS 501 and MPS 514 or MPS 515 or MPS 541.

MPS 542 POLICY DESIGN AND ANALYSIS
Focuses on processes and techniques of analyzing and designing public policies. Students are introduced to an analytical way of thinking that includes: defining and modeling policy problems; designing policy alternatives; evaluating policy alternatives using ethical, legal, economic, organizational, and political criteria; and anticipating problems of policy implementation. PREREQUISITE(S): MPS 501 and MPS 514 or MPS 515 or MPS 541.

MPS 543 POLICY IMPLEMENTATION IN A BUREAUCRATIC CONTEXT
This course introduces students to the challenges and opportunities of policy implementation. It helps students understand and improve the implementation of public and organizational policies. Using a variety of approaches, students learn to analyze implementation, the factors that influence the process, and to monitor, evaluate, revise, and reform policies. PREREQUISITE(S): MPS 542.

MPS 546 ADVOCACY AND LOBBYING
Explores the roles of individuals and organizations in the public policy process, particularly as power arrangements facilitate or impede consensus building. Examines how legislation is written and how administrative rules are formed in government agencies. Special attention is paid to advocacy techniques such as lobbying, public education, and litigation.

MPS 550 APPLICATIONS IN PUBLIC POLICY ANALYSIS
This course uses analytical techniques to explore policy problems faced by nonprofit organizations and governmental agencies. It considers economic and public policy tools to evaluate and resolve contemporary domestic and international issues. The course may include specialized work in a specific policy area, such as economic reform, global poverty reduction, and environmental management. PREREQUISITE(S): MPS 542, 613 or instructor consent.

MPS 553 MANAGEMENT CONTROL IN NONPROFITS & GOVERNMENT
This course combines the basic tools of financial analysis with more advanced techniques using case studies to introduce students to management control systems in nonprofit and government organizations. Specific skill sets include full-cost accounting, differential costs analysis, pricing decisions, operations analysis, output measurement, and performance reporting. PREREQUISITE(S): MPS 514 or MPS 515 or MPS 541.

MPS 559 ENTREPRENEURSHIP AND NEW VENTURE MANAGEMENT [CROSS-LISTED WITH MGT 570]
Entrepreneurship and New Venture Management. Cross-listed with MGT 570.

MPS 560 ADMINISTRATIVE LAW
This course focuses on an understanding of government powers by federal, state and local agencies in the US such as oversights, rule making, adjudication and judicial review of local and federal actions, and enforcement of regulatory decision making. It examines how public administration decisions are affected by existing constitutional and legal constraints on the administrative process; it includes the Administrative Procedure Act, Open Meetings Act of Illinois, and the Freedom of Information Act.

MPS 561 LAW AND NONPROFIT ORGANIZATIONS (FORMERLY MPS 532)
Introduces laws and regulations governing nonprofit organizations, including procedures for incorporation, maintenance of tax-exempt status, and compliance with relevant labor laws. No legal background is assumed.

MPS 562 INTRODUCTION TO HEALTH LAW (FORMERLY MPS 570)
Introduces students from nonlegal backgrounds to the legal system. Examines legal materials, including statutes, judicial opinion, and administrative regulations. Basic legal research and writing skills are taught.

MPS 563 LAW AND PUBLIC POLICY
Examines the sources of law and explores methods of legal research within the context of public policy analysis. PREREQUISITE(S): MPS 542.

MPS 570 RESEARCH METHODS IN PUBLIC SERVICE
This course introduces students to the principles and methods of public service research, and teaches students how to collect and analyze data. Topics include sampling, surveys, interviews, and focus groups. PREREQUISITE(S): MPS 502.

MPS 571 METROPOLITAN PLANNING
The purpose of this course is to provide an introduction to the professional practice of urban planning and the basic theoretical concepts on which the discipline is based. Students will analyze urban issues, decision-making processes, and resources that affect planning across a metropolitan area, including urban-suburban relations, and the complexities of zoning, economic and community development.

MPS 572 URBAN POVERTY SEMINAR
This course explores causes of urban poverty both in the US and abroad. It compares and contrasts policies addressing basic human needs. It includes discussion of global cities and international poverty reduction programs.

MPS 573 URBAN AND COMMUNITY DEVELOPMENT
This course discusses urban issues including social area analysis, neighborhood change, land use and other topics. It examines community organizations as problem-solving bodies that interact with government agencies to affect urban development.

MPS 575 SEMINAR IN ADMINISTRATION/BRUSSELS
This course increases understanding and knowledge of the European Union and the North Atlantic Treaty Organization as organizations of change. It focuses on the international public sector including relationships with NGO's and the nonprofit sector. Students expand experiential and intellectual understanding of these global actors and how they compare to the US. The course takes place in Brussels. PREREQUISITE(S): Consent of instructor.

MPS 580 QUANTITATIVE METHODS IN PUBLIC SERVICES
This course prepares students to use and produce quantitative analyses for policy studies and administrative decision making. It focuses on descriptive and inferential statistics, bivariate measures of correlation, and introduces the concept of statistical control. Introduces students to statistical software. PREREQUISITE(S): MPS 570.

MPS 585 THESIS DESIGN
Prepares students to undertake a capstone project. Students will be introduced to a variety of data sets and invited to explore issues in which they are interested by reviewing the relevant literature and applying the analytical tools acquired during their coursework to these data. Students with a grade point average of 3.5 or higher will have the option of collecting their own data. Students electing this option are required to find a faculty advisor with the approval of the Director. PREREQUISITE(S): MPS students or department consent.

MPS 586 RESEARCH METHODS I, INTRODUCTION TO APPLIED RESEARCH AND STATISTICS
This course introduces students to the principles underlying scientific research. It covers both qualitative and quantitative approaches and teaches students to collect and analyze data. Students learn about research ethics, causality, sampling (both random and purposive), and the techniques of survey design. Students calculate descriptive and inferential statistics using statistical software. Students develop their own research proposal using program theory and logical frameworks to conduct a needs assessment or an outcomes evaluation as their capstone or thesis project. PREREQUISITE(S): MPS 501 for MS in International Public Service; MPS 501 and MPS 514 or MPS 515 or MPS 541 for all other degree programs.

MPS 587 RESEARCH METHODS II, ADVANCED APPLIED RESEARCH AND STATISTICS
This course introduces students to more advanced mixed methods of scientific research including interviews and focus groups, observation, and ethnography. Students learn about the design of experiments and the problems associated with spuriousness and control. Students calculate and interpret bivariate and multivariate statistics and use it to conduct process and outcome evaluations. Students extend and finalize their research proposal for their capstone or thesis project. PREREQUISITE(S): MPS 586.

MPS 588 RESEARCH METHODS AND STATISTICS FOR NONPROFIT MANAGEMENT
This course develops skills necessary for conducting research through surveys, interviews, and focus groups. The course introduces students to sampling strategies, statistics, and the logic of statistical and experimental control. It includes instruction in statistical software. This course prepares students for MPS 589 and the
MPS 589 NEEDS ASSESSMENT AND PROGRAM EVALUATION FOR NONPROFIT MANAGEMENT
This course provides an overview of two of the most common applied research methodologies as vital tools for the nonprofit manager. It explores and explains the relationship between these tools as part of an assessment and evaluation cycle and the best contexts for using them to identify and clarify community needs, establish policies and evaluate programs in the nonprofit sector. PREREQUISITE(S): MPS 588.

MPS 590 PUBLIC SERVICE ASSESSMENT AND EVALUATION
This course explains and explores the purposes and methodologies for assessing public service needs in shaping social policy, designing management systems, evaluating program results, and the effect of policy or program change. It includes the effectiveness of organizations in implementing policies and programs, and the development of process measures. These serve as possible approaches for completing the capstone project in MPS 593. PREREQUISITE(S): MPS 542 and MPS 570.

MPS 593 INTEGRATIVE SEMINAR
In this capstone course students complete an action research project integrating applied research, theoretical frameworks, and professional practice. Students choose one of the applied research competencies learned in MPS 590 and focus on either a policy or management issue. PREREQUISITE(S): MPS 580 and 590, or 588 and 589 or MPS 586 and 587.

MPS 594 ETHICAL LEADERSHIP IN PUBLIC SERVICE
This course provides students with the essential framework for personal and professional ethical decision making applied in the context of diverse workplaces and international organizations. Through lectures in ethical theories, case studies in applied ethics, and specific assignments, students clarify their personal-professional values, assess their moral intelligence, and develop their ethical leadership integrity. Students will also study the ethics of organizations, including the formation of social norms, how they influence individual decisions, and how entire organizations can become more ethical. Formerly MPS 506. PREREQUISITE(S): MPS 586 or 588.

MPS 597 PUBLIC SERVICE FELLOWS SEMINAR
Elective, 4-credit hour course available to students with MPS CGPA of 3.75 or greater. For MPS Fellows taking MPS 593, Integrated Seminar, or MPS 598, Thesis Research I, during the academic year, meets roughly every other week during winter and spring terms. Seminar includes distinguished academic and professional guest lectures and presentations of research by Fellows.

MPS 598 THESIS
Students carry out a theoretically-based research project designed in MPS 585. The final product of this course is a master's thesis. Binding fee. PREREQUISITE(S): MPS 585 and consent of program director and instructor.

MPS 600 INDEPENDENT STUDY
Individually supervised learning experience, usually involving extensive library research and writing. Variable credit. PREREQUISITE(S): Consent of program director and instructor.

MPS 601 INTERNSHIP
Supervised work experience during one or more quarters, usually involving application of administrative skills in an organizational setting new to the student. Variable credit. PREREQUISITE(S): Consent of School Director and Internship Supervisor.

MPS 602 CANDIDACY CONTINUATION
Required of students who are not registered for regular courses during an academic quarter while completing course requirements or research. (0 credit) $40.00 per quarter. PREREQUISITE(S): Consent of School Director.

MPS 604 SPECIAL TOPICS
Topics vary each term. (May be taken more than once). Variable credit.

MPS 605 SEMINAR IN ADMINISTRATION
In-depth examination of selected issues in public service administration. Topics vary each term. May be taken more than once.

MPS 606 SEMINAR IN HIGHER EDUCATION ADMINISTRATION
In-depth examination of selected issues in higher education administration. Topics vary each term. May be taken more than once.

MPS 610 INTERNATIONAL/INTERCULTURAL INTERNSHIP
The internship consists of work experience supervised by a site supervisor in an international or cross-cultural organization during one or more terms and involving the application of administrative skills in an organization new to the student. Students may take internship abroad or in the US. Variable credit. PREREQUISITE(S): Consent of School Director and Internship Supervisor.

**MPS 611 MANAGEMENT OF INTERNATIONAL NGOs**  
This course examines management skills and trends of international nongovernmental organizations. Through specific case studies in the fields of international public service, development and emergency, students learn current techniques for effectively manage projects, relations and operations of NGOs.

**MPS 612 INTERNATIONAL POLITICAL ECONOMY**  
This course provides an overview of major theories and practice in international political economy. It includes critical analysis of international political economy such as growth theories, capital and labor flows, and transformation of regimes. Students develop analytical skills for professional interests and research purposes.

**MPS 613 COMPARATIVE PUBLIC POLICY**  
This course is an introduction to cross-national social policy research and to the fascinating and challenging issues of comparative research. Students will learn about comparative welfare state research and reflect on major theoretical and methodological aspects of social policy. North American public policy approaches will be compared with European, Asian and Latin American case studies on education, health care, housing, social security, labor market and other policy fields.

**MPS 614 GLOBALIZATION AND CIVIL SOCIETY ORGANIZATIONS**  
This seminar introduces students to the practices and theories of global civil society organizations. Globalization of economics, politics, technology and culture is critically reviewed as threat and opportunity for NGOs and CSOs. Students learn about network analysis of civil society in relation to the United Nations, international organizations, and transnational movements.

**MPS 615 INTERCULTURAL COMMUNICATION IN ORGANIZATIONS**  
This course provides the necessary conceptual foundation and practical skills for leading, managing and communicating in a cross-cultural and diverse working environment. Students learn intercultural competency through applications and examples on international relations and human resource management.

**MPS 616 INTERNATIONAL RELATIONS AND CONFLICT MANAGEMENT**  
The course focuses on theoretical foundations and practical implications of diplomacy, negotiation, mediation and peace-building to solve and prevent conflicts. It offers reflective practices and concrete directions for creating constructive solutions to interpersonal, inter-group, and international conflict.

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**Real Estate**

Graduate Course Descriptions - Current ▽ P, Q & R ▽ Real Estate

**RE 530 REAL ESTATE INVESTMENT AND FINANCE**  
Analysis of real estate investment opportunities and the characteristics that distinguish them from other assets. Emphasis is upon forecasting cash flows and estimating risk. Case analysis is an integral part of the course technique. PREREQUISITE(S): FIN 555

**RE 531 REAL ESTATE FINANCE**  
Analysis of private and public institutions involved in real estate finance. A critical study of institutional arrangements facilitating real estate investment and development. Analysis of yields and risk in mortgage lending. PREREQUISITE(S): RE 530 and FIN 555

**RE 533 REAL ESTATE MARKET ANALYSIS AND VALUATION**  
Critical analysis of the appraisal process and its theoretical foundation. Market analysis techniques and valuation of income producing properties. Exploration of both basic and innovative approaches to value employing computer databases and information technology. PREREQUISITE(S): FIN 555 and RE 530.

**RE 535 REAL ESTATE INVESTMENT**  
Analysis of different strategies available to real estate investors. Focus is on large-scale development and
institutional investment portfolio decisions. The case method is an integral part of the course technique. PREREQUISITE(S): FIN 555 and RE 530

**RE 596 REAL ESTATE SEMINAR**
The objectives of this course are to identify current, researchable topics pertaining to real estate and for students to perform independent research on selected topics approved by the seminar professor. Meetings will be held on both a class and on an individual basis. Students will present both their proposals and the results of their preliminary investigations in class. A seminar research paper is required of each student.

**RE 798 SPECIAL TOPICS**
Content and format of this course are variable. In-depth study of current issues in finance. Subject matter will be indicated in class schedule. Offered variably. PREREQUISITE(S): Determined by instructor.

**RE 799 INDEPENDENT STUDY**
Available to graduate students of demonstrated capability for intensive independent work in finance. PREREQUISITE(S): Determined by instructor.

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**Relational Communication**

**REL 500 RELATIONAL COMMUNICATION THEORIES**
Students will gain an understanding of the different meta-theoretical frameworks used to explain relational communication as well as an understanding of what theories are and how theories are developed. A wide range of relational theories will be used in explaining what constitutes relational communication. Students will be provided with opportunities to apply theoretical concepts to everyday personal and professional relations as well as given opportunities to critique and analyze the efficacy of those theories presented.

**REL 513 NONVERBAL COMMUNICATION**
Nonverbal messages are important as we typically monitor our own nonverbal messages less, but believe others nonverbal messages more than their verbal messages. Likewise, research suggests that 65% of our communication is based on nonverbal messages and some estimates are as high as 93%. Clearly such messages are important, yet we spend little time examining such messages. That said, the goal of this course is to provide you with a research based overview of a variety of nonverbal messages, that is, everything we communicate without using our words. This course surveys various conceptual areas generally subsumed under the broad rubric of nonverbal communication. Topics include physical appearances, gestures, face and eye behavior, vocalic, proxemics, touch, time, environmental contexts as well as application of nonverbal behaviors to specific interpersonal communication contexts.

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**Russian**

**RUS 497 SPECIAL TOPICS IN RUSSIAN**
See schedule for current offerings. Graduate standing required.

**RUS 498 STUDY ABROAD**
Variable credit. PREREQUISITE(S): Permission required. Graduate standing required.

**RUS 499 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Permission of chair and instructor required. Graduate standing required.
Graduate Course Descriptions - Current

Subjects beginning with the letter S are listed below and on the navigation bar to the left. These descriptions reflect the courses as of May 24, 2011. For the most up-to-date descriptions, please visit Campus Connection.

Soc/Cult Std Ed Human Dev Grad
Science, Technology, Engineering and Math
Software Engineering
Sociology
Spanish
Strategy Execution Valuation
Study Abroad Program

Soc/Cult Std Ed Human Dev Grad

SCG 25 BASIC TECHNOLOGY LITERACY
(0 Credit) This online course provides students with a knowledge about assembling, using, and troubleshooting basic technology hardware and software. In this course, students demonstrate understanding of basic computer setup and the use of peripheral devices such as printers, speakers, flash drives, scanners, digital cameras, videos, and computer software.

SCG 401 ADVANCED DEVELOPMENTAL PSYCHOLOGY
Current research and theories in human development relating to motivation, personality, learning and socialization. Case studies and an analysis of various developmental problems.

SCG 402 PSYCHOLOGY OF LEARNING
Study of the learning-teaching process with specific emphasis on the person as a learner, human capacity and potential, learning theories and materials, motivation, concept formation, and behavior.

SCG 403 HUMAN DEVELOPMENT AND LEARNING: ELEMENTARY
This course will focus on the developmental processes of school-age children, kindergarten through middle school, by beginning with the study of the young child's social, emotional, cognitive, and physical growth and change. The theoretical and observational study of child development will be framed by an examination of culture, gender, and socio-economic factors as they inform assumptions about normative processes. The relationship between development and learning in a social context will be examined with particular attention to children's developing concepts in math, science, and language arts. Attention will also be given to the role of teachers and schools and other institutions in fostering the healthy development and learning of young people.

SCG 404 HUMAN DEVELOPMENT AND LEARNING: THE EARLY YEARS
This course will focus on the developmental process of children from birth to age 8 by beginning with the study of the young child's social, emotional, cognitive and physical growth and change. The theoretical and observational study of child development will be framed by an examination of culture, gender, and socio-economic factors as they inform assumptions about normative processes. The relationship between development and learning in a social context will be examined with particular attention to children's developing cognitive concepts. Attention will also be given to the role of teachers, schools, and other institutions in fostering the healthy development and learning of young children. COREQUISITE(S): T&L 400.

SCG 406 HUMAN DEVELOPMENT AND LEARNING:SECONDARY
This course focuses on the multiple factors that contribute to the period of adolescence, bridging childhood
This course focuses on the multiple factors that contribute to the period of adolescence, bridging childhood and adulthood. Particular attention is given to the intrapsychic, interpersonal, biological, and socio-cultural processes that are mediated by the meanings that youth give to their identity vis a vis race, class, and gender formations within the broader society. Students will engage in interdisciplinary study of theories to examine the implications for teaching and learning processes and the role of educational institutions in fostering the healthy development of youth in society. Forms of inquiry will include students' examination of their own lives and assumptions, critique of theory, and observations of young people in a variety of contexts.

**SCG 408 EDUCATION AND SOCIETY**
A study of social forces that impinge upon the educational enterprise and analysis of the relationship to major social problems in urban education with emphasis on their social, economic, political, historical and philosophical dimensions.

**SCG 409 SOCIOLOGY OF EDUCATION**
This course focuses on the relationship between school structures and culture, social relations of race, ethnicity, class, and gender, and ideologies organizing education in the United States. Students will explore a range of theories in the sociology of education that explore linkages between school structures and processes and broader social forces. Readings may examine the political economy of schooling, inequalities in educational practices, and student and teacher identities shaped by schools and the larger society.

**SCG 410 INTRODUCTION TO RESEARCH: PURPOSES, ISSUES, AND METHODOLOGIES**
(formerly CUG 400) This course will examine the basic questions, issues and theoretical frameworks central to the purpose, conceptualization, conduct, writing, reading and the use of educational research as a means for informing educational theory, practice and policy. Students will be exposed to the multiple frameworks which inform education research, the various methodologies employed in collecting and analyzing data and will examine the advantages, limitations and values implicit in conducting and evaluating research.

**SCG 411 PHILOSOPHY OF EDUCATION**
This course examines the relationship of education to the moral and ethical dilemmas or predicaments of the human condition. It will entail issues related to the nature of education's responsiveness, or lack there of, to the concerns of the human condition: for example, human alienation, suffering, success and failure, caring, freedom, responsibility, liberation and agency. Special attention will be given to how these concerns influence or have social, cultural and political implications for how teachers address them within the teaching and learning process.

**SCG 439 PHILOSOPHY AND PSYCHOLOGY OF YOUTH AND MIDDLE LEVEL EDUCATION**
This course examines foundational and contemporary theories of youth and adolescent development. It considers how these theoretical ideas relate to contemporary questions of youth and middle level education. The course explores the historical invention of adolescence, changing ideas about the meaning of childhood, as well as some of the broader social, economic, political, and cultural implications of these changing ideas. This course seeks to develop in prospective educators a broader capacity to theorize about youth and schooling, and, hence, to act critically and reflectively in multiple contexts in which youth learn.

**SCG 527 GLOBAL PERSPECTIVE IN EDUCATION**
Studies of school systems outside the United States, their methods, curriculum and achievements.

**SCG 582 PRACTICUM IN EDUCATIONAL TECHNOLOGY AND NEW MEDIA**
This course provides directed experiences in decision-making for curriculum planning, instructional design and delivery, scholarship and leadership in instructional technology-supported learning contexts. Students will engage in co-teaching activities in technology-rich classrooms; develop an instructional technology plan; make field evaluation and use of educational hardware and software; review and discuss research and professional literature in instructional technology; evaluate and use instructional products; develop and present a multimedia-based project; learn and apply theories and principles of instructional and information message design; engage in collaborative, micro-teaching activities online; develop a technology-enhanced instructional program for the K-12 environment; create a staff development plan with focus on technology applications for administrative purposes; conduct an evaluation study on-site; observe and experiment face-to-face and virtually with a range of instructional technology applications; produce comparative reviews on the use of instructional technology in various school settings. The practicum will also provide students with multiple opportunities to reflect and share their thinking with each other in a supportive community of learners and researchers. (PREREQUISITE(S): SCG 402 & CS 460).

**SCG 588 INDEPENDENT STUDY IN SOCIAL AND CULTURAL FOUNDATIONS IN EDUCATION**
Independent Study in Social and Cultural Foundations in Education. PREREQUISITE(S): Permission of instructor, program chair and associate dean.

**SCG 600 REGISTERED STUDENT IN GOOD STANDING**
SCG 600 REGISTERED STUDENT IN GOOD STANDING
(0 credit) Registration is this course is open to students who are not registered for any other courses but need to complete requirements/assignments for previously taken courses. It provides access to University facilities. Permission of advisor required. $50 per quarter.

SCG 603 PROSEMINAR: CULTURE AND EDUCATION
This course focuses on the relationship between education, pedagogy, and theories of culture framed by a concern for social justice. Topics may include the pedagogical and political dimensions of popular culture, questions of knowledge production, the relationship between knowledge and power of the political economy of culture production.

SCG 604 PROSEMINAR: IDENTITY CONSTRUCTIONS AND NEGOTIATIONS
This course examines identity construction in educational contexts. Drawing on theoretical frameworks in the sociology of education, postmodernist, feminist and critical theories of education, and cultural studies literature, this course will explore identity as complex and multifaceted. It explores relations of class, race, ethnicity, gender, and sexuality and the implications of sociality for contemporary education.

SCG 608 PROSEMINAR: IDEOLOGY, POWER AND POLITICS
This course examines how power operates pedagogically and how domination and resistance get shaped in education. It considers power relations in society and how these power relations enter into educational discourse and practice. It also explores ways in which power produces various educational practices and ways in which power gets psychically configured. Students will examine major theories of power, analyze race, ethnicity, gender, class and sexuality as systems of power and consider the educational implications of such an analysis.

SCG 610 INTRODUCTION TO RESEARCH METHODS
(Special section of SCG 410, Introduction to Research: Purposes, Issues and Methodologies.) This course will examine the basic questions, issues and theoretical frameworks central to the purpose, conceptualization, conduct, writing, reading and the use of educational research as a means for informing educational theory, practice and policy. Students will be exposed to the multiple frameworks which inform educational research, the various methodologies employed in collecting and analyzing data and will examine the advantages, limitations and values implicit in conducting and evaluating research. Students will also begin exploring possible thesis topics as they begin defining their particular research purpose, methodology and issues.

SCG 611 PROSEMINAR: PHILOSOPHICAL STUDIES IN EDUCATION AND CULTURE
Examines both traditional philosophical questions in education from such perspectives as Africana, feminist, Latino/Hispanic thought and distinctively Africana, feminist, and Latino/Hispanic issues in a philosophical way. Some of the perspectives are, for example, the necessary conditions of a humanistic education, the relation between theory and practice, the relationship between individual and institutional/society, the role of education in the struggle for social justice, the role of aesthetics in human development and projects of political emancipation, the dialectics of history and experience in the development of liberatory ideas, and the moral and ethical dimensions of education.

SCG 614 CRITICAL MEDIA LITERACY
This course focuses on theories of media interpretation, cultural pedagogy, and cultural studies. Literature from critical media literacy, cultural studies, critical pedagogy, communication studies, sociology, and philosophy will inform student understanding of how media educates, how interpretations of media are struggled over, and how such practices relate to broader structures of power, identity formation, political economy of media, theories of communication and representation, and pedagogy.

SCG 615 THEORIZING IN EDUCATION, TECHNOLOGY AND SOCIETY
This course explores philosophical and sociological theories of education, technology and society. Topics include the social, political, and pedagogical implications of educational technology and new media. The aim of the course is to introduce students to the history of critical theoretical perspectives on educative technologies through foundational texts in the humanities and social sciences as well as contemporary studies in the multiple educative aspects of technology. Course readings will draw on scholarship in philosophy, sociology, new media, educational foundations, and political theory.

SCG 625 CANDIDACY CULMINATING PROJECT (STUDENT IN GOOD STANDING)
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing culminating projects for their program of study, including theses, papers, and final portfolios. It provides access to university facilities. Permission of thesis/capstone advisor required each term. Registration limited to three terms. $50 per quarter.

SCG 635 ADVANCED QUALITATIVE RESEARCH METHODOLOGIES
This course extends the fundamental principles of educational research first introduced in SCG 610. It provides
students with theoretical and practical preparation in conceptual issues in qualitative research and research design. Students will explore a variety of methodological approaches to interpretive inquiry in social science research, research design, methods of data collection, research ethics, and critical analysis. This course will prepare students to undertake the capstone master's thesis requirement.

**SCG 636 THESIS RESEARCH**
A student writing a thesis registers for this course for four quarter hours of credit. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. Completion of this course is required to receive the MA Degree in Social and Cultural Foundations in Education.

**SCG 637 CAPSTONE: SOCIAL AND CULTURAL FOUNDATIONS IN EDUCATION**
The SCFE Capstone allows students to explore substantive areas of scholarship within their areas of interest and to create a final project or paper of their own design under the mentorship of a faculty member in the program. The Capstone is an opportunity to engage in a synthesis of what has been learned through coursework, and to integrate and compare knowledge gained from students' own research with that which was learned in the program. The capstone course will involve preparation of a substantive piece of work.

Upon completion of all coursework, students enrolled in this course will select and work with a Capstone Advisor (a faculty member in the SCFE program) to discuss possible paper topics. The paper will generally consist of library-based research and will typically be 20-25 pages in length. Completion of this course is required to receive the MEd Degree in Social and Cultural Foundations in Education.

**SCG 701 PHILOSOPHY OF ETHICS IN EDUCATION**
This course is a philosophical investigation into the structure and meaning of ethics within education. Education, a condition for self-formation and self-other relations, is explored as a site of ethical inquiry. It is within this framework that education, which involves learning, teaching, response, and communication, is posed as a condition of ethical possibility and not merely as the vehicle through which a certain ethics gets carried out. Primary and secondary philosophical and non-philosophical literature and authors within and outside of philosophy of education will be used to study these issues.

**SCG 711 CULTURE, POWER AND EDUCATION**
The purpose of this course is to facilitate the development of a critical understanding of the larger concept of culture within the notion of multiculturalism. This begins by recognizing that educational institutions such as schools and universities are cultural institutions engaged in the making of culture. While the focus of multiculturalism is about theorizing difference in relation to the particular cultural processes that go on in schools and universities, its focus does not address how educational institutions are shaped by broader cultural dynamics that are outside of the immediate context of educational institutions. It is in this context that doctoral students will examine how cultural processes are intimately connected with social relations, especially with class relations, with gender and ethnic divisions, and with the racial restructuring of social relations. They will also explore how culture involves power, which serves to produce inequalities in the abilities of individuals and social groups to define and realize their needs. In addition, culture will be analyzed as a site of social difference and struggle. The primary focus of the course will be to explore how the larger political economy, popular culture and politics of a society effect the dynamics of how culture is constructed within social life. Doctoral students from within this framework will analyze what we mean by culture; how it is produced and consumed; the relationship of everyday life are represented by dominant cultural and sub-cultural groups and institutions. It is in this context that the course also examines how relations of power, knowledge, social identity and pedagogy within educational institutions are conditioned and shaped by the educational practice that shapes and impinges upon the internal workings and purposes of educational institutions.

**SCG 721 HUMAN DEVELOPMENT AND THE EDUCATIONAL PROCESS**
This course will examine the process of human development and learning through the ages by critically examining cross-cultural research and developmental theories designed to describe and interpret the physical, social, emotional, intellectual, and psychological processes involved. Emphasis will be placed on the range of individual, familial, environmental, and cultural factors that may enhance or inhibit human growth and development, and on the critical role that human relationships play in the lifelong interactive processes of learning and growth. Considerable attention will be paid to the historical role of power, culture, class, gender and capability in defining and interpreting certain behaviors as indicators of normative development. These normative indicators will be critiqued with regard to underlying cultural assumptions and values, their function in fostering and maintaining current social, educational and political relations, and their contribution to the current crises in urban education and the development of children and youth. Class participants will examine their perspective on human development and learning and explore the socio-cultural and historical bases which contribute to their underlying values and assumptions. Through multifaceted inquiry utilizing self-
reflection, case studies, theoretical analyses, and child assessment and observation, participants will consider the implications for their work as educational leaders in approaching current challenges with students, parents, community, and teachers and in creating schools that will foster societal change to support the healthy development of children and youth.

SCG 735 QUANTITATIVE RESEARCH METHODS I
This course is designed to provide doctoral level students with theoretical and practical preparation in quantitative research design including: instrumentation; data collection; statistical analysis; ethics and politics of the conduct of research; and development of analytical skills for critiquing quantitative research. Students will have the opportunity to work with real databases to conduct both univariate and multivariate analyses, including correlations, ANOVAS, and multiple regressions. PREREQUISITE(S): SCG 785.

SCG 745 QUALITATIVE RESEARCH METHODS I
This course is designed to provide doctoral level students with theoretical and practical preparation in qualitative methods including: data collection and analysis; ethics and the politics of the conduct of research; and critical analytical skills for review and critique of qualitative research. Students will be introduced to a range of approaches to qualitative inquiry that may include: narrative inquiry; ethnography; case study; phenomenology; grounded theory; and participatory action research from a variety of theoretical perspectives. PREREQUISITE(S): SCG 785.

SCG 755 QUANTITATIVE RESEARCH METHODS II
A continuation of SCG 735. Students will prepare a methodology section of a research project and will learn how to write up quantitative results of their analyses. By the end of the course students should be able to: understand quantitative methodological approaches; select appropriate data collection strategies; conduct the appropriate analysis for the research question(s) proposed and the nature of the data; and be prepared to write a candidacy paper. PREREQUISITE(S): SCG 735.

SCG 765 QUALITATIVE RESEARCH METHODS II
A continuation of SCG 745. Students will conduct a pilot study on an issue of interest using a qualitative research design. By the end of the course students should be able to: understand qualitative methodological approaches; select appropriate data collection strategies; conduct the appropriate analysis for the research question(s) proposed and the nature of the data; and be prepared to write a candidacy paper. PREREQUISITE(S): SCG 745.

SCG 775 SEMINAR: FRAMEWORKS OF INQUIRY IN EDUCATIONAL RESEARCH I
This course offers doctoral students a general introduction to theory and practice in educational research. First, it is designed to help students develop an understanding of the assumptions that underlie multiple approaches to knowledge construction and the conduct of inquiry in education. Second, the course will introduce students to the structural organization of a research manuscript. By the end of the course students should be able to: understand key theoretical and methodological issues in educational inquiry; engage in the critical analysis of multiple educational frameworks; recognize the components of a research manuscript; and identify a general topic area for dissertation research.

SCG 785 SEMINAR: FRAMEWORKS OF INQUIRY IN EDUCATIONAL RESEARCH II
Drawing upon the knowledge and skills developed in Frameworks of Inquiry I, this course is designed to enhance students' ability to critically analyze existing research as a crucial element in completing their own doctoral research. Emphasis will be placed on the preparation of a critical literature review. By the end of the course students should be able to: review the components of a research proposal; develop the ability to evaluate research critically; conduct a literature review that will involve interpretation, evaluation, and synthesis of literature on a topic of their choice; refine a topic for dissertation research; and make an informed decision between the quantitative and qualitative sequences. PREREQUISITE(S): SCG 775

SCG 895 ADVANCED DOCTORAL RESEARCH SUPPORT SEMINAR:
This course is designed to assist doctoral students with the candidacy paper, the proposal and/or the dissertation research. Students will have the opportunity to set individual project goals. The course will incorporate classroom lecture, group discussion, individual assignments, and individual consultation in order to support students as they move toward completion. This course meets over 2 quarters and should be taken at the end of program coursework. PREREQUISITE(S): SCG 755 or 765

Science, Technology, Engineering and Math
**STEM 405 ECOLOGY FOR TEACHERS**
This course provides a broad survey of ecological principles through laboratory and field investigations appropriate in an urban setting. The course focus is on the use of local environments to promote awareness of and appreciation for the complexity, diversity and structure of the natural world while developing skills in hypothesis testing, experimental design and data analysis. Formerly SDV 405.

**STEM 409 MATHEMATICAL METHODS FOR MIDDLE SCHOOL SCIENCE TEACHERS**
This course develops the mathematical methods that support the teaching of science at the middle school level: proportional reasoning, rates, exponents and scientific notation, graphing, and elementary modeling. The course incorporates the use of technology such as calculators and spreadsheets for scientific analysis.

**STEM 410 TOPICS FOR TEACHERS**
Selected topics in science and science education. Formerly SDV 410.

**STEM 411 FOUNDATIONS OF PHYSICAL SCIENCE I**
This course explores the nature of scientific inquiry, using a historical case study of the development of classical physics in the work of Copernicus, Brahe, Kepler, Galileo, and Newton. It explores the roles of observation, classification, experiments, theory, and mathematical models in science as well as the character of scientific change. Formerly SDV 411.

**STEM 412 FOUNDATIONS OF PHYSICAL SCIENCE II**
Fundamental concepts of physics examined quantitatively: velocity, acceleration, surface area, volume, density. Elementary modeling for data analysis, including spreadsheets and data acquisition software. Scaling of physical quantities. Formerly SDV 412.

**STEM 413 LIGHT AND WAVES**
Fundamentals of wave motion with application to light, water, and sound. Teachers are introduced to a variety of physical science topics in the curriculum as well as an example of the extraordinary unifying power of physics concepts such as waves. Formerly SDV 413.

**STEM 420 CHEMISTRY FOR TEACHERS**
The structure and composition of matter. Physical and chemical change, examined from conceptual viewpoints which include atomic theory, stoichiometry, periodicity, bonding, equilibrium, thermodynamics and kinetics. Formerly SDV 420.

**STEM 421 CELL BIOLOGY FOR TEACHERS**
This course focuses on the chemical and cellular nature of living organisms, cell structure and function, and heredity. Enzymes, the movement of materials across membranes, photosynthesis, respiration, cell division, and basic genetics. Formerly SDV 421.

**STEM 422 EVOLUTION AND DIVERSITY FOR TEACHERS**
This course explores the subjects of biological evolution and species diversity. Topics covered include the history of our understandings of the origin and nature of species, mechanisms that produce evolutionary change, geographic variation and speciation, current theories and evidence of life's origin and the history of life on earth. Controversies in biological evolution, both scientific and cultural will be discussed. Formerly SDV 422.

**STEM 423 PLANT AND ANIMAL BIOLOGY FOR TEACHERS**
This course focuses on the structure and function of living organisms. Students will investigate how different organisms solve common problems of food acquisition, digestion and the distribution of nutrients, waste removal, gas exchange, maintenance of homeostasis and reproduction. While this course examines the diversity of living forms, there is a special emphasis on the structure and function of the human body. Formerly SDV 423.

**STEM 425 TOPICS IN LIFE SCIENCES FOR TEACHERS**
Diverse topics in Life Sciences appropriate for middle school and high school students. Offered occasionally. Formerly SDV 425.

**STEM 430 ASTROBIOLOGY FOR TEACHERS**
Astrobiology focuses on basic questions such as: How does life of any kind begin and develop? Does life exist elsewhere in the universe? What are the environmental limits for life? What is the future of life on the earth
and beyond? The course reviews the origin and evolution of life on Earth and goes on to examine the prospects of habitats capable of supporting life in our solar system, and the potential for planets and life to exist orbiting other stars. Students will work with NASA remote sensing data of the earth, the other planets, and their moons. Formerly SDV 430.

**STEM 431 ASTRONOMY FOR TEACHERS**
This course emphasizes astronomy particularly relevant to the middle school science curriculum. The structure of the solar system, motion of the sun, phases of the moon, familiarity with the night sky, stellar structure and evolution, galaxies, and introduction to cosmology. Students will be familiarized with student reading materials particularly appropriate for the combined teaching of science and reading. Students will make observations and use sky simulation software. Formerly SDV 431.

**STEM 432 GEOLOGY AND PLANETARY SCIENCE FOR TEACHERS**
Planetary formation and evolution. Plate tectonics and the rock cycle, including volcanism, planetary interiors, weathering, sedimentation, and metamorphism.

Formerly SDV 432.

**STEM 440 HEAT AND ENERGY FOR TEACHERS**
Concept of energy, its nature, forms, and transfer with applications to physical science and earth science. Definition of energy in terms of work, potential and kinetic energy, conservation of energy, thermal energy, solar energy, energy in earth systems. Formerly SDV 440.

**STEM 441 WEATHER AND CLIMATE FOR TEACHERS**
Basic physical and chemical processes that shape weather and climate. Solar radiation and the seasons, composition and structure of the atmosphere, atmospheric processes, human effects, historical and contemporary climate change. This course emphasizes quantitative methods. Formerly SDV 441.

**STEM 442 ENVIRONMENTAL SCIENCE FOR TEACHERS**
A general introduction to the scientific background of some of the most important environmental problems facing urban areas, the nation and the world. Population dynamics, water and energy resources, ecosystem degradation, extinction and the loss of biodiversity, and climate change. The course will include a field observation and experiment.

**STEM 490 SCIENCE TEACHING CAPSTONE**
Teachers will further examine current research on how students at the middle school level learn science concepts and conduct an action research project involving science teaching. PREREQUISITE(S): SDV 411, SDV 412, SDV 413 and six content courses. Formerly SDV 490.

**STEM 698 TOPICS FOR MATHEMATICS AND SCIENCE TEACHERS**
Diverse topics in teaching and learning of mathematics and science. These courses are designed for current and future teachers.

**STEM 699 INDEPENDENT STUDY**
Variable credit. PREREQUISITE(S): Consent of chair. Formerly SDV 699.

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Software Engineering

**SE 425 PRINCIPLES AND PRACTICES OF SOFTWARE ENGINEERING**
This course introduces students to the principles and methods of software engineering. Topics covered include software methodology, software requirements and specifications, software design, testing and validation, software evolution, and project management. Students will also be exposed to a number of popular tools used extensively in industry to support software engineering activities. PREREQUISITE(S): CSC212 or CSC262 or IM230

**SE 427 SOFTWARE QUALITY MANAGEMENT**
Quality management principles, tools, and methods applied to the software development process. Selected
techniques for continuous and incremental improvements in product and process such as defect analysis, control charts, risk assessment, quality control, quality improvement programs, quality function deployment, the capability maturity model, cleanroom engineering, and benchmarking. PREREQUISITE(S): IT 223 or consent.

**SE 430 OBJECT ORIENTED MODELING**
Object-oriented modeling techniques for analysis and design. Provides the tools and techniques needed to solve complex, real-world software engineering problems in an object-oriented manner, using the most effective elements of the Unified Process. The course covers the essential concepts and notation of the Unified Modeling Language (UML), the standard notation for object-oriented analysis and design. Team project. PREREQUISITE(S): IT 223 or consent.

**SE 433 SOFTWARE TESTING AND QUALITY ASSURANCE**
This course is designed for the software engineering professional to gain a greater understanding of the key ingredients in creating and/or managing a successful testing program to meet project needs. Topics covered include test lifecycle planning, test design & coverage analysis, complexity, levels of testing such as unit, integration, system, performance and stress testing. Best practice strategies in software testing such as verification & validation, early lifecycle testing, risk based testing and automation will also be examined including exposure to test automation methods and tools. PREREQUISITE(S): CSC 383 or SE430

**SE 450 OBJECT-ORIENTED SOFTWARE DEVELOPMENT**
Principle, techniques and tools of object-oriented modeling, design, implementation, and testing of large-scale software systems. Topics include design patterns, application frameworks, architectural design, and the applications in the software development process to improve the extensibility, maintainability, and reliability of software systems. PREREQUISITE(S): (CSC 383 or CSC 393) and (CSC 224 or CSC 212)

**SE 452 OBJECT-ORIENTED ENTERPRISE COMPUTING**
This course focuses on applying object-oriented techniques in the design, development, and integration of server-side enterprise applications using technologies such as servlets, Java Server Pages, and JDBC. Topics include web applications, multi-tier architecture, model-view-controller architecture, database connectivity, and security. PREREQUISITE(S): CSC 212 or CSC 224 or CSC 396.

**SE 453 ARCHITECTURE AND FRAMEWORKS FOR DEVELOPING CLIENT APPLICATIONS**
This course will focus on software architectures, frameworks, and techniques for developing web-based thin client applications as well as rich desktop client applications. Topics will include discussion on design and architectural patterns, such as model-view-controller pattern; survey of widely used development frameworks for building client applications, such as Struts, Java Server Face (JSF), Swing, and SWT, etc.; discussion of widely used techniques such as AJAX; evaluation of the strengths and weaknesses of these technologies for making technology decisions. Students will gain hands-on experiences in developing applications that utilizes these frameworks and techniques. PREREQUISITE(S): SE452.

**SE 456 ARCHITECTURE OF COMPUTER GAMES**
This course discusses the software architecture and the engineering of computer games. The topics include gaming platforms, libraries and frameworks for game development, techniques for accessing and managing low level devices and resources, and application of artificial intelligence. PREREQUISITE(S): SE 450 or GAM 474.

**SE 457 SERVICE-ORIENTED ARCHITECTURE**
An in-depth study of service oriented architecture (SOA) from the business, architectural, and technology perspectives. The business perspective will explain the imperatives behind SOA and discuss the significance of SOA in industry. The architectural perspective will discuss the different architectural models of software development and contrast these with SOA. The technology perspective will provide students with the opportunity to gain the required hands-on experience to analyze, design, implement and deploy SOA solutions that will meet both functional and non-functional requirements. Major topics include software architectures in practice, SOA development lifecycle, Enterprise Service Bus, SOA analysis and design methods, Web Services, and governance. PREREQUISITE(S): SE450 or CSC435

**SE 459 AGILE SOFTWARE DEVELOPMENT**
This course focuses on the fundamentals, principles, tools, and techniques in agile software development. Students will gain hands-on experiences in agile software development through projects dealing with various aspects of agile development, including planning, construction, testing, and integration. Students will be able to effectively participate in and manage agile software development as a result of their successfully completing this course. PREREQUISITE(S): SE 450

**SE 468 SOFTWARE MEASUREMENT/PROJECT ESTIMATION**
Software metrics. Productivity, effort and defect models. Software cost estimation. PREREQUISITE(S): Introductory Statistics and (SE430 or SE450)

**SE 469 SOFTWARE SAFETY**
Managing safety, the safety process, hazard analysis models and techniques, designing for safety, verification of safety. PREREQUISITE(S): SE 430 or consent.

**SE 470 SOFTWARE DEVELOPMENT PROCESSES**
This course will study recent developments in software engineering processes that aim to improve software quality and estimation of development cost and schedule. It will focus on the Unified Software Development Process, along with discussion on other software development processes including: eXtreme Programming (XP), Personal Software Process (PSP), Team Software Process (TSP), and Capability Maturity Model (CMM). PREREQUISITE(S): SE 430.

**SE 473 SECURITY ARCHITECTURE I**
This course focuses on the design and development of software for secure applications. Students will analyze and secure an existing application. Topics include: user authentication mechanisms; practical use of symmetric-key and asymmetric-key ciphers for ensuring secrecy and integrity; key distribution and management; cryptography, authentication, and authorization APIs; Kerberos. PREREQUISITE(S): C++ and CSC 373 and CSC 390 and (CSC435 or TDC 561) and SE 450

**SE 477 SOFTWARE AND SYSTEMS PROJECT MANAGEMENT**
Project Management is presented from a practitioner's view. The four basic building blocks of software project management: people, process, tools, and measurements are covered. Special emphasis is placed on professional standards such as the Project Management Book of Knowledge and IEEE Software Engineering Standards. Specific topics include Managing People, Selecting Project Tools, Leadership & Motivation, Software Development Processes, Estimation, Risk Analysis, Scheduling and Tracking, Leveraging Measurements, and Project Completion. Consideration is given to rapid development and project cultural issues. PREREQUISITE(S): Knowledge of the Software development life cycle model, for example through courses such as SE430, ECT455, IS425, MIS555 or through appropriate work experience.

**SE 480 SOFTWARE ARCHITECTURE**
Software architecture is a critical aspect of complex software systems. A system's architectural design is concerned with describing its decomposition into computational elements and their interactions. Architectural design tasks involve system decomposition; global control structures; protocols for communication, synchronization, data access; physical distribution of components; performance tuning; defining evolution paths; and selecting design alternatives. Major issues addressed include: architectural description, formal underpinnings, design guidance, domain-specific architecture, tools and environments. PREREQUISITE(S): SE 450.

**SE 482 REQUIREMENTS ENGINEERING**
Requirements Engineering (RE) plays a critical role in the software development process. This course will introduce related vocabulary, concepts, and techniques, and will examine the role of RE in software and systems engineering. The course will cover topics related to eliciting, validating, negotiating, analyzing, specifying, and managing requirements. Popular RE tools will also be introduced. PREREQUISITE(S): SE430 or SE450.

**SE 491 SOFTWARE ENGINEERING STUDIO**
Students will work in small teams to develop realistic software systems in a master-apprentice environment. The instructor will serve as a master/mentor/project leader. Students will apply knowledge and skills they have learned in previous course in solving real world problems. PREREQUISITE(S): SE 450.

**SE 511 PRACTICES OF GLOBAL SOFTWARE DEVELOPMENT**
This course studies the challenges and solutions for developing software in a global environment. Topics covered include strategic issues related to allocation of tasks; communication issues that arise due to distance, time zone differences, infrastructure support, geographical dispersion, and lack of information communication; coordination complexity; cultural issues, technical issues related to information and artifact sharing, and architectural design, and finally knowledge management issues. Some sections of this course will include a hands-on global development project in conjunction with teams of students at other universities, while other sections will focus on a more in-depth theoretical discussion of these issues and concepts. Prerequisite(s): SE 450 or SE 430 or IS 430 or PM 430.

A student may not take both IS 540 and SE 511 for credit toward a degree.

**SE 525 SOFTWARE SECURITY ARCHITECTURE**
Students in this course will learn architectural patterns for integrating security into software such as web applications. Topics include: an overview of software security; integration of authentication, access control, and auditing into software; programming with symmetric-key and asymmetric-key cryptography, including key distribution and key management, use of certificates, and SSL/TLS; security mechanisms in modern runtime environments, e.g., code signing, code verification, access control, and security policies. Students will get hands-on experience designing and implementing secure software. Prerequisite(s): CSC 435 and SE 450

SE 526 SOFTWARE SECURITY ASSESSMENT
Students in this course will learn how to conduct software security assessment to identify software vulnerabilities in software such as web applications and operating system services. Topics include: common software vulnerabilities and attack vectors; malicious payloads, including shellcode structure; and application review techniques, including fuzzing and code auditing. Students will get hands-on experience identifying vulnerabilities in software. Prerequisite(s): CSC 435

SE 529 SOFTWARE RISK MANAGEMENT
Identification, estimation, evaluation, planning, controlling, and monitoring of risk involved in the development, maintenance, operation and evolution of systems. PREREQUISITE(S): IT 223 and SE 430 or consent.

SE 533 SOFTWARE VALIDATION AND VERIFICATION
Techniques, methods and tools for software inspection and testing. Theory and applications of formal verification of programs. Techniques and tools for automated analysis of programs. PREREQUISITE(S): SE 450.

SE 546 SOFTWARE ARCHITECTURE AND DESIGN FOR DESKTOP APPLICATIONS
This course will introduce students to architecture, design and implementation issues for developing GUI-based desktop application. The goal is to understand the engineering aspect of user interface development -- that is the basic software architectures and designs that govern the development of graphical user applications including patterns like the Model-View-Controller and its derivatives, event-driven design, as well as addressing concurrency, performance, caching, and software packaging and distribution issues. The course will also provide an in depth exposure to the toolkits available in Java. Examples include JFC/Swing, JMF, JAF. Prerequisite(s): SE450.

SE 549 MODEL-DRIVEN SOFTWARE DEVELOPMENT
Advanced methods and techniques in software specification, modeling, and model-driven development. Topics include methods to software specification and modeling, formal specification languages, techniques for structural and behavioral modeling of software systems, and tools for analysis and transformation of software systems. PREREQUISITE(S): SE 430 or SE 450

SE 554 ENTERPRISE COMPONENT ARCHITECTURE
This course will focus on object-oriented component architectures for enterprise applications. Topics include: Enterprise Java Beans (EJB), Java Naming and Directory Interfaces (JNDI), Java Mail and Messaging Services. PREREQUISITE(S): SE 450 or SE 452.

SE 556 ADVANCED ARCHITECTURE OF COMPUTER GAMES
This course discusses the advanced issues in software architecture and the engineering of computer games. The topics include engineering and programming issues in graphics, scene management, kinematics, simulation, collision detection. Software design patterns and frameworks for computer games. Project management, configuration management, and quality assurance of computer game development projects. PREREQUISITE(S): SE 456 and CSC374 or instructor consent

SE 558 ARCHITECTURE AND DESIGN FOR MULTIPLAYER GAMES
Multiplayer games were made possible by the advances in networking technology, increases in processor speed and data storage. Today, the majority of successful game titles are equipped with a multiplayer capability. This technical course discusses the fundamental aspects of multiplayer game development such as: design techniques, architectures, client and server side implementation, time and event synchronization, databases. PREREQUISITE(S): (CSC383 or CSC393) and CSC374 or instructor consent

SE 560 STRUCTURED DOCUMENT INTERCHANGE AND PROCESSING
Document and data interchange among different applications is an extremely important aspect of software application development. This course will focus on emerging technologies associated with the Extensible Markup Language (XML), such as the Document Object Model (DOM), the Simple API for XML (SAX), the XML Stylesheet Language (XSL) and Transformation Language (XSLT), and XML Schema. Applications of these technologies will be discussed in conjunction with tools and techniques for parsing, transforming, and manipulating documents. PREREQUISITE(S): SE 450 OR (CSC 383 and SE 430).
SE 567 SOFTWARE RELIABILITY
The practical application and theory of software reliability models. Classification and comparison of software reliability models. Parametric estimation. PREREQUISITE(S): CSC 423 or SE 427 or SE 468 or consent of instructor.

SE 571 SOFTWARE MAINTENANCE
Maintenance characteristics, tasks, side effects, issues and techniques. Management considerations. Productivity in the maintenance environment. Structured technologies and maintenance. PREREQUISITE(S): SE 430 or consent.

SE 573 SECURITY ARCHITECTURE II
Design and construction of secure software systems, with an emphasis upon the security mechanisms available in modern programming languages and runtime environments. Topics include APIs for cryptographic techniques and key management; security mechanisms in modern runtime environments, e.g., code signing, code verification, access control, and security policies; design patterns for secure software systems. PREREQUISITE(S): SE 473.

SE 582 SOFTWARE-INTENSIVE SYSTEMS ENGINEERING AND MANAGEMENT
This course will introduce students to fundamental principles of systems engineering for large and complex software intensive systems. The course will include a study of systems engineering failures, and will cover topics related to problem frames; systems level modeling of hardware and software components, concept definition, design tradeoffs, risk assessment, interface definition and related systems engineering activities. Additional topics such as product line development, ultra-large scale systems, and engineering of safety critical systems will also be covered. PREREQUISITE(S): (SE 470 or PM 430 or IS 430) and (SE 430 or SE 482 or IS 485)

SE 590 ADVANCED TOPICS IN OBJECT ORIENTED TECHNOLOGY
This is an independent study course. PREREQUISITE(S): Consent of the instructor.

SE 591 SOFTWARE ENGINEERING STUDIO II
This is the continuation of SE 491. SE 491 and 591 must be taken as a sequence in two consecutive quarters. PREREQUISITE(S): SE 491.

SE 690 RESEARCH SEMINAR
Readings and discussion on current research topics. Students may register for this course no more than three times. PREREQUISITE(S): Consent of the instructor.

SE 691 RESEARCH SEMINAR CONTINUATION
This course is intended for students not registering in either SE 696 or SE 698. After registering for SE 690, students register for this course in each subsequent quarter until they complete the research. Students who fail to do so will be required to re-enroll in SE 690 to meet the requirement for completing that course. PREREQUISITE(S): SE 690

SE 696 MASTER'S PROJECT
(4 credit hours) Students may register for this course only after their advisor has approved a written proposal for their project. Independent study form required. PREREQUISITE(S): Consent of advisor.

SE 698 MASTER'S THESIS
(2 credits) Students may register for this course only after their advisor has approved a written proposal for their thesis. Students must continue to register for this course every quarter after their first registration in it until they complete their project or thesis to the satisfaction of their advisor. They earn two hours of credit for each such registration but only four hours of credit will apply for degree credit. PREREQUISITE(S): Consent of advisor. Independent study form required.

SE 699 SOFTWARE ENGINEERING RESEARCH CONTINUATION
Students register for continuation credit after registering for SE 698 in each subsequent quarter until they complete their thesis. Students who fail to do so will have to reregister for SE 698 to meet the requirement for completing that course. PREREQUISITE(S): SE 698.

in t}r?rt?? ??? ysis of multiple educational frameworks; recognize the components of a research manuscript; and identify a general topic area for dissertation research.

SCG 785 SEMINAR: FRAMEWORKS OF INQUIRY IN EDUCATIONAL RESEARCH II
Drawing upon the knowledge and skills developed in Frameworks of Inquiry I, this course is designed to enhance students' ability to critically analyze existing research as a crucial element in completing their own
doctoral research. Emphasis will be placed on the preparation of a critical literature review. By the end of the course students should be able to: review the components of a research proposal; develop further the ability to evaluate research critically; conduct a literature review that will involve interpretation, evaluation, and synthesis of literature on a topic of their choice; refine a topic for dissertation research; and make an informed decision between the quantitative and qualitative sequences. PREREQUISITE(S): SCG 775

SCG 895 ADVANCED DOCTORAL RESEARCH SUPPORT SEMINAR:
This course is designed to assist doctoral students with the candidacy paper, the proposal and/or the dissertation research. Students will have the opportunity to set individual project goals. The course will incorporate classroom lecture, group discussion, individual assignments, and individual consultation in order to support students as they move toward completion. This course meets over 2 quarters and should be taken at the end of program coursework. PREREQUISITE(S): SCG 755 or 765

Sociology

Graduate Course Descriptions - Current

SOC 401 ADVANCED INTRODUCTION TO SOCIOLOGY
A focused and intense introduction to the current state of the discipline of sociology: its basic concepts, theories, methodologies and research strategies. Students completing the course are expected to be able to engage successfully in the department's graduate program.

SOC 402 STATISTICS FOR THE SOCIAL SCIENCES
Introduction to quantitative and statistical reasoning in the social sciences, quantitative data analysis, and computer software.

SOC 403 SOCIAL POLICY AND SOCIAL CHANGE
Examines the process of policy-making and the effects of policies on individuals, organizations, and communities.

SOC 405 SOCIOLOGICAL PERSPECTIVES
Examines sociological theories, methods and concepts through a study of the work of contemporary sociologists.

SOC 411 SOCIAL RESEARCH
This course focuses on the logic of sociological inquiry, ethical issues of research, the various methods social scientists use, and research in applied settings. For Sociology MA students only.

SOC 412 DATA ANALYSIS
The implementation of a research project. Analytic techniques, data processing and the preparation of a written research report. PREREQUISITE(S): SOC 411

SOC 413 QUALITATIVE METHODS
An examination of qualitative methods in sociology: data collection and analysis, field research, life histories, unobtrusive measures and visual methods employing video and film equipment are emphasized.

SOC 414 LITERATURE REVIEW WRITING PROJECT
This course requires students to complete a paper reviewing the sociological literature on a topic of their choice. Successful completion of the literature review paper is one of the ways in which students may fulfill the final project requirement leading to the master's degree. PREREQUISITE(S): Instructor's consent.

SOC 415 WRITING A RESEARCH PAPER
This writing project is open to students who are working on their literature review, research papers, and thesis.

SOC 416 APPLIED ANTHROPOLOGY (CROSS-LISTED AS ANT 316)
(Cross-listed as ANT 316)

SOC 417 ETHNOGRAPHIC DOCUMENTARY FILM PRODUCTION
This course imparts the art, craft, and discipline behind the making of sociological ethnographic documentary films. Throughout the course students learn ethnographic concepts and methods, develop film criticism faculties, and build a film production skill set.

**SOC 417 ETHNOGRAPHIC DOCUMENTARY FILM PRODUCTION**
This course critically examines the history of documentary filmmaking and criticism in the social sciences and humanities. Students analyze documentary films created by social scientists and non-social scientists over the past 100 years.

**SOC 418 DOCUMENTARY FILMS IN SOCIAL SCIENCES**
Introduction to advanced level studies in applied urban sociology: contemporary urban theory, research, and policy issues.

**SOC 420 URBAN SOCIOLOGY**
Theories and methods of contemporary anthropology are employed to analyze a variety of topics of urban phenomena including the process of urbanization, urbanism-urban culture, subcultures, ethnic life styles—and the notion of images of cities.

**SOC 422 URBAN AND COMMUNITY ANALYSIS**
Qualitative analysis of urban issues including social-area analysis, patterns of segregation, neighborhood change, and other selected topics.

**SOC 423 RESEARCH ON URBAN CULTURES**
An in-depth approach of a major component of urban life with a focus on federal and local policies, programs and issues.

**SOC 425 STRATEGIES OF COMMUNITY ORGANIZATIONS**
Strategies and techniques used in the formation and process of community organizations.

**SOC 426 URBAN DEVELOPMENT POLICIES**
Community agencies viewed as problem-solving organizations. Concentration on the impact of state and local government on community organizations and how community organizations influence social policy. Sequel to SOC 425.

**SOC 430 MEDICAL ANTHROPOLOGY (CROSS-LISTED AS SOC 319)**
Analysis of the social system of health care: practitioners, organizations, patients, and their multiple interrelationships. An evaluation of problems in health care delivery systems.

**SOC 431 SOCIOLOGY OF HEALTH, ILLNESS AND MEDICINE (CROSS-LISTED AS MPS 534)**
Analysis of the concept of welfare, evaluation of the social organization of welfare and the problems of welfare service systems. The interrelationships between welfare and the family, employment, health and crime are explored.

**SOC 433 THE SOCIOLOGY OF EDUCATION**
Analysis of educational organizations and their effects—including characteristics of institutional structures, teaching as an occupation, and the relationship between educational attainment and social mobility.

**SOC 434 YOUTH SERVICES: HEALTH AND WELFARE**
Review of research on various youth problems (eg., substance abuse, pregnancy, runaways) and consideration of efforts at amelioration and control.

**SOC 435 STRUCTURE OF HEALTH CARE ORGANIZATIONS**
A case study approach emphasizing the interaction of the clinical, administrative, and other components of the health care team, the formulation of policy, and the control and distribution of resources.

**SOC 436 YOUTH SERVICE DELIVERY SYSTEMS**
Consideration of the current state of youth services in Illinois. Analysis of the administration of agencies and their programs: program design, the funding process, intervention strategies.
SOC 437 HEALTH CARE DELIVERY SYSTEMS (CROSS-LISTED AS MPS 537)
Consideration of the current state of health care delivery in the United States, the growth and projected
direction of health care in the future. Implications of national policy on local delivery; cross-national
comparisons and economic conditions will be considered.

SOC 438 SOCIOLOGY OF SUBSTANCE USE & ABUSE
Sociological perspectives on substance use and abuse, related high-risk behavior, drug traffic, community
impact, and prevention and public policy.

SOC 440 LAW AND SOCIAL SCIENCE
Analysis of the American legal system as an instrument of social control, social change, and social reform.
The impact of social science research on public policy decisions.

SOC 441 PUBLIC HEALTH AND HIGH RISK BEHAVIOR
This course brings sociological theory, concepts, and methods to bear on HIV/AIDS, hepatitis B and C (HBV,
HCV), and other adverse health outcomes prevalent among injection drug users (IDUs), men who have sex
with men (MSM), and "high risk heterosexuals" (HRHS).

SOC 442 CRIMINAL JUSTICE: HISTORY, THEORY, AND ANALYSIS
Study of major criminological theories and their application to systems of corrections. Present trends at
federal, state, city and private correctional institutions.

SOC 443 LAW AND ADMINISTRATION OF JUSTICE
Analysis of legal systems and their implementation; jurisprudence and its role in the development and
change of legal systems; role of the courts and the police as related to community social problems.

SOC 444 POLICING INEQUALITY
Examination of the policies and practices of law enforcement agencies and personnel and their impact on the
communities they serve.

SOC 445 TRAFFIC: THE SOCIAL ORGANIZATION OF CHICAGO'S ILLICIT DRUG ECONOMY
This course examines the social organization of Chicago's illicit drug trade and attempts to make appropriate
and judicious research-based generalizations to economies, cultures, and societies outside of the city.

SOC 446 LAW ENFORCEMENT POLICY ISSUES
Examines the development, implementation, and evolution of formal and informal policies and procedures
governing police agencies, correctional facilities, probation and parole systems, and the courts. Policy
enactment on the "front lines" of law enforcement bureaucracies is emphasized.

SOC 447 SOCIAL CONTROL AND SOCIAL DEVIANCE
Examines theories and research on the social organization of institutions that label and process deviants.

SOC 448 STREET GANGS
Examines the problems associated with street gangs and "troublesome youth groups" in the United States and
Europe. Classical and contemporary theories of gang formation and proliferation are reviewed. Both
quantitative and qualitative research on gangs are studied. Gang reduction policies and programs (national
and local) are scrutinized. Emphasis is placed on the street gang's relationship with other organizations and
social actors in the same "habitat."

SOC 449 CRIMINAL ORGANIZATIONS
The problem of organized crime in American society is examined. Both traditional and emerging groups are
studies. The ethnic succession and alien conspiracy theories are reviewed. The importance of social structural
influences for the development of criminal organizations is emphasized.

SOC 450 ADVANCED STATISTICS I (CROSS-LISTED AS PSY 410)
Advanced Statistics I (cross-Listed As Psy 410)

SOC 451 HEALTH POLICY ANALYSIS: INTERNATIONAL PERSPECTIVES
In this course, we will learn and discuss the foundations of international health policy analysis by engaging in
health policy analysis. In an international comparative context, we will study the relationship between social
organization, knowledge about health and illness, the development of health policies and the resulting health
and illness outcomes.

SOC 452 MODERNITY, GLOBALIZATION AND SOCIAL THEORIES
This course will review classical and contemporary sociological work in both modernity and globalization and
will help students assess if that social theory still allows us to understand social reality or whether we need to create a new set of sociological propositions to understand our present and future.

**SOC 455 CHILDHOOD, FAMILY, PUBLIC POLICY**
Examines contemporary public policy issues and relevant research concerning parenting, marriage, household structure, and family formation, with a focus on the U.S.

**SOC 460 SOCIOLOGY OF THE FAMILY**
Examines demographic trends in this century, recent literature on women and men, wives and husbands, children and parents. Some comparative material is included.

**SOC 461 SOCIOLOGY OF YOUTH**
Critical analysis of literature on nondelinquent youth; focus on the social contexts within which the transition to adulthood occurs.

**SOC 462 SOCIALIZATION**
Perspectives on the individual's acquisition of patterns of behavior and culture in social groups.

**SOC 463 SOCIAL PSYCHOLOGY**
The influence of group life on personality development, social interaction, and social behavior.

**SOC 464 SOCIAL INEQUALITY AND STRATIFICATION**
An analysis of inequalities in power, wealth and prestige with an emphasis on the concept of social class, trends in social mobility, and relationships to current social topics such as housing, welfare and political participation.

**SOC 465 INTERGROUP RELATIONS**
Theoretical perspectives on racial, ethnic, gender, sexual orientation and differentially abled groups emphasizing processes of group formation, patterns of prejudice and discrimination, and an evaluation of methods to reduce prejudice and discrimination.

**SOC 466 SOCIOLOGY OF SOCIAL MOVEMENT**
Study of social trends, social movements, communications, and crowd behavior. Emphasis on processes of social change, includes examination of historical and cross-cultural case material.

**SOC 467 ORGANIZATIONS**
The functioning, premises, and consequences of formal organizations will be considered using a variety of perspectives.

**SOC 468 SOCIAL DEVIATION (CROSS-LISTED AS SOC 304)**
Research and theory in the sociology of deviant behavior, emphasis upon such topics as the labeling of deviants, the analysis of deviant careers, patterns of deviant socialization, and the roles of agents or agencies of social control.

**SOC 469 SOCIOLOGY OF LIFE CYCLE**
A look at the changing age composition of the population; meaning and societal definition of aging, the different types of responses to growing older, and the various social programs designed for the aged.

**SOC 470 GENDER AND SOCIETY (CROSS-LISTED AS MLS 447 & WMS 460)**
Theory and research on roles of men and women, sexual behavior and patterns of gender inequality.

**SOC 471 SOCIOLOGY OF KNOWLEDGE**
An analysis of the social forms of knowledge and the social processes by which individuals acquire this knowledge. The institutional organization and social distribution of knowledge.

**SOC 472 SOCIOLOGY OF RELIGION**
An historical and contemporary analysis of the interrelationship between religion and society. Emphasis upon the sacredsecular and church-sect typologies, new religious movements and religion's contributions to societal values, beliefs and meaning systems.

**SOC 473 THE DILEMMA OF THE MODERN AGE (CROSS-LISTED AS MLS 460)**
(Cross-listed as MLS 460) The crisis of the individual's place in society and in the world itself-the dilemma of modernity-is exposed through social science, philosophy, literature, art, and music. The distinctive features of and responses to modern culture-individualism, alienation, and depersonalization-are examined through the multiple perspectives that form the modern mind.
**SOC 474 POPULATION PROBLEMS (CROSS-LISTED AS SOC 271)**
An examination of population related problems and issues facing nations today. Selected topics include comparative population policies and their societal implications, population control, mortality patterns, changing patterns of illness and epidemic disease, contemporary migration and refugee patterns and related national policies, and the societal responses to changing age structures.

**SOC 475 SOCIOLOGY OF WORK (CROSS-LISTED AS MLS 443)**
Examination of the nature, meaning and history of work and leisure in Western culture; and the relationship of work and leisure to issues associated with the contemporary concept of "quality of life".

**SOC 476 WORK AND LEISURE IN THE FUTURE (CROSS-LISTED AS MLS 448)**
(Cross-listed as MLS 448) There has been a great change in the meaning, form and value assigned to work and leisure in society. Many of these changes have come to be characterized as inevitable consequences of life in post-industrial society. This course: 1) speaks to identify the factors that are shaping the future of work and leisure and 2) will explore futuristic scenarios that challenge the position of "work as a central-life meaning."

**SOC 477 SEX, SEXUALITY AND POLITICS**
Focus on sexuality as one of the central organizing ideologies shaping the fabric of our social life. Topics covered include the medicalization of sex, sex and race, pornography, sex and globalization, and gay liberation movement, etc.

**SOC 479 MEN, MASCULINITY AND POWER**
This course reviews the development of men's studies and its connection with the development of women's studies. It examines the construction of masculinity and the issue concerning gender inequality.

**SOC 480 POPULAR CULTURE AND THE ARTS (CROSS-LISTED AS SOC 386)**
(Cross-listed as SOC 386) The course explores topics in popular culture and the arts from a sociological perspective. The focus includes specific arts (film, music, photography, etc), subcultures of artists and performers and the impact of the market on the arts and popular culture.

**SOC 481 SELF AND SOCIETY**
This course examines sociological perspectives on self and society. In particular, the course will focus on the way that self and society are mediated through an analysis of small group interaction. Group interaction mediates individual action and social structure, therefore making the study of small group interaction generalizable to larger social patterns of organization.

**SOC 487 SOCIOMETRY OF CELEBRITY**
"Celebrities are known for being well-known." The course explores the role of media and fans in the making of celebrity and considers celebrity as a key feature of contemporary society.

**SOC 490 AFRICAN-AMERICAN CULTURE (CROSS-LISTED AS SCG 450/LSE 450)**
(Cross-listed as SCG450/LSE450) Intended for teachers and students of society in order that they may examine the contributions of the African American community to American culture; gain a functional understanding of the social, economic and political development of blacks in America; gain an insight into problems created by racism and social construction of race.

**SOC 491 AFRICAN-AMERICAN SOCIAL THOUGHT AND SOCIAL ACTION**
The course examines a unique African-American community-service tradition. This tradition embodied in a social thought perspective merges direct social action with intellectual ideas to improve conditions of America's black community. Contributions of social scientist and social activists will be used to demonstrate this perspective and to discuss sociology topics as community, race and social change.

**SOC 492 ERADICATING WHITE RACISM**
This graduate seminar addresses key dimensions of the social construction Whiteness (how British, Jews, Irish, Italians, etc. became White) and how the consequence White racism (denial of opportunity to non-Whites) in the United States perpetuates a system of racialized inequality. The seminar is designed to prepare students for critical self-reflection, self-appraisal, and social change.

**SOC 493 VISUAL SOCIOLOGY**
A sociological view of documents that record social reality. These documents primarily include photographs but can also include paintings and sculpture.

**SOC 494 RACISM AND RESISTANCE**
In this course, although we will be particularly interested in the way White Supremacy is created and maintained in the post-civil rights era, we will ground our examination in the histories that created our
present. We will end the course with a frank discussion of what can be done to resist racism and racial oppression in our own lives.

**SOC 495 SPECIAL TOPICS IN SOCIOLOGY**
Special courses will be offered as students and faculty identify selected topics of common interest.

**SOC 498 INTERNSHIP**
Students may be placed with agencies where they will have the opportunity to participate in activities such as research and counseling. Credit may vary but is subject to the limit of eight quarter hours. **PREREQUISITE(S):** Permission of instructor required.

**SOC 499 INDEPENDENT STUDY**
(prereq)

**SOC 500 THESIS RESEARCH**
The thesis research should culminate in the acceptance of a thesis. Four quarter hours, one registration. **PREREQUISITE(S):** Permission.

**SOC 510 MA PROJECT COMPLETION**
Students may register for this class if they are engaged in work on a writing project (thesis or MA project). Registration requires certification by the chair that the student is engaged in research or writing. The course does not apply to completion of an IN in a class. This course may be taken at most 3 times.

**SOC 601 ACTIVE STUDENT STATUS**
Registration in this course provides access to the library and other university facilities. There is no indication whether or not the student is working on the writing project. Non-credit. $40.00 fee.

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**Spanish**

**SPN 406 HISPANIC LITERATURE OF THE CARIBBEAN**
Topics include Cuban, Puerto Rican, Dominican, Afro-Caribbean. Graduate standing required.

**SPN 411 CERVANTES**
This course focuses on Miguel de Cervantes's *Don Quijote*. It examines how this "first modern novel" responds critically to developments in Renaissance literature, religious and political thinking, and theories of fictional and non-fictional representation.

**SPN 432 NINETEENTH-CENTURY SPANISH NOVEL**
This course is based on the reading, discussion and critique of major representative works in the novel of Spain of the 19th century.

**SPN 451 SPANISH IN THE U.S.**
An introduction to the varieties of Spanish spoken in the U.S. Includes code-switching, language maintenance and language policy.

**SPN 452 SPANISH PHONOLOGY AND PHONETICS**
An in-depth study of the language's sound system and intensive pronunciation practice. Advanced knowledge of Spanish is a prerequisite.

**SPN 477 PERUVIAN REALITIES IN A MULTICULTURAL SOCIETY: HISTORY, CULTURE, POLITICS, VIOLENCE & SOCIAL JUSTICE**
This interdisciplinary course will introduce students to the history, culture, literature, politics, and general life of the peoples of Peru.

**SPN 497 SPECIAL TOPICS IN SPANISH**
See schedule for current offerings.

**SPN 498 STUDY ABROAD**
**SPN 498 INDEPENDENT STUDY**  
Variable credit. Permission of chair and instructor required.

**SPN 499 INDEPENDENT STUDY**  
Variable credit. Permission required.

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### Strategy Execution Valuation

**SEV 611 RETURN DRIVEN STRATEGY**  
This course provides a framework that will enable Kellstadt students to make a significant impact on the future of their organizations and their careers. The seminar course focuses on Return Driven Strategy including the 11 tenets of successful business strategy, leveraging genuine assets, significant forces of change and strategic valuation. This seminar will focus on a deep analysis of the strategies and successful value creation of great companies. Each student will participate in a team project to apply the strategy tenets of Return Driven Strategy to an organization. The seminar-driven course will include an executive seminar session for the morning session of the first day which will include executives attending the session for executive education. This course is led by Dr. Mark L. Frigo, Director of the Center for Strategy, Execution and Valuation. **PREREQUISITE(S): ACC 500, ACC 555 or Instructor Consent.**

**SEV 621 STRATEGY EXECUTION**  
The course examines the latest developments in strategy execution. It includes strategic performance measurement, the balanced scorecard, strategy maps and value-based management as frameworks for executing strategy. The course will focus on the latest developments in Strategic Risk Management and the implications for strategy and performance measures. We will study how high performance companies measure and manage performance, strategic risk, and corporate sustainability performance, as well as the ethical dimension of strategy and execution. **(This course is accepted as a core course the SEV Concentration and can be used as course in the Management Accounting and Financial Planning and Control Concentrations). PREREQUISITE(S): ACC 500, ACC 555 or instructor consent**

**SEV 641 STRATEGIC VALUATION**  
This course surveys valuation methods, forecasting techniques, and practical methods for driving valuations from strategic corporate analysis. The course shows the link between strategic analysis and valuations - converting our qualitative understanding of company initiatives into quantitative forecasts and valuation models. The guiding principles for developing valuation models, and the tools and techniques for enhancing that analysis are introduced. This course builds a skillset for evaluating other valuation models and a first-hand experience in building models for various companies in differing settings. The course differs from traditional treatments in its focus on the actual building of valuation models directly from financial statements and the valuation projects based on real-time data This course is co-designed and co-taught by Dr. Mark L. Frigo, and Joel C. Litman, Clinical Professor of Business Strategy at DePaul’s Kellstadt Graduate School of Business. They have been combining their efforts in the research, study, and development of business strategy models and frameworks for execution and value-creation and have assisted a wide range of public and private companies in the application of these concepts. **PREREQUISITE(S): FIN 555 and SEV 611 or SEV 621 or instructor permission**

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### Study Abroad Program

**SAP ARCH02 SHORT-TERM PROGRAM: ARGENTINA AND CHILE**  
This short-term December intercession program explores the history, culture, economics, and politics of Argentina and Chile. The program includes meetings with university students and faculty, representatives of the arts, domestic and foreign businesses, the U.S. expatriate community, and Consular officials, as well as
visits to cultural and historical institutions. The Program includes two coordinated courses taken in the fall and winter quarters.

**SAP BAHM02 SHORT-TERM PROGRAM: BAHAMAS**

This short-term December intercession program to the Bahamas is for students interested in history, archaeology, and applied anthropology. During this three-week program, students explore the Bahamas' history and culture in Nassau, San Salvador, and Abaco. In addition, students participate in either an archaeological research project covering slavery and emancipation or an applied anthropological research project examining migration and community development. The program includes two coordinated courses, one in history and one in anthropology taken in the fall and winter quarters.

**SAP BRUS01 SHORT-TERM PROGRAM: SPS BRUSSELS**

This short-term graduate program to Belgium allows students to broaden their perspective on public-policy analysis and public service management in an international context. The course explores how globalization is affecting national governments and traditional cultures while encouraging the creation of international non-profits and supra-national governing agencies. Students will learn how large agencies, such as the European Union and NATO, are strengthening relationships and working more closely with grassroots organizations throughout the world.

**SAP BRZL02 SHORT-TERM PROGRAM: BRAZIL**

This short-term December intercession program to Brazil is designed for students from all colleges. Visiting three cities in Brazil, the course focuses on Information Technology (IT) in Brazil from multiple perspectives. Students learn about the history and development of IT in Brazil, the role it plays in economic development as well as its socio-cultural impact. In addition to seeing some of the highlights of the city, the participants will conduct a number of site visits to businesses, government offices, non-governmental organizations and institutions of higher learning. The program is open to graduate and undergraduate students from any college at DePaul. The program starts with several pre-departure sessions and continues through the winter quarter with meetings scheduled upon return.

**SAP BRZL03 SHORT-TERM PROGRAM: SPS BRAZIL**

This short-term program is designed to provide students with an understanding of social area analysis, neighborhood change, land use, and other topics by exploring the planning initiatives underway in Curitiba, Brazil, one of the most innovative urban areas in South America. The program site serves as an "urban laboratory" to evaluate a wide range of policies intended to enhance the efficiency and "livability" of a metropolitan region, improve public services, and support the development of critical infrastructure. At the host institution, the Pontificia Universidade Catolica do Parana (PUCPR), students critically evaluate how various strategies can be used to promote harmonious development and economic improvement in complex metropolitan areas involving many different units of government. They also compare the strategies used in Curitiba with those used in Chicago.

**SAP CHNA03 SHORT-TERM PROGRAM: CHINA (COMMERCE)**

This business seminar to Beijing and Shanghai focuses on the evolution of ownership structures in China spurred by the country's membership in World Trade Organization (WTO). Through visits to majority-Chinese owned companies, Joint Ventures between Chinese and foreign companies, as well as wholly foreign owned companies, students have the opportunity to explore China's changing economic and regulatory structures and gain an understanding of how Chinese business culture varies across companies according to their different ownership structures.

**SAP CHPS01 SHORT-TERM PROGRAM: SPS CHIAPAS**

This short-term program in Chiapas, Mexico focuses on sustainable development and indigenous rights in the Mayan cultures of Chiapas, Mexico. Participants learn about development and sustainability though meetings with fair trade cooperatives, women's organizations and Mexican and international nongovernmental organizations (NGOs). They learn about the effect of globalization on indigenous economies, organizations, and identities, as well as, the ongoing Chiapas struggle for democracy, justice, and dignity. Although language study is not a pre-requisite, Spanish-speaking students could maximize their learning in this program.

**SAP CZAU02 SHORT-TERM PROGRAM: CZECH & AUSTRIA (COMMERCE)**

This short-term seminar to Prague and Vienna will broaden your general awareness of the international business climate of Central Europe. You will be provided with an understanding of the business, political and educational issues affecting this region's transition from a centralized to a market driven economy.

**SAP DUBL01 SHORT TERM PROGRAM: SPS DUBLIN**

These summer seminars in Dublin are offered by the School of Public Service in conjunction with All Hallows College in Dublin. The courses are taught by American and Irish faculty. There, they explore public service
management and strategy as applied in non-government sectors, such as health care, social service, associations, education, and the arts. The program offers one-week, executive-style courses that may be taken in sequence. Additional program meetings are held on DePaul's campus prior to and after travel.

**SAP FRSW02 SHORT-TERM: FRANCE & SWITZERLAND (COMMERCE)**
Exploring the tourism industry in France and Switzerland, two of the most popular travel destinations in Europe, students compare and contrast customer behavior trends and tourism operations in these countries and the United States. In France, students concentrate on the infrastructure of transportation, lodging, food and beverage, and tourism opportunities for visitors. During the stay in Switzerland, students learn about regional transportation, the role of sports in tourism, and the cultural influences of national groups on the tourist experience. A major theme of the seminar is the concept of "a stranger in a strange land," providing students with a heightened awareness of what a traveler experiences, including the impact of jet lag, confusion in customs, and language difficulties with directions, instructions, explanations, and different foods.

**SAP GMN03 SHORT-TERM PROGRAM: GERMANY (COMMERCE)**
This short-term seminar will focus in Munich and Berlin, which is one of Germany's biggest industrial centers. Once a symbol of Cold War division, Berlin today is a link between Western and Eastern Europe. The Berlin-Brandenburg capital region lies at the very heart of an expanding European Union and offers many new and exciting opportunities for the future! Culturally this seminar will take you to Dachau and many other on a WWII tour of Berlin.

**SAP HKTL02 SHORT-TERM PROGRAM: HONG KONG & THAILAND (COMMERCE)**
In this business seminar, students will experience Hong Kong and Bangkok, two of the most beautiful, exciting locations of the 21st century. Through various company and site visits, students gain a unique cultural experience as well as the knowledge of global business management and organizations functioning in a foreign environment.

**SAP INDA02 SHORT-TERM PROGRAM: SPS INDIA**
This short-term December intercession study abroad program creates learning opportunities for students to understand development challenges and the role of NGOs, the government, and for-profit entities in developing and implementing policy initiatives related to climate change, rural development, healthcare, education, gender initiatives, microfinance and micro-enterprise, micro-farming and organic farming, water management and watershed development. Students have the opportunity to interact with government administrators and leaders, Indian graduate students and program beneficiaries in rural and urban areas. Students complete four online learning modules prior to leaving for India.

**SAP INDA05 SHORT-TERM PROGRAM: INDIA (COMMERCE)**
This short-term business seminar provides students the opportunity to examine India's changing macro-environment (political, economic, cultural and demographics) and its fledging micro-environment (information services, manufacturing, retail and financial). During the program, students visit various Indian companies in several major urban centers such as Mumbai, Pune, Bangalore, and Delhi. In addition, students have the chance to visit specific rural areas to become acquainted with domestic-type NGO initiatives.

**SAP JAPN04 SHORT-TERM PROGRAM: JAPAN (COMMERCE)**
This short-term seminar will focus on SMEs and their drive to accelerate into the 21st Century behind smart, unconventional, strategies and partnerships and local-community leadership. During the seminar, students will be exposed to the traditional Japan national culture juxtaposed against a new paradigm of industry innovation and entrepreneurship. Students will visit both large traditional firms as well as non-traditional entrepreneurial SME firms involved in product and process innovations across several industry sectors.

**SAP JAPN05 SHORT-TERM PROGRAM: JAPAN (CDM)**
This short-term December intercession program in Japan is open to undergraduate and graduate students in CDM who have a strong interest in computer gaming and animation. A 2-week trip to Tokyo and Kyoto takes students to visit several gaming and animation companies in Japan. Touring studios and meeting with their developers and managers help students learn the characteristics and practices of Japan's gaming and animation industries. Students also learn about issues involved in developing games and animation for the global market, and strategies for international promotion. In addition, the program introduces some of the latest and upcoming technologies in the field. Throughout the trip, students learn about the culture of Japan and how it is reflected in Japanese computer games and animation films.

**SAP JRDN01 SHORT-TERM PROGRAM: SPS JORDAN**
This short-term summer study abroad program to Jordan is designed for graduate students in Public Service. The program increases intercultural and managerial capacity of professionals interested in, or currently working with, refugees or with populations with Arabic or Middle Eastern origin. The immersion activities and
international service learning increases students' knowledge of refugees in Islamic contexts in Jordan. Participants will have the opportunity to study Arab culture and its impact on cross-cultural communication and service organizations in Jordan.

**SAP KNYA02 SHORT-TERM PROGRAM: KENYA (SPSWS)**
This short-term December intercession program offers graduate students the opportunity to study health, social welfare and development needs in metropolitan and rural Nairobi during the December intersession. Students will spend 2 to 3 weeks visiting schools, religious missions, community cooperatives, relief agencies and/or governmental offices to gain appreciation for the challenges and opportunities confronting Kenya and other African nations.

**SAP KNYA04 SHORT-TERM PROGRAM: KENYA & TANZANIA (SNL)**
This program prepares students for lives in an increasingly globalized world by engaging issues and questions of the East African experience, including foreign pressures and influences on indigenous values and social justice dilemmas like class marginalization and the impacts of globalization on lifestyles and economies. Social and cultural exploration in which simple observation serves as a powerful tool for uncovering deeper meanings in everyday events in the lives of Kenyans and Tanzanians provides students with experiences to which they compare their lives in the United States through personal reflection. The participants' ongoing dialogue with local cultures and peoples raises consciousness on global issues of justice, peace, politics and traditions. In addition, students have the chance to explore the landscape and the major natural monuments of both countries.

**SAP LEUV95 TERM PROGRAM: LEUVEN, BELGIUM (W-S)**
This term-long study abroad program in Fall and Winter-Spring offers upper level undergraduates an exciting opportunity to intern with a member of the European Parliament or for a non-governmental organization affiliated with the EU government. In addition to their internship, students take courses and live at the Louvain Institute for Ireland in Europe located in the Irish College. Winter-spring students earn a total of 27 credits: 4.5 credits for the internship and 4.5 credits for each of the five courses.

**SAP LEUV98 TERM PROGRAM: LEUVEN, BELGIUM (AQ)**
This term-long study abroad program is offered in Fall and Winter-Spring. A highlight of this program is the opportunity to intern with a member of the European Parliament or for a non-governmental organization affiliated with the EU government. In addition to their internship, students take courses and live at the Louvain Institute for Ireland in Europe located in the Irish College.

**SAP PARI93 TERM PROGRAM: PARIS, FRANCE (ALLIANCE GRAD SUMMER)**
This graduate study abroad program offers an opportunity for graduate students in Philosophy to study in Paris to increase proficiency in French. Courses are offered on PASS/FAIL basis.

**SAP PARI94 TERM PROGRAM: PARIS, FRANCE (ALLIANCE GRAD SQ)**
This graduate study abroad program offers an opportunity for graduate students in Philosophy to study in Paris to increase proficiency in French. Courses are offered on PASS/FAIL basis.

**SAP PARI95 TERM PROGRAM: PARIS, FRANCE (ALLIANCE GRAD WQ)**
This graduate study abroad program offers an opportunity for graduate students in Philosophy to study in Paris to increase proficiency in French. Courses are offered on PASS/FAIL basis.

**SAP PARI98 TERM PROGRAM: PARIS, FRANCE (ALLI GRAD AQ)**
This graduate study abroad program offers an opportunity for graduate students in Philosophy to study in Paris to increase proficiency in French. Courses are offered on PASS/FAIL basis.

**SAP PERU02 SHORT-TERM PROGRAM: PERU**
This Summer study abroad program aims to introduce students to the history, culture, economics and politics of Peru within the context of Peru's post-internal war process of reconstruction. Special emphasis will be given to social structure, gender issues and distribution of power. The purpose of this program is to immerse students in the culture of Peru, providing an experiential learning experience that complements academic and artistic learning, with intellectual investigations that concern the nature of service, social justice, democracy, globalization and human rights in contemporary Peru. This program responds to the College of Liberal Arts and Social Sciences' goals through the development of critical thinking and self-reflection while fostering social and cultural enrichment in an environment of respect and support.

**SAP PHLP01 SHORT-TERM PROGRAM: SPS PHILIPPINES**
The Manila (Philippines) study abroad program in the December intercession is an opportunity to learn applied research methods and monitoring and evaluation approaches for urban poverty reduction. The program is a collaborative effort between DePaul University and Adamson University in Manila. The program places DePaul
graduate students in collaborative teams of Adamson faculty and community leaders for evaluating the works of the Vincentian Center for Social Responsibility (VCSR) among marginalized sectors and informal settlers of Metro Manila. Students enhance their research skills for development research and monitoring and evaluation (M&E). The cross-cultural and service-learning character of this program offers to students a perfect opportunity to become effective, ethical and collaborative international public service researchers.

SAP PPRC02 SHORT-TERM PROGRAM: PUERTO RICO
This short-term study abroad program provides students the opportunity to witness and participate in transnational processes. Through readings, lectures, site visits, and service learning projects that link Puerto Rico to Chicago, students explore the contexts from which the Puerto Rican nation emerges. The program integrates service learning in Puerto Rico and in Chicago, utilizing the Steans Center's "Bringing It Home" model as a means to examine the direct political, economic, and cultural connections between Puerto Rican communities on the island and Puerto Rican communities in Chicago.

SAP SGMY02 SHORT-TERM PROGRAM: SINGAPORE & MALAYSIA
This short-term seminar explores the cultural and historical links between Singapore and Malaysia while analyzing the similarities and differences in their economic strategies. With the influence of colonialism and rapid economic growth after independence, the seminar provides insights into the economic and political development of two important South Asian societies. Students participate in meetings with government agencies, financial institutions, macro- and micro-businesses and media agencies to learn about a variety of issues.

SAP SHNG02 SUMMER: SHANGHAI/CHINESE LANGUAGE
This summer language program in Shanghai, China allows students to study intensive Chinese. The program is designed for students who have the equivalent of at least one year of Chinese language learning. Intensive language study will be offered at Fudan University, one of China’s most prestigious institutions. Private tutoring and cultural activities such as tai chi, martial arts, and Chinese calligraphy, also will be provided during weekdays to strengthen language and cultural learning. Students also learn about contemporary life in China through lectures, readings, planned excursions and interactions with local people and students. This program is designed for students focused on intensive language study. Students enroll in a course about Chinese society and culture taught by DePaul faculty members during the spring quarter prior to travel.

SAP TUSC01 SHORT-TERM PROGRAM: SPS TUSCANY
This short-term summer study abroad program in Tuscany, Italy focuses on the study of European food policies and the comparative analysis with the American food system. The program benefits from the collaboration with the International Slow Food Movement and its Foundation for Biodiversity.

SAP VIET02 SHORT-TERM PROGRAM: VIETNAM
This program offers students an opportunity to travel throughout Vietnam and explore multiple facets of its 1,000-year history, including its history of war in the twentieth century and its global emergence in the twenty-first. This program focuses on how Americans understand and interpret their encounters with other cultures, not only looking at how Americans have perceived Vietnam, but also how contemporary American culture has adopted, and been transformed by, its encounter with Vietnam. The trip features a variety of academic and cultural visits in locales such as Ho Chi Minh City, Hoi An, Hue, Hanoi, and Ha Long Bay.
Subjects beginning with the letters T, U and V are listed below and on the navigation bar to the left. These descriptions reflect the courses as of July 1, 2010. For the most up-to-date descriptions, please visit Campus Connection.

TEACH Program
Teaching and Learning
Telecommunications
Theatre Studies
Visual Effects

TEACH Program

TCH 401 Teaching as a Profession in Secondary School
This course is an introduction to the five-year Program, including the College of Education's conceptual framework and teacher dispositions, and to the professional world of secondary school teaching, including the policy bodies and stakeholders that impact teaching. Within this developing understanding of the larger context of secondary education, students will begin to articulate clearly professional identities and the behaviors inherent in those identities, including their impact on student learning. Drawing on previous coursework and their growing understanding of differences in individual, ethnic, and cultural group attitudes, values, and needs, students also will learn to recognize the complexities of teaching and learning in a pluralistic society. Ultimately, students will be committed to teaching as a responsible professional who acts in an ethical and collegial fashion. Twenty hours of Level 2 field experience is required.

TCH 411 The Nature of English
This course is designed to help students to see that the field of English Studies is bigger than the component they probably identify as English (it's Literature, Writing, and Linguistics/Grammar). Students will explore the formation of the discipline up to the current day, focusing on the shifting understanding of ways of reading, writing and thinking about language. They will strive to answer the questions: What does it mean to be a student of language and literature? and, What are the ways of knowing characteristic of English and Writing, Rhetoric, & Discourse majors? In doing so, students will relate the disciplinary content of their major to their daily lives and interests and to the larger framework of human endeavor and understanding, including identifying its importance to the personal lives of high school students. The course is a prerequisite for TCH 421.

TCH 412 The Nature of History and the Social Sciences
This course builds on the content course work students have done in the seven disciplines grouped under the heading "social sciences" (history, political science, geography, sociology, anthropology, economics, and psychology). In this class students will get further exposure to the basic concepts of the social science disciplines and consider the connections as well as differences between them. The course emphasizes how different disciplinary backgrounds lead students to bring different perspectives to their study of social phenomena and helps them see these phenomena from multiple vantage points. The course will employ a case study approach framed around social issues of interest to all seven disciplines (e.g. social control, threats, development, natural disasters). A student prepared in economics, for example, will ask a different set of questions about America's war on drugs than students from the fields of history or political science. This course will first have students examine a social phenomenon from the perspective of their major discipline, then have them shift to examining an event or issue from an alternative perspective. The above economics student's first project might be based on an economic analysis of the war on drugs, a second project would focus on the history of New Orleans and the devastation caused by hurricanes, and a third project would use the perspectives of political science and sociology to analyze the development of an urban...
community. By the end of the course, students will have applied the knowledge and skills of multiple social science disciplines to evaluate social phenomena, considered the relationship and differences between those disciplines, and be prepared to enter TCH 422 where they will apply their content knowledge to inquiry and teaching in the field.

**TCH 413 THE NATURE OF MATHEMATICS**
This course builds on students' mathematics understanding by emphasizing the universality of mathematics as a cultural endeavor. In it, students will explore the historical trends in mathematics and how those trends have been taught. Students will understand that, mathematics, at its core, is deductive; however, it also requires intuition. Thus, the course examines the interaction among intuition, experimentation, conjecture, abstraction, and deductive reasoning not only in the classroom but also in the everyday use of mathematics. It also examines the interplay between concrete problem-solving and generalization.

**TCH 414 THE NATURE OF SCIENCE**
This course is about the nature of science and the interactions between science and society. It will build on the foundation of understandings that students already have about the processes and conventions of science developed through their years as science students to create opportunities for deeper understandings of the beliefs and assumptions inherent to the creation of scientific knowledge. These opportunities will be developed through direct interactions with professional scientists as well as through case studies and readings that illustrate the strengths, limits and pitfalls of the scientific endeavor as well as provide opportunities for students to relate science to their daily lives and interests and to a larger framework of human endeavor and understanding (e.g., relationships among systems of human endeavor including science and technology; relationships among scientific, technological, personal, social and cultural values). Cases will be drawn from different scientific disciplines as well as from modern and historic times. In this way, science students will have a better understanding of what it means to be a scientist and how science interfaces with society. The course is a prerequisite for TCH 424.

**TCH 421 INQUIRY & APPLICATION IN DEVELOPING SECONDARY ENGLISH PEDAGOGY**
This course builds on TCH 411 by preparing teacher candidates to distinguish between what needs to be taught (content) and how it is taught (pedagogy), with an emphasis on understanding the historical shifts in the teaching of content and how these shifts inform teaching and learning in today’s English language arts classrooms. The course also introduces students to methods of inquiry and reflection on content pedagogical knowledge. Student will examine their own educational experience through the lens of the historical trends, focusing on how they learned and what they understood their teachers to be doing. This initial case study will serve as an introduction into case study methods. Students will also develop expertise in one of the three historical trend areas -reading, writing, and language - and examine how the trend has informed teaching and learning and shaped curriculum, pedagogy, and assessment. Students will develop a case study of a practicing teacher using the lens of the historical trend in which they are developing expertise.

**TCH 422 INQUIRY & APPLICATION IN DEVELOPING SECONDARY HISTORY AND SOCIAL SCIENCES PEDAGOGY**
This course builds on the content knowledge students developed and reinforced in TCH 412. More, it asks them to make the shift from considering how a person prepared in the social sciences analyzes social phenomena to how such a person teaches the social sciences. Students will do this by developing two units of inquiry-based case studies that they could use in their own classrooms. The topics of these case studies will vary from section to section, depending on the needs of the students and expertise of the instructor. Possible topics include the Constitution, the Cold War, slavery, and the Iraq War. As students work on these projects, they will continue to reflect on the course work they have done in the content areas as well as the instruction they see teachers delivering in their field experiences. They will contemplate such questions as: “What are the connections between the social science disciplines? How can they be taught together, creating interdisciplinary courses at the high school level? What are the differences between the social science disciplines and what does this mean for secondary pedagogy? How can teachers use inquiry with their students, making sure they have enough guidance to learn about social events but also the freedom to pursue their interests and make sense of the world on their own terms?” By the end of this course, students through readings and their projects will have advanced their learning about the nature of inquiry, its implementation in the classroom, and the connections and differences between the social science disciplines.

**TCH 423 INQUIRY & APPLICATION IN DEVELOPING SECONDARY MATHEMATICS PEDAGOGY**
This course builds on TCH 413 by introducing students to inquiry methods to understand the teaching and learning of mathematics. Students will explore how mathematics has been and is taught by examining major paradigm shifts in mathematics education and the impact those paradigms and shifts have on pedagogical content knowledge, or knowledge of how to teach disciplinary content. Students will use case study methods to look at instructional practices and begin to articulate their own mathematics teaching pedagogy. With the completion of this course, students will have a deeper understanding of mathematical literacy and the
TCH 424 INQUIRY & APPLICATION IN DEVELOPING SECONDARY SCIENCE PEDAGOGY
Following TCH 414, this course transitions from asking "what does a scientist do?" to a consideration of why science literacy in the general public has been so difficult to achieve. The focusing questions for TCH 424 are: "How do we teach science? What is science literacy? Why is an understanding of science important to the general public? and What are the major obstacles and strategies to achieving science literacy?" The course begins by participants self-reflecting on their own educational experiences that led to their paths in science education: what have been their successful learning strategies, how have teachers influenced their education and what have been successful (and less than successful) classroom instructional strategies? From this, students will begin science classroom observation, discussing their observations with their peers, and speaking with educators about their experiences teaching high school science and about the goals and short-comings of science education. Throughout this process, students will read seminal literature on science literacy and explore cases challenging their notions of the teacher-learner relationship and the relationship between science and society. As a result of this course, students will gain a deeper understanding of scientific literacy and the barriers to understanding and teaching science as well as identify what makes an exceptional science teacher able to prepare both future scientists and a knowledgeable public.

TCH 451 RESEARCH METHODS & DISCIPLINARY INQUIRY: ENGLISH
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the last 6 weeks of the course, the course focuses on research related to the teaching of the English language arts in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, conducting a literature search, developing a theoretical framework, and collecting and analyzing data.

TCH 452 RESEARCH METHODS & DISCIPLINARY INQUIRY: HISTORY AND THE SOCIAL SCIENCES
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the last 6 weeks of the course, the course focuses on research related to the teaching of history and the social sciences in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, conducting a literature search, developing a theoretical framework, and collecting and analyzing data.

TCH 453 RESEARCH METHODS & DISCIPLINARY INQUIRY: MATHEMATICS
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the last 6 weeks of the course, the course focuses on research related to the teaching of mathematics in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, conducting a literature search, developing a theoretical framework, and collecting and analyzing data.

TCH 454 RESEARCH METHODS & DISCIPLINARY INQUIRY: SCIENCE
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the
last 6 weeks of the course, the course focuses on research related to the teaching of the sciences in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, conducting a literature search, developing a theoretical framework, and collecting and analyzing data.

**TCH 461 INQUIRY & TEACHING OF MIDDLE SCHOOL ENGLISH**
This course addresses issues of teaching and learning the English language art at the middle-school level (grades 5 through 8). During the first five weeks, the course focuses on foundational and contemporary theories of middle-school-aged adolescent development. It introduces candidates to theoretical and philosophical issues related to contemporary questions of youth and middle level education. It explores the historical invention of adolescence, changing ideas about the meaning of childhood, as well as some of the broader social, economic, political, and cultural implications of these changing ideas. The last six weeks of the course explore the differences between middle school and high school students within the context of designing English language arts curriculum, creating a classroom environment, and implementing instructional delivery strategies and methods that meet diverse middle school students, including English language learners and students who speak nonmainstream dialects of English.

**TCH 462 INQUIRY & TEACHING OF MIDDLE SCHOOL HISTORY AND THE SOCIAL SCIENCE**
This course addresses issues of teaching and learning history and the social sciences at the middle-school level (grades 5 through 8). During the first five weeks, the course focuses on foundational and contemporary theories of middle-school-aged adolescent development. It introduces candidates to theoretical and philosophical issues related to contemporary questions of youth and middle level education. It explores the historical invention of adolescence, changing ideas about the meaning of childhood, as well as some of the broader social, economic, political, and cultural implications of these changing ideas. The last six weeks of the course explore the differences between middle school and high school students within the context of designing history and social science curriculum, creating a classroom environment, and implementing instructional delivery strategies and methods that meet diverse middle school students, including English language learners and students who speak nonmainstream dialects of English.

**TCH 463 INQUIRY & TEACHING OF MIDDLE SCHOOL MATHEMATICS**
This course addresses issues of teaching and learning mathematics at the middle-school level (grades 5 through 8). During the first five weeks, the course focuses on foundational and contemporary theories of middle-school-aged adolescent development. It introduces candidates to theoretical and philosophical issues related to contemporary questions of youth and middle level education. It explores the historical invention of adolescence, changing ideas about the meaning of childhood, as well as some of the broader social, economic, political, and cultural implications of these changing ideas. The last six weeks of the course explore the differences between middle school and high school students within the context of designing mathematics curriculum, creating a classroom environment, and implementing instructional delivery strategies and methods that meet diverse middle school students, including English language learners and students who speak nonmainstream dialects of English.

**TCH 464 INQUIRY & TEACHING OF MIDDLE SCHOOL SCIENCE**
This course addresses issues of teaching and learning the sciences at the middle-school level (grades 5 through 8). During the first five weeks, the course focuses on foundational and contemporary theories of middle-school-aged adolescent development. It introduces candidates to theoretical and philosophical issues related to contemporary questions of youth and middle level education. It explores the historical invention of adolescence, changing ideas about the meaning of childhood, as well as some of the broader social, economic, political, and cultural implications of these changing ideas. The last six weeks of the course explore the differences between middle school and high school students within the context of designing science curriculum, creating a classroom environment, and implementing instructional delivery strategies and methods that meet diverse middle school students, including English language learners and students who speak nonmainstream dialects of English.

**TCH 471 TEACHING ENGLISH IN THE HIGH SCHOOL 1**
This course introduces students to the theoretical and practical issues of teaching the English language arts in secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of reading, writing, speaking, and listening skills and sensibilities. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional
TCH 472 TEACHING HISTORY AND THE SOCIAL SCIENCES IN THE HIGH SCHOOL 1
This course introduces students to the theoretical and practical issues of teaching history and the social sciences in secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of the basic concepts of the seven social science disciplines. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism.

TCH 473 TEACHING MATHEMATICS IN THE HIGH SCHOOL 1
This course introduces students to the theoretical and practical issues of teaching mathematics in secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of mathematics in all its representations. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism.

TCH 474 TEACHING THE SCIENCES IN THE HIGH SCHOOL 1
This course introduces students to the theoretical and practical issues of teaching the sciences in secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of the different sciences, including biology, chemistry, environmental science, and physics. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism.

TCH 481 TEACHING ENGLISH IN THE HIGH SCHOOL 2
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 421 and TCH 471. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of reading, writing, speaking, and listening skills and sensibilities, with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 471, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism.

TCH 482 TEACHING HISTORY AND THE SOCIAL SCIENCES IN THE HIGH SCHOOL 2
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 422 and TCH 472. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of the basic concepts of the seven social science disciplines with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 471, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism.
TCH 483 TEACHING MATHEMATICS IN THE HIGH SCHOOL 2
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 423 and TCH 473. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of mathematics in all its representations with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 471, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism.

TCH 484 TEACHING THE SCIENCES IN THE HIGH SCHOOL 2
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 424 and TCH 474. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of the different sciences, including biology, chemistry, environmental science, and physics with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 471, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism.

TCH 495 ASSESSMENT ISSUES IN SECONDARY EDUCATION
This course introduces candidates to theoretical and philosophical issues related to educational assessment. It addresses the range of assessments teachers will encounter in school settings, including individual cognitive and social and emotional assessments; course material, curricula, and disciplinary program assessments; and large scale high-stakes testing. The course provides candidates opportunities to explore student, program, and curricular assessment issues, including assessment methods and tools; standardized, quantitative, and qualitative assessments; formal and informal assessments; formative and summative assessments; integrated, self-, and peer assessments; cultural, social, economic, and language influences on assessments; and issues of reliability and validity in assessment.

TCH 590 STUDENT TEACHING
This course is the culminating experience for TCH Program students and requires 11 weeks of onsite student teaching in a high school content area classroom. The course requires students to be in a high school full-time, participating in both in-class instruction and extra-curricular activities related to the school. PREREQUISITES: Open only to TEACH Program Students; Student teaching application and approval required.

TCH 591 STUDENT TEACHING SEMINAR
This course must be taken concurrently with TCH 590. The seminar format provides students an opportunity to reflect on their student teaching experiences and to reach back and consider what they have learned in the TCH Program and their next steps as practicing teachers. COREQUISITE(S): TCH 590.

Teaching and Learning

T&L 400 CLINICAL EXPERIENCES WITH INFANTS AND TODDLERS
(1 quarter hour) Teacher candidates will observe and interact with infants and toddlers (25 clock hours). Appropriate assessment and intervention methodologies will be emphasized. COREQUISITE: SCG 404.
T&L 401 CLINICAL EXPERIENCE IN EARLY LANGUAGE AND LITERACY DEVELOPMENT
(1 quarter hour) Teacher candidates will observe and interact with young children and their families in programs, family conferences and home visits (25 clock hours). They also will observe and work with families of young children with special needs.

T&L 402 CLINICAL EXPERIENCES WITH PRE-SCHOOLERS
(1 quarter hour) Students will observe and interact with preschool-age children (25 clock hours). Appropriate early childhood curricula will be emphasized. COREQUISITE(S): T&L 407.

T&L 403 CLINICAL EXPERIENCES IN PRIMARY GRADES
(1 quarter hour) Students will observe and interact with primary-age children (25 clock hours). Appropriate curricula for children in the primary grades will be emphasized. COREQUISITE: T&L 408.

T&L 404 INTRODUCTION TO ELEMENTARY EDUCATION
This is the first in a sequence of theory and practice courses that serves to familiarize teaching candidates with the world of the elementary school. Through observation and participation in schools, self-reflection, independently created assignments, cooperative learning assignments and classroom discussion, candidates will acquire familiarity with schools and classrooms including: social/cultural context, classroom climate, classroom management, curricular coherence, standards-based instruction, and the promotion of critical thinking. (20 daytime fieldwork hours are required; recommended that candidates enroll concurrently in SCG 403.)

T&L 406 LANGUAGE DEVELOPMENT OF THE YOUNG CHILD
This course will focus on the development of language in young children, including techniques and materials for use in assessing and enhancing speech and language development. Emphasis will be on issues relating to second language learners and young children with special needs. PREREQUISITE(S): SCG 404.

T&L 407 PREPRINARY PROGRAMS: CURRICULUM AND STRATEGY
Students will plan, implement and evaluate activities that promote the physical, emotional, social, spiritual, creative, and cognitive development of preschool children from diverse cultural and socioeconomic backgrounds. Methods of facilitating children's play; individualization through building on children's experiences, learning styles and interests; using media; and developing learning centers will be emphasized. Assessment practices are incorporated in this experience. PREREQUISITE(S): SCG 404. COREQUISITE: T&L 402.

T&L 409 PROFESSIONAL PRACTICE IN ELEMENTARY SCHOOLS
This course is an introduction to the professional roles required of elementary school teachers. Students will develop a knowledge-based framework for considering the many factors involved in decision-making in an elementary classroom. This framework will serve to guide students as they create a social studies curriculum unit, which integrates planning skills, teaching strategies, classroom management and evaluation techniques. Daytime clinical hours are required during this course. (Only for Dual Cert majors).

T&L 410 CHILDREN'S LITERATURE AND FAMILY LITERACY
This course addresses literacy development in young children and the roles of families and early childhood programs in fostering that development. Strategies for enhancing literacy, such as word play, storytelling, conversations will be provided and all appropriate genres of children's literature will be explored. Finally, the course features appropriate poetry, early books for infants and toddlers, read-aloud materials, and all genres of children's literature for young children.

T&L 411 ASSESSMENT IN EARLY CHILDHOOD SPECIAL EDUCATION
Candidates will study, use, and evaluate early childhood assessment methods and tools that are appropriate for young children with diverse learning, cultural, and socioeconomic experiences. Focus of the course is on the teacher candidate's acquisition of knowledge and skill regarding an array of formal and informal assessment instruments and techniques used to gather information needed for making decisions about typical and atypical children served in individual and group learning situations. Focus directed toward the development of curricular goals and instructional approaches that evolve from the assessment information. Such information is used to create learning plans, including Individualized Family Service Plans (IFSP) and Individualized Education Plans (IEP), serving child and family responsively.

T&L 412 EMERGING READING AND LANGUAGE ARTS
This course focuses on the instruction, assessment of and subsequent instruction related to emergent literacy development. Individual student strengths and needs will be addressed through theories and practices related to both code instruction and meaning-oriented approaches to literacy. Optional field experiences will provide students with opportunities to analyze theories, as well as to observe and practice strategies, and to make informed instructional decisions. The role of the home in fostering literacy development is stressed, along
This course focuses on understanding children's observable behaviors and environmental and biological factors. PREREQUISITE(S): T&L EE majors prereq is T&L 409 or T&L 404 and advanced standing; for T&L ECE majors prereq is T&L 408 or T&L 432 and advanced standing.

T&L 413 READING/LANGUAGE ARTS IN THE MIDDLE GRADES
This course extends Emerging Reading and Language Arts to facilitate increased independence in students as strategic readers and competent writers. It focuses on the further development of reading comprehension and writing abilities in the intermediate grades and middle school. Emphasis will be placed on using narrative and expository text and mixed genres related to content-area instruction. PREREQUISITE(S): T&L 412.

T&L 415 TEACHING AND LEARNING ELEMENTARY SCHOOL SCIENCE
Teaching and Learning Elementary School Science. An introduction to materials, methods and strategies for helping students in grades K-8 become scientifically literate: i.e., to understand the nature of science and its impact on technology and science. Particular attention will be given to theoretical views about how children learn science, the proper use of materials and equipment, the development of scientific thinking, e.g., skills in observing, classifying collecting, and interpreting data, questioning strategies, and ways to assess student progress. Daytime clinical hours are required during this course. PREREQUISITE(S): T&L 409 or T&L 404 and Advanced Standing.

T&L 416 TEACHING AND LEARNING ELEMENTARY SCHOOL MATHEMATICS
An introduction to materials, methods, and strategies for helping students in grades K-8 become mathematically literate: i.e., for helping elementary students to value mathematics, to become confident in their mathematical abilities, to attack and solve mathematical problems, and to reason and communicate mathematically. Particular attention will be given to the theoretical views about how children learn mathematics, the proper use of manipulative materials, the development of mathematical thinking, e.g., skills in estimation, pattern recognition, or special perception; the use of technology, and ways to assess student progress. Clinical hours required. PREREQUISITE(S): T&L 409 or T&L 404 and Advanced Standing.

T&L 418 LEARNING THROUGH THE ARTS (FORMERLY CDG 418)
This course focuses on the arts (drawing from visual arts, music, drama and dance) as an integral component of teaching and learning in the elementary school curriculum. Students will 1) be exposed to a diverse body of artistic forms, functions and disciplines to develop a critical, aesthetic and visual working vocabulary; 2) acquire an understanding and skill in helping children identify and use various mediums to explore thoughts and reveal impressions of their experiences; and 3) design, construct and implement creative, interdisciplinary activities that place a value on the arts through the languages of discipline-based art education and multi-intelligences. Daytime clinical hours are required during this course.

T&L 419 CURRICULUM AND STRATEGIES: SOCIAL STUDIES
Materials, methods and classroom management techniques appropriate for teaching social studies in the elementary grades; disciplines included are history, geography, anthropology, political science, economics and sociology. Topics will include cooperative group learning, questioning skills, role-playing, citizenship education, value development, program planning and evaluation. PREREQUISITE(S): Advanced Standing.

T&L 420 MATH AND SCIENCE IN EARLY CHILDHOOD
Students will explore theoretical principles, materials, methods, and activities for teaching and integrating mathematics and science in preschool and primary grades. Students will conduct clinical observations and complete individualized teaching assignments. PREREQUISITE(S): SCG 404, T&L 432 and Advanced Standing.

T&L 421 CHILD AND FAMILY IN THE MULTICULTURAL COMMUNITY
This course will focus on understanding the diversity of children and families in approaches to development, learning, and disability. It will examine how teachers may provide a curriculum and environments within the context of family and community that honor the families' and communities' beliefs, values, and practices. In addition, ways to develop and maintain productive and collaborative relationships between professionals and families, communities and other professionals across the range of systems are examined.

T&L 422 CLASSROOM ASSESSMENT
Candidates will study, use, and evaluate assessment methods and tools that are appropriate for elementary-aged children with diverse cultural and socioeconomic experiences. Assessment as part of the instructional system will be discussed, including the appropriate use of standardized measures, formal and informal classroom assessment, portfolio development, as well as reporting to all stakeholders. Ways of involving students and parents in the assessment processes will be stressed. How to observe and assess children individually and in classroom settings will be included. Technology applied to assessment will be emphasized. PREREQUISITE(S): SCG 403, T&L 404, and one Curriculum and Strategies course (e.g., T&L 412, T&L 415).

T&L 423 UNDERSTANDING YOUNG CHILDREN'S BEHAVIOR
This course focuses on understanding children's observable behaviors and environmental and biological factors. PREREQUISITE(S): T&L 409 or T&L 404 and advanced standing; for T&L ECE majors prereq is T&L 408 or T&L 432 and advanced standing.
This course provides an overview of the curriculum, instruction, and assessment strategies used in K-12 T&L projects. Students will explore major genres, review award-winning novels, consider the role of the media, and develop creative reading, evaluating, and teaching young adult literature; development of writing curriculums will also be examined. Completing 15 hours of field experience in an early childhood special education setting is part of requirement for this course.

T&L 424 INTRODUCTION TO SECONDARY EDUCATION
This course is an introduction to the DePaul Secondary Education program as well as the professional world of secondary school teaching. In this course, candidates develop the knowledge and skills necessary for being a reflective practitioner. Candidates focus on understanding themselves (professional identity) and their behaviors in teaching situations with students in schools. These insights, combined with subject-matter knowledge, guide the development of various course assignments. Candidates will learn how to observe effectively in a school setting, to identify school governance issues, to understand school environment and the current social issues that shape it, and will experience a variety of teaching methods and resources for their future teaching. Candidates will acquire knowledge of important social concepts and theories that affect education, especially as they affect educational change in urban societies. As candidates become aware of differences in individual, ethnic, and cultural group attitudes, values and needs, they also will learn to recognize the complexities of teaching and learning in a pluralistic society. Candidates will be committed to teaching as a responsible professional who acts ethically as well as in a collegial fashion. In addition to class attendance, candidates are required to complete 15 daytime fieldwork hours as part of the course. This course is a prerequisite to T&L 425. It is highly recommended that this course be taken concurrently with SCG 406.

T&L 425 CURRICULUM AND INSTRUCTION IN SECONDARY EDUCATION
This course will examine materials, methods, and techniques appropriate for teaching in secondary schools. Topics include writing instructional objectives, developing lesson plans, designing a curriculum unit, understanding classroom management and assessment related issues. Students will be encouraged to reflect upon their own emerging educational philosophies as well as draw from previous courses they have taken. Students will be given many opportunities for planning, using and evaluating a variety of instructional strategies while preparing and teaching a micro lesson in front of their peers. Students will be committed to teaching as a professional acting responsibly, ethically, and collegially in accordance to Vincentian Personalism. Prerequisite course: T&L 424

T&L 426 TEACHING WRITING
Prepares for teaching writing and composition at the middle and secondary school levels. The course focuses upon methods of teaching composition, examination of literature and research about the composing process, the development of language and reading skills, and the assessment and evaluation of writing. The development of writing curriculums will also be explored. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

T&L 427 YOUNG EXCEPTIONAL CHILD
This course introduces students to the field of early childhood special education including the Early Intervention System. Characteristics of infants, toddlers and young children with special needs as well as, methods of working with different disabilities during early years will be explored. Strengths and needs of families of young children with disabilities and collaboration with family members will be emphasized. Completing 15 hours of field experience in an early childhood special education setting is a part of this course’s requirements of the requirements for this course.

T&L 428 TEACHING LITERATURE
Prepares for teaching literature at the middle and secondary school levels. Examines contemporary issues in the teaching of literature, explores methods of teaching major literary genres, addresses problems of literacy and focuses on the transactional nature of reading and writing. Emphasis on developing a repertoire of ways of teaching literature and a variety of literature curriculums. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

T&L 429 TEACHING YOUNG ADULT LITERATURE
This course is devoted to the study of Young Adult Literature: an exciting, emerging field. Issues and ideas to be examined include the following: current debates regarding issues in curriculum and teaching; selecting, reading, evaluating, and teaching young adult literature; cultivation of life-long reading habits and literacy development. Students will become familiar with major writers of young adult literature, read diverse texts, explore major genres, review award winning novels, consider the role of the media, and develop creative projects. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

T&L 430 TEACHING LITERACY K-12
This course provides an overview of the curriculum, instruction, and assessment strategies used in K-12
classrooms to foster and develop students' L1 and L2 literacies. Through guided examination of prevailing theories of language acquisition and development that currently influence classroom practices across the K-12 continuum, this course enables future teachers of world languages to grow in their understanding of the literacy-learning contexts that students will bring to their language classrooms. Issues that emerge in planning and conducting literacy instruction in schools are discussed and deliberated through university classroom experiences as well as required field experiences (15 hours, minimum; level 1). Course participants enjoy multiple opportunities to apply and analyze theories; to observe, critique, and practice instructional strategies; to make informed curricular and instructional decisions; and to use assessment to inform one's planning.

T&L 431 EARLY LANGUAGE AND LITERACY DEVELOPMENT
This course will focus on enhancing language development and promoting early literacy in young children. It addresses instruction and assessment of language and literacy skills. Students will learn how family/child and teacher/child interactions promote language and literacy development and learning. Implementation of language and literacy curricula and activities that lead to growth in the key areas of literacy development for preschool and primary aged children will be explored. (Combination of previous T&L 406 and T&L 412).

T&L 432 EARLY CHILDHOOD CURRICULUM STRATEGIES AND PHILOSOPHY (BIRTH-8)
Operating from a constructivist curricular perspective that considers individual child and the social learning context, students will plan, implement and evaluate activities that promote the physical, emotional, social, spiritual, aesthetic, creative, and cognitive development of young children from diverse cultural and socioeconomic backgrounds. Methods of facilitating children's play; individuation through building on children's experiences, learning styles and interests; using technology and, developing learning centers will be emphasized. A variety of teaching methods and classroom management strategies will be discussed and illustrated, including teacher led instruction and student-centered instruction. Students will be encouraged to reflect upon their own emerging educational philosophies and teaching styles as they take part in laboratory and field experiences. Many opportunities for planning, using and evaluating a variety of teaching methods will be offered. Each student will write at least one teaching unit on a primary social studies theme. PREREQUISITE(S): Child Growth and Development: the Early Years, taken concurrently with T&L 402). (Combination of previous T&L 407 and T&L 408)

T&L 433 EARLY CHILDHOOD SPECIAL EDUCATION STRATEGIES
This course focuses on a range of curricular and instructional strategies that foster individual abilities and meet the individual learning needs within the contexts of group and individualized instruction in a variety of learning situations: classrooms, community and home environments. Teacher candidates acquire knowledge and skill to develop individual long-term and short-term educational service plans based on knowledge of children's needs and abilities; families' goals, priorities, and concerns for their children; communities; content areas; and early childhood curriculum goals. (Replaced HSC 408).

T&L 436 TEACHING AND LEARNING SECONDARY SCHOOL MATHEMATICS
Prepares for teaching mathematics at the middle school and secondary school levels. Examines contemporary issues in teaching mathematics, methods of teaching secondary mathematics, and recent history in mathematics curriculum development of alternative teaching strategies and the implementation of the NCTM Standards. Lesson and unit development, evaluation and classroom management also will be discussed. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

T&L 439 METHODS OF SECONDARY SCIENCE EDUCATION
This course is designed to update teachers in the methods of teaching science. This involves reviewing the processes of science, theories of learning, and instructional strategies appropriate to laboratory science. This course also provides an update on the current trends and issues in science education as well as an analysis of successful science curricula programs. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

T&L 440 EARLY CHILDHOOD EDUCATION CROSS-CULTURAL STUDIES
The course will discuss the historical, philosophical and cultural foundations of the education of young children in a multicultural society, emphasizing the role of ethnicity in development of young children within the context of families, childcare centers, and educational systems. Topics include: history of immigration and predictions for the future; the effects of population shifts on the education of English Language Learners; the impact of laws, litigation and executive orders on bilingual/English-as-a-Second Language education; understanding cultural and linguistic differences regarding locating and using educational resources.

T&L 441 EARLY CHILDHOOD METHODS AND MATERIALS FOR ENGLISH LANGUAGE LEARNERS
This course will discuss best practices in teaching and learning in ESL and bilingual early childhood classroom contexts. Students will learn about different approaches and methodologies currently used to support the development of listening, speaking, reading and writing in social and academic contexts in learners of English
as a second language. Curriculum-based assessment, cultural awareness and self-reflective practice will also be addressed.

T&L 442 EARLY LITERACY DEVELOPMENT AND SECOND LANGUAGE ACQUISITION
This course will examine the process of learning and using a second language. Research in second language acquisition (SLA) is multi-disciplinary in nature, reflecting the complexity of language learning and use. Linguistic, psychological and social processes that underlie language(s) learning and use will be introduced and applied to the understanding of this learning in young children. In this course, language acquisition theory concerning relationships between early literacy and oral language development in first and subsequent languages will be addressed.

T&L 443 ASSESSING YOUNG BILINGUAL/ESL LEARNERS
This course will focus on the discussion of basic principles and current approaches to assessment of language learning students in ESL Children's language learning in ESL or language learning of children in EST and bilingual early childhood and early elementary educational settings. The different purposes of process and product assessment tools, authentic and curriculum-based forms of assessment, issues in the assessment of English Language Learners (ELLs), and assessment in academic areas for early elementary ELLs will be explored.

T&L 444 EARLY CHILDHOOD BILINGUAL/ESL PRACTICUM
This course will focus on application of the theories in effective teaching practices, and assessment procedures appropriate for young English Language learners. It will emphasize on application of knowledge gained from previous ESL/ELL courses, and demonstration of skills necessary to work collaboratively and effectively with families of young English Language learners. Professional behaviors that respect, value, and support all children's native language and culture will be reinforced.

T&L 449 TEACHING MODERN LANGUAGES
Prepares for teaching modern languages at the middle and secondary school levels. Examines the theory and practice of teaching modern languages with an emphasis on developing alternative teaching strategies and using diverse resources. Lesson and unit development, evaluation and classroom management will also be discussed. Issues that emerge in planning and instruction are discussed and deliberated through university classroom experiences as well as required field experiences (15 hours, minimum; level 2). PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing. (CROSS-LISTED: WLE 349)

T&L 450 METHODS OF TEACHING WORLD LANGUAGES IN THE ELEMENTARY SCHOOL
This course is designed to provide training in the theory and methods of teaching Foreign Languages in the elementary school (FLES) to both pre- and in-service teachers. Pre-service teachers include World Language majors interested in elementary school teaching and elementary majors who are proficient in a world language and interested in teaching FLES. In-service teachers include elementary teachers proficient in a world language who are teaching or who are interested in teaching FLES and secondary trained teachers who are teaching or who are interested in teaching FLES. In order to meet the objectives of this course and subsequent methods courses, it is expected that all participants be able to demonstrate proficiency in English and a second language before enrolling. Issues surrounding elementary methods are discussed and deliberated through university classroom experiences as well as required field experiences (15 hours, minimum; level 2).

T&L 453 TEACHING HISTORY AND SOCIAL SCIENCE IN SECONDARY SCHOOLS
Teaching, History and Social Science in Secondary Schools. Prepares for teaching history and social sciences at the middle and secondary school levels. Examines the nature and purpose of history and social sciences curriculum within secondary schools, the current status of social studies materials and practices, and issues confronting today's secondary social studies teachers. Emphasis on alternative teaching strategies, resources for teaching and learning, teachers' responsibilities in curriculum development and decision-making, and methods and materials for addressing cultural diversity. Lesson and unit development, evaluation and classroom management also will be discussed. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

T&L 455 READINGS IN AMERICAN HISTORY
Prepares students for teaching American history at the secondary level. Readings focus on the foundational texts of American history from the colonial era to the late 20th century, with an emphasis on gaining content knowledge and applying it to teaching in the secondary classroom. Class discussions focus on matters of interpretation, evidence, and historiography.

T&L 465 ART AND PEDAGOGY
This course surveys the trajectory of visual thoughts and explores strategies in art production and distribution (e.g., documents, writing, and practice) used by artists, art educators, and visualists. This course examines
The visual arts in and out of space where learning occurs and explores the (in) effectiveness of the visual arts when intersected with pedagogical practices. The course presents a foundation in the social, historical, cultural, and political influences on visual thinking and explores the interpretation of visual production as language, information, curriculum, activism, design, and new media within multiple working spaces. Site visits required. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

**T&L 466 TEACHER AS ARTIST**
This course investigates strategies for creative enterprise and visual studies and includes art projects and site work, reading, investigations, multi-media projects and writing. Through the use of various media and technologies, students explore methods for teaching, authoring, and/or collaborating in preparing visual arts curriculum. The course explores teaching practices in space where technology, youth, and social and educational elements intersect. Teaching practices within diverse settings are considered as well as the contribution of artists, writers, place makers, teachers, designers, and cultural workers. Site visits are required. PREREQUISITE(S): T&L 405 or T&L 425 and Advanced Standing.

**T&L 525 READING, WRITING, AND COMMUNICATING ACROSS THE CURRICULUM**
This course analyzes the relationships among reading, writing, speaking and listening. It encourages middle level and high school teachers in all disciplines to take these interrelationships into account and to plan curricula that include current teaching strategies to enable students to become better readers, writers and thinkers in their various content-areas. This course will also concentrate on group process and its role in effective teaching within and across content-areas. Language use, learning and teaching are considered from a multicultural perspective.

**T&L 565 INDEPENDENT STUDIO TOPICS**
This course is a self directed graduate course in the Visual Arts Education Program. Candidates who consider this course must develop a written proposal for their work and identify professional expectations of this quarter long immersion in advanced study. Candidates may select from a range of possible pursuits from preparing a new body of work or preparing an exhibition to working within a host of selected museums or galleries as an art education intern throughout the city and suburbs. All candidates are required to meet with a faculty member for an initial interview to discuss contact hours, needs and limitations, critique times and locations and the required documentation from the 11 week experience. All proposals must be approved by a faculty member in the program.

**T&L 585 ELEMENTARY STUDENT TEACHING**
(6 quarter hours) Students will be placed for a minimum of 10 weeks in an elementary school. Seminar will meet once a week, in the participating schools and/or at DePaul. At first, they will focus on issues of immediate concern to student teachers. As the students gain experience the seminar will examine six or eight classroom issues, that is, topics which students have found to be significant on the basis of their experience. These would include such things as assessment, evaluation, classroom management, curriculum planning, and relationships with colleagues. After delineating what the issues are, students would be expected to analyze and discuss readings which relate to the issues. PREREQUISITE(S): Application and approval required. Open only to DePaul student.

**T&L 586 ELEMENTARY STUDENT TEACHING SEMINAR**
(2 credit hours) This course is taken concurrently with T&L 585, Elementary Student Teaching. In this course, students will have opportunities to reflect on their student teaching experience and prepare materials to support their employment searches and career as teachers. COREQUISITE(S): T&L 585

**T&L 588 INDEPENDENT STUDY IN TEACHING AND LEARNING**
PREREQUISITE(S): Permission of instructor, department chair and associate dean.

**T&L 589 THESIS RESEARCH IN TEACHING AND LEARNING**
A student writing a thesis registers for this course for four quarter hours of credit. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. PREREQUISITE(S): SCG 410 and approved thesis proposal.

**T&L 590 SECONDARY STUDENT TEACHING**
(6 quarter hours) Students will be placed for a minimum of 10 weeks in a secondary school. Seminar will meet once a week, in the participating schools and/or at DePaul. At first, they will focus on issues of immediate concern to student teachers. As the students gain experience the seminar will examine six or eight classroom issues; that is, topics which students have found to be significant on the basis of their experience. These would have found to be significant on the basis of their experience. These would include such things as assessment, evaluation, classroom management, curriculum planning, and relationships with colleagues. After delineating what the issues are, students would be expected to analyze and discuss readings which
After delineating what the issues are, students would be expected to analyze and discuss readings which relate to the issues.

PREREQUISITE(S): Application and approval required. Open only to DePaul student.

T&L 591 SECONDARY STUDENT TEACHING SEMINAR
(2 credit hours) This course is taken concurrently with T&L 590, Secondary Student Teaching. In this course, students will have opportunities to reflect on their student teaching experience and prepare materials to support their employment searches and career as teachers. COREQUISITE(S): T&L 590

T&L 592 WORLD LANGUAGES STUDENT TEACHING
(6 credit hours) Student teaching is the culminating experience of the World Languages certification program. It is a ten-week, 30-hour/week experience. Students must successfully complete student teaching with a grade of B- or better in a language classroom in which they are seeking certification to teach. The course is taken concurrently with T&L 593, World Languages Seminar. PREREQUISITE(S): Application and approval required. Open only to DePaul student.

T&L 593 WORLD LANGUAGES SEMINAR
(2 credit hours) This course is taken concurrently with T&L 592, World Languages Student Teaching. In this course, students will have opportunities to reflect on their student teaching experience and prepare materials to support their employment searches and career as teachers. COREQUISITE(S): T&L 592

T&L 595 EARLY CHILDHOOD STUDENT TEACHING
(6 quarter hours) This course requires students to participate in supervised teaching at a cooperating school, five full days per week, for an academic quarter. Part of the teaching will be in a preprimary setting and part will be in a primary setting. Feedback and discussion of issues encountered in student teaching as well as new materials and techniques of student teaching will be included. PREREQUISITE(S): Application and approval required. Open only to DePaul students.

T&L 596 EARLY CHILDHOOD STUDENT TEACHING SEMINAR
(2 credit hours) In this seminar, candidates will reflect upon their teaching experiences with young children; collaborate with colleagues and instructor to identify alternative strategies for problematic situations. Candidates will outline ways to maintain strategies for lifelong learning. In addition, candidates will share resume development and job-search strategies. COREQUISITE: T&L 595.

T&L 600 REGISTERED STUDENT IN GOOD STANDING
(0 credit) Registration is this course is open to students who are not registered for any other courses but need to complete requirements/assignments for previously taken courses. It provides access to University facilities. Permission of advisor required. $50 per quarter.

T&L 611 INDUCTION INTO THE TEACHING PROFESSION: SECONDARY
This course is designed to assist first-year secondary teachers to make the transition from student of teaching to teacher. The course creates a bridge between first-year teachers' formal education and the realities of their classrooms. In particular, the course provides assistance with the following: 1) understanding their induction into the profession; 2) analyzing their new educational contexts; 3) actualizing their educational philosophies; 4) developing their pedagogical knowledge; and 5) identifying and making the most of professional support systems within their schools. PREREQUISITE(S): Completion of student teaching or practicing teacher. PREREQUISITE(S): T&L 590 or practicing teacher.

T&L 612 CRITICAL REFLECTION TEACHING AND CLASSROOM PRACTICE
This course is designed to help practicing teachers learn more about their own teaching. They will be asked to raise, formulate and pursue questions about their own teaching and its relationship to student learning. In following this line of investigation, teachers study whole classrooms as well as select individuals. Teachers will enhance such skills as observing, listening, reflective and analyzing through employing techniques like clinical interviews, videotapes and lesson analysis. The course culminates with a paper that address what the teacher has learned about his/her own teaching and the nature and development of human learning. PREREQUISITE(S): being a first year teacher. PREREQUISITE(S): Student teaching, T&L 610 or T&L 611, and being a first-year teacher.

T&L 613 NEGOTIATING CURRICULUM IN THE CLASSROOM
This course assumes that teachers are curriculum developers, not simply implementors of curriculum provided by tests and curriculum guides. It asks teachers to examine how written curricula are enacted in the classroom, highlighting the students' role in the process. They will be expected to follow a line of investigation based on gathering data from students prior to, during, and after implementation. This course culminates with a more refined piece of curriculum, as well as a paper that addresses the teacher's growth in understanding curriculum processes. PREREQUISITE(S): Student teaching, T&L 610 or T&L 611, and being a first-year teacher.
T&L 614 INDUCTION INTO THE TEACHING PROFESSION: EARLY CHILDHOOD
This course is designed to assist first-year early childhood teachers make the transition from student teaching to teacher. It creates a bridge between first-year teachers’ formal education and the realities of their classrooms, providing assistance with: understanding their induction into the profession; analyzing their new educational contexts; actualizing their educational philosophies; developing their pedagogical knowledge; and identifying and making the most of professional support systems within their schools. PREREQUISITE(S): Completion of student teaching or practicing teacher.

T&L 615 SPECIAL TOPICS IN TEACHING AND LEARNING
Current issues and problems in education will be discussed. Focus will be current research and best practice. PREREQUISITE(S): 30 quarter hours in graduate education.

T&L 616 SPECIAL TOPICS IN INDUCTION TO TEACHING AND LEARNING: CLASSROOM ASSESSMENT
Current issues and problems in classroom-based assessment is the concentration of this course. Activities and discussion will include teacher-made paper and pencil assessment, linking assessment to planning and instruction, test-preparation, performance assessment, grading, and interpretation of standardized tests. Focus will be current research and best practice. PREREQUISITE(S): 30 quarter hours in graduate education.

T&L 625 CANDIDACY CULMINATING PROJECT (STUDENT IN GOOD STANDING)
(0 credit) Registration in this course is required of all students who are not enrolled in a course but are completing culminating projects for their program of study, including theses, papers, and final portfolios. It provides access to university facilities. Permission of advisor required. Registration limited to three terms. $50 per quarter.

Telecommunications

Graduate Course Descriptions - Current T, U & V Telecommunications

TDC 425 VOICE/DATA NETWORK FUNDAMENTALS
This course provides an introduction to voice and data networking technologies, including public and private voice services, Ethernet and Internet data technologies, network security, business applications and network management. The structure, regulation and history of the telecom and data network industry will be discussed as well. PREREQUISITE(S): Graduate Standing. Students majoring in MS Telecom or MS CINS programs will not receive credit for this course.

TDC 431 EMERGING WIRELESS AND MOBILITY NETWORKS (formerly TDC 531)
A study of evolving 2.5, 3rd & 4th Generation Wireless Networks, and disruptive technologies like WiFi(802.11), WiMax, Bluetooth, RFID, Ultra-Wideband and the security implications of mobility networks. This course provides a balanced view of the Wireless Industry in transition, through evolving technology, regulation, competition and standards. Students will be better prepared to deal with the rapid changes and seize the opportunities as data mobility impacts traditional telecommunications and private networks. In addition students will have access to extensive Global Wireless Education Consortium materials to support their individual advanced interests. PREREQUISITE(S): IT263 or TDC361

TDC 432 COMPUTER & INFORMATION SYSTEMS MODELING
Simulation, analytic modeling, and measurement of computer and information systems. Operational analysis. Introduction to queuing theory. PREREQUISITE(S): IT223 AND MAT 151 AND TDC 463.

TDC 460 FOUNDATIONS OF NETWORK TECHNOLOGIES
An introductory course on network technologies for local and wide area networks. The course examines in detail the core concepts to network architectures, Ethernet systems including wired, wireless, and Metro, virtual local area networks, storage area networks, optical networking, and the more traditional network services such as T-1, frame relay, Asynchronous Transfer Mode (ATM), and SONET. PREREQUISITE(S): (TDC 261 or IT 263) and (TDC 363 or CNS 378)

TDC 461 BASIC COMMUNICATION SYSTEMS
A history of telecommunications and regulatory and regulatory agencies. The basic communication model and its application to different communication systems, communication models. The telephone architecture, a typical data communication system, common carrier services, mediums and their characteristics.
TDC 462 DATA COMMUNICATIONS
Theory and components of data communication systems, modes, codes, and error detection techniques for data transmission, network protocols and line control procedures, communication carrier facilities and system planning. PREREQUISITE(S): TDC 411 or CSC 345, MAT 145, CSC 323.

TDC 463 COMPUTER NETWORKS AND DATA SYSTEMS
A detailed discussion of the upper layers of network architectures. Network protocol organization will be discussed using TCP/IP as an example. IP addresses, subnetting, super-netting, and CIDR. Routing algorithms. Transport layer protocols. Application layer protocols. Introduction to IPv6. PREREQUISITE(S): IT263 or TDC261 or TDC425 or ECT425.

TDC 464 CONVERGED MULTIMEDIA NETWORKS
Exploration of multimedia networks including voice, data, and video services offered by network carriers and Internet Service Providers (ISP) to both enterprise and residential customers. The course starts with an overview of current voice and data networks and presents the driving forces leading to a converged multimedia network. The focus is on Voice over IP (VoIP), including signaling, protocols, equipment, network architecture/design, traffic engineering, and service deployment strategy. PREREQUISITE(S): TDC 261 or IT 263.

TDC 476 ECONOMICS OF TELECOMMUNICATION SYSTEMS

TDC 477 NETWORK SECURITY
Network infrastructure security issues, including perimeter security defense, firewalls, Virtual Private Networks, Intrusion Detection Systems, wireless security, network security auditing tools and ethical considerations. Strategies for the deployment of "Defense-In-Depth" mechanisms in an enterprise computing environment. Pre-requisite(s): TDC 463 Computer Networks or consent from instructor (CNS 340 Foundations of Information Assurance recommended).

TDC 478 INFORMATION STORAGE AND MANAGEMENT
This course provides a comprehensive overview of network-based storage technology and information storage infrastructure. Major topics include the storage architectures, service features, and benefits of Intelligent Storage Systems. Networked storage technologies include fiber channel (FC), based Storage Area Network (SAN), Network Attached Storage (NAS), and IP-SAN. Advanced storage technologies on Content Addressed Storage (CAS), information security, and storage virtualization are also discussed. PREREQUISITE(S): none

TDC 484 SCRIPTING FOR NETWORK MANAGEMENT
This is a hands-on course on using script languages to develop practical applications for Network Management. Students will first learn the fundamentals of Linux system and script language(s) for task automation, and use scripts to develop dynamic web sites. After that, the course will cover Simple Network Management Protocol (SNMP), and use Application Programming Interface (API) to automate networks tasks of Fault Management, Configuration Management, Accounting Management, Performance Management, and Security Management (FCAPS). The final project of the course is to develop a dynamic web site with the above five functional areas to manage Linux servers, Ethernet switches and IP routers. PREREQUISITE(S): (IT263 or TDC261) and (CSC211 or CSC261).

TDC 489 QUEUING THEORY WITH COMPUTER APPLICATION

TDC 511 TELECOMMUNICATIONS PRACTICUM
Introduction to the functionality and management of voice and data communications equipment in the Telecommunications and Local Area Networks laboratories. Emphasis will be on practical understanding and experience through laboratory exercises. PREREQUISITE(S): (TDC 311 or CSC 373), TDC 460, TDC 463.

TDC 512 CELLULAR AND WIRELESS TELECOMMUNICATIONS
An overview of cellular telephony including regulatory framework, RF design and frequency reuse, signaling and wireline interconnection issues. Personal Communications Systems (PCS), mobile radio, satellite and paging systems will also be considered. PREREQUISITE(S): TDC 464.

TDC 514 COMPUTER TELEPHONY
A study of enabling technologies allowing the integration of voice communications services with personal
computers, LANs and mainframes. Telephony programming interfaces, call management software, intelligent fax/data retrieval and interactive voice response systems will be considered. PREREQUISITE(S): TDC 463 and TDC 464.

**TDC 532 WIRELESS SYSTEM ENGINEERING AND DEPLOYMENT**
The course covers technologies and theories that support the design, deployment and operation of modern-day digital wireless networks. The first half of the course will address concepts of RF theory, RF propagation, base station engineering, and antenna propagation. The second half of the course focuses on distributed antenna systems (DAS), and various digital wireless technologies used on modern networks and emerging technologies for the future. IP Multimedia Subsystem (IMS) technology and architectures, along with its interfaces to future wireless networks, will also be addressed. PREREQUISITE(S): TDC 512

**TDC 560 ADVANCED NETWORK TECHNOLOGIES AND DESIGN**
This course introduces advanced network technologies and design, including Multi-Protocol Label Switching (MPLS), MPLS Virtual Private Networks, IP storage networks, content distribution, capacity planning and traffic engineering. PREREQUISITE(S): TDC 460, TDC 463

**TDC 561 NETWORK PROGRAMMING**
The course covers the basic and advanced issues of TCP/IP networking programming such as multiple processes, I/O multiplexing, multi-threaded processes, multicasting and secure network programming USING C/C++. Application examples such as Internet browsing, instant messaging, proxy filtering and file transfer protocols are discussed. PREREQUISITE(S): (CSC309 or CSC262) and (TDC463 or CSC435).

**TDC 562 COMPUTER-COMMUNICATION NETWORK DESIGN & ANALYSIS**
This course provides an in-depth study of Internet protocols from the perspective of network planning, simulation and troubleshooting. The course includes in-depth study of Internet traffic, traffic measurement techniques, network planning and simulation using simulation tools, and packet management techniques. PREREQUISITE(S): TDC 463.

**TDC 563 PROTOCOLS AND TECHNIQUES FOR DATA NETWORKS**
Advanced topics in TCP/IP including IPv6, TCP traffic control, routing protocols, multicast routing protocols, and upper layer protocols supporting Quality of Service (QoS) in the new generation of the Internet; compression techniques; introduction to SNA and APPN, SNA and TCP/IP integration. PREREQUISITE(S): TDC 463.

**TDC 564 LOCAL AREA NETWORKS**
A detailed discussion on wired and wireless LAN technologies and their applications to the enterprise networks. Topics include LAN standards, protocols, network equipment, and network design. The course starts with the standard Ethernet, from 10M to 10G LANs, and then presents advanced Ethernet technologies on fault tolerance, flow control, Quality of Service (QoS), and Metro Ethernet. The course also covers WLAN security and Storage Area Networks (SAN). PREREQUISITE(S): TDC 463.

**TDC 565 VOICE AND DATA INTEGRATION**
Exploration of integrated voice and data networks with the focus on Voice over IP (VoIP) networks and services. The course starts with an overview of current voice and data networks and presents the driving forces leading to a converged network. Student will learn the overall VoIP architecture for enterprise and carrier networks, new services (such as unified message service), and network components (such as IP phone, call manager, and media gateway). The course seeks a balance of theory and practice where students will learn interworking protocols, such as H.323, SIP, and SS7 over IP, and use a packet sniffer to capture and analyze VoIP traffic. Other topics covered are vocoding, QoS, traffic engineering, and measurement of voice quality. PREREQUISITE(S): TDC 463 and TDC 464

**TDC 566 BROADBAND ACCESS TECHNOLOGIES**
This course studies internetworking technologies between the private intranet and public internet, and it is also known as Wide Area Network (WAN) technologies. The course starts with the narrowband technologies such as ISDN and X.25 to help students learn WAN from a historical perspective. After that, student will learn the current broadband technologies, including leased lines (T1 to OC-x), Frame Relay, ATM, and DSL. The next topic is the emerging broadband technologies such as Wireless (WiFi and WiMax) and Multi-Protocol Label Switch (MPLS). Remote access is an integral component of WAN and it covers dial-up and virtual private network (VPN). The course also covers the issues of WAN design, engineering, and management. (PREREQUISITE(S): TDC463)
TDC 567 TELECOMMUNICATION SYSTEMS DESIGN AND MANAGEMENT
The theory and practice of Telecommunication system design. Ongoing systems management. Telecommunication management including selection of vendors/systems, structuring an RFP systems proposal analysis, computer aided telecommunications management. Telecommunication management strategies from a business perspective. PREREQUISITE(S): TDC 463.

TDC 568 NETWORK MANAGEMENT
The five major areas of network management--fault management, performance management, security, accounting and configuration management—are discussed. Advanced topics such as fault diagnosis and isolation, event correlation, MIB design, SNMP programming, performance monitoring, service level agreements and network security architectures are also discussed. PREREQUISITE(S): TDC 463.

TDC 569 TELECOMMUNICATION REGULATION, POLICY, LAW AND STANDARDS

TDC 573 MULTIMEDIA NETWORKING
This course addresses the concepts, architecture and design of Quality of Service (QoS) networks and distributed multimedia systems. Key issues in designing networked multimedia systems are discussed, including reliable multi-point communication/IP multicasting, media coding and compression, audio/video streaming, audio/video transmission, media synchronization, multimedia traffic demands and requirements, congestion control and scheduling. PREREQUISITE(S): TDC 561 or TDC 562.

TDC 577 NETWORK SECURITY II
This course is an advanced class in network security. Topics include: Intrusion Detection and Prevention Systems; Security Engineering processes; Advanced firewall considerations; Honeypots; Incident response; Forensics; Enterprise security policy development and complex enterprise security infrastructure design and integration. PREREQUISITE(S): TDC 477 or TDC 572

TDC 588 ADVANCED NETWORK DEFENSE SYSTEMS
This course focuses on developing techniques for attack detection and mitigation in enterprise networks. The course includes: traffic/log analysis, anomaly detection, intrusion prevention, adaptive security policy, alarm analysis, and worm contaminating and quarantining, performance evaluation of defense systems. Special emphasis will be giving to developing intelligent network defense systems. Thus, students must be prepared to do programming projects using any platform or programming language. PREREQUISITE(S) TDC 477 and (CSC309 or CSC212 or CSC261)

TDC 593 TOPICS IN TELECOMMUNICATIONS
This is an independent study course. PREREQUISITE(S): Consent of instructor. Independent study form required.

TDC 594 NETWORK CAPSTONE
In this class students will synthesize knowledge from previous courses to design, build, test, and demonstrate a comprehensive network project as members of a project team. Topics introduced or reviewed, and used in completing the project, will include network requirement analysis, network architecture design, vendor evaluation, planning, experimental design, physical design, logical design, security design, testing strategy, documentation, change management, and network management strategy. Other topics include reasoning about uncertain user requirements, negotiation, online meeting techniques, and group dynamics. The capstone course will extensively use the DLPOD environment and the OPNET for network design and experiment.

TDC 597 TOPICS IN DATA COMMUNICATIONS
This is an independent study course. (PREREQUISITE(S): Consent of instructor. Independent Study form required).

TDC 663 INTRODUCTION TO LOCAL AREA NETWORKS
Principles of computer networks using LANs as an example. Issues in communications protocols and compatibility. Client-server versus peer-peer software applications. Network operating system services and management of local networks. PREREQUISITE(S): Enrollment in Curriculum Studies Technology Specialist

TDC 690 RESEARCH SEMINAR
Readings and discussion on current research topics. Students may register for this course no more than twice. PREREQUISITE(S): Consent of the instructor.

TDC 696 MASTER'S PROJECT
Students may register for this course only after their advisor has approved a written proposal for their project. PREREQUISITE(S): Consent of advisor. Independent study form required.

**TDC 698 MASTER’S THESIS**
(2 credit hours) Students may register for this course only after their advisor has approved a written proposal for their thesis. Students must continue to register for this course every quarter after their first registration in it until they complete their project or thesis to the satisfaction of their advisor. They earn two hours of credit for each such registration but only four hours of credit will apply for degree credit. PREREQUISITE(S): Consent of advisor. Independent study form required.

Theatre Studies

**Graduate Course Descriptions - Current T, U & V Theatre Studies**

**THE 511 GRADUATE MANAGEMENT PRACTICUM**
Work training course as full-time employment at Chicago Shakespeare Theater. Specialized training in company operations of tickets sales, gift processing, customer service, house management, producing, company management, budget development, special event planning, subscription campaign, marketing and development, facilities operations, and organizational structure. (4-6 credit hours)

**THE 512 GRADUATE MANAGEMENT PRACTICUM**
Work training as full-time employment at Chicago Shakespeare Theater. Specialized training in company operations of ticket sales, gift processing, customer service, house management, producing, company management, budget development, special event planning, subscription campaign, marketing and development, facilities operations, and organizational structure. (4-6 credit hours)

**THE 513 GRADUATE MANAGEMENT PRACTICUM**
Work training as full-time employment at Chicago Shakespeare Theater. Specialized training in company operations of ticket sales, gift processing, customer service, house management, producing, company management, budget development, special event planning, subscription campaign, marketing and development, facilities operations, and organizational structure. (4-6 credit hours)

**THE 521 ARTS LEADERSHIP SYNTHESIS SEMINAR**
All study revolves around this weekly seminar that includes aspects of the Chicago Shakespeare work experience and DePaul course integration in addition to readings, field trips, projects, and time for independent study. The Synthesis Seminar is fluid and reflective, allowing for both examination of coursework and on-the-job experience. Each seminar session synthesizes the students’ weekly studies, experiences both at work and in the community, independent research, and natural curiosity in close connection with Theatre School faculty, program director, and the Chicago Shakespeare department heads. (3 credit hours)

**THE 522 ARTS LEADERSHIP SYNTHESIS SEMINAR**
All study revolves around this weekly seminar that includes aspects of the Chicago Shakespeare work experience and DePaul course integration in addition to readings, field trips, projects, and time for independent study. The Synthesis Seminar is fluid and reflective, allowing for both examination of coursework and on-the-job experience. Each seminar session synthesizes the students’ weekly studies, experiences both at work and in the community, independent research, and natural curiosity in close connection with Theatre School faculty, program director, and the Chicago Shakespeare department heads. (3 credit hours)

**THE 523 ARTS LEADERSHIP SYNTHESIS SEMINAR**
All study revolves around this weekly seminar that includes aspects of the Chicago Shakespeare work experience and DePaul course integration in addition to readings, field trips, projects, and time for independent study. The Synthesis Seminar is fluid and reflective, allowing for both examination of coursework and on-the-job experience. Each seminar session synthesizes the students’ weekly studies, experiences both at work and in the community, independent research, and natural curiosity in close connection with Theatre School faculty, program director, and the Chicago Shakespeare department heads. (3 credit hours)

**THE 534 DRAMATURGY I**
This course develops the skills necessary to begin work as a production dramaturg through a consideration of practical, historical, and theoretical issues. The students work on both in-class and school productions as well
as writing critical essays.

THE 535 DRAMATURGY I
This course develops the skills necessary to begin work as a production dramaturg through a consideration of practical, historical, and theoretical issues. The students work on both in-class and school productions as well as writing critical essays.

THE 599 INDEPENDENT STUDY
Independent Study

THE 601 GRADUATE SEMINAR
Three quarter hours. The course familiarizes the student with the requisites of the thesis project and prepares the student to successfully complete this graduate requirement. Additionally, students review material in preparation for the comprehensive exam in the history of theatre and dramatic literature. (prereq)

THE 602 GRADUATE SEMINAR
Three quarter hours. The course familiarizes the student with the requisites of the thesis project and prepares the student to successfully complete this graduate requirement. Additionally, students review material in preparation for the comprehensive exam in the history of theatre and dramatic literature. (prereq)

THE 603 GRADUATE SEMINAR
Three quarter hours. The course familiarizes the student with the requisites of the thesis project and prepares the student to successfully complete this graduate requirement. Additionally, students review material in preparation for the comprehensive exam in the history of theatre and dramatic literature. (prereq)

THE 611 GRADUATE MANAGEMENT PRACTICUM
Work training as full-time employment at Chicago Shakespeare Theater. Specialized training in company operations of ticket sales, gift processing, customer service, house management, producing, company management, budget development, special event planning, subscription campaign, marketing and development, facilities operations, and organizational structure. (4-6 credit hours)

THE 612 GRADUATE MANAGEMENT PRACTICUM
Work training as full-time employment at Chicago Shakespeare Theater. Specialized training in company operations of ticket sales, gift processing, customer service, house management, producing, company management, budget development, special event planning, subscription campaign, marketing and development, facilities operations, and organizational structure. (4-6 credit hours)

THE 613 GRADUATE MANAGEMENT PRACTICUM
Work training as full-time employment at Chicago Shakespeare Theatre. Specialized training in company operations of ticket sales, gift processing, customer service, house management, producing, company management, budget development, special event planning, subscription campaign, marketing and development, facilities operations, and organizational structure. (4-6 credit hours).

THE 621 ARTS LEADERSHIP SYNTHESIS SEMINAR
All study revolves around this weekly seminar that includes aspects of the Chicago Shakespeare work experience and DePaul course integration in addition to readings, field trips, projects, and time for independent study. The Synthesis Seminar is fluid and reflective, allowing for both examination of coursework and on-the-job experience. Each seminar session synthesizes the students' weekly studies, experiences both at work and in the community, independent research, and natural curiosity in close connection with Theatre School faculty, program director, and the Chicago Shakespeare department heads. (3 credit hours)

THE 622 ARTS LEADERSHIP SYNTHESIS SEMINAR
All study revolves around this weekly seminar that includes aspects of the Chicago Shakespeare work experience and DePaul course integration in addition to readings, field trips, projects, and time for independent study. The Synthesis Seminar is fluid and reflective, allowing for both examination of coursework and on-the-job experience. Each seminar session synthesizes the students' weekly studies, experiences both at work and in the community, independent research, and natural curiosity in close connection with Theatre School faculty, program director, and the Chicago Shakespeare department heads. (3 credit hours)

THE 681 ARTS LEADERSHIP THESIS PROJECT
As the final term of the Synthesis Seminar, this course focuses on the culmination of the program and successful completion of a final capstone project. These projects will be individually selected in conference with the Program Director during the second year of the program. Possible projects include analytical reports, a specific and substantial employment undertaking, and exploration and treatise with an innovative focus in the industry. (5 credit hours)
Visual Effects

Graduate Course Descriptions - Current T, U & V Visual Effects

VFX 478 DIGITAL COMPOSITING II
This course expands on topics covered in VFX 278. Emphasis is on developing the student's understanding of advanced compositing techniques and design. PREREQUISITE(S): VFX 200
**WGS 400 FEMINIST THEORIES (CROSS-LISTED AS MLS 440)**
This course is designed to provide you with an introduction to the development of some contemporary feminist theories: local, global, transnational. The theories are interpretive frameworks to analyze, understand and act in the world. The theorists/writers offer concepts to critically analyze structures and practices of oppression, privilege, resilience, and resistance; they provide frameworks for conducting feminist research, advocacy, and activism for personal, social, intellectual, and/or political change and transformation. In this course, we will examine how these theoretical perspectives seek to understand and address various systems of inequality and power and the method(s) that we, theorists, scholars, researchers, advocates, activists, artists, writers - propose for change. We will discuss how these various feminisms continue to develop and evolve in relation to one another and to changing historical, political, social, economic contexts.

**WGS 406 GENDER AND FAMILIES**
This course considers issues raised by the diverse roles that women, men, and children play in families. It focuses particular attention on the social construction of gender in families, and examines families in their social, economic, and political contexts. Topics covered include adult intimate relationships, the social construction of motherhood and fatherhood, and shifting gender relations of power in families, family stress and adaptation, and the impact of social policies on families' lives.

**WGS 407 WOMEN IN THE MIDDLE EAST: BEYOND THE VEIL**
This course explores how Middle Eastern Women have been represented in the media outside of the Middle East, by Arab women scholars, and "Third World" feminists and challenges these representations by focusing on issues such as veiling, the everyday lives of Middle Eastern Women, political activism, literary works, economics and social class, and media representations.

**WGS 410 FEMINIST ETHICS**
This course explores theoretical issues regarding women's moral experience and feminist approaches to liberation from various forms of socio-cultural and political oppression. It explores the moral status of women from their own experiences and perspectives, in contrast to traditional Western ethics characterizations. It examines and evaluates the ethic of care as an alternative moral perspective and investigates a variety of themes and values discerned in women's moral experiences. It explores feminist ethical perspectives on oppressive social practices, such as racism and violence against women, and examines the ethical dimensions of difference among women.

**WGS 414 ANTRACRIST FEMINISMS**
This course introduces students to the wide array of feminist thinking regarding ideologies of race, racism, white privilege, ethnocentrism, racial and ethnic identifications, and their relationship to gender, class, sexual and national identities and locations. The ways that racism has divided women's movements and feminist organizations will be examined along with the work of feminist scholars, writers, activists, and advocates who have articulated explicitly anti-racist theories, analyses, and programs within the U.S. as well as internationally.
WGS 415 CONTENTIONS IN FEMINIST AND GENDER THEORIZING: NEW DIRECTIONS
This course addresses different aspects of feminist and gender theorizing and their interrelationships, focusing on exploration and critical examination of controversies and debates in the field. The course content engages students in examining philosophical, ideological, social, political, and cultural fault lines that offer opportunities to deepen and extend our understandings about discourses on women's and gender studies constructions and negotiations, in the late 20th century as well as in the early 21st century. The lens through which particular issues and ideas are viewed draws upon multiple perspectives, taking into consideration issues of culture and context, grounded in examining specificities of the local in relationship to global or transnational dynamics.

WGS 416 REPRESENTATIONS OF THE BODY
This course reflects the current explosion of intellectual interest in the body as a site of cultural meaning. We will enter this discussion by examining how the body, which seems to be a natural, universal fact, is also a deeply cultural symbolic construction. The readings attempt to capture the complexity of this evolving field using a multidisciplinary approach, including such fields as history, art, medicine, philosophy, religion, sociology, women's studies, and cultural studies.

The course addresses the questions of how the body is socially created and sustained. It explores those questions in terms of tensions between nature and culture (to what extent is the body natural? cultural?), body and spirit (what does human "embodiment" mean? are we our physical bodies -and nothing else?), and how discourses of power converge in and on the body (gender/race/class/age/ability). Course topics include: the meaning of physical pain in Western history; the personal experience of and social construction of race in the U.S., with its background assumptions about skin color; the social constructions of gender, sexualities, and sexual desire; personal experience and the cultural "readings" and representations of male and female, old, disabled, and transgressive bodies; socio-cultural "readings" of physical violence pertaining to both victim and perpetrator.

WGS 422 FEMALE IDENTITIES: YOUNG ADULT LITERATURE
This course is an introduction to Young Adult Literature as a genre and explores how this literature relates to adolescent girls' experiences in diverse cultural contexts. It addresses themes related to physical and emotional development, the development of personal values and beliefs; the construction of identity; beliefs and attitudes about the body; interpersonal relationships; gender and sexuality; and coping with change, death, belonging, alienation, and escape. Course materials are multicultural with a focus upon the experiences of female adolescents in terms of ethnicity, culture, gender, religion, disability, as well as other dimensions of difference within national and international contexts.

WGS 424 WOMEN IN THEATRE: A GLOBAL PERSPECTIVE
This course examines the concepts of gender and theatrical performance with reference to history, culture, critical response, viewer interpretation, and identity in a global context. Students will study character as a dramatic construct with respect to gender, race, and class; it examines how dramatic images are as diverse as their cultural contexts; explores the concepts of reader and viewer response to theater; and interrogates the relationship between the American theatrical image and the larger global context within which images are created.

WGS 426 WOMEN AND LAW
This course investigates the variety of ways in which women come into relation with the law, e.g., through laws and judicial decisions dealing with equal opportunity.

WGS 430 LESBIAN LIVES
This course explores constructions of lesbian lives, politics, and communities in the U.S. using the political cartoons of artist Alison Bechdel as a primary text, along with theoretical and historical readings. Students examine the constructions of identities and politics within lesbian culture, paying particular attention to how these have changed and evolved over time, and how community can be created and sustained. Cross-listed with WGS 330.

WGS 432 CREATING CHANGE: CONTEMPORARY GLBT POLITICS
This course explores the historical roots and contemporary realities of gay, lesbian, bisexual and transgendered (GLBT) politics, nationally and internationally. GLBT groups and individuals are gaining political recognition, challenging institutions, and creating change by asserting claims to rights and protections under law. Such issues as hate crimes, marriage, AIDS, and ballot initiatives over non-discrimination law and policy have entered the political mainstream since the 1970's. This course examines the GLBT movement, its political and social strategies, conflicts and issues, and the political roles played by its members as participants in political culture.
WGS 438 SEXUAL JUSTICE: LESBIANS, GAYS AND THE LAW (CROSS-LISTED AS WGS 338)
This course examines the historical and contemporary relationships between lesbians, gays, and the law in the U.S., focusing on the intersections of power, sexuality, and identity with issues of sexuality-based discrimination. It focuses on case law, along with social science and legal literature, seeking out a diversity of voices and experiences. Primary emphasis will be on cases that have come before the U.S. Supreme Court since the mid-1950's, with particular attention paid to how groups and individuals have reached out to the court system for redress of injustice and how these groups and individuals have exercised or failed to exercise power within the legal process. The U.S. legal system has reflected a complex set of social and institutional arrangements with regard to sexuality. This course explores the evolution and current construction of these arrangements, how power is allocated and adjudicated, and how law may be used to resist and dismantle pervasive discrimination.

WGS 440 GENDERED COMMUNICATION (CROSS-LISTED WITH CMN 523)
Examines research into the ways the various aspects of communication are affected by and affect the social construction of gender. Topics covered include language and language usage differences, interaction patterns and perceptions of the sexes generated through language and communication. (Cross-listed as CMNS 523)

WGS 455 WOMEN AND ART (CROSS-LISTED WITH MLS 474 AND ART 356)
Examines the work of the most significant women artists from the Renaissance to the present. It will also investigate how women have been represented in Western art by both male and female artists. (Cross-listed as MLS 474 and ART 356)

WGS 460 GENDER AND SOCIETY (CROSS-LISTED AS MLS 447 & SOC 470)
Attention to the growing literature and empirical research on changing patterns in economic, psychological, and social outcomes for women and men. Consideration of various theories of gender differentiation and equality. (Cross-listed as MLS 447 and SOC 470)

WGS 465 GLOBALIZATION, TRANSNATIONALISM, AND GENDER
This course examines how gender-based inequities are linked to global and transnational politics of power, security, political economy, militarism, and ecology. There will be a focus on how gender roles, relationships, and identities are constructed, deployed, challenged, and resisted around the globe, paying particular attention to how systems and structures of gender, race, class, sexuality, age, ability, culture, religion, nation etc. are interconnected. It will explore how resistance to structural inequities is constructed within and across national boundaries, paying particular attention to the role of non-governmental organizations (NGOs) worldwide and how the responses of NGOs to crises (e.g., nuclearism, uneven economic development, environmental degradation) highlight the shortcomings of state-centered decision making.

WGS 470 ADVANCED PSYCHOLOGY OF WOMEN AND GENDER (CROSS-LISTED AS PSY 561/MLS 478)
A review of research and theory on women's and gender, including sexist biases and methodology, feminist therapy, violence against women, and gender differences in the development of power and sexuality. Cross-listed as MLS 478 and PSY 561.

WGS 475 FEMINISMS OF THE BLACK DIASPORA (CROSS-LISTED AS WGS 375)
This course is designed to offer a critical examination of black women's experiences and thought within a global and transnational framework. The course examines works by and about black women in diverse social, political, and geographical contexts: the continent of Africa, Western Europe, Canada, Latin America, the Caribbean, and Australia. Topics to be explored will include issues of politics and ideology; power and inequality based on intersectionality of race and other dimension of identity; agency, activism, and social movements; the mass media, popular culture and social policies.

WGS 478 UTOPIAN & DYSTOPIAN LITERATURE AND FILM: GENDER, RACE AND BEYOND
What does the future hold for humankind on this planet and elsewhere? What will life be like in the not too distant as well as far distant futures? How will societies be organized? What kinds of cultural milieux will shape life and living? How will identities be articulated and negotiated? Who will govern? Who will be in resistance? Who will be present and who will be absent? How will things come to be? These questions will form the core of our study of a genre devoted to social commentary, envisioning vastly different ideas about the future, emergent from 20th century works.

WGS 480 SELECTED TOPICS: WOMEN, SELF AND SOCIETY
Topics vary. See schedule for current offerings. [Cross-listed as MLS 468 and WGS 394]

WGS 485 WOMEN, GENDER, AGENCY, AND SOCIAL CHANGE
This course will examine women's individual and collective involvement in social, economic, and political resistance and change. The course will focus on women's participation with attention to the ways that gender
shapes the history and development of social movements organized at local, national, regional and global levels, within and across differences of race, class, ethnicity, nationality, religion, geographic location and sexuality. Concrete examples of women's and gender movements within particular historical and geographical contexts, including within Africa, Latin America, Europe, the Middle East, Asia, the United States, among others, will be highlighted.

**WGS 486 BLACK WOMEN'S EXPERIENCES: VARIABLE TOPICS**
Topics vary. This course is designed to address issues related to the particular experiences of women in the Black Diaspora. Topics will vary in terms of their particular focus in addressing issues that are important to understanding Black women's experiences in a US context and globally: making interconnections to the experiences of women of other ethnic, cultural, and national backgrounds. The course will provide occasions for students to study and examine issues such as Black women's cultural criticism, Black women in the arts, engagement in activism and social and political movements --literature and the media.

**WGS 488 QUEER THEORY: AN INTRODUCTION**
This course examines some of the central texts of queer theory in order to contextualize and historicize the notion of homosexuality as a primary category of identity. The issue of sexual normativity as it relates to gay and lesbian assimilation will also be discussed. Because of the significant relationship of gender and sexuality, we will also examine theories of embodiment and take up the debates around the politics of intersex and transgender identities.

**WGS 490 WOMEN ACROSS CULTURES (CROSS-LISTED AS MLS 441, WGS 390)**
A critical analysis of the roles of women in societies around the world, with special emphasis on economics, politics and culture. Focus is on African, Asian and Latin American cultures and nondominant groups within Western societies. Topics vary each quarter. (Cross-listed as MLS 441 and WGS 390)

**WGS 491 METHODS AND SCHOLARSHIP IN WOMEN'S & GENDER STUDIES**
An exploration of the transforming effects that feminist methodologies and scholarship have had in the social sciences and humanities. This course emphasizes interdisciplinary research approaches, feminist publishing, and the interplay of research and activism, as it prepares students to write a research proposal.
PREREQUISITE(S): WGS 400.

**WGS 493 FINAL PROJECT INDEPENDENT RESEARCH**
This course involves individual investigation and research (toward completion of the Master's thesis, project, or portfolio) under the supervision of a faculty member. A minimum of 4 credit hours required. Course can be repeated for a total of 8 credit hours. PREREQUISITE(S): Permission.

**WGS 495 SPECIAL TOPICS IN WOMEN'S STUDIES**
Topics vary. See schedule for current offerings.

**WGS 496 CANDIDACY CONTINUATION**
Students who must take extra time to complete the requirements for the Master's thesis, project, or portfolio must enroll in candidacy continuation each quarter of the academic year until this Master's requirement has been completed. Non-credit, $40.00 per quarter. PREREQUISITE(S): Permission of Graduate Program Director.

**WGS 497 CANDIDACY MAINTENANCE**
Masters candidates who are not actively working on their thesis, project, or portfolio during a given quarter but who want to maintain active university status can register for this course by permission of the graduate director. This course does not maintain student status for purposes of student loans. Non-credit, $40.00 per quarter. PREREQUISITE(S): Permission

**WGS 498 FOREIGN STUDY**
Foreign Study

**WGS 499 INDEPENDENT STUDY**
PREREQUISITE(S): Permission of Women's and Gender Studies Program Director required.

Writing
MWR 497 WRITING THE LITERATURE OF FACT

MWR 498 INDEPENDENT STUDY
Independent Study PREREQUISITE(S): Written permission

MWR 499 THESIS RESEARCH
Thesis Research PREREQUISITE(S): Written permission

MWR 500 INDEPENDENT STUDY
Independent Study PREREQUISITE(S): Written permission

MWR 501 THESIS RESEARCH
PREREQUISITE(S): Written permission

MWR 502 CANDIDACY CONTINUATION
Candidacy Continuation

WRD 500 PROSEMINAR
An introduction to the intellectual/scholarly traditions of writing studies, rhetorical theory, and discourse. Students learn different theoretical perspectives as well as the field's lexical-conceptual vocabulary, providing a gateway to the field and the program's concentration areas.

WRD 503 ANCIENT RHETORICS (FORMERLY ENG 403)
A survey of rhetorical theory from ancient Greece and Rome and as well as various Eastern traditions. The course examines important definitions and discussions of rhetoric from Plato to Augustine, with attention to their implications for an understanding of the roles of rhetoric and writing in modern society. Formerly ENG 403.

WRD 504 RENAISSANCE AND 18TH CENTURY RHETORICS (FORMERLY ENG 404)
A survey of developments in rhetoric from the 16th through the 18th centuries. Includes consideration of the vernacular rhetorics of the English Renaissance and analysis of connections between logic, rhetoric and literary criticism in the 18th century, with attention to implications for contemporary studies of language and writing. Formerly ENG 404.

WRD 505 CONTEMPORARY RHETORICS (FORMERLY ENG 405)
A survey of theories and practices in 19th- and 20th-century rhetoric. Examines psychological, social and philosophical roots of contemporary rhetorics and the influence of scientific and literary studies on theories of discourse. Formerly ENG 405.

WRD 506 MULTICULTURAL RHETORICS (FORMERLY ENG 406)
An introduction to written rhetoric and culture. Explores competing conceptions of culture and meanings of literacy, particularly as they relate to American literacy education. Formerly ENG 406.

WRD 507 GLOBAL ENGLISHES
Explores the role and nature of the English language in a global context, focusing on the historical context and cultural legacy of the spread of English, global varieties of English, uses and contexts of English, issues of ownership and identity, and writing and language instruction. Course content draws upon theoretical models of World Englishes, scholarly debates, descriptions of spoken and written English around the world, and artifacts of global Englishes.

WRD 508 DISCOURSE AND STYLE
Explores discourse theory and practice in examining features of style, including linguistic and rhetorical perspectives.
WRD 509 GENRE THEORY AND PRACTICE
An overview of the study of non-literary genres, focusing on contemporary theories and practices of genre and genre learning. Students become familiar with various disciplinary perspectives on genre theory, methods for analyzing non-literary genres, and pedagogical approaches to teaching genre in the writing classroom. Explores genres from textual, social, and critical perspectives, considering how genres within social and institutional contexts such as the academy, the workplace, and the public sphere.

WRD 510 TOPICS IN RHETORICAL HISTORY
Explores topics in rhetorical history. Topics vary.

WRD 511 TOPICS IN COMMUNITY, CULTURE AND IDENTITY
Explores topics related to community, culture, and identity from the perspectives of rhetoric and discourse. Topics vary.

WRD 512 TOPICS IN LANGUAGE
Explores topics related to language and its intersections with rhetoric and discourse. Topics vary.

WRD 513 SEMIOTICS
An introduction to semiotics, or the study of ‘the sign’? a theory of meaning that is concerned with anything intended to or interpreted to stand for something else, including objects, pictures, sounds, gestures, and body language. The course examines the construction of meaning in manifold contexts, extending the notion of ‘text’ beyond the written page to any artifact that functions as a ‘message’ embodied in a genre and a medium.

WRD 514 SOCIOLINGUISTICS
An introduction to the study of language in social contexts. Explores the principles of language variation and change within social contexts.

WRD 515 THE ESSAY
Explores the history of the essay as genre from the Renaissance to the present, compares and contrasts literary essays with those written in most school settings, and offers students the opportunity to write their own extended essays on personal and professional topics.

WRD 520 COMPUTERS AND WRITING
Explores the cultural, institutional, professional, and pedagogical implications of digital writing technology, drawing upon theories of technology as well discussions from the field of computers and composition.

WRD 521 TECHNICAL WRITING
An introduction to various aspects of technical writing, including readability, document design, editing and usability. Formerly ENG 495.

WRD 522 WRITING IN THE PROFESSIONS (CROSS-LISTED AS MLS 459 AND MPS 508)
Improves writing skills useful in semitechnical and nontechnical professions; emphasis on style, tone, awareness of purpose and audience; effective memo, proposal and report design. Formerly ENG 494.

WRD 523 EDITING
An introduction to editing principles and practices in professional and technical fields.

WRD 524 DOCUMENT DESIGN
Theories, concepts, and components of effective document design, including the interrelation of visual displays and written texts across a range of electronic and print genres. Formerly ENG 486.

WRD 525 WRITING FOR THE WEB
An introduction to various genres of web-based communication and the roles played by writers, readers, and users of web sites. Includes analysis, design, and revision of web-based writing as well as practice producing written documents which accompany the development of web information.

WRD 526 GRANT AND REPORT WRITING
An introduction to the purpose and structure of these common workplace genres through analysis of successful documents and guided practice in producing their own.

WRD 530 TOPICS IN PROFESSIONAL AND TECHNICAL WRITING
Explores topics in professional and technical writing. Topics vary.

WRD 540 TEACHING WRITING
Introduction to teaching composition at the secondary and college undergraduate levels. The course helps students develop methods of teaching composition based on modern theories of rhetoric, reading and language acquisition. Formerly ENG 480.

**WRD 541 COMPOSITION THEORY**
Explores the development of contemporary theories of written composition; focuses on contexts for writing, the writing process, and reader-writer relationships. Formerly ENG 483.

**WRD 542 URBAN LITERACIES**
Explores the multiple definitions of literacy with a special emphasis on adult literacy in an urban environment. Students examine the relationship between theory and practice, reading about theories of literacy from psychology, cognitive science, education, composition & rhetoric and linguistics while engaging in literacy tutoring at Chicago-area literacy sites.

**WRD 543 TEACHING ESL WRITING**
Provides an overview of the theory and practice of writing in a second language. Examines distinctions between first and second language writing and major issues and dilemmas within the field, including composing processes, error correction and feedback, contrastive rhetoric, culture, course design, plagiarism, and U.S. composition classrooms.

**WRD 544 TEACHING ENGLISH AS A SECOND OR FOREIGN LANGUAGE**
A survey course in the teaching and learning of English as a Second Language (ESL). Familiarizes students with theoretical foundations and basic principles of second language learning and teaching, the components of the major language skills (listening, speaking, reading, writing), and the social and political dimensions of teaching and learning ESL.

**WRD 545 TEACHING WRITING ONLINE**
Explores the teaching of writing in online-supported distance-learning. Introduces students to challenges and best practices and techniques for specific technologies.

**WRD 546 PEDAGOGICAL GRAMMAR**
An introduction to grammar instruction for language and writing classrooms. Introduces students to current research in grammar instruction and applies that research to develop strategies for the instruction of a range of aspects of English grammar, with an emphasis on rhetoric and context.

**WRD 547 AP INSTITUTE IN ENGLISH LANGUAGE AND COMPOSITION**
A workshop designed to help Advanced Placement teachers prepare their students for the AP exam in English Language and Composition and for the demands of college writing. The institute is a week-long, full-day intensive workshop that covers teaching, reading, writing, style, assessment, and argumentation in accelerated high school classes. This course is offered in the summer only.

**WRD 550 TOPICS IN TEACHING WRITING AND LANGUAGE**
Explores topics related to teaching writing and language. Topics vary.

**WRD 551 TEACHING APPRENTICESHIP PRACTICUM**
Ongoing support in instructional practice to include grading and responding to student work; facilitating in-class activities such as discussion and peer workshopping; student-teacher conferencing; classroom management; and related topics. Available only to MA in WRD students admitted to the Teaching Apprenticeship Program. PREREQUISITE(S): WRD 540.

**WRD 582 WRITING CENTER THEORY AND PEDAGOGY (CROSS-LISTED AS WRD 395)**
Introduction to current theories and practices in writing instruction; prepares students to develop and administer writing centers and to work as writing consultants. (Writing Center practicum required.)

**WRD 586 WRITING FOR PUBLIC POLICY**
Specifically for those admitted to the M.S. in Economics and Public Policy Analysis and M.B.A. in Economic Policy Analysis, this course provides instruction in writing and presentation skills that allow students to communicate research findings to economists, non-economists, business executives, interest groups, and public officials.

**WRD 590 INTERNSHIP IN PROFESSIONAL/TECHNICAL WRITING**
Internship in professional and/or technical writing. PREREQUISITE(S): Instructor permission required.

**WRD 591 INTERNSHIP IN TEACHING WRITING AND LANGUAGE**
Internship in teaching writing and/or language. PREREQUISITE(S): Instructor permission required.
**WRD 595 INDEPENDENT STUDY**
Independent study guided by a faculty member. PREREQUISITE(S): Written permission of supervising faculty member and of department chair required before registration.

**WRD 597 CANDIDACY MAINTENANCE**
Masters candidates who are not enrolled in a course during a given quarter but who want to maintain active university status should register for this course by permission of the graduate director. This course does not maintain student status for purposes of student loans. Non-credit, $40.00 per quarter. PREREQUISITE(S): Permission

**WRD 599 PORTFOLIO**
A capstone seminar course in which students select, revise, and write supplementary documentation for a collection of their work appropriate to a job search in their area of concentration or for doctoral program application.