

Course Catalog

UMKC 2007-08 Graduate and Professional Catalog (1.0)

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Graduate Course Catalog

Accordion Courses

5500A Graduate Accordion-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

Accounting Courses

5517 Survey Of Accounting (3). An overview of financial and managerial accounting. The course introduces the various reports that are used by stockholders, creditors, and managers to assess company performance and evaluate financial health. In addition, techniques are presented that assist firm managers in planning, control, and decision-making activities.

5539 Accounting Information Systems For Management Planning & Control (2). This course covers the use of financial information in management decision-making. Topics include profitability and performance measurement issues, and activity-based management and decision support. Prerequisites: Admission to Executive MBA program

5556 Cost Management (3). A study of the principles and techniques of cost accounting with emphasis on the structure of cost accounting systems and the processing, summarizing, and reporting of cost information. Topics include various issues relevant for manufacturing and service organizations, and introduction of situations that requires the application of cost information to managerial settings. Prerequisite: ACTG 517 or equivalent. NOT open to students who have completed ACTG 307 or equivalent.

5557 Introduction To Income Taxation (3). An investigation of the structure of federal, state, and local taxation, along with an examination of the impact of taxes on the management decision process. Prerequisite: ACTG 517 or equivalent. NOT open to students who have completed ACTG 408 or equivalent.

5558 Financial Accounting Theory (3). A study of the theory and practice of financial accounting with emphasis upon financial statement preparation and analysis of asset, liability, and equity measurement. Prerequisite: ACTG 517 or equivalent. NOT open to students who have completed ACTG 310 or equivalent.

5559 Advanced Financial Accounting Theory (3). A study of advanced topics in financial accounting. Topics include business combinations and financial statement consolidation theory and practice. Offered: Every Fall, Winter, and Summer

5560 Introduction To Auditing And Accounting Systems (3). Fundamentals underlying the design of accounting systems and the processing of accounting data. Current auditing standards and procedures are extensively investigated, with emphasis on the nature of internal control, audit evidence, and audit reports. Prerequisites: ACTG 350 & ACTG 558. Not open to students who have completed ACTG 405 or equivalent.

5561 Personal Financial Planning (3). A study of the personal financial planning process and environment, with the goal of training participants to prepare integrated financial plans. Topics addressed include an overview of insurance, retirement, investments, debt management, tax issues, estate planning and professional ethics. Prerequisite: ACTG 517 or equivalent.

5562 Financial Statement Analysis (3). A look at financial statements prepared by corporations for external use. The course provides students with the ability to organize, summarize, and understand corporate financial data for use in decision making. The subject matter should be especially useful for students considering careers in accounting, finance and financial services, and law. Prerequisite: ACTG 517 or equivalent.

5565 Advanced Accounting Systems (3). An in-depth analysis of various contemporary issues in accounting information systems. Prerequisite: ACTG 350 or its equivalent or permission of instructor.

5567 Information Systems Control And Audit (3). A study of the theory and practices employed to provide a secure computing environment. Potential threats to information systems as well as controls designed to counter those threats are emphasized. Prerequisite: One previous graduate course in accounting systems, management information systems, or computer science, or permission of the instructor.

5569 Information Systems Consulting (3). An application of systems concepts to the evaluation of information systems of local organizations. Student teams will analyze, document and make recommendations for the improvement of these systems, and will communicate their findings via written

reports and oral presentations. Prerequisite: One graduate information systems course or permission of instructor.

5571 Individual Tax Problems (3). A study of substantive issues relating to individual taxation using the Internal Revenue Code and Regulations as sources. Topics include a detailed study of current issues such as alternative minimum tax, passive losses, and employee business expenses. Prerequisite: ACTG 409 or ACTG 557 or concurrent enrollment in ACTG 409.

5572 Tax Theory And Business Applications (3). A study of substantive issues relating to the taxation of business entities including multi-jurisdictional considerations. Topics include business formation and dissolution, business valuation, selection of business entity, compensation of employees, sales or exchanges of business property, and business tax credits. Prerequisite: ACTG 409 or ACTG 557 or concurrent enrollment in ACTG 409.

5573 Taxation Of Estates, Gifts, And Trusts (3). A study of substantive issues in the income taxation of estates and trusts and the taxation of estates and gifts using the Internal Revenue Code and Regulations as sources. Emphasis will be placed on lifetime and post-mortem planning techniques as well as compliance requirements. Prerequisite: ACTG 409 or ACTG 557 or concurrent enrollment in ACTG 409.

5574 Tax Accounting (3). A study of substantive issues relating to the accounting aspects of federal income taxation. Topics include methods of income and expense reporting, adoption of and change in accounting periods and methods, and annual accounting and transactional concepts. Prerequisite: ACTG 409 or ACTG 557 or concurrent enrollment in ACTG 409.

5575 Managerial Accounting: Issues, Tools And Analysis (3). A look at various tools used to assist in the planning, control, performance evaluation, and decision-making activities of managers. Contemporary issues that confront management are introduced where appropriate. Prerequisite: ACTG 307 or ACTG 556 or equivalent.

5576 Tax Research, Procedure And Practice (3). An introduction to research sources and methods with an emphasis on analysis and communication of conclusions. Administrative procedures of the Internal Revenue Service and the professional responsibilities of tax practitioners will also be addressed. Prerequisite: ACTG 409 or ACTG 557 or concurrent enrollment in ACTG 409.

5577 Advanced Auditing (3). An analysis of real-world cases of audit problems with emphasis on red flags, pressures auditors face, and serious implications of audit failure (both perceived and real) Prerequisite: ACTG 405 or equivalent

5578 Current Problems In Accounting (3). This course will focus on an in-depth exploration of specific problems including, but not confined to those accounting problems which have resulted in official positions being published or considered by the accounting profession. Prerequisite: ACTG 420 or equivalent or concurrent enrollment in ACTG 420.

5579 Theory Of Income Determination (3). This course will consider the historical and cultural development of accounting principles and the relationship of those principles to economic concepts of profit and cost. Consideration of the economic aspects of accounting measurements will provide a vehicle for exploring accounting problem areas in terms of both internal and external reporting needs. Pertinent literature in the field will be explored as a basis for both oral and written reports. Prerequisites: ACTG 420 or equivalent, or concurrent enrollment in ACTG 420.

5580 Financial Reporting Systems (2). Introduces generally accepted accounting principles and concepts along with the preparation and analysis of financial statements.

5595 Internship (1). An opportunity for students to integrate their academic studies via employment with a business/organization in the community. Admission only by prior approval and consent of instructor. Offered: Every Fall, Winter, Summer

5597 Special Topics In Accounting (1-3). Study and research in areas of special interest under individual faculty direction. Areas are: (A) Financial Accounting; (B) Cost/Managerial Accounting; (C) Taxation; (D) Auditing; (E) Accounting Systems; (F) Other Topics. Students may complete a maximum of six hours of Accounting 597. Prerequisite: Preregistration consent of instructor.

5597A Special Topics In Accounting:Financial Accounting Theory (1-3).

5597B Special Topics In Accounting:Cost/Managerial Accounting Theory (1-3).

5597C Special Topics In Accounting:Taxation (1-3).

5597D Special Topics In Accounting:Auditing (1-3).

5597E Special Topics In Accounting:Accounting Systems (1-3).

5597F Special Topics In Accounting:Other Topics (1-3).

5597G Special Topics In Accounting:Personal Financial Planning (1-3).

Anthropology Courses

5530 Anthropology Of Women (3). This class explores such global women's issues as cultural diversity, local and international politics, the economy and work, education and other ideologies, etc. We will inquire into women's lives in a variety of societies, during colonial contact, and in the current post-colonial New World Order to understand how the study of women through cultural anthropology informs all areas of life. In addition to the undergraduate course work, graduate students are required to submit a 15-page term paper at graduate-level quality.

5531 Feminist Theories (3). This class introduces the major feminist theories and their primary authors over the last 200 years. The class takes both an historical (we begin with two millennia of male-centered theories about women) and a conceptual approach (theories are grouped by common ground) and familiarizes the student with both the historical processes that necessitate feminist theories as well as with the breadth of the historically and currently available scholarship. Graduate students are expected to fulfill all undergraduate requirements at graduate-level quality, including independent research components; in addition, graduate students are required to be prepared to lead class discussions. Prerequisites: Introduction to Women's Studies Offered: Every Winter

5558 Cultures Of The African Diaspora (3). The course will explore the cultures of African people and their descendants who settled in Europe, the Caribbean or the Americas due primarily to the impact of the Trans-Atlantic trade in human beings. The focus will be comparative, with emphasis on cultural adaptation, kinship systems, music and religion

5580 Special Studies In Anthropology (1-3). An opportunity to explore in depth topics not included in usual course offerings. One or more topics will be announced in advance of registration.

Art and Art History Courses

5501 Scope And Methods Of Art History (3). A history of the discipline, bibliography, procedures and methods, and similar topics essential to graduate-level work in art history. Every winter.

5505 Graduate Technical Colloquium (3). An advanced study of technical matters pertinent to the production and study of art. Demonstration projects are required. Prerequisite: Permission of the department. Every fall.

5506 Graduate Photography (3-6). Photography on the graduate level with individual selection of media and technique. Permission of the department is required. May be repeated up to a total of 15 hours.

5510 Graduate Painting (3-6). Painting on the graduate level with individual selection of medium and technique. Permission of the department is required. May be repeated up to a total of 15 hours.

5513 Graduate Graphic Design (3-6). Graphic design on the graduate level with individual selection of medium and technique. Permission of the department is required. May be repeated up to a total of 15 hours.

5515 Graduate Drawing (3-6). Drawing on the graduate level with individual selection of media and technique. Student may pursue selected projects on a group or individual basis. May be repeated up to a total of 15 hours.

5520 Graduate Printmaking (3-6). Printmaking on the graduate level with individual selection of medium and technique. Permission of the department is required. May be repeated up to a total of 15 hours.

5530 Graduate Sculpture (3-6). Sculpture on the graduate level with individual selection of medium and technique. Permission of the department is required. May be repeated up to a total of 15 hours.

5540 Graduate Electronic Media (3-6). Electronic media on the graduate level with individual selection of subject and technique. Permission of the department is required. May be repeated up to a total of 15 hours.

5550 Graduate Performance Art (3-6). Performance art on the graduate level with individual selection of medium and technique. Permission of the department is required. May be repeated up to a total of 15 hours.

5565 Seminar In American Art (3). Graduate-level seminar dealing with an announced area in American art. May be repeated once, provided there is a change in the area of concentration. Permission of the department is required.

5566 Seminar In 19Th-Century Art (3). Graduate-level seminar dealing with an announced area in 19th-century art. May be repeated once, provided there is a change in the area of concentration. Permission of the department is required.

5567 Seminar In 20Th-Century Art (3). Graduate-level seminar dealing with an announced area in 20th-century art. May be repeated once, provided there is a change in the area of concentration. Permission of the department is required.

5570 Seminar In Renaissance Art (3). Graduate-level seminar dealing with an announced area in Renaissance art. May be repeated once, provided there is a change in the area of concentration. Permission of the department is required.

5571 Seminar In Art Of Africa, Oceania And New World Cultures (3). Seminar in art of Africa, oceania and new world cultures. May be repeated

once, provided there is a change in the area of concentration. Permission of the department is required.

5572 Seminar In Asian Art (3). Seminar dealing with an announced area in Asian Art. May be repeated once, provided there is a change in the area of concentration. Permission of the department is required.

5573 Visual Arts Administration (3). This course on professional arts administration includes assignments in: copyright laws, database management, ethics issues, evaluation design, gallery museum management, grant writing and budgeting, public relations, resume design, tax laws, and website design and management. Students are required to learn relevant computer programs. This course is also open to music and theatre majors. Research requirements for graduate credit are more comprehensive and professional.

5575 Seminar In Baroque Art (3). Graduate-level seminar dealing with an announced area in Baroque art. May be repeated once, provided there is a change in the area of concentration. Permission of the department is required.

5590 Directed Studies In Art History (2-4). Individually directed studies or research in selected topics or problems in art history. Permission of the department is required. May be repeated up to a total of six hours applicable to a degree program.

5591 Directed Technical Studies (2-4). Individually directed studies or research in selected projects of a technical nature in studio art. Permission of the department is required. May be repeated up to a total of six hours applicable to a degree program.

5599 Research And Thesis (1-9). Production and/or writing of thesis. Usually taken in the last term of candidacy. Permission of the department is required.

5699 Research And Dissertation (1-12). Dissertation Research and writing in Art History. Prerequisite: Consent of advisor

5899 Required Graduate Enrollment (1).

Arts and Sciences Courses

5500 Interdisciplinary Colloquium On Aging (3). This course will introduce students to gerontology as a field of study and as a profession. The context for the emergence of the field is set in important demographic transitions of the 20th century. Identification and understanding of major issues and controversies in the field will help locate the contributions of a range of disciplines to aging studies. The connection of these issues with the development of social policies will be discussed.

5500A Interdisciplinary Colloquium On Aging I (1-2).

5500B Interdisciplinary Colloquium On Aging II (1-2).

5500C Interdisciplinary Colloquium On Aging III (1-2).

5500L Special Readings Topics/Philosophy (1-3).

5500P Special Topics-Readings Psychology (1-3).

5500Q Special Readings/Topics Theatre (1-3).

5501 Special Readings/Topics (1-3). This is a designated Arts and Sciences course which gives all departments in the College the flexibility to offer, on demand and as the need arises, a graduate-level readings course in a particular area of specialization in any discipline in the College. The individual departments determine the content of the course in any given semester in the same manner as any reading course, special topics, or independent study is presently handled. The departments are responsible for approving individuals or groups for the course and determine whether or not the course will be included as a part of a post-baccalaureate degree in their disciplines.

5501E Special Readings/Topics (1-3).

5502 Introduction To African American Studies (3). This course provides an introduction to the contexts, theories, and methodologies that undergird African American studies. In addition to substantial time spent covering particular research skills and resources, students will also be introduced to African American culture and the issues related to African studies from several perspectives: history, literature, sociology, communication studies, and the like. Influences and perspectives from Africa, the Caribbean, and South America will also be covered. The course will thus provide a broad background in African American culture and history, an introduction to the methodologies of several disciplines, and discussion of particular contemporary and historical issues such as slavery, segregation and integration, the Civil Rights Movement, Pan-Africanism, Afrocentrism, and current political debates.

5505 Career Education And Transition In Special Education (3). This course is designed to increase awareness and knowledge about current disabilities legislation, vocational education, vocational rehabilitation, quality transition programs, school to work, self advocacy, workplace accommodations and comprehensive life skills learning. Prerequisites: EDSP 407 or equivalent. Offered: On demand.

5509 Methods Of Inq: Research Issues And Methods In The Liberal Arts (3). This seminar is required of all first semester participations in the Master of Arts in the Liberal Studies program. Must be taken concurrent with either A & S 510, 511, 512 or 513. This course serves as an introduction to various methods of inquiry and research in the humanities, social sciences, and sciences. Offered during four week-ends, the course is taught in conjunction with the week-day class offered that term (A & S 510 through 513). This course includes graduate level instruction in library research use of computer generated research tools and a strong emphasis on academic writing. Offered fall and winter semesters.

5510 Method Of Inquiry: An Interdisciplinary Study Of The 1930S (3). This course is one of a series in the Master of Arts in Liberal Studies program which studies American culture, history, and science by examining major decades of the 20th-century. This seminar offers an in-depth study of America's Great Depression during the 1930s and how the problems of this country related to events across the globe. Readings, lectures, and discussions focus on historical, economic, political, and cultural issues in the face of national conflict. Sessions cover such topics as the emergence of Regionalist artists in the Midwest, the contributions of Kansas City jazz to the creation of a new art form, African-American writers, the role of women in the Depression, economic causes of the Depression, the Pendergast Machine, and scientific developments between the two World Wars. Offered: every fourth semester or on demand.

5511 Methods Of Inquiry: An Interdisciplinary History Of The 1940S (3). This course examines a decade, in this case the 1940s, from a variety of perspectives. The second world war stimulated profound changes in science, ethics, government, economics, social structures, and cultural constructions of race, class, and gender. In essence, this course will examine how America in the 1940s became increasingly "modern" and assesses the impact of those changes on the nation and the world.

5512 Method Of Inquiry: An Interdisciplinary History Of The 1950S (3). This course examines a decade, in this case the 1950s, from a variety of perspectives. This course has three major themes: Domestic Politics, Foreign Relations and Scientific Development. Within these three major themes, a broad spectrum of human activity in the arts and sciences will be examined.

5513 Methods Of Inquiry: An Interdisciplinary Study Of The 1960S (3). As part of the Master of Arts in Liberal Studies series, this course examines a decade, in this case the 1960s, from a variety of perspectives. The Vietnam War stands as a turning point in the ways in which Americans, especially young Americans, viewed their country, the world, and, most importantly, themselves. This decade was crucial to the history of the civil rights movement, the women's liberation movement and American judicial process.

5514 Critical Choices: Methods Of Inquiry In Science (3). The course surveys current scientific developments and how these developments influence our society, whose citizens must make major policy decisions in areas with significant scientific content. Offered: On Demand

5520 Critical Choices: Final Research Project And Capstone Seminar (3). This seminar is designed as a capstone experience for students in the last semester of their studies in the Master of Arts in Liberal Studies program. Working with three faculty members of the graduate faculty (one member each from the humanities, the social sciences, and the sciences), each student defines a final research project, spends the semester developing it, and presents his or her findings to the seminar at the conclusion of the course. Each project is intended to be thought-provoking and to be researched from an interdisciplinary point of view.

5535 Directed Studies In Liberal Arts (1-3). Open to students in the Master of Arts in Liberal Studies Program, this course offers students the opportunity to pursue independent work at the graduate level on selected topics of an interdisciplinary nature, working with faculty members from at least two different departments. The course may not be repeated beyond a total of three credit hours. Permissions of the MALS Programs Director required.

5540 Liberal Arts Thesis (1-3). Open to students in the Masters of Arts in Liberal Studies Program who wish to include a written thesis in their program of studies. The course may not be repeated beyond a total of three credit hours. Permission of the MALS Program Director required.

5550 Seminar In Social Science Perspectives Study Of Community (3).

5571A Seminar In The Social Sciences (1-6). This is a designated Arts and Sciences course which gives all departments in the College the flexibility to offer, on demand and as the need arises, a graduate level seminar in a particular area of specialization in any discipline in the college. The individual departments determine the content of the course in any given term in the same manner as any seminar is currently handled. The departments are responsible for approving individuals or groups for the course and determine whether or not the course will be included as a part of post baccalaureate degree in their disciplines.

5572 Seminar In Philosophy Of Science I (3).

5581 Practicum Seminar In Aging (3). This practicum experience is for students who already have substantial experience working in the aging services network. Students, faculty and service providers to the elderly from the community will discuss a work on solutions to practical problems and issues confronted in agencies serving the elderly. The student will complete a written project and related oral examination on a problem pertinent to his/her work experience.

5591 Practicum In Community Social Science Research (3).

5592 Field Practicum In Aging (3-8). Students spend 180-480 hours in a field placement with the supervision in a community agency or organization which services or advocated for older persons and keep a journal documenting and reflecting on the practicum activities and experiences, particularly as related to gerontological theory and research. Students will study a particular subject relevant to their placement and describe this in a written project.

5899 Required Graduate Enrollment (1).

Bassoon Courses

5500A Graduate Bassoon-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Bassoon - Masters Performance (4).

5601 Graduate Bassoon - Doctoral Performance (4).

Biology Courses

5519 Principles Of Evolution (3). Synthesis of the modern concepts of evolution. Discussion of the biological processes that produce organic diversity through phyletic change. Discussed are variation, mutation, population genetics, natural selection and adaptation. Three hours lecture a week. Prerequisites: BIOL 206 or consent of instructor.

5525 Bioinformatics And Data Analysis (3). Methods and procedures for the storage, retrieval and analysis of information in biomolecular and biological databases. Emphasis will be given to the use of database information in biological research and to recent developments in genomics and proteomics. Offered: Every Winter Prerequisites: LSBIOC 341, LSBIOC 360, upper level undergraduate biochemistry or molecular genetics course, or permission of instructor.

5534 Cardiovascular Pulmonary Physiology (3). Function of the cardiovascular and pulmonary systems at the cellular, tissue, and system levels with particular emphasis on regulation, maintenance of homeostasis and integration with other systems. Consent number required. Restricted to SBS graduate students and interdisciplinary Ph.D students. Prerequisites: LSPHYS 316 or equivalent.

5539 Mammalian Physiology (4). Study of the physiological functions and controls in human and related mammalian systems, with emphasis on fundamental processes that underlie normal and abnormal clinical conditions. Prerequisites: LSPHYS 316 or equivalent. Restricted to SBS graduate students and interdisciplinary Ph.D students. Consent required. Offered: Every Fall

5542 Neurobiology (3). Neurobiology will consist of the presentation of theory and data concerning cellular and molecular fundamentals of the nervous system, synaptic mechanisms, sensor-motor systems, and higher-order functions of the nervous system. Three hours of lecture per week. Consent number required Restricted to SBS graduate students and interdisciplinary PhD students. Prerequisites: LSBIOC 304

5591 Directed Individual Studies (1-6). Intensive readings and/or research in an area selected by the graduate student in consultation with the instructor. Not to be identified with thesis research. Restricted to SBS graduate students and Interdisciplinary Ph.D. students.

5592 Master Of Arts Topics In Biology (1-6). Special problems and topics in biology specifically intended to satisfy the project or report requirement for the master of arts degree in biology. Enrollment is restricted to persons having satisfactorily completed at least nine hours of graduate work in Biology. Restricted to SBS graduate students.

5593 Master Of Science Topics (1-4). Investigation of problems and topics to satisfy the M.S. topics requirement for the master of science degree in Cellular and Molecular Biology. Restricted to SBS graduate students. Prerequisites: LSMBB 5561 and LSMBB 5562.

5899 Required Graduate Enrollment (1).

Business Administration Courses

5501 Economics For Administration (3). This course is designed for graduate students in the School of Business and Public Administration. Topics include the theory and determination of national income, fiscal policy, monetary theory and policy, production and cost theory, and market structure.

5503 Economic Analysis For Management (3). A study of relationships between economic theory and management of the firm in a market economy. Demand, revenue, and cost interrelationships are examined in the context of various market structures encountered in the American economy. The theoretical framework developed is used further to analyze economic problems involving the firm and the public interest. Prerequisites: BA 501, BDS 530.

5504 Advanced Organizational Finance (2). This course systematically examines three recurring financial challenges: what resources to acquire or sell, how to finance a business, and how much cash to distribute to owners in the form of dividends or share repurchases. Each topic is viewed on the practical level of how each affects accounting measures of performance and on the conceptual level of whether each creates or destroys value. Prerequisites: Admission to the Executive MBA program.

5508 Financial Decisions And Societal Goals (0.5). Deals with the application of financial theory to cases in financial decision-making and relies upon the practical application of corporate financial models. Students will explore agency and signaling theories and their implications for organizational leaders and will come to understand the importance of corporate communications and its impact on firm value. Offered: Every Fall
Prerequisites: Admission to Executive MBA Program

5515 Managerial Economics (0-2). This course studies the relationships between the economic theory and system as a whole and the ways in which their functioning is affected by the behavior of the interdependent sectors of which they are composed. Students will explore the major factors and determinants of economic prospects relevant to profit-maximizing production and pricing decisions for the firm.

5519 Operations Management (3). An integrating study focusing upon the models and methods of production and operations management. Managerial approaches to planning, scheduling, and controlling both product and service cost, quality, production, inventory, and distribution are studied. While both quantitative and qualitative models are studied, an emphasis is given to quantitative methods of planning and controlling the operations function of organizations. Prerequisites: BDS 508, ACTG 517 or Equivalents.

5531 Marketing (3). The convergence of traditional and direct marketing into integrated relationship marketing, incorporating the new arena of electronic technology is the focus of this course. The emphasis is on the interface between an organizations' objectives, capabilities, resources and marketplace needs and opportunities; this is applied to all organizations, including those that produce products or services, and profit and non-profit organizations.

5532 Financial Management (3). An introduction to the role of financial management through the development of a conceptual framework appropriate for financial decision making. Generally, financial management is charged with the responsibility for obtaining and effectively utilizing the funds necessary for the operation of an enterprise. As such, the conceptual framework includes elements of financial planning (financial analysis, cash budgeting and profit planning), capital budgeting (rate of return and cost of capital), and basic considerations of alternative sources of funds. Prerequisites: ACTG 517, BDS 508, BA 501.

5539 Management In Direct Marketing (3). The organization, planning and control of direct marketing efforts as an integral part of an institution's total marketing program. A synthesis of direct marketing efforts with the institution's other major functional areas in order to achieve efficiently overall organizational objectives. Prerequisite: BA 531.

5540 Service Operations Management (3). This course focuses on the increasing importance and role of service in our economy. Topics studied are: the role of services in an economy, the nature of services, service strategy, the service delivery system, service facility location, the service encounter, service quality, productivity and quality improvement. Methods of process analysis in service organizations, methods improvement procedures, and work measurement techniques are developed to provide the basis for analyses of processes, layouts, and job design in a service organization. Prerequisites: BA 519 or BA 426 or consent of the instructor.

5541 Total Quality Management (3). An in-depth study of managing an effective system of quality in organizations. Coverage includes the key TQM concepts developed by Demming, Juran, and Crosby, and others, a quality process model, primary considerations in planning and implementing a quality process, and familiarization with the tools used to plan and manage quality throughout the organization.

5542 Erp-Enterprise Resource Planning Systems (3). Discusses the design and implementation of Advanced Manufacturing Technologies (AMT). This includes Just-In-Time (JIT) systems, Cellular and Flexible Manufacturing

Systems (CM & FMS), Computer Integrated Manufacturing (CIM), and Enterprise Resource Planning (ERP) systems. It also explores the role that manufacturing plays in product development efforts and cross-functional teams. Other topics such as manufacturing strategy, maintenance, set-up and lot size reductions, group technology and focused factories, production and operations scheduling and control techniques, and the design of work systems are presented as well. Case Studies and group projects/presentations are used for instructional purposes. Students are also required to use the MAX software to perform an ERP system analysis. Prerequisites: BA 519 or equivalent.

5543 Project Management (3). Planning and control of projects, to include network models, risk analysis, time reduction, resource scheduling, leadership, and evaluation. Prerequisite: BA 519

5544 Erp-Supply Chain And Logistics Management (3). A study of integrated enterprise-wide supply chain management and logistics. Topics include integrating forecasting system design, inventory management, distribution requirements planning, supply chain management, purchasing and supplier/vendor networks, logistics, transportation network, and E-operations. Integrated enterprise-wide computer-based systems and network optimization are studied for both production and service operations. Prerequisite: BA 519 or consent of instructor.

5547 Contemporary Issues In Operations Management (3). An integrative study of technical issues of operations including manufacturing planning (MRP-II), Just-In-Time, comparative productivity analysis, advanced manufacturing engineering methods and systems including CAD/CAM/CIM, flexible manufacturing systems, artificial intelligence and expert systems, and their impacts on both service and product operations. Prerequisite: BA 519 or equivalent.

5550 Advanced Financial Management Theory And Policies (3). Advanced financial management covering topics such as working capital, financial structure, cost of capital, dividend policy and valuation. Discussions include both financial theory as well as financial policy. Includes exposure to literature central to the development of finance theory. Prerequisite: Six hours of finance coursework beyond BA 532.

5551 International Financial Management (3). This course analyzes present and future international financial market conditions and extends the decision-making tasks of financial management into the context of problems of the international and foreign financial systems. The financial constraints of the international business environment and their effect on standard concepts of financial management are studied along with international currency flows, capital structure problems, working capital management, foreign investment, and international banking practices. Prerequisite: BA 532 or equivalent.

5552 Financial Markets And Institutions (3). A study of structure and operation of the major financial markets. The concept of flow of funds serves as the underlying mechanism bringing together the various private, public, and foreign sectors as they relate to the demand for and supply of loanable funds. Topics include consideration of short, intermediate, and long-term credit and equity market instruments; the level and structure of yields in financial assets; behavior of risk premiums; structure of financial institutions; and implications of alternate policy actions. Prerequisite: BA 532 or equivalent. Previous graduate coursework is recommended.

5553 Investment Analysis (3). Development of a theoretical framework applicable to the solution of problems related to creation and management of the investment portfolio. Consideration is given to the analysis of risk, functions of security markets, sources of information, evaluation of securities, and measurement of investment return. Prerequisite: BA 532 or equivalent.

5556 Management Of Financial Intermediaries (3). This course addresses the management operations of selected financial intermediaries including commercial banks and thrift institutions. Attention is given to asset-liability structure, the development and delivery of financial services, institutional structure, legal and regulatory factors, and the dynamics of the competitive environment. Prerequisite: BA 532 or equivalent.

5557 Derivative Securities (3). This course is designed to introduce students to the basic principles of financial risk management. The student should develop a working knowledge of issues regarding both the theoretical valuation and application of derivative securities. Applications will focus on techniques designed to manage financial risks in the corporate environment. Specifically, the course will focus on using futures, options, and swaps to hedge financial risks. Valuation issues will be explored to identify theoretical pricing fundamentals that can be applied toward valuing newly developed securities. Prerequisites: BA 501, BA 532, BDS 508, AND ACTG 517 or equivalents.

5558 Risk Management And Insurance (3). This course introduces students to the principles of personal and corporate risk management. Personal risk management topics include: Personal insurance planning, annuity investing, benefits plans, social security, and personal liability management. Corporate risk management topics include: Managing corporate risk, reducing risk through hedging, and legal liability risk.

5559 Strategic Financial Management (3). This non-quantitative, readings-based course seeks to impart the latest concepts in strategic financial theory and rational economic thought. Major financial and economic developments such as signaling theory and agency are applied to a wide variety of contemporary problems facing businesses, governments, and individuals. Prerequisites: BA 532 or equivalent.

5560 Buyer Behavior (3). A review of behavioral science concepts applicable to an understanding of constituent decision making. Special emphasis is placed on applications of these concepts, by the student, to problems of offer planning, pricing, distribution and promotion. Prerequisites: BA 531.

5561 Promotional Strategies In Marketing (3). Emphasis will be placed on the organization's persuasive communications to customers and prospective customers within a framework of the system of distribution. The central focus concerns how marketing management allocates the promotional mix within the organization's total marketing program. Topics will include the following: 1) promotional mix, 2) campaign strategies, 3) campaign coordination and 4) follow-up control of promotional programs. Prerequisite: BA 531.

5562 Marketing Research (3). This course requirement is designed to acquaint the student with the special problems of understanding and applying various measurement techniques to marketing problems. Specific topics to be investigated will depend upon the instructor's and the student's areas of interest and specific competencies. Prerequisites: BA 531, BDS 508.

5563 Direct Marketing Theory (3). Supervised research in direct marketing areas of special interest under individual faculty direction for the purpose of developing and validating direct marketing theories. Prerequisites: BA 539.

5565 Marketing Management (2). Addresses the role of marketing in meeting the objectives of value building within organizations. Students will use market planning as a tool to achieve the organization mission and strategic vision and will appreciate the value of marketing research in the decision making process. Prerequisite: Admission to Executive MBA Program Offered: Every Fall

5566 Operations Management For World Class (0-2). The study and application of the models, methods, and computer based systems of production and operations management. Managerial approaches to planning, scheduling, and controlling product and service cost, time, quality, production, inventory and distribution are examined. ERP systems, Just-In-Time, Total Quality Management, Time Based Competition, Supply Chain Management, e-commerce, and other contemporary topics in operations management are introduced in this survey course. The course studies both product and service oriented organizations for general applicability.

5568 Organizational Finance (0-2). Focuses on the fundamental tools of financial analysis used in the valuation of corporate investment projects, as well as tools for the valuation of the organization as a whole. Primary topics covered will include financial statement analysis, forecasting and sustainable growth, discounted cash flow analysis, the valuation of corporate securities, the firm's financing decision, and capital market efficiency.

5570 Policy And Administration (3).

5573 Business Strategy Overview (0.5). Provides an overview of approaches to business strategy rooted in economic modeling and analysis. The focus is on identifying and developing strategic sensibilities that executives confront in the face of complexity and uncertainty. Prerequisite: Admission to Executive MBA Program Offered: Every Fall

5575 Advanced Marketing Strategy (3). This course focuses on advanced marketing skills and practical techniques for defining and meeting the needs of the chosen market. The emphasis is on key drivers of marketing effectiveness, including creating a market-oriented culture, customer-focused information systems, the relationship of various components of marketing, and the response to marketing variables. A variety of pedagogical approaches, including applied projects, may be employed. Prerequisites: BA 531

5576 Statagic Marketing (0-2). This course examines those market-based issues that have broad implications for strategy, such as market sizing, brand and competitive set, and product life cycles. Among strategies and business models discussed will be those tailored to start-ups and growing businesses, as well as businesses in mature and declining markets, with special emphasis on the challenges of differentiation in highly competitive industries.

5580 Seminar In Finance (3). Advanced work in each of the above areas-Financial Management, Investment Analysis, and Financial Markets and Institutions would form the basis for the Seminar. Each topic selected would provide the opportunity for an investigative study on the part of the student. Major problems, hypotheses, and cases, together with the literature addressing the specific topic, would serve as the spring-board for classroom activity. Both written and oral reports would be required. Prerequisites: BA 532 or equivalent and consent of the instructor.

5595 Internship (1-3). An opportunity for students to integrate their academics studies via employment with a business/organization in the community. Admission only by prior approval and consent of instructor. Offered: Every Fall, Winter, Summer

5597 Independent Research In Business Administration (1-6). Study and research in areas of special interest under individual faculty direction. Admission to (A) Quantitative Analysis, (B) Finance, (C) Management Information Systems, (D) Marketing, (E) Production and Operations Management, (F) Unspecified, of student whose programs of study and research abilities warrant intensive study of either (1) the problems of practices characteristic of a particular industry or (2) advanced theory in the areas of a specialized management function. Prerequisite: Consent of instructor.

5599 Thesis (1-9).

5899 Required Graduate Enrollment (1).

Business Decision Sciences Courses

5501E Introduction To Management Science (1-3). The design and application of scientific models for managerial decision making. Students will be introduced to linear programming, decision theory, utility, and other management science topics, and will become familiar with their application to the areas of production, logistics, inventory policy, advertising, maintenance, financial decision, etc. It is assumed that students have acquired basic skills in electronic spreadsheets and college algebra. Enrollment limited to those admitted to EMBA. Must take 3 hours to qualify for prerequisite for advanced courses. Must take 3 hours (BDS 530 or BDS 508) to qualify for program completion.

5508 Statistical Analysis In Business (3). Data analysis and statistical inference in the context of business management. Communication of analysis and conclusions using text, numbers, and graphics is emphasized. Understanding the conceptual framework of probability and statistics as it relates to statistical tests and procedures is emphasized more than computational methods. Most of the work will be done using a computer spreadsheet. The course includes the topics of estimation, tests of hypotheses, analysis of variance, and multiple regression. Prerequisite: College Algebra.

5509 Applied Statistical Methods (2). Investigates the use of detailed sample data for purposes of estimating, predicting, forecasting, and explaining correlations among varied observations. Students will apply the concepts of probability theory, central tendency, sampling, inference, modeling, and forecasting to help solve managerial problems and support decision processes. Prerequisite: Admission to Executive MBA Program Offered: Every Fall

5510 Decison Making With Uncertainty (0.5). Introduces formal decision process structures, descriptive statistics, and elementary probability theory as the basic tools for representing uncertainty in business. Powerful examples are used to translate these to the decision-making challenges of contemporary leaders. Prerequisite: Admission to Executive MBA Program Offered: Every Fall

5512 Statistical Quality Control (3). A study of statistical methods of assuring and assessing quality in all organizational settings. Topics include methods of statistical process control (SPC), acceptance sampling (AS), Shewhart control charts, design of experiments (DOE) including those of Taguchi, and statistical theory of analyses popularized by Deming, Juran, and others. Where appropriate, the probability and the statistical theory of these methods are studied. Prerequisite: BDS 508 or a first statistics course, or equivalent

5520 Sampling And Experimental Design (3). Principles of sampling, properties of estimators and strategies for improving efficiency. Relationship between the design of an experiment and the testing of hypotheses using analysis of variance. Sampling topics include simple, stratified, multistage, cluster and systematic sampling. Experimental design topics include factorial designs and the treatment of randomization, nesting and confounding. Prerequisites: BDS 508 or equivalent.

5528 Decision Support And Expert Systems (3). The packaging and delivery of models, knowledge bases, data bases, and graphics to interactive software to support managerial decision making. Decision support systems via spreadsheet modeling. Artificial intelligence applications in business. May include a number of computer-oriented assignments. Prerequisite: BDS 508 and BIS 502.

5530 Decision Analysis And Modeling With Spreadsheets (3). The modeling of business decisions in operations, finance and marketing, and the analysis of models using optimization, computer simulation, and decision theory. Modeling and analysis are conducted using the medium of a computer spreadsheet. The course focuses on the creation, critical evaluation, and improvement of models, as well as written and oral communication of analysis and conclusions. Prerequisite: BDS 508.

5545 Forecasting Theory And Applications (3). A study of the essential concepts, theoretical basis and applications of alternative forecasting methods. Typical methods included are smoothing and decomposition time-series methods, regression methods, econometric models, single and multiple series autoregressive/moving average methods (ARIMA methods of Box-Jenkins). Prerequisite: BDS 508.

5548 Multivariate Statistical Methods (3). Theory and managerial applications of multiple regression analysis, multivariate analysis of variance, discriminant analysis, factor analysis and canonical correlation. Computations via statistical software and spreadsheets. Prerequisite: BDS 508 or equivalent.

5581 Seminar In Quantitative Research Methods (3). The seminar is provided for students who have achieved a level of competence in quantitative analysis which will allow them to undertake independent research activity. Each student will have the responsibility for pursuing a research project under the supervision of the instructor and of reporting the progress and results before the seminar. Prerequisite: The level of competence in statistical method or some other related quantitative area might be presumed on the basis of 6 to 9 hours of course work in such areas.

5681 Multivariate Statistical Methods-II (3). Theoretical and research applications of MANOVA, Canonical Correlation, Multi-Discrimination Analysis, Factor Analysis, and introduction to Structural Equation Modeling using appropriate software. Students are expected to undertake a major research project during this class and to apply appropriate multivariate statistical analysis to their chosen academic research topic. Prerequisite: BDS 548 Offered: Every Winter

Business Information Systems Courses

5502 Management Information Systems (3). Fundamental concepts of hardware, software, networking, system life cycle, enterprise systems, and strategic systems in a business context. Techniques in programming and web publishing.

5529 Decision Support Systems (3). Information systems to support decision makers in organizations. Influences of cognitive biases and group think on decision makers. Identification of both potential uses of information technology to support decision makers and potential effects of information technology on the decision making purposes. May include a number of computer-oriented assignments. Prerequisite: BIS 502 or equivalent.

5552 Data Base Management (3). Data administration, including theory of relational databases and projects using relational data management packages. Data modeling and information engineering. Entity-relationship modeling. Database design, normalization, data dictionaries, distributed databases, database servers, data quality assurance, data integrity, SQL. May include a number of computer-oriented assignments. Prerequisite: BIS 502.

5554 Systems Analysis, Design And Engineering (3). Tools for documenting information system requirements and design and implementation methods. Organization of software projects. Classes and objects. Requirements analysis fundamentals and methods. System specifications. Documentation and diagramming standards. Tool selection. Programming languages and methodology. Costs and schedule estimation. Project management. Program verification, metric, debugging and testing. Internal control issues. May include a significant project. Also offered as Accounting 566. Prerequisite: BIS 502.

5556 Distributed Information Technology (3). Basics of data communication and telephony with how these are used to achieve business advantage. Voice, data and video communications. Networks, distributed computing, EDI, inter-organizational systems, and electronic commerce. Using Internet applications and running Internet services. Prerequisite: BIS 502.

5558 Management And Economics Of Computing (3). Procurement and management of computer systems. Economics of hardware and software. Cost-benefit analysis. Software acquisition, RFQs, RFPs, contract terms and conditions. Enduser computing. Organizational location and staffing of computing. Distributed processing versus central DP center. Capacity planning. Contribution of computing to business objectives. Control, audit, and security of information technology. Legal and ethical perspectives. Computer center operations. Business policies about computing. International issues. May require a significant term paper. Prerequisite: One previous course in computer science or information systems.

5569 Information Systems Consulting (3). An application of systems concepts to the evaluation and implementation of information system. Student teams will analyze, document and make recommendations for the improvement of these systems, and will communicate their findings via written reports and oral presentation. Project management concepts will be covered as well. Course content might be actual projects for local organizations, or it might be a simulation of consulting engagement. Prerequisites: Instructor Permission

5580 Seminar In Information Systems (3). This seminar is provided for students interested in exploring advanced BIS topics not covered in the regularly offered courses. The content of this seminar may change from one offering to the next. Prerequisite: BIS 502.

Business Management and Administration Courses

5504 International Management (3). Examination of the management of contemporary international business organizations through a study of the political, economic, social and technological factors and their relationship and impact upon the administrative activities and strategies of the international firm.

5505 Organizational Behavior (3). A study of individual, group, and organizational behavior and processes. Examination of social and behavioral sciences methods and theories which apply to the understanding of administrative social systems. Classroom activities will utilize lectures, laboratory training, and clinical cases.

5506 Contract Negotiation And Dispute Resolution (3). This course surveys the conceptual framework for negotiating legally binding contracts and examines contemporary institutions and processes for resolving contractual disputes. Particular attention will be given to identifying and appreciating strategies, practices, and specific rules by which binding contractual rights and duties are determined in the United States and in international jurisdictions. Working independently and in teams, students will assimilate the legal rules and negotiation strategies and apply them to common business transactions and disputes. Most business professionals face opportunities to negotiate and to resolve conflicts. This course provides students the solid preparation to maximize those real-life opportunities that arise in their management careers.

5508 Law Of Business Associations (3). Working individually and in teams, students study the legal rules that govern most common business relationships. These include the rules for creating and managing agency and partner relationships, LLC and other new joint ventures, as well as public and closely-held corporations. Student teams follow local public companies as they prepare and conduct their annual meetings and conduct mock negotiations to form a new business venture. Prerequisites: None.

5510 Legal And International Environment Of Business (3). This course provides an essential introduction to the domestic and international environment of business. Particular attention is given to the comparative historical development, cultural, economic, legal and political context for the conduct of business in the U.S. and abroad. Topics include international trade, international management, alternative modes of international operations, international finance and exchange rates, international marketing, international human resources, international business strategy, protection of property interest, including worldwide protection of intellectual property, private contracts, multilateral agreements, dispute resolution systems and the influence of government trade.

5513 Economic Policy And Managerial Control (3). Analysis of the industrial foundations and economic institutions of modern times. The politics of industrial control, including power relationships in economic nationalization and planning. Theory of managerial industrialism and business enterprise.

5516 Leading Teams (3). This course is designed to increase the student's understanding of team processes in organizational settings and to contribute to the student's ability to build and lead high-performing teams. The class will be utilized as a laboratory for the exploration of team leadership theory and research. Prerequisite: BMA 505.

5533 Leadership And Change In Organizations (3). Study of the dynamics of leadership and change in organizational contexts with attention to both theory and practice. Classroom activities can include lectures, case discussions, group presentations, and experiential activities. Prerequisite: BMA 505, PA 548 or consent of instructor.

5536 Strategic Management (3). A consideration of current problems of significance to the administrator and appropriate decision-making procedures relevant to the firm as a whole. Prerequisites: Completion of or concurrent with completion of Stage I requirements.

5537 Competitive Strategies (3). Study of the processes of formulating and implementing competitive management strategies. Analytical techniques appropriate to the firm, the market or the industry will be emphasized. Major individual and/or group papers analyzing existing organizations will be required. Prerequisites: Must be taken in the student's final semester of the program.

5546 Successful E-Commerce Strategies (3). The course focuses on major factors that influence success in electronic commerce-E businesses must deliver customer value and make a contribution to profit. Knowledge and ability to implement initiatives dealing with supply chain management (manufacturer, distributor, retailer), selecting business partners, effective marketing (customer acquisition and retention) are some of the topics covered in the class. The course will also focus on understanding customer value chain and successful, profitable e-business strategies. Drawing on success and failures in the market, we will describe key drivers for developing an e-business that will add up to real value and sustainable profit.

5550 The Operation Of International Business (3). The course reviews the basic decision-making and operations taking place within international business. Attention will be given to export/import activities of firms including global marketing & sourcing, transportation, finance, customs clearance, & legal issues such as intellectual property rights & agent/distributor agreements. Prerequisite: BMA 510.

5555 International Marketing (3). This course focuses on marketing problems confronting international business managers and the ways they may be analyzed and resolved. The course content includes concepts and techniques useful in international marketing; effects of national differences on marketing practices; organization for international marketing; and strategy formulation for international markets. Prerequisites: BA 531 and BMA 510.

5557 Leadership And Organizations (2). Focuses on how organizations work and how leaders can set direction, marshal resources, and build support to move initiatives forward. The course provides tools and tactics for assessing organizations needs and constraints through multiple lenses, and assessing one's own leadership strengths and weaknesses for development and alignment with organization needs. Prerequisite: Admission to Executive MBA Program Offered: Every Fall

5560 Strategic Human Resources (3). This course will provide an overview of the theory, research and practices used to strategically align human resource policies and practices with the overall goals and objectives of organizations. The course will highlight ways in which HR policies and practices affect and are affected by organizations' environments and culture. Emphasis will be placed on high performance and innovative work practices. Particular attention will be given to assessing internal and external conditions and contexts in which HR policies and practices maximize effectiveness.

5566 Strategic Staffing (3). This course presents theoretical frameworks and practical applications for determining optimal person-organization fit and person-job fit within organizations. Emphasis will be placed on integrating recruitment and selection strategies and practices with overall business strategies. The importance of strategically planning and implementing recruitment and selection processes will be addressed as it relates to various organizational contexts, including environmental threats and opportunities, organizational size, structure, and climate.

5567 Total Rewards Management (3). This course presents both theory and practice for designing effective rewards systems within organizations. Compensation. (including base pay and incentives). Benefits and performance management will be covered from a strategic perspective. Characteristics of the work environment, such as recognition, work/life balance, and culture will also be considered in terms of their contribution to the total rewards systems.

5577 Team And Community Building (0.5). Kicks off the EMBA program to create relationships among the participants and faculty that facilitate and accelerate learning and to introduce students to the concepts and material in the leadership curriculum. Prerequisite: Admission to Executive MBA Program Offered: Every Fall

5580 Seminar In Organizational Behavior (3). Students will do research under the direction of a member of the faculty. Results of the research will be presented to a seminar composed of students and faculty. Students will be required to read original sources and demonstrate advanced competence in relating theory to a body of descriptive data. Prerequisite: BMA 505 OR PA 548

5582 Managing People For Strategy Execution (0-2). The focus of this course is producing, for an organization, a sustainable competitive advantage through the effective management of people-the human resources of the organization.

5583 Leading With Integrity (3). Examination of the personal and ethical underpinnings of leadership, with special attention to issues of values, faith, and spirit. Activities will include discussion of readings and cases, personal exploration, and a weekend workshop near the end of the term. Student teams will choose a topic, write a paper, and make a class presentation. Prerequisite: Consent of the instructor.

5587 Seminar In Management And Administration A To G (1-6). A course on advanced and/or new topics in one of the following areas of Management Administration: (A) International, (B) Human Resources, (C) Law, (D) Organizational Behavior, (E) Strategic Management, (F) Entrepreneurship and (G) Unspecified. This course is designed to facilitate at least one of two purposes, an initial offering of a new course (prior to formal approval) or an initial and possibly final offering of new topics. New topics include those that are contemporary, cutting-edge, or advanced topics that are not currently covered by existing courses. Prerequisites: Various, including permission of instructor

5587D Seminar In Organizational Behavior (1-6).

5588 Power, Influence, And Negotiation (2). This course seeks to enhance an important component of leadership success: political savvy and influence. The course presents conceptual models, applications, and tactical approaches to

help you understand political dynamics in organizations and develop ethical strategies to enhance your credibility and influence. The class uses a variety of vehicles, including readings, case studies, guest speakers, and self-assessment tools. Prerequisites: Admission to the Executive MBA program.

5589 Strategic Management I (1). Strategic Management I is the first course in a two-part series entitled, "The EMBA Project", and is intended to provide opportunity to a) sensitively develop an agreement with the client based on EMBA curriculum/concepts, client needs, and team interests; b) undertake a project that fits those parameters; and c) assist the client company in implementation (or planning thereof) of the project findings. The projects are intended to provide opportunity for the EMBA students to develop strategic, organizational, and operation insights. Prerequisites: Admission to the Executive MBA program.

5597 Independent Research (1-6). Study and research in areas of special interest under individual faculty direction. Areas are (A) International, (B) Human Resources, (C) Law, (D) Organizational Behavior, (E) Strategic Management, (F) Entrepreneurship and (G) Unspecified. Prerequisite: Consent of instructor

5599 Thesis (1-9).

Cello Courses

5500A Graduate Cello - Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Cello - Masters Performance (4).

5601 Graduate Cello - Doctoral Performance (4).

Chemistry Courses

5511 Laboratory Safety And Health I (1). An introduction to laboratory safety and health. Topics to be discussed include good laboratory practice; laboratory hazards; safe chemical handling; storage and disposal; first aid; protective equipment; and federal regulations.

5520R Survey Of Organic Chemistry (3). An intensive advanced survey of the structure, synthesis and reactions of organic compounds. Three hours lecture a week.

5521R Mechanisms Of Organic Reactions (3). A comprehensive course in which the mechanisms of organic reactions are discussed in light of modern chemical principles. Prerequisites: Chemistry 322R and 432. Three hours lecture a week.

5522 Synthetic Organic Chemistry (3). A critical approach to the synthesis and modification of organic molecules; newer methods will be emphasized. Prerequisites: Chemistry 322R and 432. Three hours lecture a week.

5529 Selected Topics In Organic Chemistry (3). Selected topics from the chemistry and theories of organic structures with particular attention to recent developments. Three hours lecture a week.

5530 Systematic Physical Chemistry (3). An intensive and comprehensive review of the principles of physical chemistry. This course may either emphasize thermodynamics with an introduction to principles of quantum mechanics or emphasize quantum mechanical description of atoms and molecules, molecular spectroscopy, statistical mechanics and kinetics. Three hours lecture a week.

5531 Classical Thermodynamics (3). A rigorous treatment of the laws of thermodynamics and their application to ideal and non-ideal equilibrium systems. Three hours lecture a week.

5532 Chemical Kinetics (3). Empirical analysis of chemical reaction rates. Theories of unimolecular and bimolecular reactions, reactions in solution and complex reactions. Review of modern and classical techniques used to study chemical kinetics. Three hours lecture a week.

5533 Quantum Chemistry (3). Application of quantum mechanical methods to the study of systems of chemical interest. Exact solutions and approximate methods will be discussed. Three hours lecture per week.

5534 Molecular Spectroscopy (3). A theoretical introduction to molecular spectroscopy and its relation to structure. Electronic, vibrational and rotational spectra of chemical systems will be discussed.

5535 Statistical Thermodynamics (3). A rigorous treatment of the fundamental concepts of statistical thermodynamics, with applications to specific systems that reflect the interests of students participating in the course.

5539 Selected Topics In Physical Chemistry (3). Selected topics and recent developments in physical chemistry. Prerequisite: Chemistry 5530 or consent of instructor. Three hours lecture a week.

5541R Advanced Analytical Chemistry (3). An intensive review of modern concepts of analytical chemistry. Prerequisite: Chemistry 432. Three hours lecture a week.

5549R Selected Topics In Analytical Chemistry (3). Selected topics and recent developments in analytical chemistry, including modern instrumental methods, electrochemical methods and separation methods. Topics vary from year to year. Prerequisite: Chemistry 442 or Chemistry 5541R.

5551R Advanced Inorganic Chemistry I (3). A systematic treatment of bonding, structure, reactions and reaction mechanisms of inorganic compounds, with emphasis on classical transition metal compounds and organometallic compounds. Prerequisite: Chemistry 451 or equivalent.

5553R Organometallic Chemistry (3). A survey of the synthesis, structure and reactions of organometallic compounds. Prerequisite: Chemistry 5551R or consent of instructor. Three lecture hours each week.

5559 Selected Topics In Inorganic Chemistry (3). Various special topics in the inorganic area to be offered in different semesters. Prerequisite: Chemistry 5551R or consent of instructor. Three hours lecture a week.

5567 Advanced Bioorganic Chemistry (3). This course examines the organic chemistry and laboratory synthesis of the major biopolymers and organic chemistry related to biological systems. Emphasis is on literature and library research and natural product and solid phase organic synthesis, combinatorial synthesis, bioconjugates and applied bioorganic chemistry.

5571R Introduction To Polymer Chemistry (3). Survey of organic and inorganic monomers and polymers; the occurrence, synthesis, structures and properties of natural and synthetic polymers; discussion of general properties of plastics, elastomers, fibers, resins and plasticizers. Prerequisite: Chemistry 432. Three lecture hours a week.

5579R Selected Topics In Polymer Chemistry (3). Selected topics and recent developments in specialized fields of polymer chemistry. Presented at intervals, topics vary from year to year.

5580R Computer Applications To Chemical Problems (3). An intense course in FORTRAN programming and its uses in chemical problems related to theory and experimentation. Emphasis will be placed on the mathematical structures of the chemical problems and the coding of these problems into Fortran. No previous programming experience is required.

5587 Environmental Chemistry I (3). A survey of how chemical principles can be applied to the environment. Included will be topics in aquatic chemistry, atmospheric chemistry and chemistry of the geosphere and soil.

5588 Environmental Chemistry II (3). Discussion of selected topics in advanced environmental chemistry, such as environmental toxicology, environmental risk, the chemistry of hazardous wastes and their treatment, and environmental analytical chemistry.

5590 Directed Studies (1-3). Intensive readings and/or research in an area selected by the graduate student in consultation with the instructor.

5598 Research Methodology Conference (3). Student will meet on an individual basis with two faculty members who are involved in research. The student's adviser will coordinate this course.

5599 Research And Thesis (1-9). Research for thesis.

5611 Chemistry Seminar (1). Presentation and discussion of topics currently appearing in United States and foreign literature. One hour each week.

5699 Research And Dissertation (1-16). Research for dissertation.

5899 Required Graduate Enrollment (1).

Civil Engineering Courses

5500 Problems (1-6). Supervised investigation in civil engineering to be presented in the form of a report. Prerequisite: Graduate standing.

5501 Advanced Topics In Civil Engineering (1-3). Current technical developments in civil engineering.

5501L Advanced Topics In Civil Engineering (1-3).

5525 Advanced Reinforced Concrete Design (3). Designed of eccentric and combine footings, retaining walls, two way floorslabs, design and analysis of multistory building frames, and introduction of prestressed concrete. Prerequisite: CE 422

5536 Advanced Soil Mechanics (3). Theoretical soil mechanics as applied to solution of specific engineering problems. Prerequisite: CE 335.

5544 Unit process Laboratory for Water and Wastewater Treatment (3). Typical chemical and physical relationships are applied to unit processes of water and wastewater. Troubleshooting for operation problems is emphasized. The class has significant laboratory/field component. Prerequisite: CE342

5545 Environmental Engineering Microbiology (3). Theory and application of fundamental principles of microbiology, toxicology, ecology, and aquatic biology of the microorganisms of importance to environmental engineers.

5546 Limnology (3). A survey of the physical, biological, and chemical issues important in surface fresh waters. Includes carbonate chemistry, algal assay and Thermocline analysis. Prerequisites: Chem 211 and Math 345

5552 Hydraulics of Open Channels (3). The fundamentals of free surface flow are investigated. This includes the study of the principles of continuity, Momentum and Energy; Specific Energy, Discharge and Force; Steady-Gradually varied and Steady, Rapidly Varied Flow; Hydraulic Structures; and, the derivation of, and general methods for solution of the 1-dimensional, unsteady St. Venant Equations. Prerequisite: CE 351

5553 Hydraulics and Variability of Rivers (3). This course investigates the fundamental concepts of alluvial channel behavior including stream channel evolution and change due to natural and man-induced modifications to streams and watersheds. Numerous case studies of river behavior and studied from the perspective of hydraulics, geomorphology and sediment transport. Prerequisite: CE355

5554 River Stability and Scour (3). With over 500,000 bridge over water, a significant number are damaged or destroyed by floods annually. This is a study of the theory of and fundamentals methods and procedures recommended to evaluate and analyze stream stability and scour at bridges. Specific topics include Bridge hydraulics; stream stability bridge piers and abutments; hydraulic modeling of floods; and, countermeasures for protection of bridge infrastructure. Prerequisite: CE355 or instructor approval.

5555 Highway Hydraulics and Sediment Transport (3). The study of sediment transport in rivers, specifically in the vicinity of highway and railroad bridge encroachments. The understanding of the relationship between sediment transport and the fundamentals of fluvial geomorphology. Computation of sediment transport and sediment transport modeling. Prerequisite: CE 355

5582 Advanced Traffic Engineering (3). This course covers the review of traffic flow characteristics, the field survey practices and studies, traffic signal designs, freeway operation, and the introduction to Intelligent Traffic Systems (ITS) Prerequisites: CE481 and CE319

5599 Thesis Research (1-6). Independent investigation in the field of civil engineering to be presented in the form of a thesis.

5601 Doctoral Topics In Civil Engineering (1-3). Current technical developments in civil engineering.

5601B Advanced Topics In Civil Engineering (1-3).

5601X Advanced Topics In Civil Engineering (1-3).

5602 Directed Reading In Civil Engineering (1-3). Faculty supervised readings course. Prerequisite: Graduate standing. Offered: Fall and winter.

5607 Numerical Methods In Engineering (3). Classification and numerical solution of engineering problems—ordinary and partial differential equations, algebraic equations. Includes initial, boundary, eigen-# and characteristic-value problems. Prerequisite: Math 345.

5621 Continuum Mechanics (3). Introductory course in the mechanics of continuous media. Basic concepts of stress, strain, constitutive relationships; conservation laws are treated using Cartesian tensor notation. Examples from both solid and fluid mechanics investigated. (Same as ME 621) Prerequisites: CE 351, Math 345, and CE 276

5622 Theory Of Elasticity (3). Stress and strain at a point. General equations of elasticity. Plane stress, plain strain problems; torsion of prismatic bars. Energy methods. (Same as ME 622) Prerequisite: CE 621

5623 Theory Of Plates And Shells (3). Bending of plates with various loading and boundary conditions. Deformations, stresses in thin shells. (Same as ME 623) Prerequisite: CE 621

5624 Theory Of Elastic Stability (3). Buckling of columns, beams, rings, curved bars, thin plates, shells. (Same as ME 624) Prerequisite: CE 621

5645 Water Quality Modeling (3). Derivation and application of models for describing oxygen budget, nutrient exchange, and biological productivity in streams, lakes and estuaries. Prerequisite: CE 342.

5646 Physiochemical Treatment Processes (3). Fundamental principles, analysis and modeling of physical and chemical processes for water and wastewater treatment. Prerequisite: CE 342.

5647 Biochemical Treatment Processes (3). Biochemical principles, kinetic models and energy considerations in the design of biological wastewater treatment processes. Prerequisite: CE 342.

5648 Environmental Engineering Practicum (3). Numerical water quality modeling of actual site data for wasteload allocation.

5649 Design Of Water And Wastewater Treatment Facilities (3). Development of design criteria and their application to the design of water and wastewater treatment facilities. Prerequisite: CE 342.

5651 Fundamentals Of Fluid Mechanics (3). Fundamentals of fluid motion, lecture and laboratory. Instrumentation, technique and analysis for experimental studies in fluid mechanics.

5656 Advanced Hydraulic Engineering (3). Rapidly varied flow and design of transition structures. Hydraulic design of spillways, reservoirs and related structures.

5676 Finite Element Methods (3). The concepts and fundamentals of the finite element method with applications to problems in solid and fluid mechanics. Prerequisite: ME 486 or CE 421.

5679 Dynamics Of Structures (3). Study of the dynamic behavior of structures. Analysis of equivalent lumped parameter systems for the design of structures in a dynamic environment. (Same as ME 679) Prerequisites: ME 484 and CE 276, or CE 421, Math 345, and ME 285

5699 Research And Dissertation (1-9). Doctoral dissertation research.

Clarinet Courses

5500A Graduate Clarinet-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Clarinet - Masters Performance (4).

5601 Graduate Clarinet - Doctoral Performance (4).

Communication Studies Courses

5597 Directed Graduate Studies: Readings (1-6). Special Projects on the graduate level.

5598 Directed Graduate Studies: Non-Thesis Research (1-6). Special projects on the graduate level.

Computer Science Courses

5510 Information Theory (3). Representation, transmission and transformation of information, information compression and protection, generation, storage, processing and transmission of information. Prerequisite: BS in Computer Science, Engineering, or Mathematics.

5511 Advanced Telecommunications Networks (3). Efficient source coding and channel coding techniques, principles of switching, digital transmission over microwave, copper and optical media, T-carrier and SONET systems, traffic consideration in telecommunications networks, network synchronization, control and management, ATM concepts. Prerequisite(s): CS 394R and CS 411.

5513 Digital Cellular Communications (3). Principles of microwave communications, performance metrics, mobile communications and cellular topology, co-channel and adjacent channel interference, fading and shadowing, various types of diversity, TDMA, FDMA and CDMA and other techniques for channel assignment, cellular network architectures, design considerations, PCN concepts. Prerequisite CS 411.

5514 Optical Fiber Communications (3). Fiber optic cable and its characteristics, optical sources and transmitters, optical detectors and receivers, optical components such as couplers and connectors, WDM and OFDM techniques, modulation and transmission of information over optical fibers, design of optical networks, single and multihop fiber LANs, optical carrier systems. Prerequisite: CS 411.

5514A Optical Networking (3). Components of optical networks such as OADM, OXC, optical switches, DWDM, and their functions and interactions. Design, analysis and routing over all-optical networks to include waveband, wavelength and lightpath routing. Prerequisite: CS411

5517 Digital Switching: Techniques And Architectures (3). Integration of transmission and switching, single and multistage switching principles, space and time division switching, conventional switch architectures such as 4ESS, integration of circuit and packet switching, ATM switching and design considerations, ATM switch architectures, evaluation and comparison, future trends. Prerequisite(s): CS 394R and CS 411.

5520 Network Architecture I (3). Principles, protocols, and architectures of data networks, internetworking, routing, layering, and addressing, with specific

investigation of the Internet Protocol (IP), Mobile IP, Multiprotocol Label Switching (MPLS), IP over Asynchronous Transfer Mode (ATM) networks, and virtual private networks. Prerequisite: CS 420 or CS 421, CS 431.

5521 Network Architecture II (3). Principles, protocols and architectural issues of computer networks for transport layer and above, with specific emphasis on TCP/IP for best-effort services as well as for emerging multi-media services. Prerequisite: CS520

5522 Computer Network Design And Analysis (3). Topological design, capacity and flow assignment problem-modeling and algorithms, and their analysis, issues in network control. Prerequisite(s): CS 352, CS 394R, CS 421.

5524 Protocol Design (3). Protocols as formal algorithms, architectural definition, protocol specification languages and models and their translation to implementation languages, overview of verification methods, symbolic execution. Prerequisite: CS 421.

5526 Network Routing (3). Algorithms, protocols and analysis for network routing. Routing in different networks such as circuit-switched networks, Internet, broadband networks, and transmission networks are covered. Prerequisites: CS520 and CS522.

5528 Local Area Networks: Analysis And Design (3). Definition of local area networks (LAN), LAN architecture and protocols, topology, transmission media, channel access protocols, modeling, simulation and performance evaluation of LANs, considerations in design and implementation, examples. Prerequisite: CS 421 and 494R.

5531 Advanced Operating Systems (3). Components of an operating system, scheduling/routing mechanisms, process control blocks, design and test various operating system components. Prerequisite: CS 431.

5532 Discrete Event Simulation (3). Review of statistical distributions, generation of pseudorandom variates and stochastic processes, basic queueing systems such as M/M/m and Jackson Networks, simulation project. Prerequisite: CS 5594.

5551 Advanced Software Engineering (3). Current concepts in software architecture and design, comparative analysis for design, object-oriented software design, software quality criteria for evaluation of software design. Introduction to metrics, project management and managerial ethics. Prerequisite: CS 451.

5552 Advanced Data Structures (3). Formal modeling including specification and deviation of abstract data types, completeness issues in the design of data types and data structures, implementation of data structures from a formal data type specification, verification of abstract to concrete data mapping. Prerequisite(s): CS291 and CS 352.

5552A Formal Software Specification (3). Formal modeling including specification and deviation of abstract data types, completeness issues in the design of data types and data structures, implementation of data structures from a formal data type specification, verification of abstract to concrete data mapping. Prerequisite(s): CS291 and CS 352.

5554 Software Tools And Programming Environments (3). Taxonomy of software tools and environments, generic software tool architecture, interface techniques for users, intra-system and stand-alone systems, integration of heterogeneous systems components. Prerequisite: CS 451.

5556 Human Factors In Computer Systems (3). Design of "user friendly" man-machine interface, survey of recent psychological studies in man-machine interaction, user interface design, instrumentation and testing, analytic models of man-machine interaction. Prerequisite: CS 451.

5560 Knowledge Discovery And Management (3). This course teaches students fundamental theory and practice in the field of knowledge discovery and management and also provides them with hands-on experience through application development. Prerequisites: CS 5551, and either CS 461 or CS 464 Offered: Every Winter

5561 Advanced Artificial Intelligence (3). AI systems and their languages, implementations and applications, case studies of various expert systems, current research topics in AI, logic programming using PROLOG. Prerequisite: CS 461.

5564 Inference Techniques And Knowledge Representation (3). Inference Techniques is an in-depth course of logic and automatic theorem proving, intended for Computer Science graduate students, with particular importance to those students interested in Artificial Intelligence. The main areas of study will be concerned with the principals and techniques used for automatic theorem proving. An overview of the representation of knowledge and logic, a detailed appreciation of theorem proving methods, and implementation techniques will be provided in the course. The course will provide background for further study in varying fields of A.I. Prerequisite: CS 461 or consent of instructor.

5566 Introduction To Bioinformatics (3). This course introduces students to the field of Bioinformatics with a focus on understanding the motivation and computer science behind existing Bioinformatic resources, as well as learning

the skills to design and implement new ideas. Offered: Every Fall
Prerequisites: CS 352 and a course/background in Biology (Genomics or etaModels preferred.)

5567 Machine Learning In Bioinformatics (3). This course introduces students to the field of Machine Learning algorithms that are used in Bioinformatics, illustrated by several examples of applications to various problems. Offered: Every Winter Prerequisites: CS 352, CS394R and a course/background in Biology (Genomics or MetaModels preferred.)

5570 Architecture Of Database Management Systems (3). Covers in detail, architecture of centralized database systems, database processing, management of concurrent transactions, query processing, query optimization, data models, database recovery, data warehousing, workflow, World Wide Web and Database performance, and reviews the architecture of some commercial centralized database systems. Prerequisites: CS470 and CS431, or consent of instructor.

5572 Mobile Computing (3). This course covers in detail the architecture of mobile and wireless network. It discusses and develops relevant concepts and algorithms for building mobile database systems (MDS), which is necessary for managing information on the air and E-commerce. This course is offered once a year. Prerequisite: CS 5570 Offered: Every Fall

5575 Advanced Computer Graphics (3). Review of transformations, 3D viewing, curve fitting in 3D, generation of surfaces, hidden surface elimination, scan-line coherence, rigid solid representation, shading, color theory. Prerequisite: CS 475.

5581 Parallel Computer Architecture I (3). Parallelism in computer architecture, pipelined processors, array processors and multi-processor systems, algorithms for SISD, SIMD, MISD and MIMD organizations, vectorization, pipelining algorithms. Prerequisite: CS 481.

5590 Special Topics (1-3). Selected topics in specific areas of computer science. May be repeated for credit when the topic varies.

5590AB Special Topics (1-3).

5590AC Special Topics (1-3).

5590BI Special Topics (1-3).

5590CA Special Topics (1-3).

5590CD Special Topics (1-3).

5590DA Special Topics (1-3).

5590DM Special Topics (1-3).

5590KB Special Topics (1-3).

5590MB Special Topics (1-3).

5590NM Special Topics (1-3).

5590O Special Topics (1-3).

5590OP Special Topics (1-3).

5590OS Special Topics (1-3).

5590PC Special Topics In Computer Science (1-3).

5590SK Special Topics Computer Science (1-3).

5590WW Special Topics (1-3).

5590XX Special Topics (1-3).

5591 Concurrency Models (3). Concurrency control constructs, P/V primitives, cobegin/coend, monitors, message transmission, rendezvous systems, underlying mathematics of concurrent systems, Petri Nets, liveness (deadlock), reachability, boundedness, invariants, system modeling. Prerequisite: CS 431 and 493.

5592 Design And Analysis Of Algorithms (3). Combinatorial analysis, searching and sorting, shortest path algorithms, spanning trees, search and traversal techniques, backtracking, branch and bound, heuristics, algebraic simplification and transformation. Prerequisite: CS 352.

5594 Introduction To Queueing Theory (3). Review of statistics and probability, stochastic processes, Markov Processes, the basic Poisson process, equilibrium conditions, M/M/1 system with variations local and global balance in networks of queues, open and closed networks. Prerequisite: CS 494R.

5595 Mathematical Foundations Of Computer Science (3). Study of the theory, and algorithmic techniques, of the fields of graph theory, combinatorics and number theory, as they relate to their application in the field of computer science. Prerequisite: CS 352 and CS 494R, or Consent of Instructor.

5596A Computer Security I: Cryptology (3). Study of theory, and algorithmic techniques, of the fields of number theory and cryptology, as they are applied in the general area of computer and network security. Prerequisites: CS291.

5596B Computer Security II: Applications (3). Application of the algorithmic techniques learned in CS 596A to provide suitable security countermeasures to the variety of security threats across the spectrum of computing. Prerequisite: CS 596A.

5597 Directed Readings (1-3). Readings in an area selected by the graduate student in consultation with a faculty member. Arrangements must be made prior to registration.

5598 Research Seminar (1-3). Graduate research based on intensive readings from the current research literature under the direction of a faculty member. Arrangements must be made prior to registration.

5599 Research And Thesis (1-6). A project investigation leading to a thesis, or written report under the direction of a faculty member. A prospectus must be accepted prior to registration.

5622 Advanced Network Analysis (3). Design and analysis of data networks, comparative analysis of capacity and flow strategies, time-delay/cost trade offs, concentration and buffering in store and forward networks, random access techniques, pure, slotted and reservation type Aloha schemes, carrier sense multiple access. Prerequisite: CS 5522.

5623 Network Simulation And Modeling (3). Simulation and modeling of network topologies and protocols, evaluation of the physical layer, data-link layer, network layer routing algorithms, local and long-haul networks. Prerequisite: CS 522 and 532.

5651 Distributed Computing For Software Systems (3). Formal descriptions of problems encountered in distributed computing for architecture. Parameters to formal requirements, operating system support, communications support, process synchronization, and system verification, distinctions between real time and concurrent time. The nature of life cycles, project organization and use of automated tools. Prerequisites: CS 5551, CS 5531 OR CS 5570.

5670 Architecture Of Distributed Database Systems (3). Detailed study of distributed database systems architecture, in-depth study of distributed transaction management, distributed concurrency control and recovery algorithms, database distribution, distributed query optimization and analysis of database system design, and intelligent network databases. Prerequisites: CS 5570 or consent of instructor.

5690 Advanced Special Topics (1-3). A lecture course presenting advanced research level topics. Prerequisite: Ph.D candidacy or consent of instructor. On demand. This course is intended to allow faculty and visiting scholars to offer special courses in selected research areas.

5694 Advanced Queueing Theory (3). Non-Markovian systems such as M/G/1, G/M/1 and G/G/1, solutions of networks of non-Markovian nodes, queueing network approximate solution techniques. Prerequisite: CS 5594.

5697 Directed Readings (1-3). Readings in an area selected by the doctoral student in consultation with a doctoral faculty member. Arrangements must be made prior to registration.

5698 Advanced Research Seminar (1-3). Advanced research by a group of doctoral students based on intensive readings from the current research literature under the direction of one or more doctoral faculty. Original research results of each student are exchanged by presentations and group discussion. Arrangements must be made prior to registration.

5699A Research And Dissertation Research In Computer Science (1-12). Doctoral research in computer science.

5899 Required Grad Enrollment (1).

Conservatory of Music Courses

5517 Advanced Opera Workshop (2).

5523 Analytical Procedures (3). An introduction to recent methods of stylistic and formal analysis including twelve-tone, Schenkerian and set theoretic approaches.

5524B Advanced Analysis II - Common Practice Period (3). Theory and analysis of selected works from the 17th through the mid-19th century. Prerequisite: Cons 5523 or consent of the instructor.

5524C Advanced Analysis III - Contemporary Period (3). Theory and analysis of selected works from the late 19th century to the present. Prerequisite: Cons 5523 or consent of the instructor.

5526A Introduction To Schenkerian Theory And Analysis (3). An introduction to the theories and analytic methodology of Heinrich Schenker (1868-1935). Prerequisite: Passing theory matriculation score or completion of Conservatory 421.

5526B Schenkerian Analysis (3). Continuation of 5526A emphasizing the acquisition of advanced skills in Schenkerian analysis. Prerequisite: Cons. 5526A and consent of the instructor.

5527 Advanced Counterpoint (3). Analysis and writing in 18th century style and forms including canon, invention and fugue.

5528 Contemporary Harmonic/Contrapuntal Styles (3). Analysis and writing in contemporary styles. Prerequisite: CONS 428 or consent of the instructor.

5529 Aspects Of Time And Music (3). A course offering a broad-based, multi-disciplinary exploration of the natures of time preparatory to an in-depth

study of some of music's primary temporal aspects; these focus on complex treatments of rhythm and meter in tonal music. Prerequisite: 5523, 5591G, or permission of instructor. Offered: Winter 2002

5531 Advanced Orchestration (3). A study of the scoring techniques of such composers as Debussy, Ravel, Schoenberg, Bartok, and Stravinsky, and the application of these techniques by the student in scoring works for small and large ensembles. In the case of the composition major, detailed work in orchestrating original compositions will be required. Prerequisite: Cons. 431 or consent of the instructor. May be repeated for credit.

5533 Advanced Composition (3). Intensive work in advanced composition in the large forms for various vocal and instrumental ensembles and orchestra. May be repeated for credit. Prerequisite: Consent of the instructor.

5534 Advanced Electronic Music Composition (3). Creative, original composition of music in diverse styles utilizing the full range of equipment and techniques available. May be repeated for credit. Prerequisite: Consent of the instructor.

5534B Advanced Computer Music Language Study (3). This course is designed to fulfill the computer language option of the foreign language requirement for DMA students in composition. Focus will be on development and mastery of skills in computer languages specifically related to musical composition, such as MAX or Csound, or in compositional uses of more general languages such as html, C, and Lingo. Prerequisite: Cons. 335 or consent of instructor.

5534C Electroacoustic Music Aesthetics And Analysis (3). An overview of the context and practice of electroacoustic music in two parts: 1) new aesthetic parameters of sonic composition made possible by technology; and 2) creating a cogent analysis of a work by developing individual, personalized analytical tools. Offered in rotation with Cons. 5534 (Advanced Electronic Composition) and 5534b (Computer Programming for Musicians). Prerequisite: None Offered: Every 3rd semester

5540A Seminar In Adv Music Education Methods For Elementary Teachers (2). A seminar in the design of music materials for K-6 students, preparation of elementary music teachers, and a review of elementary music literature and materials.

5540B Advanced Methods In Instrumental Music (2). Organizational and rehearsal techniques for programs from the beginning bands and orchestras through high school and college ensembles. Includes information regarding methods, materials and program building.

5540C Advanced Methods In Choral Music (2). Addresses the organization of secondary and college choral classes and ensembles. Areas of study include methods, materials and program building.

5543 Psychology Of Music (3). The study of psychological aspects of music including acoustical phenomena and factors affecting musical preference, perception and taste. A review of related literature and basic methodology for experimental investigation and quantification of related variables will be included. Prerequisite: None

5544 Advanced Clinical Experience (2). Music Therapy practicum in a clinical area. Includes review of literature of that clinical area and presentation of materials and techniques used with clients.

5545 Seminar In Music Therapy (2). Discussion of current trends in music therapy.

5547 History Of Opera I (3). A survey of opera from its origins to 1800. Prerequisite: Consent of the instructor.

5551 History Of The Oratorio (3). A study of the oratorio from its beginning through contemporary works.

5554 Music Of The Medieval Era (3). Seminar in the music of the Middle Ages, from 800 to 1400. Prerequisite: Cons 5593

5555 Music Of The Renaissance (3). Seminar in the music of the Renaissance, from 1400 to 1600.

5556 Music Of The Baroque Era (3). Seminar in the music of the Baroque era, from 1600 to 1750. Prerequisite: CONS 5593

5557 Music Of The Classical Era (3). Seminar in the music of the Classical era, from 1750 to 1828. Prerequisite: CONS 5593.

5558 Music Of The Romantic Era (3). Seminar in the music of the Romantic era from 1828 to 1914. Prerequisite: CONS 5593.

5559A Music Since 1900: 1900-1945 (3). Seminar in music from 1900 to 1945. Prerequisite: CONS 5593

5559B Music Since 1900: 1945 To The Present (3). Seminar in music since 1945. Prerequisite: CONS 5593

5560A Seminar: History Of Russian Vocal Music (3).

5560B Seminar: Nineteenth-Century Nationalism In Music (3).

5560C Seminar: History Of American Music (3).

5561 Advanced Music Literature (1-3). Survey of the literature of the appropriate instrument. May be repeated for credit. Prerequisite: Consent of the instructor.

5566A Advanced Vocal Literature: French Melodies (2). In-depth study of the French melodies of Duparc, Faure, Debussy, Ravel, and Poulenc.

5566B Advanced Vocal Literature: German Lieder (2). In-depth study of the German lieder of Schubert, Schumann, Brahms, Wolf, Mahler, and Strauss.

5566C Advanced Vocal Literature: Nationalistic Art Songs (2). In-depth study of Nationalistic art songs of Russia, Scandinavia, Spain, and Middle Europe.

5566D Advanced Vocal Literature: 20Th Century Amer & Engl Art Songs (2). In-depth study of the 20th Century American and English art songs.

5570 Music Education In The College Environment (3). A preparation for entering and functioning in the college Music Education teaching environment. Course serves as a review and examination of missions and philosophies of Music Education programs in U.S. colleges and universities and an analysis of job responsibilities for college Music Education instructors.

5574 History And Philosophy Of Music Education (3). An overview of the history of music education in this country from the beginning of the seventeenth century to the present. Also includes a discussion of the major philosophical models used to justify the study of music.

5576 Professional Aspects Of College Teaching (2). Designed for graduate students planning a career in college teaching. Covers preparation of job application materials; presentation of a master class; interviews with a search committee and dean; faculty loads and evaluation procedures; tenure and rank, and relationships with students, colleagues and administrators.

5577 Advanced Vocal Diction (2). This course is designed to review and hone diction skills in Italian, French and German on the level of professional opera, recital and oratorio performance; the vocal literature is approached through the text with both reading and singing practice. It is limited to graduate vocal majors. Prerequisites: CONS 171/172 or its equivalent. Offered: Every other Winter

5582A Advanced Choral Conducting - Technique (2). An introductory study of the techniques of choral conducting. An overview of conducting topics, including score preparation, rehearsal techniques and performance problems. May be repeated for credit.

5582B Advanced Choral Conducting - Style (2). A study of conducting problems of music of the Renaissance, Baroque, Classic, Romantic and Twentieth century; further examination of performance problems associated with choral performances of madrigals, chamber music, a cappella works and music utilizing advanced compositional techniques. May be repeated for credit.

5582C Advanced Choral Conducting-Rehearsal Techniques (2). An advanced study of methods and rehearsal procedures in the development and organization of choral performance; includes concepts of tone quality, diction, programming, and development of communication skills. May be repeated for credit.

5583A Advanced Instrumental Conducting (2). An introductory study of the techniques of instrumental conducting. An overview of conducting topics, including score preparation, rehearsal techniques and performance problems.

5583B Advanced Instrumental Conducting - Orchestra (2). A further study of the techniques of instrumental conducting, including such topics as string techniques, performance practice, baton technique and the art of accompaniment. Prerequisite: Cons 5583A. May be repeated for credit.

5583C Advanced Instrumental Conducting - Band (2). A further study of the technique of band conducting, including such topics as wind/percussion techniques, performance practice, baton technique, and contemporary wind chamber repertoire. Prerequisite: Cons 5583A. May be repeated for credit.

5586A Seminar In Orchestral Literature (2). Advanced study of a variety of styles, periods, and analytical procedures encountered by orchestral conductors. Content will vary from semester to semester. May be repeated for credit.

5586B Seminar In Wind/Band Literature (2). Advanced study of a variety of styles, periods, and analytical procedures encountered by instrumental conductors of wind ensembles/bands. Content will vary from semester to semester. May be repeated for credit.

5587A Seminar In Choral Literature-Middle Ages & Renaissance (2). Each seminar is concerned with the conductor's viewpoint of a segment of the literature from the specified historical periods and deals with analysis, interpretation, vocal problems, conducting problems, etc., of that literature. Prerequisite: Consent of the instructor.

5587B Seminar In Choral Literature-Baroque And Classical (2). Each seminar is concerned with the conductor's viewpoint of a segment of the

literature from the specified historical periods and deals with analysis, interpretation, vocal problems, conducting problems, etc., of that literature. Prerequisite: Consent of the instructor.

5587C Seminar In Choral Literature-Twentieth Century (2). Each seminar is concerned with the conductor's viewpoint of a segment of the literature from the specified historical periods and deals with analysis, interpretation, vocal problems, conducting problems, etc., of that literature. PREREQUISITE: Consent of the instructor.

5587D Seminar In Choral Literature-Large Forms Orchestral Accomp (2). Each seminar is concerned with the conductor's viewpoint of a segment of the literature from the specified historical periods and deals with analysis, interpretation, vocal problems, conducting problems, etc., of that literature. Prerequisite: Consent of the instructor.

5587E Seminar In Choral Literature - Sacred (2). Each seminar is concerned with the conductor's viewpoint of a segment of the literature from the specified historical periods and deals with analysis, interpretation, vocal problems, conducting problems, etc., of that literature. Prerequisite: Consent of the instructor.

5589 Academic Portfolio (1). Creative synthesis of coursework or clinical experience resulting in original products such as research documents, pedagogical materials, technology applications, music compositions or arrangements, and musical improvisation applications. Portfolio item may not include materials used to meet admission requirements. May be repeated for credit.

5589A Academic Portfolio II (1). Additional coursework or clinical experience resulting in original products. Open only to students concurrently enrolled in CONS 5589.

5590 Special Topics (1-3). A seminar in selected topics in various fields and idioms of music. May be repeated for credit when the topic varies. Prerequisite: Consent of the instructor.

5590AD Special Topics (1-3).

5590BJ Special Topics (1-3).

5590CA Special Topics (1-3).

5590CE Special Topics (1-3).

5590CT Special Topics (1-3).

5590HA Special Topics (1-3).

5590HG Special Topics (1-3).

5590HS Special Topics (1-3).

5590IN Special Topics (1-3).

5590MB Special Topics (1-3).

5590OL Special Topics (1-3).

5590PO Special Topics (1-3).

5590PP Special Topics (1-3).

5590SV Special Topics (1-3).

5591C Advanced Pedagogy I - Organ (2).

5591E Advanced Pedagogy I - Piano (2).

5591G Pedagogy Of Music Theory I (3). Study of teaching techniques and materials combined with supervised teaching. Prerequisite: Consent of the instructor.

5591H Advanced Pedagogy I - Voice (2).

5591J Advanced Pedagogy I-General (2). An overview of basic pedagogical practice including modes of instruction, feedback, reinforcement, and assessment. Students will review current literature in this area and develop a project related to their own teaching. Prerequisite: none

5591K Pedagogy Of Music History (3). Techniques and materials related to teaching music history and music appreciation combined with supervised teaching. Prerequisite: Consent of instructor Offered: Every other Winter On Demand

5592C Advanced Pedagogy II - Organ (2).

5592E Advanced Pedagogy II - Piano (2).

5592H Advanced Pedagogy II - Voice (2).

5593 Introduction To Research And Bibliography In Music (3). A survey of procedure in bibliography, research, and scholarly writing.

5594A Introduction To Descriptive And Experimental Research In Music (3). Introduction to basic descriptive and experimental methodologies in music. Includes a review of important literature in music, proposal writing, design, data analysis and scholarly writing styles used in graduate research.

5596 Research In Teaching/Learning Music (3). A study of contemporary research in learning and teaching, its application to music, and the systematic observation and quantification of musical behavior. Prerequisite: None

5597 Master's Recital (4).

5597A Master's Conducting Performance (4).

5597B Master's Recital II (4).

5597CE Master's Recital (4).

5598 Research Problems (2). Individual study with a member of the adjunct, associate or graduate faculty. Study will culminate in the writing of a formal paper. Research projects must be completed within two consecutive semesters, and filed in the Music Library. The paper must be in agreement with the Conservatory Library's Format Guidelines for Music Dissertations and Theses.

5598B Research Problems In Computer Languages And Music (1-3).

Individual study with a member of the adjunct, associate, or graduate faculty. Study will culminate in the production of a project (computer program, CD-ROM, composition, or other document) that demonstrates skills in computer languages specifically related to music. This course fulfills the computer language option of the foreign language for DMA students in composition.

5599 Thesis (1-9).

5620 History Of Music Theory I (3). A study of theoretical treatises, in the original languages and in translation, from earliest times through treatises on the thorough bass.

5621 History Of Music Theory II (3). A study of theoretical treatises, in the original languages and in translation, from the 18th-20th Centuries.

5674 Music Administration In Higher Education (3). An historical survey of the music program in higher education, its philosophy, purpose and function; discussions of administrative problems of personnel, budget, public relations, recruitment, curriculum and development.

5693 Advanced Research And Bibliography In Music (3). Advanced procedures in bibliography, research, and scholarly writing. Prerequisite: Cons 5593 Offered: Every other Winter

5695 Practicum In Music Education (3-6). Individual conference course requiring the development of a research paper in a special subject and designed to resolve a practical problem of special interest to the student. Conference.

5697 Doctoral Recital (4).

5697A Doctoral Lecture Recital (4).

5697B Doctoral Conducting Performance (4).

5697BP Doctoral Conducting Performance Paper (1). Individual study with the student's conducting teacher. Study will culminate in the writing of a formal paper addressing aspects of a doctoral conducting performance.

5697C Doctoral Recital II (1-4).

5697CP Doctoral Recital Paper II (1). Additional individual study with the student's applied teacher. Study will culminate in the writing of another formal paper addressing aspects of a doctoral recital. Open only to students concurrently enrolled in CONS 697P.

5697D Doctoral Conducting Performance II (1-4).

5697DP Doctoral Conducting Performance Paper (1). Additional individual study with the student's conducting teacher. Study will culminate in the writing of another formal paper addressing aspects of a doctoral conducting performance. Open only to students concurrently enrolled in CONS 5697BP.

5697P Doctoral Recital Paper (1). Individual study with the student's applied teacher. Study will culminate in the writing of a formal paper addressing aspects of a doctoral recital.

5698 Research Problems (2). Individual study with a member of the adjunct, associate, graduate or doctoral faculty. Study will culminate in the writing of a scholarly paper.

5698A Doctoral Research Problems II (2). Additional study with a member of the adjunct, associate, graduate or doctoral faculty. Study will culminate in the writing of another scholarly paper. Open only to students concurrently enrolled in CONS 5698.

5698B Doctoral Music Product (1-4). Individual study with a member of the adjunct, associate, graduate, or doctoral faculty. Study will culminate in the writing of a creative, original composition, arrangement or edition of music.

5699 Dissertation Research (1-16).

5699A Dissertation Research (1-16).

5899 Required Graduate Enrollment (1).

H5593 Introduction To Research And Bibliography In Music (3). A survey of procedure in bibliography, research, and scholarly writing.

Counseling Psychology and Counselor Education Courses

- 5500 Introduction To Professional Counseling (3).** Introduction to counseling and counseling psychology as professions practiced in a variety of settings. Basic concepts of mental health, client problems, history of the profession, ethics and standards, counseling in a multicultural and pluralistic society and credentialing. Includes use of professional journals and library investigation. May be taken prior to admission. For Mental Health and Couples and Families emphases only.
- 5502 Fndtns Of Elementary & Secondary School Counseling & Guidance (3).** The course will present an overview of theory and practice in the field of school counseling and will examine the roles and functions of guidance counselors. May be taken prior to admission. For School Counseling Emphasis only.
- 5503 Psychopathology: Diagnoses And Classification (3).** This course is designed to provide students with an opportunity to study psychopathological patterns, mental disorders, and other reactions in client behavior, which are encountered by therapists, counselors, and psychologists in contemporary psychological service systems. The major focus of the course will be on learning current diagnostic criteria and making differential diagnoses. Attention will also be given to the etiology, development, dynamics, and treatment of psychopathology. In addition, the influence of culture on behavior and treatment will also be discussed. Prereq/Coreq: CPCE 5500
- 5504 School Guidance Programs (3).** CPCE 5504 will provide knowledge and skills in the development and management of school guidance programs, including program planning, implementing and evaluation.
- 5505 Career Development I (3).** Theories of career development and vocational choice and their implications in counseling. Emphasizes knowledge of occupational and career information sources and use of these data by counselors and counseling psychologists. Open to any student who has been admitted to an advanced degree program.
- 5515 Assessment Methods In Professional Counseling (3).** This course provides an understanding of assessment process and assessment techniques. Students will develop skills in selection, administration, and interpretation of representative assessment instruments. Prerequisites: Crosslisted: PSYCH 5510
- 5520 Theories Of Counseling (3).** Theoretical positions in counseling; significance of these theories in professional practice. To be taken prior to or concurrent with CPCE 5530 (Methods of Counseling), both of which must be taken prior to Counseling Practicum I, CPCE 5531. Co/Prerequisite: CPCE 5500.
- 5521 Special Counseling Methods - Substance Abuse (3).** Theories and methods of counseling as applied to clients with substance abuse problems. Includes assessment, treatment strategies, and evaluation. Skills practice in implementing methods.
- 5527 Theory And Methods Of Sexual Counseling (3).** The focus is on sexual development and the acquisition of therapeutic skills to work with problems relating to human sexual functioning and sexual dysfunctions. Co/Prerequisite: CPCE 5520.
- 5530 Methods Of Counseling (3).** This course is designed to introduce students to the fundamental concepts and methods of counseling. Students will apply ethical and multicultural principles to the helping relationship while learning the basic methods of humanistic, psychodynamic, and cognitive behavioral approaches as they relate to the helping process. A main focus of this course is the acquisition of basic helping skills. Students will also become familiar with counseling outcome research and will increase their level of counselor self-awareness. Prerequisite: PSYCH 5622 or Co/pre-requisite: CPCE 5520 Offered: Fall, Winter, Summer
- 5531 Counseling Practicum I (3).** Closely supervised therapeutic counseling with individuals; translation of theory into practice; clinical and professional techniques and issues. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Counseling Psychology and Counselor Education Practicum Coordinator required. Co/Prerequisites: CPCE 5553
- 5532 Counseling Practicum II (3).** Supervised therapeutic counseling with individuals and consultation in professional settings. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Counseling Psychology and Counselor Education Practicum Coordinator required. Prerequisites: CPCE 5531
- 5533 Couples And Family Therapy Practicum (3-6).** Supervised application of theories and methods of family therapy with individuals, couples and families. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Division of Counseling Psychology and Counselor Education required. Prerequisite: CPCE 5532 and 5542. Co-requisite: CPCE 5541
- 5534 Practicum For The Assessment Of Children And Adolescents (3).** The practicum for assessment of children and adolescents covers the facilitation of psychological evaluations for this population and includes maintaining a caseload of assessment evaluations to complete through the CCS Assessment Center. Specialized assessment evaluations and conceptualization issues are covered in the second half of the course, with evaluations for ADHD and learning disorders emphasized. Special topics will be discussed at the end of the course. Prerequisite: CPCE 5515
- 5539 Continuing Counseling Practicum (1-6).** Supervised therapeutic counseling with individuals. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Counseling Psychology and Counselor Education Practicum Coordinator required. Prerequisites: CPCE 5532.
- 5540 Theories And Methods In Group Counseling (3).** Theories and research in group counseling as related to the work of the counselor and counseling psychologist; establishing and maintaining a counseling group; qualifications of the group leader; goals for group counseling; therapeutic and anti-therapeutic forces in groups; special techniques. Three semester hours of lecture and one semester hour of laboratory experience. The two hours per week in laboratory experience is to practice group techniques. Prerequisite: CPCE 5531.
- 5541 Couples And Family Therapy (3).** Introduction to and overview of couples and family therapy. Discussion of major theoretical positions, demonstrations of therapy strategies, role playing and case study examples.
- 5542 Theories And Techniques Of Family Systems Therapy (3).** A study of major family systems theories and their applied practices in family therapy. Students will develop skills in family assessment techniques and family therapy processes.
- 5550 Organization And Administration Of Counseling Programs (3).** Organization, administration, and planning of counseling programs with emphasis on their practical aspect; counseling practice in schools and agencies; intraprofessional relationships; legal and ethical considerations. Course to be taken near completion of the master's program.
- 5551 Counseling In A Pluralistic Society (3).** Addresses the needs of diverse populations served by counselors and addresses developing intervention methods of working with these populations. Focuses on advocacy and change agent roles of counselors. Prerequisite: CPCE 5520.
- 5553 Ethics And Professional Issues In Counseling (3).** CPCE 553, Ethics and Professional Issues in Counseling, is designed to examine the major ethical and professional issues within the counseling profession. More specific, ethical dilemmas and professional issues relevant to the practice of mental health, marriage and family, school and substance abuse counseling are the major foci of this course. In addition, instruction is designed to enhance student understanding of the ethical standards such that students can effectively apply the critical thinking necessary to practice ethical behavior with clients, professional colleagues, consultees, and the communities in which they work.
- 5575 Internship In Counseling (3-16).** Applied experiences in a planned, supervised program. Seminar accompanies internship experiences. The following areas of specialization are available: a) Marriage and Family, b) Mental Health, c) School, and d) Substance Abuse. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Division of Counseling Psychology and Counselor Education required. Prerequisite: CPCE 5532 and consent of adviser.
- 5589 Special Topics (1-6).** A course designed to deal with a topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed in the semester bulletin.
- 5589CA Special Topics (1-6).**
- 5589NP Special Topics (1-6).**
- 5589PT Special Topics (1-6).**
- 5589SG Special Topics (1-6).**
- 5589TL Special Topics (1-6).**
- 5590 Seminar (3).** Discussion and evaluation of literature in Counseling Psychology and Counselor Education.
- 5590CF Seminar (3).** This is a final seminar for students in the couples and family emphasis area. It is an advanced study of couples and family counseling and related research with a focus on current issues and problems in the profession. Prerequisite: CPCE 5541
- 5598 Individual Studies (1-6).** Review of the research and trends relative to selected problems. By prior arrangement with instructor.
- 5599 Research And Thesis (1-9).** By arrangement.
- 5600 Introduction To Counseling Psychology (1).** Introduction to the science and practice of professional counseling psychology. Orientation to University of Missouri-Kansas City and the Counseling Psychology Program

5605 Career Development II (3). Major theories and research in vocational psychology and career development and implications for the work of the counseling psychologist and counselor. Prerequisite: CPCE 5505.

5609 Assessment II: Intellectual And Cognitive Assessment (3). This course is designed to provide students with a foundation in the use of intellectual and cognitive assessment instruments in clinical evaluation. The course covers theoretical issues pertinent to intellectual and cognitive assessment as well as basic assessment skills including administration, scoring, interpretation, and communication of results for commonly used measures. Cross-listed with PSYCH 5509. Prerequisites: Admission to the Ph.D Program in Counseling Psychology

5610 Theoretical And Professional Issues In Counseling Psychology (3). This course is designed to introduce first year doctoral students to the fundamental concepts and methods of psychology conceived as the application of scientific and ethical reasoning to human problems. It will provide an in-depth examination of the American Psychological Association code of ethics and its application to the conduct of psychologists. Critical and analytical thinking will be emphasized in all aspects of the course. The course will cover broad models of clinical and counseling psychology and their historical and scientific foundations, issues in diagnosis, cross-cultural applications and professional problems in light of ethical principles, professional standards, scientific data & multi-cultural contexts. Prerequisite: consent of the instructor. Offered: Fall

5615 Survey Of Research In Counseling Psychology (3). Survey of significant research in counseling psychology. Critical evaluation of research procedures, instrumentation, and clinical application of results. Prerequisites: EDRP 5605 and EDRP 5608.

5620 Advanced Theories And Methods Of Counseling (3). Personality and learning theories and their implications for professional practice in counseling psychology. Emphasis on critical evaluation of assumptions, methods, comprehensiveness and usefulness of the theories, with reference to related research. Prerequisite: CPCE 5532

5631 Advanced Counseling Practicum (3). Advanced supervised therapeutic counseling with individuals and supervised consultation in clinical settings. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Division of Counseling Psychology and Counselor Education required. Prerequisite: Completion of CPCE 5532 and CPCE 5620 with grades of B or better.

5632 Practicum In Group Counseling (3). Leading groups under supervision. Focus on problems and experiences of counselors and counseling psychologists when leading groups. Prerequisites: Completion of M.A. in Counseling; CPCE 5540. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Division of Counseling Psychology and Counselor Education required.

5633 Advanced Couples & Family Practicum (3). Advanced supervised application of theories and methods of family therapy with individuals, couples and families. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Division of Counseling Psychology and Counselor Education required. Prerequisite: CPCE 5542.

5634 Practicum For The Assessment Of Children And Adolescents (3). The practicum for assessment of children and adolescents covers the facilitation of psychological evaluations for this population and includes maintaining a caseload of assessment evaluations to complete through the CCS Assessment Center. Specialized assessment evaluations and conceptualization issues are covered in the second half of the course, with evaluations for ADHD and learning disorders emphasized. Special topics will be discussed at the end of the course. Prerequisite: CPCE 5515

5639 Continuing Advanced Counseling Practicum (1-6). Supervised therapeutic counseling with individuals, beyond the advanced level. Preregistration by application at least 60 days prior to beginning of semester. Approval by the Division of Counseling Psychology and Counselor Education required. Prerequisite: CPCE 5631

5640 Theories And Methods Of Counseling Supervision (2). This course offers an overview of counseling supervision theories and models, exposure to recent research and information about the supervision process, supervisor tasks and roles as well as ethical responsibilities. Admission to the doctoral or education specialist programs in the Division of Counseling, Educational Psychology and Exercise Science is required. Prerequisite: CPCE 5631

5641 Supervision Practicum (1). This course is designed to provide students with an opportunity to practice supervision. Students will be assigned 2 to 3 counselors-in-training from a CPCE 5531/5532 practicum class to supervise over the course of a semester. The practicum instructor will provide weekly supervision. Offered: Every Fall Prerequisite: CPCE 5640

5645 Projective Testing (3). Course focuses on the diagnostic use of projective assessment techniques, with a special focus on the Rorschach Inkblot Test. Prerequisites: Enrolled in Doctoral Psych. Program, Completed CPCE 5515 and Measurement of Intelligence or Cognitive Assessment course.

5650 Seminar In Current Issues In Counseling Psychology (3).

Professional issues related to counseling psychology and counseling programs. Special emphasis on ethical and legal issues and other professional concerns of counseling psychologists and counselors.

5675 Internship In Counseling Psychology (1-16). Applied experiences in a professional setting under supervision of licensed psychologists.

5690 Special Problems (1-6). Individual studies; thesis exploration; special reading.

5699 Research And Dissertation (1-16). By arrangement.

Criminal Justice and Criminology Courses

5500 Sociology Of Law (3). A sociological study of the legal system with focus on organizational analyses of the legal profession, courts as a social system, the bureaucratization of the legal process, stratification and the allocation of legal services and careers.

5501 Proseminar To The Criminal Justice System (3). This course is designed to address issues affecting the entire criminal justice system. The course addresses aspects of policing, courts and court administration, and the state of American correctional practices.

5510 Sociological Methods I (3). A survey of methods used by sociologists: selection and formulation of problem, research design, survey research, participant observation, sampling, reliability and validity, and use of scales, and data analysis. Crosslisted with SOC 510. Offered: Fall. Prerequisites: CJC 483 or equivalent

5511 Sociological Methods II (3). Quantitative research is the primary focus of the course; emphasis is placed on problem formulation; research design; sampling procedures, questionnaire construction and interviewing techniques; data collection; problems of scaling, computer statistical programs; linking appropriate statistical analyses with data analysis; and report writing. Cross listed with SOC 511. Prerequisite: CJC 483 or equivalent.

5516 Intermediate Statistics (3). A systematic development of the logic and practice of selected statistical methods used in sociological research. Included are analysis of variance and covariance, regression analysis, multiple contingency, and non-parametric tests. Prerequisite: CJC 363 or equivalent. Crosslisted with SOC 516.

5518 Advanced Criminological Theory (3). This course provides an understanding of past as well as present criminological theories by examining each criminological tradition (beginning in the 18th century and continuing into the present.) The primary aim of the course is to determine the root causes of deviant and criminal behaviors. Moreover, this course offers special attention to how society has historically reacted and responded to crime and deviant behavior. Furthermore, by examining crime and deviant behavior from a historical context, the students are able to determine how criminological theories have influenced public policies designed to reduce and control criminal behavior. In the final analysis, students will examine the rationales that society use to justify efforts toward punishment and treatment. Prerequisite: CJC 319 or equivalent.

5530 Crime And The Public Health Care System (3). This course will focus on how crime affects the public health care industry. Special attention will be given to the integration of criminal justice and public health care strategies to address the crime problem, reduction of victimization, and expensive medical costs.

5540 Criminal Justice Organization And Management (3). The purpose of this class is to introduce the student to the police, courts and corrections from, an organizational perspective. First, this class discusses organizational theory, the idea of open and closed systems, the relationship of organizations to its environment and the concept of the organizational goal. Next, this class will address management issues and individual and group behavior in organizations. Finally, this class will discuss organizational change, and the requisite modifications for the implementation of change in organizations.

5551 Seminar In Policing (3). This course addresses the important topics related to the institution of policing. Through readings and class discussions, students will gain a better understanding of both historical aspects of policing as well as the future of policing. Topics include selection, training and socialization, police management, deviance and corruption, use of force, community oriented policing.

5565 Seminar In Crime Prevention (3). This seminar examines variations in methods to reduce crime in America, including strategies from the criminal justice system as well as other institutions. Building on established criminological theory, this seminar will evaluate the best practices to prevent crime across a variety of social contexts.

5570 Contemporary Corrections And Correctional Policy (3). Present-day correctional alternatives are considered regarding the correctional policy that is, or potentially can be, carried out within the various programs. Prisons, probation, parole community-based programs are evaluated as to the theory of punishment demonstrated within these programs. Emphasis is placed on what

constitutes a rational and workable corrections policy and the form of correctional programs needed to realize such policy.

5571 Legal Aspects Of Criminal Justice Professionals (3). This course is designed to acquaint students with the powers that correctional administrators enjoy. In the final analysis, the course addresses the legal liabilities that administrators face if they infringe on the rights of people in the places of confinement.

5575 Correctional Rehabilitation And Treatment (3). This course will begin with a thorough examination of the rise, fall, and recent resurrection of "rehabilitation and treatment" in American Correctional strategies. Both past and current treatment strategies will be studied regarding their effectiveness in reducing recidivism. This will be done through a survey of the quantitative literature base. There will be some emphasis on treating special needs offenders (e.g., sex offenders, juvenile offenders, offenders with developmental disabilities or mental illnesses).

5576 Seminar In Criminal Justice And Criminology Issues (3). This course is an advanced exploration of the relationship between the criminal justice system and criminal behavior from at least one of the following perspectives: psychological, sociological, economic, legal, political or administration/management. Will include discussions and analysis of contemporary readings and on-going research in the selected perspective.

5580 Seminar: Policy And Decision Making In Criminal Justice (3). The focus of the course is the nature and scope of policy and decision-making processes in legal institutions and law enforcement bureaucracies.

5590 Directed Studies In Criminal Justice And Criminology (1-3).

Individual research and study in the student's field of interest as approved and directed by major professors. The work involves examination and reporting of selected problems affecting the various agencies of our legal system. A. Law Enforcement B. Court Operations and Administration C. Corrections D. Legal Theory and Philosophy E. Criminological Theory F. Sociology of Law

5592 Advanced Gis For Crime Analysis (3). This course provides an overview of crime mapping as it relates to the spatial and temporal analysis of crime. Utilizing theory related to criminal offending, this course will provide students with hands-on experience in geographic profiling and crime prevention strategies. Prerequisites: GEOG 203 or equivalent

5595 Crime Analysis Internship (3). This experience involves working with crime analysts in the field. Students will learn and hone practical skills while being supervised by department faculty or staff. Prerequisite: CJC 592

5599 Research And Thesis (1-6). Directed specialized research. Before writing a thesis, the student must clear the topic and research design with the Supervisory Committee.

5699 Dissertation Research (1-12). Individual directed research leading to preparation and completion of doctoral dissertation. Prerequisites: PH.D course requirements completed. Offered: Every Fall, Every Winter, Every Summer.

5899 Required Graduate Enrollment (1).

Curriculum and Instruction Courses

5504 Social Studies In The Elementary And Middle School (3). Trends and new curricular developments in elementary and middle school social studies. Focus on integration of social science concepts, the development of critical thinking skills, and analysis of values.

5505 Introduction To Curriculum Theory (3). An introduction to curriculum theory with the recognition that knowledge, power, ideology and schooling are connected to patterns of complexity and contradictions. Emphasis will be placed on curricula that cultivate theoretical discourses about the quality and purpose of schooling and human life.

5506 Curriculum Design (3). This course is designed to enhance educators' skills in the areas of curriculum design and interpretation. Students will apply and adapt strategies for curriculum development as well as for interpreting and adapting existing curricula.

5508 Curriculum And Methods For Teaching The Non-Motivated Learner (3). Analysis of materials relevant to reluctant learners; student-teacher prepared consumable materials; current research; methods for presenting material.

5509 Reducing Risk Factors For Students In Educational & Community Stn (3). The course offers an overview of current research and of special programs that deal with students who are likely to fail at school or in life. The roles of the larger society in helping create such problems will be considered. There will be an emphasis on early identification of such students and a consideration and evaluation of a number of programs designed to help them. The course will also present descriptions of the roles that educators can implement in programs designed for prevention and intervention.

5511 Developing Multidisciplinary Problem Solving Skills (3). Development of heuristic strategies in problem analysis, information

processing, modeling and logical thinking. Study of methods and materials for teaching problem solving strategies, with applications from several school curriculum areas and instructional settings. Use of microcomputers to develop skills.

5512 Strategies For Effective Classroom Management (3). The course presents several current approaches to classroom management and how they might be applied to the classroom. The approaches are evaluated in terms of psychological theory and research. Direct experiences with discipline problems are offered through simulation and role-playing.

5513 Effective Communication In The Classroom (3). This course will emphasize the relationship between communication and classroom climate, and the influence of communication on motivation and student behavior. Communication with large groups, small groups, and individuals is studied and practiced.

5515 Integrated Arts As A Model For Classroom Instruction (3). This course provides background on theory, research and practice in arts education. Students will learn to integrate the arts across the curriculum and explore the value of the arts as conveyors of information, powerful tools of communication and bridges to the broader culture. This course will also give the students the opportunity to create, study and experience in the arts as a model for classroom instruction. Offered: Winter 2000

5517 Teaching Methods And Practices (3). This course is designed to present and evaluate basic instructional methods and techniques and to determine the ways in which instruction is affected by the social and cultural context of the school. Offered: Every Fall

5520 English Curriculum In The Middle And High School (3). Advanced study of contemporary programs and procedures in specialized sectors of the secondary school curriculum. Examination of program objectives, teaching methods, and instructional materials in English. Prerequisites: A valid, regular teaching certificate; undergraduate special methods or equivalent; teaching experience or consent of the instructor.

5522 Language Arts Curriculum In The Elementary And Middle School (3). Consideration of language concepts as they relate to the teaching of the Language Arts in Grades K through 8. Significant research and its application to current trends in teaching the language arts will be explored. Prerequisite: an undergraduate course in Language Arts or reading or consent of the instructor.

5523 Advanced Literature For Children (3). History of children's books. Less well-known works of high quality from countries other than Europe, bilingual, and recent translations of books. Prerequisite: TE 201 or equivalent.

5531 Diagnosis And Remediation Of Mathematics Learning Problems (3). This course addresses the problems of children, youth and adults in basic education, in learning mathematics, whether in the regular classroom or in special environments. Attention is given to the skill of identification of mathematical conceptual levels and to specific difficulties impeding normal progress. There is a focus on methods and materials of remediation in basic skills and concept development. Relevant research literature is examined.

5536 Specialized Secondary School Curriculum Mathematics (3). Advanced study of contemporary programs and procedures in specialized sectors of the secondary school curriculum. Examinations of program objectives, teaching methods and instructional materials in Mathematics. Prerequisites: A valid, regular teaching certificate; undergraduate (Special Methods) or equivalent; teaching experience or consent of the instructor.

5539 Mathematics Curriculum Development (3). Application of principles of curriculum development to the mathematics content and instructions. Development of a rationale for objectives and content selection and for evaluation. Study and evaluation of current programs, trends and experiments.

5540 Evaluation Of Computer Software (3). The goals of the course are to provide students with a systematic evaluation process which analyzes the hardware resources and application needs of various user groups. This course provides the student with both an academic understanding of evaluation and requirement analysis for educational user groups. The course includes a practicum activity for application projects.

5541 Teaching Mathematics With Computer (3). The use of a variety of technologies and the appropriate software in teaching secondary mathematics will be investigated and the resulting impact on curriculum will be covered. Prerequisite: Mathematics teaching certificate or the equivalent of an undergraduate degree in mathematics.

5544 Theory and Research in Second Language Teaching and Learning (3). This course covers both second language learning theories and second language research and design. It will also contain a survey of both qualitative and quantitative research literature.

5545 Linguistics for ESOL Teachers (3). This course is an introduction to linguistic theories focusing on topics that are particularly relevant to ESOL teachers in culturally and linguistically diverse settings. It also covers applying these theories to practice in ESOL classrooms. The contents include basic

practical knowledge in phonetics, phonology, morphology, syntax, pragmatics and semantics.

5546 Literacy Development/Biliteracy (3). Class will investigate current research and practice in literacy development at home and in the classroom in general and on biliteracy in particular. Students will research their own theories and practices in language learning and teaching. Inquiry into early literacy development, adult literacy development, literacy development in an English as a second language classroom and literacy development in multilingual-multicultural class will be conducted. The course is one of the requirements for an endorsement to teach in an English as a second language classroom.

5547 Second Language Acquisition (3). The course focuses on the foundations of second language learning and teaching. Major theoretical approaches to second language acquisition and second language learning will be discussed. The course is also one of the requirements for an endorsement to teach in English as a second language classroom.

5548 English As A Second Language In Content Areas (3). Theoretical perspectives of teaching, learning and researching literacy development. The focus of this course will be on content based English as a second language instruction. The course is one of the requirements for an endorsement to teach in an English as a second language classroom.

5549 Practicum In English As A Second Language (3). A four-week practicum for teachers and researchers in the field of second language learning and teaching. Students will have the opportunity to develop their own teaching plan of action according to the curriculum guidelines of the program in which they participate. Students will develop portfolio and reflection piece about their own learning in the practicum.

5551 Science Curriculum In The Middle And High School (3). Advanced study of contemporary programs and procedures in specialized sectors of the secondary school curriculum. Examination of program objectives, teaching methods and instructional materials in Natural Sciences. Prerequisites: A valid, regular teaching certificate; undergraduate special methods or equivalent; teaching experience or consent of the instructor.

5553 Curriculum And Instruction In Science (3). Advanced study of contemporary programs and practices in science education at all instructional levels. Examination of program objectives and teaching methods and development of instructional materials for classroom use. Prerequisites: A science teaching methods course and teaching experience, or consent of instructor.

5554 Assessment In Science Education (3). Advanced study of science education assessment with option for elementary or secondary emphasis.

5560 Teaching And Learning In The Urban Classroom (3). Emphasis will be placed on examining beliefs, assumptions, values and their influence on the processes of teaching, perception of the urban learner, understanding the characteristics of the urban learner, and processes for transforming pedagogical practices, including fostering collaboration between home and school. Offered: Winter 2001

5561 Teaching Diverse Populations In Today's Classrooms (3). This course focuses on culturally responsive pedagogies for meeting the academic needs and learning styles of culturally diverse students. Emphasis will be placed on critical investigation of the role of socio-cultural dynamics on learning and teaching, and design of curriculum, materials, and pedagogical and disciplinary practices that affirm student's culture. The ultimate goal of the course is to examine ways in which a culture-based curricular perspective provides powerful scaffolding for enabling and empowering educational experiences for diverse students. Prerequisite: Consent of instructor.

5562 Teaching For Equity And Social Justice (3). This course examines a systems approach to the design, development, assessment, and implementation of school practices that support equity and social justice for all students. It investigates issues of educational inequities and educational empowerment. Practitioners will develop the knowledge, skills and dispositions needed for empowering self and students. Emphasis will be placed on social action learning, empowerment and agency. Prerequisites: EDCI 626. Multicultural Perspectives in Education or Consent of Instructor. Offered: Summer

5563 Multicultural Perspectives In Education (3). This course provides an opportunity for students to engage in a critical and in-depth study of multicultural education. Students will examine current theoretical, conceptual, ideological, and political positions that help frame the multicultural education debate. The ultimate goal of the course is to help students develop critical and multiple perspectives about education in a democratic society with the aim of transforming curricular and pedagogical practice. Prerequisites: EDUC 428 or consent of instructor.

5565 Social Studies Curriculum Elementary Education (3). Trends and new curricular developments in elementary school social studies. Focus on integration of social science concepts, the development of critical thinking skills, and analysis of values.

5566 Social Studies Curriculum In The Middle And High School (3). Advanced study of contemporary programs and procedures in specialized sectors of the secondary school curriculum. Examinations of program objectives, teaching methods, and instructional materials in Social Studies. Prerequisites: A valid, regular teaching certificate; undergraduate special methods or equivalent; teaching experience or consent of the instructor.

5570 Curriculum And Instruction In Technology (3). Study of contemporary programs and practices of technology usage in education at all instructional levels. Examination and application of technologically enhanced teaching methods, assessment, and curriculum development for classroom use. Prerequisites: teaching methods or consent of instructor. Offered: On demand

5571 Cognition & Technology (3). The purpose of this course is to respond to current research in the field of cognition and educational technology and design an evaluative research response to a local technology program. The educators will define their concepts concerning implementation of new technologies into learning environments and the mediational effects on the types and quality of learning that results from that process.

5572 Assessing The Role Of Technology In Education (3). The purpose of the course is to develop an understanding of changing role of technology in education by reviewing current and historical articles on the topic. This includes a historical analysis of trends and expectations within educational settings and outside educational settings and defining the educator's understandings of the role of technology in educational settings, past, present and future. Prerequisites: None

5573 Development Learning Tech Progs: Traditional & Non-Trad Settings (3). The purpose of this course is to develop understandings of currently implemented educational technologies including both software and hardware configurations. The educators will review current use of a variety of current technologies integrated into traditional settings and non-traditional settings and evaluate their effectiveness in developing standards-based learning outcomes and constructivist-based learning outcomes.

5575 Internship - Early Childhood (3-16). Applied experiences in a planned, supervised curriculum program. Seminar accompanies internship experiences. Prerequisite: Consent of advisor.

5576 Administration Of Early Childhood Programs (3). This course is designed to examine the administrative functions and decisions involved in effectively directing an Early Childhood Program. Students may plan their own Early Childhood Program incorporating philosophical values and beliefs.

5578 Play In Early Childhood Education (3). The purpose of this course is to study the various play theories and developmental levels of play. Students plan play activities and participate in Early Childhood programs.

5579 History, Theories, And Issues In Early Childhood Education (3). This course is designed to explore the historical and theoretical principles in early childhood education. Current issues in the field will be examined and discussed.

5580 Curriculum In Early Childhood Education (3). The content of this course will include an exploration of appropriate curriculum and instruction of early childhood classrooms. Students will recognize, understand and analyze the differences and similarities between early childhood curriculum and instruction methods and elementary education instruction.

5581 Infant-Toddler Programs: Research Theory And Practice (3). This course is designed to investigate the research relevant to infant and toddler programs, learn about the appropriate curriculum and teaching methods, and visit infant and toddler programs.

5582 Program Models In Early Childhood Education (3). This course is designed to explore and analyze program models in early childhood education in terms of their theoretical and/or philosophical bases and their transformation into practice. During this process, students are encouraged to evaluate their own personal views and values concerning teaching/learning issues in early childhood education.

5583 Supervision In Early Childhood Education (3). The purpose of this course is to study the process of effective supervision of staff in the diverse contexts of early childhood education. This course is designed to prepare students to supervise teachers, staff, paraeducators, or volunteers in early childhood education programs. Students will explore theories of adult development, the supervision process, professional development, and the evaluation process.

5584 Early Childhood Culminating Project (1-6). This seminar is designed for graduate students to explore current issues and topics pertaining to the field of early childhood education. An in-depth investigation of ways to work with community agencies will be included.

5585 Teaching and Learning with Technology (3). This is an introductory course that covers the fundamental of standard educational computer applications in addition to providing the basic concepts regarding classroom hardware and software integration. This course familiarizes students with the National Educational Technology Standards For Teachers and Students.

Because of the computer's increasing importance in all phases of education, hands-on experiences are required throughout the course.

5589 Special Topics In Education (1-6). A course designed to deal with a curriculum topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589AM Special Topics In Education (1-6).

5589CD Special Topics In Education (1-6).

5589HR Special Topics In Education (1-6).

5589SC Special Methods Science (5).

5589SE Special Methods English (5).

5589SM Special Methods Math (5).

5589SS Special Methods Social Studies (5).

5589TM Special Topics In Education (1-6). A course designed to deal with a curriculum topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5590 Seminar (3). Discussion and evaluation of literature in curriculum. Prerequisite: EdCI 5505 or consent of instructor.

5591 Curriculum & Instruction For The 21St Century (3). A seminar including critical examination of current issues affecting schools such as education for democracy and global interdependence in a diversified society, curriculum and instruction in a technological, post-industrial society; the changing demographics of the U.S. and the implications for curriculum and instruction; and the roles of teachers and administrators in the school of the future. Students will be actively involved in "research-in-action" study of both theory and practice.

5595 Action Research For Practitioners (3). This course is designed to enable practitioners to engage in systematic inquiry on some aspect of their practice in order to find out more about that practice and eventually improve it. Participants in the course are expected to put their assumptions, ideas and practices to the test by gathering, analyzing and drawing conclusions from evidence.

5596 Classroom Assessment (3). This course is designed to help practitioners develop an understanding of the various roles of classroom assessment, strengthen their own assessment strategies & be able to better use data in the development of curriculum that is appropriate for all learners. Students will develop a more clear understanding of the relationship of curriculum, instruction & assessment & ways in which good assessments can help diverse learners.

5598 Individual Studies (1-6). Review of the research and trends relative to curriculum in education. By prior arrangement with instructor.

5618 Survey Of Research In Curriculum (3). Review and analysis of research in curriculum theory and methods.

5619 Curriculum Evaluation (3). This course focuses on current practices in systemic curriculum review at the grade, school, district or state level in order to better serve the needs of diverse learners. Emphasis will be placed on the processes of curriculum review, curriculum change, implementation, evaluation of changes, and on-going long-range curriculum planning and review. Prerequisites: EDRP 5508 EDCI 5504 or EDCI 5505.

5620 Seminars In Theories Related To Curriculum (3). Study of major historical developments in curriculum and their influence on contemporary models and practices. Prerequisite: EdCi 5504 or EdCI 5505.

5640 Apprenticeship And Conference In College Training (2-5). Apprenticeship experience in preparing, conducting, and evaluating college teaching under the direction of and in conference with supervising professors. Some attention to student personnel and administration in higher education. By arrangement.

5690 Special Problems (1-6). Individual studies: thesis exploration, special reading.

5697 Dissertation Curriculum And Instruction (1-16). By arrangement.

Dental Hygiene Courses

5500 Introduction To Educational Methodology (2-4). This course is designed to introduce the student to educational methodologies in higher education. Topics include are: preparation of course syllabi, the use of instructional objectives in course development, development of presentation objectives, teaching/learning strategies, instructional presentation, basic principles of testing, student and self evaluation. Offered: Fall Semester on-line only.

5510 Student Teaching And Conference I (2-4). Student teaching experience in classroom areas as selected by the student under the direction of a supervising professor. The student develops behavioral course objectives, test and examination items, classroom presentations, and prepares student evaluations in the selected classroom teaching areas. The student may select teaching assignments in one of the developed externship student teaching

programs. Conferences will be held in conjunction with the course. Offered: TBA Prerequisite: DHGR 5500

5512 Student Teaching And Conference II (2-4). This course is designed to provide the graduate dental hygiene student with additional experience in classroom teaching. Student teaching experiences will be selected by the student under the direction of and in conference with a supervising professor. Offered: TBA

5516 Special Issues In Higher Education For Health Professional (2-4). This course is designed to introduce the student to issues encountered in higher education. Weekly classroom sessions will address subjects such as: grantsmanship, accreditation, promotion and tenure, faculty governance, outcomes assess, managed care, use of theory to guide practice, and case-based learning. Offered: Winter Semester on-line only.

5520 Independent Study In Hospital Dentistry (2-4). An introduction to the role of the dental hygienist in one or more clinical settings within the hospital environment. The settings may include the operating room, surgical wards, prenatal clinics, post-partum area, medical docent teams, medical clinics, specialty clinics and other areas of special interest. Specific student experiences are to be arranged in consultation with and under the direction of the hospital dental hygiene faculty member. Offered: TBA

5530 Clinical Instruction And Conference I (1-4). Actual experiences in clinical instruction under the supervision of a School of Denistry faculty member. Students will be encouraged to apply knowledge gained in the didactic component during actual clinical instructional experiences. Offered: Fall Semester, on-line and on-site.

5532 Clinical Instruction And Conference II (1-4). This course is designed to provide the graduate dental hygiene student with additional experience in clinical teaching. Student teaching experiences will be selected by the student under the direction and in conference with the Director and supervising professor. Offered: TBA Prerequisite: DHGR 530

5553 Seminar In Advanced Clinical Techniques And Methodologies (2-4). This course will expand on the student's basic knowledge of the dental hygiene process of care. Current scientific literature related to topics in dental hygiene and oral health will be examined to enhance background knowledge related to the dental hygiene process of care and foster an attitude of life-long learning. Offered: Winter Semester on-line only.

5560 Practicum In Clinical Supervision And Management (2-4). Practical experience in functioning as a Clinic Supervisor. Clinical managerial projects will be assigned according to students' interests and goals by agreement between student and instructor. Offered: TBA

5565 Advanced Special Patient Care Practicum I (1-4). This course is designed to familiarize the student with general principles of cancer therapy and the role of the dental team in the multidisciplinary care of patients undergoing oncology treatments. Special emphasis will be placed on the treatment of the patient with head and neck cancer, and preventive and palliative dental interventions for control of the oral complications associated with all cancer therapies. Cancer prevention issues and the psychosocial and economic impact of cancer diagnosis will also be discussed. Offered: TBA

5566 Advanced Special Patient Care Practicum II (1-4). This course will provide the graduate dental hygiene student with the opportunity to explore the relationship of an oncology dental program to medical health care facilities. Offered: TBA

5570 Administrative Practicum (1-4). Practical experience in administration. The student selects areas of responsibility based on their goals and interests in administration. Possible areas of involvement are: recruitment, admissions, curriculum and course development, course scheduling, grant and report writing and student advising. Offered: TBA

5580 Special Topics In Dental Hygiene-Expanded Duties (3). Theoretical and clinical experience in expanded duties for the dental hygienist in the areas of local anesthesia and restorative dentistry. Offered: TBA

5590 Independent Study (1-4). Independent study of a particular topic or area of interest to the student in dental hygiene/dentistry and/or higher education. Offered: TBA

5595 Writing In Science (1-2). This seminar course is designed to provide advanced education students in the health professions the skills necessary to write and communicate in science. Course activities and topics include: critical analysis of the literature, literature summary tables, structure and organization of documents, style and usage, drafting, revising and finishing. Participants will practice the craft of scientific writing not only as the writer but also as the reader providing correction and reorganization where appropriate. While this course examines many writing tasks, exercise culminate with the development of a research protocol or scientific article. Offered: Winter Semester, on-line only

5599 Research And Thesis (1-6). This course is designed to support the research process from protocol development through data collection and report of results. Research committee chairperson typically serves as the course director.

Dentistry Courses

6305 Operative Dentistry I Lecture (1). An introduction to the prevention and principles of the restorative treatment of dental caries.

6305L Operative Dentistry I Laboratory (2). Restorative procedures discussed in Dent 6305 are performed on laboratory manikins.

6306 Introduction To Ethics And Professionalism (1). An introduction to basic concepts in the analysis of ethics, morals and values. Systems of ethical analysis are introduced and explored using contemporary issues from medicine and dentistry. Students will explore their own ethical values and apply this knowledge to issues in professional education.

6310C Clinical Assisting (2.5). The student will first learn the principles and techniques of chairside dental assisting with the aid of lectures, demonstrations, and visual aids. The student will then assist third and fourth year students in the clinic. Offered: Fall

6312 Dental Behavioral Science I (1-2). An introduction to the basic principles of behavioral science as they relate to dentistry. Topics include basic principles of human behavior, compliance and dental self-care behavior, fear and anxiety behavior, pain behavior and stress related to dental practice.

6314C Introduction To Oral Diagnosis (3). A combined lecture/clinic course in which the student will be introduced to the techniques of Oral Diagnosis and the studies of patient history taking, patient examination, patient diagnostic techniques, radiographic techniques, and radiation hygiene. Personal oral hygiene and patient education will be stressed.

6316 Dental Morphology (3). This lecture/laboratory course introduces the student to dental terminology, then continues with the study of masticatory biomechanics and occlusion. The students' knowledge of dental morphology and occlusion are then reinforced by having them construct wax models of the human succedaneous and permanent dentition.

6317 Dental Occlusion (3). This lecture/laboratory series covers the judicious use of gnathologic instruments in dental reconstruction and occlusal therapy. Provides an introduction to temporomandibular disorders with special emphasis upon pathologies caused by the occlusion. The practical application of gnathologic instruments is demonstrated in the laboratory, followed by various occlusal treatments useful in the management of temporomandibular disorders. Offered: Winter Semester.

6318 Dental Biomaterials Lecture (1). An introduction to the study of common dental materials and their manipulation as used in modern dentistry.

6328 Introduction To Dental Research Literature (1-2). A study of the scientific literature of dentistry from the viewpoint of the reader. Topics include the identification and evaluation of key components in the reading and understanding of dental research.

6335 Applied Neuroscience (2). This course serves as an introduction to nervous system function and its relation to the practice of dentistry. Primary focus is on synapses, with applications to the innervation of the oral cavity and patient management. Appropriate content and principles from the basic sciences and neurology will be integrated into a unit readily applicable to clinical practice.

6350 Introduction To The Histopathology Of Oral Tissues (2.5). A comparison of the microscopic anatomy of healthy and diseased oral tissues.

6390 Dental Research Experience (1). This independent study course focuses upon experience gained in both an area of dental research as well as the process of research in working with an established dental researcher.

6410 Operative Dentistry II Lecture (1). A continuation of 6305. Principles of cavity preparation, materials and techniques are stressed.

6410L Operative Dentistry II Laboratory (2). A continuation of 6305L. Restorative procedures are performed on laboratory manikins and extracted teeth.

6411 Operative Dentistry III Lecture (1). A continuation of Dent. 6410.

6412 Anesthesiology I Lecture (1). Infiltration and regional anesthesia; technique of injections; complications of local anesthesia; a brief overview of conscious sedation.

6414 Pathology I Lecture (4). The general etiology of disease; circulatory and metabolic disorders; degenerative processes; inflammation; infection and immunity; tumors; and organ system pathology.

6415 Pathology II (2). A study of developmental defects, inflammatory diseases, and neoplasia of the oral region.

6416 Complete Removable Prosthodontics I Lecture (1). A study of the edentulous patient, pre-extraction records, mouth preparation for dentures, impression making, jaw relations, the arrangement of teeth and processing.

6416L Complete Removable Prosthodontics I Laboratory (2). Complete dentures are constructed. Procedures used in the clinic are followed and a manikin serves as the patient.

6417 Removable Partial Prosthodontics Lecture (3).

6420 Periodontics I (2). It is the scope of this course to introduce the basic disease mechanisms involved in the evolution of the inflammatory periodontal lesion; i.e., the interaction of the host tissues with the oral microbial flora. The course will cover the entire range of possible periodontal diseases, ranging from simple marginal gingivitis to AIDS related necrotizing ulcerative periodontitis. Further, the course will continually reinforce the science of periodontology and its overwhelming relationship to the clinical practice of periodontics.

6422 Fixed Prosthodontics I Lecture (1). Fundamental considerations of fixed bridge construction; diagnosis and treatment planning; tooth preparation; impression techniques; temporary coverage; construction of many types of crowns, including porcelain-veneered crowns; and associated laboratory techniques.

6422L Fixed Prosthodontics I Laboratory (2). The student develops skills (gains experience) in tooth preparation, impression taking, articulation, pontic design, waxing, casting, finishing, and assembling various fixed prosthesis.

6423 Fixed Prosthodontics II Lecture (1). A continuation of Dent. 6422.

6423L Fixed Prosthodontics II Laboratory (2). A continuation of Dent. 6422L.

6424 Oral Diagnosis And Oral Medicine (1-2). Includes presentation of the principles of history taking and examination of the patient, the signs and symptoms of diseases and the medical management of patients with illness. The dental management of patients with systemic disease is stressed.

6426 Oral Radiology Lecture (2). Radiation physics, radiation biology, quality assurance, imaging principles, radiation hygiene, radiographic interpretation and techniques of intra-oral survey are presented.

6429 Dental Behavioral Science II (1). An in depth study of the processes of effective dentist-patient communication.

6431 Pediatric Dentistry I Lecture (1). The student is introduced to techniques used in treating the child patient; including examination, diagnosis, interpretation of intra-and extra-oral radiographs, treatment planning and preventive dentistry.

6435 Endodontics I Lecture (1). An introductory course in endodontics emphasizing pulpal biology, endodontic diagnosis and treatment planning.

6436 Orthodontics: Growth And Development (1). Certain malocclusions and dental deformities can occur due variations in growth and normal developmental process. In order to treat and understand these problems, an in-depth and through understanding of craniofacial growth and development is necessary. Understanding how and when the face and head is actively growing will enable the clinician to redirect facial growth to reduce the severity of forming skeletal/ dental malocclusions. Since orthodontic treatment may involve the modification and/or manipulation of skeletal growth, it is important not only to understand dental development but also physical, physiologic and psychosocial development. This course is designed to address these needs.

6439 Medical Emergencies In The Dental Office (1).

6440 Oral Surgery I (1). An introduction to the basic principles of oral surgery.

6441C Treatment Planning (2). The student is introduced to comprehensive treatment planning in dentistry using lectures, cases, and class discussions. Offered: Winter

6442 Endodontics II Lecture (1). A continuation of the study of endodontics emphasizing non-surgical endodontics, surgical endodontics and post-endodontic treatment.

6442L Endodontics Laboratory (2). The preparation and filling of root canals of extracted teeth in the laboratory setting.

6460C Review Of Pre-Clinical Dentistry (2). A combination of lecture, selected readings and independent study designed to reinforce and integrate concepts contained in the pre-clinical dental curriculum. The course will meet for 3 hours each week for the first 7 weeks of the term, with an additional 11 hours of independent computer-aided study required during this period. Offered: Summer Semester.

6501C Intro To Comprehensive Patient Care (1-10). The purpose of this course is to introduce the student to the clinical environment and to familiarize him/her with comprehensive patient care. In addition, it allows the student to develop and interpret basic diagnostic aids that enable him/her to arrive at a diagnosis and treatment outline, the beginning steps of comprehensive care. Patient care is provided following the outlined treatment plan. The student will apply the principles/concepts of patient care. Students begin treatment of a "family" of patients under faculty supervision. Prerequisite: first and second year courses.

6502 Grand Rounds I (1). Students prepare to develop and present oral reports typically given at professional meetings such as case presentations,

table clinics, research reports or presentations of new techniques (such as in Table Clinic requirements or Senior Grand Rounds). This course will expand on the student's basic knowledge of critical review of scientific literature and information literacy. Cases and problems in dentistry and oral health will be the context for identification and application of current valid scientific literature. This course seeks to foster an attitude of critical analysis and commitment to life-long learning.

6507C Pediatric Clinical Dentistry II (1-2). Clinical application of those principles taught in preceding terms.

6509C Comprehensive Patient Care I (1-10). Third and fourth year dental students will spend the majority of their curriculum time mastering the competencies required of a general dentist. This includes the ability to complete a dental diagnosis and treatment plan, present the case to the patient, implement and evaluate the dental care delivered. Comprehensive patient care courses foster development of skills through daily evaluation in technique, patient management, and diagnostic ability, supplemented by periodic mentor and team faculty evaluation. Semester evaluation will also take into account clinical productivity using a time unit system. Offered: Fall Third and fourth year dental students will spend the majority of their curriculum time mastering the competencies required of a general dentist. This includes the ability to complete a dental diagnosis and treatment plan, present the case to the patient, implement and evaluate the dental care delivered. Comprehensive patient care courses foster development of skills through daily evaluation in technique, patient management, and diagnostic ability, supplemented by periodic mentor and team faculty evaluation. Semester evaluation will also take into account clinical productivity using a time unit system. Offered: Winter

6510C Comprehensive Patient Care II (1-10). Third and fourth year dental students will spend the majority of their curriculum time mastering the competencies required of a general dentist. This includes the ability to complete a dental diagnosis and treatment plan, present the case to the patient, implement and evaluate the dental care delivered. Comprehensive patient care courses foster development of skills through daily evaluation in technique, patient management, and diagnostic ability, supplemented by periodic mentor and team faculty evaluation. Semester evaluation will also take into account clinical productivity using a time unit system. Offered: Winter

6514 Pathology III Lecture (1). Continued study of pathological conditions of the oral region with emphasis on clinical signs and symptoms.

6515 Periodontics II (1). The overall goal of this course is to help the pre-doctoral students to recognize periodontal disease and treatment plan the needed periodontal therapy. Specific goals are to enhance the student's knowledge of the surgical aspects of periodontal therapy, and the relationship of periodontal disease and its treatment to the overall dental treatment plan.

6519 Advanced Dental Materials (0.5). This course is a review of dental materials in general, an introduction of new materials and uses.

6521 Oral Surgery II Lecture (1). The diagnosis and treatment planning of fractures, cysts, neoplasms, and other problems in oral pathology of the mandible and maxilla and associated anatomical structures.

6522 Oral Surgery Lecture III (1). A continuation of Dent. 6521.

6522C Periodontics Clinical II (1-2). Clinical application of those principles taught in preceding terms.

6524 Principles Of Medicine And Physical Diagnosis (2). Includes presentation of the principles of history-taking and examination of the patient, the signs and symptoms of diseases and the medical management of patients with illness. The dental management of patients with systemic disease is stressed.

6526 Orthodontics I (1). Orthodontics I is a course designed to introduce the student to the field of orthodontics. The lecture will introduce the student to basic orthodontic terminology, description, diagnosis, and mechanotherapy. This course will prepare the student for the clinical treatment of patients needing limited tooth movement. Offered: Winter

6526C Preventive Dentistry Clinical (1). Clinical application of those principles taught in preceding terms.

6526L Orthodontics I Laboratory (2). Orthodontics I is a course designed to introduce the student to the field of orthodontics. The laboratory enables the student to master the materials of orthodontics in order to complete diagnostic records, to construct fixed and removable appliances, and to be familiar with tooth movement mechanics. This course will prepare the student for clinical treatment of patients needing limited tooth movement. Offered: Winter

6527 Therapeutics (2). Therapeutic use of drugs in dental practice.

6531 Complete Removable Prosthodontics II Lecture (1). Advanced principles of complete denture construction are stressed and emphasis on their clinical application is included. Additional clinical approaches to the partial and completely edentulous patient are explored.

6532C Oral Diagnosis Clinical II (1-2). Clinical application of those principles taught in preceding terms.

6534 Advanced Predoctoral Prosthodontics (1). Students will learn the coordinated application of advanced techniques and products used for complete, fixed and removable partial prosthodontics. The course is coordinated amalgamation of principals from these three discipline of restorative dentistry. Offered: Winter

6537 Oral Oncology (0.5). A lecture course on oral oncology will deal with the biologic aspects of cancer; the detection of oral cancer and the different modalities of treatment of cancer; the dental aspects both from surgical reconstruction and prosthetic reconstruction following cancer surgery; and management of the patient prior to, during, and following radiation therapy to the head and neck and during chemotherapy for systemic cancer.

6538 Orthodontics II (1). This course will present a variety of topics related to orthodontics, such as: normal development, abnormal occlusal deviations during the developing permanent dentition, diagnosis and treatment planning of orthodontic problems, biomechanical principles in orthodontics, adolescent vs. adult orthodontics, periodontal health during orthodontic treatment, complications associated with orthodontic treatment and controversial aspect of orthodontics. You should also be able to recognize which kind of cases exceed the scope of limited treatment and may require intervention by a specialist. Offered: Fall

6542C Operative Dentistry Clinical II (1-2). Clinical application of those principles taught in preceding terms.

6551CR Oral Surgery Clinical (2). Clinical application of those principles taught in preceding terms.

6556 Radiographic Interpretation (0.5). This is a comprehensive multidisciplinary course in radiologic interpretation of normal anatomy, anomalies, dental caries, periodontal disease, periapical pathology and infections of the maxilla and mandible.

6558 Radiographic Interpretation II (0.5). This is a continuation of radiographic interpretation in which the students continue to deepen their knowledge in radiologic interpretation of normal anatomy, anomalies, dental caries, periodontal disease, periapical pathology and infections of the maxilla and mandible. Offered: Winter

6559 Diagnosis And Management Of Orofacial Pain (1). Essential conceptual, clinical and technical information and skills necessary in the diagnosis and treatment of Orofacial Pain States. Diagnostic protocols and radiographic procedures and their integration as it relates to painful head and neck conditions are presented in depth. Differential diagnosis and special diagnostic techniques are also addressed. Behavioral factors associated with the development of chronic pain and complicating the management of pain states are identified and discussed.

6562C Removable Prosthodontics Clinical II (1-2). Clinical application of those principles taught in preceding terms.

6584 Case Presentation (0.5). an applied course directed at improving communication skills with patients in order to maximize case acceptance and patient satisfaction. Offered: Fall

6591C Professional Development I (1-2). Clinical application of those principles taught in preceding terms.

6592C Professional Development II (1-2). Clinical application of those principles taught in preceding terms.

6593C Professional Development III (1-2). Clinical application of those principles taught in preceding terms.

6595 Introduction To Implant Dentistry (1). To provide the undergraduate student with a solid background into the role of implant dentistry in their profession. Advances in technique and materials which are responsible for improved predictability will be presented. Emphasis will be on patient selection, treatment planning and basic restorative techniques. The student will be able to initiate uncomplicated dental implant procedures with this information and will be prepared to enter into more advanced continuing education and graduate programs in this subject.

6600 Review Of Clinical Dentistry (1-2). A summative review of the basic areas of clinical dentistry.

6601C Endodontics Clinical (1-2). Clinical application of principles taught in preceding terms.

6602 Grand Rounds II (1). This course is a continuation of Grand Rounds I and its aim is similar to Grand Rounds I: expand on the dental student's basic knowledge of critical review of scientific literature and information literacy. Students will present a Table Clinic at Midwest Dental Conference and prepare a proposal for their senior Grand Rounds presentation.

6603 Grand Rounds III (1). A continuation of DENT 6602.

6604 Grand Rounds Iv (1). A continuation of DENT 6603.

6605 Review Of Clinical Dentistry II (1-2). A review of foundation knowledge for clinical dentistry.

6606C Pediatric Dentistry Clinical I (1-2). Clinical application of those principles taught in preceding terms.

6607C Pediatric Dentistry Clinical Iv (1-2). Clinical application of those principles taught in preceding terms.

6609C Comprehensive Patient Care III (1-10). Third and fourth year dental students will spend the majority of their curriculum time mastering the competencies required of a general dentist. This includes the ability to complete a dental diagnosis and treatment plan, present the case to the patient, implement and evaluate the dental care delivered. Comprehensive patient care courses foster development of skills through daily evaluation in technique, patient management, and diagnostic ability, supplemented by periodic mentor and team faculty evaluation. Semester evaluation will also take into account clinical productivity using a time unit system. Offered: Winter

6610 Anxiety And Pain Control In Dentistry (1). Techniques of selecting, administering and evaluating inhalation and intravenous sedation agents. An introduction to general anesthesia will also be included. Clinical experience in inhalation and intravenous sedation is highly desirable.

6610C Comprehensive Patient Care Iv (1-10). Third and fourth year dental students will spend the majority of their curriculum time mastering the competencies required of a general dentist. This includes the ability to complete a dental diagnosis and treatment plan, present the case to the patient, implement and evaluate the dental care delivered. Comprehensive patient care courses foster development of skill through daily evaluation in technique, patient management, and diagnostic ability, supplemented by periodic mentor and team faculty evaluation. Semester evaluation will also take into account clinical productivity using a time unit system. Offered: Fall

6611C Fixed Prosthodontics Clinical I (1-2). Clinical application of principles taught in preceding terms.

6613 Periodontal Treatment Planning (1).

6614 Dentistry For The Special Patient (1-2). Special problems associated with dental care for handicapped, chronically ill, culturally variant, homebound, geriatric and institutionalized patients.

6614C Comprehensive Patient Care V (1-10). Third and fourth year dental students will spend the majority of their curriculum time mastering the competencies required of a general dentist. This includes the ability to complete a dental diagnosis and treatment plan, present the case to the patient, implement and evaluate the dental care delivered. Comprehensive patient care courses foster development of skill through daily evaluation in technique, patient management, and diagnostic ability, supplemented by periodic mentor and team faculty evaluation. Semester evaluation will also take into account clinical productivity using a time unit system. Offered: Winter

6617 Pediatric Dentistry Seminar (0.5). This course is designed to follow and build on the concepts presented in D431. Using a seminar format, students will review pediatric dentistry concepts with emphasis on clinical application. The course is intended for fourth year dental students who have had some initial clinical experience with pediatric patients. Offered: Fall

6618 Dental Jurisprudence And Ethics (1). Legal aspects of dentistry to include dentist-patient and dentist-state relationships. Principles of ethics and the Missouri State Dental Laws are also covered.

6622C Periodontics Clinical Iv (1-2). Clinical application of those principles taught in preceding terms.

6626 Clinical Treatment Planning (1). This course builds on the didactic courses and clinical experiences in treatment planning. Each student will demonstrate competency in comprehensive treatment planning to earn credit in the course. Offered: Fall

6630 Practice Administration I (1). A consideration and evaluation of the various economic factors and managerial practices that affect the operational aspects of the practice of dentistry.

6631 Practice Administration II (1). A lecture course which provides a working knowledge of basic practice management topics which will help future practitioners avoid many common mistakes. Specific business systems for managing a dental practice will be presented in a forum which encourages questions and dispels many common practice myths. A profitable private practice model will be presented that is designed to keep the fun in dentistry and minimize burn-out. Each student will then have the opportunity to build their own personal mode, or Personal Practice Blueprint, that will serve as their roadmap when creating their own practice. Upon completion, students should feel competent in running the business side of their practice and maintaining control over their business life. Resources for further study and ongoing support are also provided.

6632C Oral Diagnosis Clinical Iv (1-2). Clinical application of those principles taught in preceding terms.

6633 Introduction To Dental Public Health (1). Discussion of contemporary issues in community health and community oral health with emphasis on preparing students for their roles as professional members of their communities.

6634 Community-Based Dental Education I (1). The purpose of this course is to expose third and fourth year dental students to alternative methods of dental care delivery to populations at high risk for dental disease. Specifically the course places junior and senior students in an existing network of community health centers and rural outreach sites where they deliver dental care while serving on multi-disciplinary teams that meet the primary health care needs of large segments of underserved populations. The long range goal is a practitioner who is sensitive to diverse community needs. Prerequisite: Completion of Third Year Offered: Winter Semester Restrictions: Not eligible until completion of two clinical semesters-summer and fall of junior year.

6635 Community-Based Dental Education II (1). A continuation of community-based dental education I (D-634). Prerequisite: Completion of Third Year Offered: Summer/Fall Semester Restrictions: Not eligible until completion of clinical requirements for the third year.

6636C Oral Radiology Clinical (2). Clinical application of those principles taught in preceding terms with emphasis on use of a variety of film holding devices. Radiographic quality assurance and darkroom maintenance will be reviewed during this course.

6641CR Operative Dentistry Clinical I (1-2). Clinical application of principles taught in preceding terms.

6642C Operative Dentistry Clinical Iv (1-2). Clinical application of those principles taught in preceding terms.

6650 Applied Ethics (0.5). Four or five case studies will be used during seminars. Basic ethical principles from the D-6306 course will be applied to the case studies. Two of the cases will involve ethical issues, and one of the cases will add community dentistry issues. Other cases will be used as generated or suggested by each seminar group.

6656C Orthodontic Clinical I (1). The purpose of this course is to allow each student to develop the skills, knowledge and values to diagnose potential or actual malocclusions and manage patient who need orthodontic intervention. Offered: Fall

6657C Orthodontic Clinical II (0.5). A continuation of Dent 6656C.

6680 Dental Occlusion Iv (0.5). To review and reinforce the more theoretical information presented in the first year, give additional information and help students to further apply this information. This course will require a minimum of six weeks plus one lab/clinical for each student. A lecture/discussion format will enable the students to more fully explore problems encountered in the clinic. Offered: Winter Semester.

6690 Independent Study In Dentistry (1-6). This course provides students the opportunity to undertake independent study projects in specific areas of dentistry. Prior consent of instructor required. Course may be repeated.

6691C Professional Development Iv (0.5-3). Clinical application of those principles taught in preceding terms.

6692C Professional Development V (1-2). Clinical application of those principles taught in preceding terms.

6899 Required Graduate Enrollment (1).

Dentistry - Biological Sciences Courses

5700 Biomaterials Teaching (2). Through this course, students will acquire teaching experience in graduate and undergraduate biomaterials.

5701 Engineering Principles Of Dental Materials (2). The application of engineering principles to a description and understanding of the structure and properties of dental materials. Identification of engineering principles which are appropriate in the examination of the function of dental materials. Basic information, as well as current materials research will be discussed.

5704 Temporomandibular Disorders: Evaluation And Management (2). Lecture and seminar course on the temporomandibular disorders, evaluation and management in light of behavioral, biological and environmental factors.

5706 Growth And Development I (1). A course designed to teach the general principles of normal and abnormal physical, psychological and social growth and development of children and adolescents. The growth and development of the craniofacial structures is emphasized. The diagnosis of malocclusions is stressed. Consideration is given to possible approaches to their treatment.

5707 Growth And Development II (1-2). A comprehensive study of the genetic aspects of growth and development with special analysis of the molecular control of these processes by both intrinsic and epigenetic factors. Prerequisite: Growth and Development I.

5710 Molecular Genetics And Biochemistry Of Cranial Facial Biology (2). Biochemistry of oral structures and the effect of oral diseases on these structures. This course may not be used to satisfy Cell Biology and Biophysics or Molecular Biology and Biochemistry discipline-specific requirements for the Interdisciplinary Ph.D. programs.

5711 Biochemical Endocrinology (2). An advanced study of the chemistry, metabolism, and mechanisms of hormone actions on molecular processes.

Each hormone will be studied with respect to its site of origin, chemical properties, metabolism, disease entities, and mechanism of action on molecular processes. Prerequisite: BISC 5710. This course may not be used to satisfy Cell Biology and Biophysics or Molecular Biology and Biochemistry discipline-specific requirements for the Interdisciplinary Ph.D. program. Prerequisite(s): LSBIOC 5710.

5730 Oral Microbiology (2). The course will focus on rapidly developing areas of oral microbiology especially the etiology, prevention and treatment of oral disease. Topics will be selected by the instructor to reflect recent advances in research and to provide a critical examination of the current literature. Two hours lecture per week. This course may not be used to satisfy Cell Biology and Biophysics or Molecular Biology and Biochemistry disciplinespecific requirements for the Interdisciplinary Ph.D. program.

5735 Advanced Immunology (2). This seminar course will focus on rapidly developing areas of modern immunology relevant to the health professions. Topics will be selected by the instructor to reflect recent advances in immunology and provide a critical examination of the current literature. Two hours lecture per week. This course may not be used to satisfy Cell Biology and Biophysics or Molecular Biology and Biochemistry discipline-specific requirements for the Interdisciplinary Ph.D. program.

5739 Dental Biomaterials For The Dental Specialist (1). Discussion of basic biomaterials principles and terminology including explanation of physical, mechanical and surface chemical properties, metallurgy, polymer chemistry, ceramics and composites. Clinical examples of how these principles apply to Prosthodontics, Pedodontics and Orthodontics will be presented. Students cannot take both this course and 5742 for credit.

5740 Oral Pathology I (2). A study of the clinical and histopathologic features of oral diseases, including inflammatory, degenerative, metabolic, and neoplastic diseases and developmental disturbances.

5741 Oral Pathology II (2). A continuation of BISC 5740.

5742 Dental Biomaterials For The Restorative And General Dentist (2). A thorough discussion of basic biomaterials principles and how they apply to the practice of general and restorative dentistry. Students cannot take both this course and 5739 for credit.

5743 Advanced Seminar In Dental Biomaterials (1-2). The use and behavior of dental biomaterials in Pediatric Dentistry, Prosthodontics, Orthodontics, and Restorative Dentistry will be discussed in depth. Current basic and clinical literature related to these areas will be discussed and research information to improve dental practice will be presented. Prerequisite: BIO SCI. 5739 or 5742 and permission of instructor.

5747 Research Instrumentation Used In Dental Biomaterials (2-4). A discussion and laboratory use of instrumentation employed in dental biomaterials research. Practical hands-on experience will include calibration and use of specific research equipment including the Instron, metallurgical mounting and polishing equipment, measuring microscope, metallograph, and contact angle goniometer. Prerequisite: Permission of instructor.

5749 Special Problems In Oral Pathology (1-2). The student will review surgical cases and literature pertinent to those cases under the guidance of faculty members of the department.

5750 Special Problems In Dental Biomaterials (2-4). The student will select or be assigned a special research problem including appropriate literature reviews of a special topic in dental biomaterials. Emphasis will be placed on the correlation between basic and clinical research. The design and conduct of clinical research will be discussed. Prerequisite: Permission of instructor.

5751 Elements Of The Scientific Method (1). Students enrolled in the Masters of Science in Oral Biology program are required to attend this weekly seminar series every semester. The course is offered during their matriculation in the program. Attendance is open to other students and faculty. Research presentations will cover a variety of biological, engineering and psychological disciplines relevant to dental education and the dental profession. Presentations will be by faculty and students. Fall and Winter semesters. (Day, time and place to be determined).

5752 Research Methods In Oral Biology (1-5). A continuation of BISC 5751.

5759 Special Problems In Pharmacology (2). Pharmacologic and therapeutic problems of special interest in the practice of dentistry.

5760 Physiology Of Oral Hard Tissues (2). A study of the physiology of the oral hard tissues with emphasis on the mechanisms of the growth, remodeling, and healing of maxillo-mandibular bones and on the mechanism of dentinogenesis. This course may not be used to satisfy Cell Biology and Biophysics or Molecular Biology and Biochemistry discipline-specific requirements for the Interdisciplinary Ph.D. program.

5780 Teaching Of Dentistry (1-2). A consideration of the problems of teaching in dental schools. Each department of the School of Dentistry will report on its teaching methods. The student will observe lectures and laboratory teaching in each department.

5781 Clinical Student Teaching I (1-2). This course is designed to give the student teaching experience in conducting and supervising predoctoral students in their clinical practice. Diagnosis and treatment planning in each specialty field will be emphasized.

5782 Clinical Student Teaching II (1-2). A continuation of BISC 5781.

5790 Directed Research In Oral Biology (1-6). Student utilizes beginning research skills to design, conduct and report an individual research project under the direction of the faculty.

5799 Research And Thesis (1-9). The satisfactory completion of an original research project. Results of the research and critical review of the pertinent literature are incorporated into a thesis. Credit is awarded after the student's thesis is successfully defended and accepted by the School of Graduate Studies.

5801 Readings In Immunology (1-3). A detailed study of special topics in immunology. Specific topics to be arranged with the instructor. This course may be repeated by doctoral students for a maximum of 3 credit hours. Prerequisite: LS 435.

5802 Immunopathology (2). A detailed study of selected topics in immunopathology with emphasis on physicochemical barriers such as cutaneous and mucosal immune systems. Prerequisite: LS 435.

5805 Molecular Biology Of Oral Microflora (2-3). Lecture and discussion. An overview of the ecology of oral microbial flora and its role in oral health; bacterial virulence factors and pathogenesis; mechanisms of gene expression in oral bacteria; and the effect of recent advances in molecular biology on oral diagnosis and treatment. Permission of Instructor Required for registration. The basic course will meet twice a week and be 2 credit hours. An optional additional credit can be earned by writing a research paper on a pertinent topic in Oral Molecular Microbiology.

5806 Oral Microbiology And Infectious Disease (1-2). A detailed study of oral microbiology with a particular emphasis on dental plaque formation and bacterial infection in dental caries. The role of bacterial genetics in the diagnosis, prevention, and treatment of diseases involving the oral maxillofacial complex, bacteremia and endocarditis will also be discussed. Prerequisite: LS 4180.

5830 Structural Characterization Of Dental Biomaterials (3). A detailed study of the techniques commonly used to determine the composition and structure of dental biomaterials. Surface and near-surface characterization techniques will be emphasized. The student will be expected to complete laboratory projects on the scanning and transmission electron microscopies available in the School of Dentistry. Two hours lecture and two to six hours laboratory per week. Prerequisite: Biosc 5701.

5899 Required Graduate Enrollment (1).

Economics Courses

5501 Advanced Macroeconomic Analysis (3). Basic theoretical concepts of national income and statistical tools utilized in its measurement. Aggregate demand and supply as problems of economic dynamics. The course includes examination of the primary competing theoretical approaches: neoclassical, Keynesian, new classical, real business cycle, new Keynesian supply side, Austrian, and Post Keynesian. Topics covered include growth, money, labor markets consumption, investment, expectations formation, role of time and uncertainty, equilibrium and disequilibrium analysis, exchange rates, international trade, and optimal currency areas. Policy implications of the various macroeconomic theories are explored. Prerequisites: Economics 301 and 302, or their equivalent. Offered: Fall 2001.

5502 Advanced Microeconomic Analysis (3). The course first provides a critical survey of neoclassical microeconomic theory, including methodology, demand theory, production and cost theory, theory of competitive and non-competitive markets, distribution, welfare, and general equilibrium. It then introduces heterodox microeconomic theory, covering its historical origins, methodology, structural organization of economic activity, in-put-output models, flow of funds, agency and institutions, and the business enterprise. Prerequisites: Economics 302, 521

5504R American Economic History Since 1865 (3). The course deals with the emergence of Industrial America since 1865. It will cover the rise to dominance of the large modern corporation, with the problem of economic and social instability and stability, with the rise of trade associations, cartels, and government regulation in an unstable economy, and with the evolution of American economic policy and national economic planning. The course is the same as History 566R.

5504RR American Labor History (3). This course examines the history of work and the working class in the U.S. from 1750 to the present. We will focus on the transformation of the workplace, the rise of the union movement, the nature of cultural and political organizations, workers' relationships with other social groups, and the role played by gender, race, and ethnicity in uniting or dividing the working class. Also cross-listed with History 566RR. Prerequisites: graduate standing

5505 Advanced Comparative Economic Systems (3). Contents vary depending upon the instructor's design for the course. Prerequisite: Economics 301, 302.

5506 Advanced History Of Economic Thought (3). This seminar uses issues raised in the reading of two 'classic' primary texts, Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776) and John Maynard Keynes's *The General Theory of Employment, Interest and Money* (1936), as points of departure for the examination of a series of topics in the history and development of economics and alternative paradigms in the discipline. These investigations will lead us to the study of a number of other seminal articles, representing alternative approaches in the field. Topics include competition, accumulation, path dependence and endogenous technical change, cumulative causation, the laws of return, money and credit, capital theory, and more. Prerequisites: Economics 301, 302

5508 Controversial Issues In Recent Economic Literature (3). This course will focus on theoretical and policy-oriented controversies that have occurred in economic in the 20th century. The type of controversies covered include, but are not restricted to, money, unemployment, business cycles and economic growth, pricing and administered prices, capital controversy, labor theory of value controversy, and free trade vs. protectionism. While the course concentrates on recent debates, it identifies the origins of the modern disputes in earlier controversies. For each controversy, its real world importance and policy implications are discussed.

5512 Advanced Economic Development (3). Contents vary depending upon the instructor's design. Prerequisite: Economics 301, 302.

5513 Economic Cycles And Growth (3). A critical review and evaluation of economic analysis and the forces of economic fluctuation and growth; and analysis of statics, dynamics, monopolistic competition, the role of the interrelationships of the market structure and other institutional forces as they relate to fluctuations and growth. An emphasis will be made on the critical evaluation of recent literature in the field of economic analysis related to fluctuations, growth, statics, dynamics, market structure and the reinterpretation of economic fluctuations, growth, forecasting and overall economic behavior. An analysis of the technological, monetary, and fiscal policy implied by economic trends and growth will also be discussed. Prerequisite: Economics 501 or its equivalent or by special permission of the instructor.

5516L Law And Economics (3). This course will examine the use of economic principles in the analysis and applications of public and private law. Emphasis will be given to the efficiencies of laws in meeting social objectives, how laws can be modified to become more economically efficient, and the uses of economics in the actual practice of the law. Issues covered will include proofs of liability in antitrust, contracts and employment law using statistical and economic analysis, and the calculation of economic damages in commercial, employment and personal injury/death litigation. Graduate students will be assigned a specific research paper. Prerequisites: Econ 302 or consent of instructor.

5521 Mathematical Economics (3). An introduction to mathematical methods as applied to the questions addressed by economists. The principal methods to be applied are matrix algebra and differential calculus in the context of optimization. Other topics may include integral calculus, differential equations, difference equations or linear and nonlinear programming. Prerequisites: Economics 301, 302 and Math 110 or equivalent

5525 Econometric Methods (3). Continuation of Economics 425. The major problems encountered in building and testing economic models are treated and alternative solutions to these problems are discussed. Major topics include corrections for heteroscedasticity and autocorrelation, maximum likelihood and BLUE estimation, simultaneous equations methods, probit and logit analysis and distributed lags. Other topics may include ARIMA or other series analytic methods, three stage least squares and dynamic multipliers or simulation. Work with econometric software is stressed. No programming experience necessary. Prerequisite: Economics 425 or equivalent and Economics 521

5529 Readings In Quantitative Economics (3). Readings from the economic literature which stress advanced mathematical or econometric tools. A general subject matter is selected by the student with the consent of the instructor. Prerequisites: Economics 521, 525

5531 Monetary Theory And Policy (3). A study of the nature and functions of money and the financial system, with emphasis on monetary theory and its application to current banking and financial problems; recent contributions to monetary theory and current literature. Prerequisite: Econ 301.

5535 Theory Of Public Finance (3). An inquiry into the scope and nature of economics with emphasis on the nature of the public sector including a brief study of welfare criteria along with the study of ability to pay, benefit theory of taxation, and expenditure theories.

5537 State And Local Government Finance (3). This course investigates the role, problems and relative importance of municipal governments in the United States. Such areas as the demand for public services, tax and expenditure

policies, and intergovernmental fiscal relations will be explored in detail. Case studies of state and local governments will be introduced to emphasize the problems and proposed solutions arising in modern municipal governments. Prerequisite: Economics 302.

5538 Economic Policy (3). Analysis of the confluence of political and economic behavior, the economics of collective action. Prerequisites: ECON 301 and 302

5540 Advanced International Trade (3). This course emphasizes the global allocation of resources and distribution of income under various commodity market conditions and government trade policies. Major topics include: comparative advantage; terms of trade; the distribution of gains and losses from trade; perfect vs. imperfect competition; tariffs, quotas and other barriers to trade; exchange rates and the balance of payments; preferential trading arrangements; international factor movements and multinational corporations. Prerequisites: Economics 302, or equivalent; graduate status.

5542 Advanced International Finance (3). This course emphasizes the global activity and balance of payments implications of government taxation, expenditure and monetary policies under various capital market conditions. Major topics include: exchange rates and the balance of payments; national income determination in an open economy; integrated and non-integrated capital markets; economic growth, stabilization policies and the quest for global economic stability.

5548 Advanced Socialist Economic Systems (3). The course will deal with the theoretical analysis of socialist economic theory, Marxian and non-Marxian, and/or of socialist economics systems such as those of Eastern Europe, the Chinese mainland and elsewhere. The emphasis of the course will vary depending upon the instructor's design for the course. Prerequisite: Economics 301 and 302.

5550 Regional Economics (0-3). The economics of spatial relations, emphasizing basic location and land utilization theory and the role of transport will be considered at the micro-level. Keynesian and neoclassical growth theories and contemporary policy approaches to regional growth and decline are analyzed. Prerequisite: Economics 302.

5551 Advanced Institutional Theory (3). Evolution, organization and allocation functions of the modern industrial economy. Contributions and limitations of conventional economic concepts. Philosophical and theoretical interpretations of the economy in light of modern developments in philosophy and social science. Prerequisite: Economics 451

5558 Advanced Urban Economics (3). The study of the city as a dynamic system of interrelated and interdependent markets. Significant markets in cities include land, housing, labor, transportation and public services.

5560 Industrial Organization (3). The structure, conduct and performance of American industry. Historical evolution of American industry; alternative industrial systems, antitrust policies and their alternatives. Technological change and industrial performance. Prerequisite: Economics 301, 302.

5565 Advanced Health Economics (3). This course is a critical review and evaluation of the economic analysis of medical markets. An emphasis will be placed on the critical evaluation of recent literature assessing health care systems and institutions, medical care spending, demand estimations for various types of medical services, demand estimation for medical insurance, analysis of medical care productions and costs, analysis of government policy for the deployment of health care resources. Prerequisites: Economics 465 or equivalent. Offered: Every Other Winter on Demand.

5583 Racial Inequality & Public Policy (3). This course will provoke open debate and discourse about public policy responses to racial inequality. The emphasis is on stimulating participants to think about and to analyze critically the range of strategies offered for reducing racism and racial economic inequality. Offered: On demand

5587 Human Resource Economics (3). An analysis of the factors determining the productivity of human resource: education, nutrition, job training and work environment. An analysis of work patterns, wage patterns, and the impact of automation. This course will be taught at the same time as Economics 487, the undergraduate Human Resource Economics. Graduate students will be assigned a specific research paper on a topic to be decided with the instructor. Prerequisite: Economics 302

5589 Graduate Seminar In Labor Economics (3). Content of seminar will vary from semester to semester depending upon the instructor's design for the course. Prerequisite: Economics 486.

5590 Special Topics (1-3). Selected topics in theoretical and applied economics. Prerequisite: Consent of instructor.

5590A Special Topics (1-3).

5590B Special Topics (1-3).

5590C Special Topics (1-3).

5591 Research And Planning Seminar (3). The objective of this research seminar is to apply the quantitative techniques and theoretical constructs of

economics to an urban-regional problem. Students are required to formulate and evaluate present economic models, and then complete a research project. Prerequisites: Economics 502 and 521

5599 Research And Thesis (1-6). Directed specialized research.

5601 Colloquium In Advanced Macroeconomics (3). The course will deal with analyses of topics in Macroeconomic analysis and Macroeconomic policies and investigation of current literature in divers areas of Macroeconomic analysis. A written report(s) will be made upon the selected assignment(s). Prerequisite: Economics 501 or equivalent.

5602 Colloquium In Advanced Microeconomics (3). As a continuation of Economics 502, this course deals with the business enterprises-including production, costs, pricing, and investment-markets, market demand, market governance, general price-quantity models of the economy, microfoundations of the heterodox macroeconomics, and social welfare. Prerequisite: Economics 502

5608 Topics In Economic Theory (3). This course deals with advanced topics in Institutional, Post Keynesian, and other heterodox economic theory. May be repeated with different topic. Offered on a 2 year cycle or on demand.

5616 History Of Economics In The 20Th Century (3). The history of 20th century economics is concerned with a number of interdependent issues, including the institutional organization of economics at universities; the historical development of the structures and social networks that make-up the economic paradigms of neoclassical economics, Marxian economics, Post Keynesian economics, and other heterodox economics; and the role of institutional and state power to maintain the dominance of the neoclassical paradigm. The aim of the course is to introduce students to this institutional/organizational history.

5625 Colloquium In Econometrics (3). This course treats advanced topics in econometrics such as non-linear estimation techniques, model development, simultaneous equation estimation techniques, and simulation. Topics are developed from theoretical and application perspectives. Familiarity with personal computer is necessary. Prerequisite: Economics 521, Mathematical Economics or equivalent, Economics 525, Econometrics, or equivalent, Economics 501, Advanced Macro-economics or equivalent, Economics 502, Advanced Micro-economics or equivalent.

5645 Financial Macroeconomics (3). This course will introduce the student to the central role of financial analysis in macroeconomic analysis and to theories of macroeconomics instability based on the integration of finance and macroeconomics. It will examine modern finance theory and modern approaches to financial analysis, paying particular attention to the contributions made by Fisher and Keynes. Offered: Fall 2000

5660 Evolution Of American Industrial Society (3). Drawing on economic and organizational theory, the course will concentrate on the evolution of American industrial technology, the American business enterprise, and the organization of American industries and markets since 1870.

5665 Colloquium In Advanced Health Economics (3). This course is designed as a seminar with a special emphasis on analysis of econometric methods to assess issues in health care. The topics are developed from a theoretical and applied perspective. Familiarity with personal computers is necessary. Special emphasis will be given in the selection of course topics to the interests and backgrounds of participants. Prerequisites: Econ 565, 521, and 525 or their equivalents. Offered: Every other Winter on demand.

5680 Teaching Methods And Course Design (3). This course is designed to prepare students for the challenge of teaching economics. Students will be taught how to write a syllabus; how to prepare for class; how to plan learning activities; how to become skillful in leading discussion; how to present an effective lecture; how to test and assess student learning; how to develop effective group projects; how to motivate their students for lifelong learning. Students will be required to design a course to be taught at the 200-, 300 or 400-level. It would be possible for the student to design an entirely new course, but it is hoped that the student will choose an existing course, which could then be taught as part of the ECON 681/682 requirement. The student will prepare a complete set of course materials, including a lecture outline, a list of require readings, useful handouts, course materials, including a lecture outline, a list of require readings, useful handouts, course assignments, exams, etc. The course should incorporate an interdisciplinary approach and should emphasize an "active learning" component, designed to promote a "rich learning experience." The student will work closely with an appropriate member of the faculty. Prerequisite: Must have completed/passed Comprehensive Exams Offered: Every Fall

5688 Colloquium On Political Economy (3). This course is designed as a seminar and will take into account theory and policy analysis from alternative perspectives. The topics covered will include philosophical foundations of contemporary theory and policy, the organization of production information and finance, resource and environment, wealth and income distribution, public and private policy and planning. Stress is placed on contemporary research and students are expected to become involved in research projects.

5690 Special Doctoral Readings In Economics (1-3). Special research topics in Economics at the Doctoral level.

5699 Doctoral Dissertation (1-12). Directed selected research for Economics in the interdisciplinary doctoral program.

5899 Required Graduate Enrollment (1).

Education Courses

5501 Teaching Of Reading (3). Basic theory and practice in reading instruction, with attention to individual needs. Prerequisite: EDUC 333 or equivalent to TE 415.

5534 Reading Assessment And Evaluation (3). Study of procedures and instruments for characterizing and evaluating reading and related educational factors and skills. Students will administer and interpret ability tests customarily used in diagnosing reading problems. Prerequisite: Educ. 5501 or equivalent.

5542 Introduction Diagnostic-Treatment Procedures In Reading (3). Identification and classification of reading disability; role of the Special Reading Teacher; factors related to reading disability; special techniques used in remedial reading instruction; analysis of reading performance.

5552 Advanced Diagnostic And Treatment Procedures In Reading (3). Significant aspects of reading disability; diagnostic testing; case report writing; interpretation of test data; implications of test data for recommendations. Prerequisites: Educ. 5542 and permission of instructor. May be taken concurrently with Educ. 5575R.

5575R Internship In Reading (3-16).

5589AQ Special Topics In Education (1-6).

5589B Special Topics In Education (1-6).

5589Q Special Topics In Education (1-6).

5590R Seminar In Reading (3).

5598 Individual Studies (1-6). Review of the research trends relative to selected problems in education. By prior arrangement with instructor.

5598A Individual Studies In Administration (1-6).

5598B Individual Studies In Mathematics (1-6).

5598C Individual Studies Curriculum (1-6).

5598H Individual Studies Higher Education (1-6).

5598J Individual Studies Philosophy Of Education (1-6).

5598P Individual Studies Educational Psychology (1-6).

5598Q Individual Studies Early Childhood Education (1-6).

5598R Individual Studies Education Reading (1-6).

5598S Individual Studies Research (1-6).

5598SA Individual Studies Research (1-6).

5598U Individual Studies History Of Education (1-6).

5598X Individual Studies Sociological Foundations (1-6).

5599 Research And Thesis (1-9). By arrangement.

5601 Organizing And Guiding The Reading Program (3). An investigation of several procedures for organizing developmental and special reading programs with emphasis on effects of such plans on the role of the reading specialist and the impact on the school environs. Prerequisites: Educ. 5542 and Educ. 5527.

5621 Practicum In Curriculum And Instruction (3-6). A field experience which provides an opportunity for the application of current research in the area of curriculum and instruction to an educational setting. Prerequisite: Consent of adviser.

5640 Apprenticeship And Conference In College Training (2-5). Apprenticeship experience in preparing, conducting, and evaluating college teaching under the direction of and in conference with supervising professors. Some attention to student personnel and administration in higher education. By arrangement.

5650 Seminar In Dyslexia And Related Learning Disabilities (3). A systematic study of the likely etiology and treatment of dyslexia and related learning disabilities. Topics include: hereditary, sensory-motor, perceptual-motor, and psychological and neurophysiological problems. Prerequisite: Educ. 5542, 5552, 5575 or consent of instructor.

5690 Special Problems (1-6). Individual studies; thesis exploration, special reading.

5695 Doctoral Dissertation: Reading Education (1-16). By arrangement.

5696 Dissertation Administration And Community Leadership (1-16). By arrangement.

5697 Dissertation Curriculum And Instruction (1-16). By arrangement.

5698 Dissertation General Education (1-16). By arrangement.

5899 Required Graduate Enrollment (3).

Electrical and Computer Engineering Courses

5501AP Special Topics In Electrical Engineering (1-4).

5501NN Special Topics In Electrical Engineering (1-4).

5512 Microwave Remote Sensing (3). Basic principles of remote sensing including scattering, absorption, transmission, and reflection of microwave energy. Basic radiative transfer theory. Microwave remote sensing systems including altimeters, scatterometers, radiometers, & synthetic-aperture systems. Principle applications of remote sensing systems including imaging, atmospheric sounding, oceanographic monitoring, ice-sheet dynamics, etc. Prerequisite: ECE 414.

5516 Computer Networks (3). Concepts and goals of computer networking, structure of computer networks, OSI model and layers, network control, analysis, design and management, data communication techniques including fiber optics, WAN, MAN and LAN architecture and protocols, internetworking, case studies and hand-on studying the performance by analytic modeling and computer simulation. Prerequisite: ECE 424 or instructor's consent.

5528 Digital Hardware Systems Design (3). Characteristics and parameters of various hardware subsystem including main memory, auxiliary memory, arithmetic units, card equipment, etc., and principles of organization into efficient system. Prerequisite: ECE 428.

5530 Digital Electronics (3). Electronic hardware aspects of digital systems. Includes state-of-the-art information on integrated-circuit logic devices and their applications. Prerequisite: ECE 435 or instructor's consent.

5532 Biomedical Instrumentation (3). Biomedical objectives, physical and engineering principles; optimal equipment design and actual performance of biomedical instrumentation; considers practical instrumentation problem solutions and unsolved problems. Prerequisite: ECE 330 and instructor's consent.

5535 Hdl-Based Digital Systems Design (3). This course covers hardware design techniques using a Hardware Description Language (HDL). It also discusses several digital system design methodologies, including structural specifications of hardware, HDL-based simulations and testbenches. Courses focus on the synthesis methodologies for use-defined primitives (UPD), data types, operators, Verilog constructs multiplexed datapaths, buses, bus drivers, FSMs, assignments, case, functions, tasks, named events and rapid prototyping techniques with Verilog HDL, ASICs and FPGAs. Prerequisites: ECE 226 (Logic Design) or consent of instructor.

5536 Power Electronics II (3). Circuit concepts and analysis techniques for transistor switching regulators, thyristor choppers, transistor inverters, self-commutated thyristor inverters and cycloconverters. Prerequisite: ECE 436.

5568 Economics Of Power Systems (3). Transmission loss formula coefficients, incremental costs and losses, economic scheduling of generation, and applications. Prerequisite: ECE 466 and ECE 467.

5572 Antennas & Propagation For Wireless Systems (3). This course introduces the mathematical aspects of the basic antenna parameters such as vector potential, gain, directivity, impedance, radiation patterns, and develops a comprehensive theory of antenna arrays including the effects of mutual coupling. In-depth modeling studies for wire, aperture and microstrip antennas, is presented; diffraction of plane electromagnetic (TE and TM) waves by perfectly conducting half-planes and wedges- applications to site-specific propagation path modeling in wireless systems. Prerequisites: ECE 412 and ECE 341 (or their equivalents) and written communication skills; must have a knowledge of MATLAB, C or C++ for computational work. Recommended: Prior or concurrent enrollment in PHYS 5500.

5579 Digital Signal Processing In Telecommunications (3). Applications of digital signal processing in telecommunications systems; oversampling and quantization, Delta-Sigma modulation, linear predictive speech coding, adaptive filtering, echo canceller, adaptive receivers and equalizers for wireless communication, digital cellular, CDMA. Prerequisites: ECE 474 and ECE 480.

5580 Advanced Digital Signal Processing (3). Topics in digital signal analysis and filtering, including hardware implementation, speech synthesis and recognition, multi-dimensional transforms, random-signal concepts, design methods and computer aids to analysis and design. Prerequisite: ECE 480.

5586 Pattern Recognition (3). Decision functions, distance measures, minimum distance classifiers, hard clustering methods, fuzzy clustering methods, statistical pattern recognition methods, Bayesian classifiers, error

probabilities, estimation of density functions, perceptrons, least-mean-square algorithms, feature selection, dimensionality reduction and syntactic pattern recognition. Prerequisites: CS 394R or MATH 436, course in high-level programming language, some matrix theory and linear algebra or instructor's consent.

5588 Communication Theory I (3). Generalized communication systems, signal processing, signals as random processes, optimum receivers. Prerequisite: A statistics course, ECE 478, and CS 394R

5590 Special Topics In Electrical And Computer Engineering (1-4).

5590AE Special Topics In Electrical And Computer Engineering (1-4).

5590B Special Topics In Electrical And Computer Engineering (1-4).

5590BB Special Topics In Electrical And Computer Engineering (1-4).

5590BE Special Topics In Electrical And Computer Engineering (1-4).

5590BP Special Topics In Electrical And Computer Engineering (1-4).

5590C Special Topics In Electrical And Computer Engineering (1-4).

5590CA Special Topics In Electrical And Computer Engineering (1-4).

5590CD Special Topics In Electrical And Computer Engineering (1-4).

5590CL Special Topics In Electrical And Computer Engineering (1-4).

5590CS Special Topics In Electrical And Computer Engineering (1-4).

5590DC Special Topics In Electrical And Computer Engineering (1-4).

5590DE Special Topics (1-4).

5590DS Special Topics In Electrical And Computer Engineering (1-4).

5590ER Special Topics In Electrical And Computer Engineering (1-4).

5590ES Special Topics In Electrical And Computer Engineering (1-4).

5590IP Special Topics In Electrical And Computer Engineering (1-4).

5590MC Special Topics In Electrical And Computer Engineering (1-4).

5590NA Special Topics In Electrical And Computer Engineering (1-4).

5590NN Special Topics In Electrical And Computer Engineering (1-4).

5590NR Special Topics In Electrical And Computer Engineering (1-4).

5590ON Special Topics In Electrical And Computer Engineering (1-4).

5590PG Special Topics In Electrical And Computer Engineering (1-4).

5590PL Special Topics In Electrical And Computer Engineering (1-4).

5590PR Special Topics In Electrical And Computer Engineering (1-4).

5590PS Special Topics In Electrical and Computer Engineering (1-4).

Special Topics in Electrical and Computer Engineering.

5590RD Special Topics In Electrical And Computer Engineering (1-4).

5590T Special Topics In Electrical And Computer Engineering (1-4).

5590WW Special Topics ECE (1-4).

5590XX Special Topics In Electrical And Computer Engineering (1-4).

5597 Directed Readings (1-3). Readings in an electrical and computer engineering areas selected by the graduate student in consultation with a faculty member. Arrangements must be made prior to registration.

Prerequisite: Permission of instructor

5598 Research Seminar (1-3). Graduate research and/or readings in an electrical and computer engineering area selected by the graduate student in consultation with a faculty member. Arrangements must be made prior to registration. Prerequisite: Permission of instructor

5599 Research (1-6). Independent investigation in field of electrical engineering to be presented in the form of a thesis.

5600 Problems (2-5). Supervised investigation in electrical engineering to be presented in form of report.

5606 Electromagnetic Scattering And Antenna Theory (3). Dyadic analysis; integral equations and Green's functions; field theorems-uniqueness, induction equivalence, reciprocity; image and Babinet's Principles; applications to antennas; method of stationary phase and applications to aperture antennas; array antennas and mutual coupling analysis; method of moments; asymptotic techniques and applications to EM scattering from wedges, cylinders, and spheres; RF propagation path loss modeling and conformal antennas. Prerequisite: ECE 412 is required and Physics 500 is recommended.

5616 Parallel And Distributed Processing (3). Covers the fundamental issues involved in designing and writing programs for simultaneous execution. Semaphores and monitor constructs are covered to provide a basis for critical section programming. Expansion of these concepts provide a basis for the analysis and design of control systems for multiprocessor devices and computer networks. Prerequisites: A suitable systems programming course or instructor's consent.

5617 Neural Network Based Computing System (3). The course will consider computing systems based on neural networks and learning models, along with implementations and applications of such systems. Prerequisite: Instructor's consent.

5618 Artificial Intelligence (3). Concepts, theories, and models pertaining to neural nets, pattern recognition, learning systems, and programmed problem solving. Prerequisite: Instructor's consent.

5619 Theory Of Automata (3). Sequential machines: Turing machines; deterministic and stochastic automata; applications of automata. Prerequisite: instructor's consent.

5624 Digital Software Systems Design (3). Characteristics and parameters of various software subsystem including assemblers, compilers, utility programs, special programming packages, interpreters, and operating systems; and principles of organization into efficient systems. Prerequisite: ECE 524.

5635 Vlsi Systems Design (3). Course discuss design of the MOSFETs (nFETs and pFETs), and high speed CMOS cascades in VLSI. It also covers the design of various arithmetic circuits, different fast adders, memories, and chip-level physical designs requirements in the VLSI subsystems are also the focus of this course. It uses Verilog HDL/VHDL as a tool to design VLSI systems. Prerequisites: ECE 535 or knowledge of VHDL or instructor's consents

5642 Advanced Integrated Circuits (3). Fundamentals of advanced integrated circuit design: diffusion, ion implantation and epitaxy; MOS and bipolar techniques; survey of current LSI design, fabrication and testing.

5644 Liapunov And Related Nonlinear Methods In Automatic Control (3). A study of nonlinear methods in automatic control including phase plane analysis, describing function techniques, basic definitions and theorems of Liapunov, methods of generating Liapunov functions, applications of Liapunov's methods, and Popov's methods. Prerequisite: ECE 544.

5645 Optimal Control Theory (3). Analysis and design of dynamic systems using optimal control theory parameter optimization, dynamic optimization, computational methods, differential games. Prerequisite: ECE 544.

5646 Stochastic Optimal Estimation And Control (3). Surveys random process theory; stochastic control and optimization; estimation and filtering based on Kalman-Bucy techniques; stochastic stability; adaptive and learning control systems. Prerequisite: ECE 544.

5660 Power-Systems Stability (3). Performance of synchronous machines under transient conditions, power system stability, system fault computations using symmetrical components; computer solutions of power system problems.

5661 Solid State Energy Conversion (3). Solid state direct energy conversion; and design of thermoelectric generators and heat pumps.

5662 Power Electronic Drives (3). Advanced study of dc and ac motor drives controlled by power electronic methods, including phase controlled rectifier dc chopper, cycloconverter, variable frequency inverters. Prerequisite: ECE 536 or consent of instructor. Recommended: ECE 544 and ECE 562.

5664 Lightning And Switching Surges In Power Systems (3). Overvoltage, switching surge and lightning effects of a power system. Use of grounding and lightning arresters. Effects of surges off and on machines. Prerequisites: ECE 466 and ECE 467, or equivalent.

5668 Advanced Computer Methods In Power System Analysis (3). Power system matrices. Sparse matrix methods. Advanced load flow analysis techniques and concepts. Contingency analysis. State estimation. Prerequisites: ECE 466K and strong background in FORTRAN or C.

5670 Direct Current Power Systems (3). Characteristic and performance analysis of DC transmission lines and associated conversion systems.

5672 Power Systems Relaying (3). Theory of relaying systems for power system protection, improvement of power system stability. Relay coordination; performance of relays during transient swings and out-of-step conditions. Prerequisite: ECE 466.

5674 Machine Intelligence (3). Formal languages in relation to natural language processing; formal languages, graphs, and image processing; formal logic and automated theorem proving; natural language processing; aspects of problem solving and heuristic programming.

5675 Introduction To The Modeling And Management Of Uncertainty (3). Theoretical and practical issues in the modeling and management of uncertainty. Topics include probabilistic uncertainty, belief theory and fuzzy set theory. Applications to computer vision, pattern recognition and expert systems.

5676 Advanced Electric Circuit Analysis (3). Specialized study of mathematical analysis as applied to solutions of circuit networks with fixed and variable parameters.

5677 Network Synthesis (3). Surveys linear active and nonreciprocal circuit elements, realizability conditions, methods for synthesizing active networks, and practical applications. Prerequisite: ECE 676.

5680 Digital And Sample-Data Systems (3). Introduces sampling and quantization, design of digital and sample-data systems, digital filters, adaptive sampling and quantization. Prerequisite: ECE 480.

5681 Applications Of Transforms (3). Applications of Laplace and other transform methods of solution of circuit and field problems.

5682 Coding Theory II (3). Further study of error-correcting codes; ring and cyclic codes, linear switching circuits, burst error codes, codes for arithmetic units, etc. Prerequisite: ECE 579.

5684 Computer Vision (3). Image processing methods for segmentation, object representation, scene description and scene interpretation. Prerequisite: ECE 484 or consent of instructor.

5688 Communication Theory II (3). Probability theory of analog and digital communication in the presence of random process noise. Encoding systems, detection systems, optimum receivers. Prerequisite: 472.

5690 Advanced Topics In Electrical And Computer Engineering (1-4).

5690EM Advanced Topics In Electrical And Computer Engineering (1-4).

5690ET Advanced Topics In Electrical And Computer Engineering (1-4).

5697 Advanced Directed Readings (1-5). Advanced readings in an electrical and computer engineering area selected by the graduate student in consultation with a faculty member. Arrangements must be made prior to registration. Prerequisite: Permission of instructor Offered: Every semester

5698 Advanced Research Seminar (1-5). Advanced Graduate research and/or readings in an electrical and computer engineering area selected by the doctoral student in consultation with a faculty member. Arrangements must be made prior to registration. Prerequisite: Permission of instructor Offered: Every semester

5699 Dissertation Research (1-9). Doctoral Dissertation

Endodontics Courses

5701 Endodontology 1 (1-6). This course is designed to introduce the first year endodontic postgraduate student to the field of advanced endodontics. It will provide introductory information and guidance which will serve as a basis for follow on course work in ENDO 5702 through ENDO 5706. Prerequisite: None

5702 Endodontology 2 (1-6). This course is designed to continue the transition of the general dentist into a first year endodontic postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident. Prerequisite: None

5703 Endodontology 3 (1-6). This course is designed to complete the transition of the general dentist into a first year endodontic postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident. Prerequisites: ENDO 5701 & 5702 Offered: On demand

5704 Endodontology 4 (1-6). This course is designed to transition the first year into a second year postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident. Prerequisites: ENDO 5701, ENDO 5702, ENDO 5703.

5705 Endodontology 5 (1-6). This course is designed to continue the transition of the general dentist into a more proficient second year postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident. Prerequisites: ENDO 5701, ENDO 5702, ENDO 5703, ENDO 5704

5706 Endodontology 6 (1-6). This course is designed to complete the transition of the general dentist into a fully independently practicing endodontist. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident. Prerequisite: ENDO 5701, ENDO 5702, ENDO 5703, ENDO 5704, ENDO 5705

English Courses

5500 Introduction To Graduate Study In English (3). An introduction to historical and contemporary methods of research and scholarship related to English Studies. The course uses a wide spectrum of print and digital materials, library facilities (including archives and Special Collections), Databases, and other resources such as microfilm, to explore English studies as an academic discipline.

5501 Magazine Editing (3). A course combining academic study of editorial management, publishing operations and language skills, with "hands on" experience in article evaluation, editing, magazine production and legal matters such as copy right and libel. Class work concentrates on authentic and effective language use, with attention given to copy editing, grammar,

typography, printing processes, financing and distribution, for commercial and small-press publications.

5502 Magazine Nonfiction (3). This course emphasizes the origination and execution of nonfiction magazine articles for a variety of publications. Special attention is given to successful queries, and the various writing techniques required for different kinds of articles. Students learn re-structuring and revision and the legalities affecting writers. Students are expected to complete three publishable articles.

5503 Old English (3). Study and the reading of Old English of a wide range of Old English prose and poetry, beginning with less difficult works and terminating with *Beowulf*.

5504 Radio And Television Writing (3). A course in how to write scripts, both dramatic and comic, for radio and television. Special emphasis is placed on the genesis and continuation of the radio and television series. Principles of dramaturgy for broadcast media are also stressed. Students are expected to write at least one broadcast play, and the pilots for at least three series. Attention will also be given to the marketing of broadcast scripts and to local production of their writing.

5508 Harlem Renaissance (3). This course examines the period from 1920 to 1940, known as the Harlem Renaissance, a time of unprecedented literary and cultural creativity by Black artists. This course explores a variety of cultural productions, not only traditional forms of literature such as novels, short stories, plays and poetry, but also nonliterary objects of study such as painting, sculpture, and music. Offered: On demand

5510 Black Women Writers (3). This course explores the writings of African American Women Writers. The course examines how these writers have interacted with and often revised stereotypical representations of African American womanhood typically found within canonical and African American male literatures. The course will examine literature (which might include fiction, poetry, autobiography, and drama) of the nineteenth and twentieth centuries; the majority of the works will be by modern and contemporary authors such as Nella Larsen, Zora Neale Hurston, Toni Morrison, and Terry McMillan. By placing the works in this sort of cultural and historical context, it will be possible to examine the unique tradition of African American women's writings as well as individual texts.

5512 Chaucer (3). Readings from Chaucer's most important works, especially "The Canterbury Tales" and "Troilus and Criseyde" with emphasis on them as types of medieval genres and on the Middle English language. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5513 Renaissance Literature I (3). English literature from the time of Wyatt and Surrey to the beginning of the 17th century, including the works of Spenser, Marlowe, Sidney, Shakespeare and others. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5514 Milton (3). A study of Milton's prose and poetry, with special attention to "Paradise Lost". Students will make in-class presentations and submit papers requiring research and bibliographical work.

5515 Restoration And Early 18Th-Century British Literature (3). British literature from the late 17th century to the mid 18th century. Selected writers may include Addison and Steele, Behn, Congreve, Defoe, Dryden, Finch, Pope, Rochester, Swift, and Wortley Montagu.

5516 The Romantic Period (3). An extensive study of selected writers (such as Austen, Barbauld, Byron, Coleridge, Hazlitt, Hemans, Keats, Gilpin, the Shelleys, Wollstonecraft, and Wordsworth) organized around literary themes and/or cultural issues important to the Romantic period. Prerequisite: English 327 or permission of the instructor. This prerequisite applies only to undergraduate students.

5517 Modern Poetry (3). Study of works by modernist poets such as Hopkins, Yeats, Frost, Stevens, Williams, Moore, Pound, H.D., Eliot, Millay, Hughes. Students will make in class presentations and submit papers requiring research and bibliographic work.

5518 19Th-Century American Literature (3). An intensive study of either selected major American writers in the 19th Century or of 19th-Century literary movements. Students will make in class presentations and submit papers requiring research and bibliographical work.

5519 Teaching Writing: Theories, Histories, Contexts, Practices (3). This course focuses on issues related to the teaching of English at the high school and college levels, with an emphasis on the teaching of writing. Issues addressed may include assignment design, teaching invention and revision, response to and evaluation of writing, collaborative learning, relationships between reading and writing, classroom uses of electronic media, and institutional contexts within which teachers work. The course is required of Teaching Assistants in the UMKC Composition Program, to be taken either prior to or concurrently with their first semester of teaching. Secondary English teachers and others interested in English teaching are also welcome.

5520 Greater Kansas City Writing Project (3). Studies in methods and objectives for the teaching of English with special attention to secondary school teaching.

5522 Medieval Literature (3). Western religious and secular verse and prose, to the 15th-century. Late Middle English works are read in the original; all other selections in translation. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5523 Renaissance Literature II (3). English literature from 1600 to the beginning of the Restoration, including the works of Donne, Jonson, Milton, and other contemporaries. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5526 The Victorian Period (3). An intensive study of selected writers (such as Arnold, Braddon, the Brontes, the Brownings, Dickens, Darwin, Eliot, Gaskell, Hardy, Ruskin, and the Rossetts) organized around literary themes and/or cultural issues important to the Victorian period. Prerequisite: English 327 or permission of the instructor. This prerequisite applies only to undergraduate students.

5527 Contemporary Poetry (3). Study of works by contemporary poets (post World War II), such as Auden, Bishop, Hayden, Berryman, Rukeyser, Larkin, Rich, Plath, Heaney, Boland, Komunyakaa. Students will make in class presentations and submit papers requiring research and bibliographic work.

5528 20Th Century American Literature (3). Major American writers or literary movements of the 20th-century. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5529 Screenwriting II (3). This advanced screenwriting course should allow students to complete a rough draft of a screenplay that they have begun in another course or on their own. It can also be used as a course in which a play or short story is transformed into a screenplay. Students are expected to be familiar with screenwriting techniques and formats and with cinematic concepts before they enroll in this course. Prerequisite: English 429 or permission of instructor.

5531 Late 18Th-Century British Literature (3). British literature from the mid to late 18th century. Selected writers may include Blake, Burney, Collins, Equiano, Fielding, Gray, Johnson, Sheridan, and Wollstonecraft.

5532 Advanced Creative Writing: Fiction (3). A course for advanced students of fiction writing. The class will proceed through analysis of models, discussion of general principles, critique of student work. Students will simultaneously be encouraged to experiment and to refine the form and subjects best suited to their talents. Emphasis will remain on the short story, though there may be units in other forms—novella, film script, the non-fiction essay. May be repeated once for credit. Prerequisite: Graduate Standing Offered: Every Year

5533 Histories Of Writing, Reading, And Publishing (3). A study of selected topics concerning the material practices of writing, reading, and publishing within specific cultural and historical contexts. Issues examined may include authorship, education, information technologies, libraries, literacy, periodicals, popular literature, publishers, and communities of readers. Offered: On Demand

5534 Postcolonial Literature (3). An exploration of postcolonialism through the study of literary and theoretical texts created by or representing peoples whose historical experience has been decisively shaped by the experience or legacies of colonialism. Texts will be drawn from a variety of genres and from several countries. The course will consider several definitions of postcolonialism and related terms such as cosmopolitanism, hybridity, diaspora, and nationalism. Prerequisite: None Offered: On Demand

5535 Advanced Creative Writing: Poetry (3). An advanced poetry workshop that includes intensive reading of contemporary poetry and aims at each student creating a portfolio of publishable poems. The focus of the course will vary to address a variety of topics such as metaphor and closure; imitation and the line; form and voice. May be repeated once for credit. Offered: Every Year Prerequisite: Graduate Standing

5536 Poetic Forms (3). An advanced creative writing course that focuses on intensive study of and practice in metrics and traditional and nonce forms. May be repeated once for credit. Prerequisite: English 315 or its equivalent

5537 Prose Forms (3). This course covers techniques for planning and drafting major prose forms. Students will learn how to use content as a guide to inventing new forms (i.e. novella, novel, linked-story collection, episodic novel, essay novel, and creative nonfiction book. Prerequisites: English 432/35 Adv CW Prose/Poetry Offered: Winter

5540 American Culture (3). Texts that offer perspectives on key historical themes of American culture. Texts may be grouped around any culturally significant principle (e.g. region, race, gender, class, ethnicity, religion) or theme (e.g. the mythology of the frontier, marriage and domesticity, the American Dream). Students will make in-class presentations and submit papers requiring research and bibliographical work. Offered: On demand.

5541 Girls And Print Culture (3). This course deals with girl's relationships to the continually evolving print culture. Students will examine various literary representations of girlhood by adult writers, explore texts directed at girls (e.g., conduct books, periodicals, textbooks), and study the writing and reading practices of girls themselves. Offered: On demand

5545 History And Principles Of Rhetoric (3). A study of selected writings of ancient and modern rhetoricians illustrating key issues in the development of Western discourse theory and practice. Issues examined include the relationships between rhetoric and knowledge, orality and literacy, and rhetoric and poetics. Attention will also be given to the implications of rhetorical theory for modern language instruction. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5547 Introduction To Literary Criticism (3). An introduction to major schools or methods of literary criticism. The first third of the course is an historical overview of criticism from Aristotle to Northrop Frye. The remainder of the semester is devoted to a study of genetic, formalist, mimetic, affective, intertextual, and deconstructionist approaches. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5550 Graduate Seminar (3). Authors, works and intellectual currents which form the basis of these seminars may vary from semester to semester, depending upon the instructor's design for the course. May be repeated for credit. Composition & Rhetoric Course 550 covers the first halves of periods which naturally fall in two parts. Continued in English 555.

5550A Graduate Seminar Medieval Literature I (3).

5550B Graduate Seminar Renaissance Literature I (3).

5550C Graduate Seminar Neo-Classical Literature I (3).

5550D Graduate Seminar 19Th Century Literature I (3).

5550E Graduate Seminar American Literature I (3).

5550F Graduate Seminar Modern Literature I (3).

5550G Graduate Seminar Literary Criticism (3).

5550H Graduate Seminar Studies In Fiction I (3).

5550I Graduate Seminar In Dramatic Literature I (3).

5550J Graduate Seminar: History Of The English Language (3).

5550K Graduate Seminar: Creative Writing Prose (3).

5550M Graduate Seminar In Rhetoric And Composition (3).

5550N Graduate Seminar: Criticism (3).

5550P Graduate Seminar: Sociolinguistics And Dialectology (3). Seminar focusing on the role of social factors in language use, and on the origin and development of regional and urban dialects in English. Special attention will be paid to sociolinguistic motivations for change, variation and merger in dialects and languages in contact, and Black English. Offered: On demand.

5551 Shakespeare Comedies And Histories (3). A study of Shakespeare's major comedies and history plays with special emphasis on his dramatic works before 1600. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5552 Early English Drama (3). English religious and secular drama prior to Shakespeare. Mystery and morality plays are studied with emphasis on their literary and social backgrounds. Close readings of such works as "Everyman", "The Wakefield Second Shepherd's Play" and "The Spanish Tragedy." Students will make in-class presentations and submit papers requiring research and bibliographical work.

5553 Modern Drama 1880-1945 (3). A study of modern drama: Continental, British, and American, including history and development, critical theory, and literary evaluation. This course will focus on the earlier modern playwrights from Ibsen and Shaw, with special attention to naturalism. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5555 Graduate Seminar (3). See description English 550. Course 555 covers the second halves of periods which naturally fall into two parts. May be repeated for credit.*

5555A Graduate Seminar Medieval Literature II (3).

5555B Graduate Seminar Renaissance Literature II (3).

5555C Graduate Seminar Neo-Classical Literature I (3).

5555D Graduate Seminar In 19Th Century Literature II (3).

5555E Graduate Seminar American Literature II (3).

5555F Graduate Seminar In Modern Literature II (3).

5555G Graduate Seminar Literary Criticism (3).

5555H Graduate Seminar Studies In Fiction II (3).

5555I Graduate Seminar In Dramatic Literature II (3).

5555J Graduate Seminar English Language (3).

5555K Graduate Seminar In Creative Writing:Poetry (3).

5555M Graduate Seminar: Composition (3).

5555N Graduate Seminar: Prose Fiction (3).

5556 Studies In The Novel 1740-1900 (3). An intensive study of no more than three major novelists of the eighteenth or nineteenth century. The content of the course will change, depending on the instructor. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5560 Special Topics (1-4). The professor who gives this course determines what its content shall be. All aspects of English studies are within its possible range.

5561 Shakespeare-Tragedies And Romances (3). A study of Shakespeare's major tragedies and late romances with special emphasis on his dramatic literature after 1600. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5562 Restoration And 18Th Century Drama (3). The drama after the restoration of the monarchy and the reopening of the theatres through the 18th-century. Special emphasis is placed on the comedy of manners and the heroic drama in the Restoration and the sentimental comedy in the 18th-century. Includes such playwrights as Dryden, Congreve, Etherege, Wycherley, Steele, Lillo, Cumberland, Sheridan, and Goldsmith. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5563 Contemporary Drama (3). A study of contemporary drama: Continental, British, and American, including history and development, critical theory and literary evaluation. This course will focus on the more recent writers, including the absurdists, with special attention to experimental drama. This course is a continuation of English 453. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5565 Studies In Modern Novel (3). An intensive study of no more than three major twentieth century novelists. The content of the course will change depending on the instructor. Students will make in-class presentations and submit papers requiring research and bibliographical work.

5566CA Cluster Course: Images Of The Human Body In Renaissance (3). Focusing on Renaissance conceptions of the human body, this cluster treats the following topics as they are reflected in Renaissance literature, art, astrology, astronomy, biology, anatomy, medicine, and politics: A) The dignity of the human body B) Microcosm and macrosm C) The human body and the heavens D) Stranger manifestations: freaks and beasts E) The humors F) Disorders of the human body G) The body politic H) The human body as an object of study

5566CF Courts And Culture In The Middle Ages (3). This cluster course offers an interdisciplinary approach to the study of the Middle Ages, focusing on medieval cultures in Europe. Arranged around a series of themes, the cluster will read a variety of documentary and literary texts to investigate not only the "high culture" of the courts but also the interactions of people from various social backgrounds in Western Europe. Cross listed with For Lang 500CF and Hist 500CF.

5591 Research In Selected Fields (1-3). Individual study under the direction of a senior member of the department, leading to the writing of a formal or scholarly paper. Enrollment through approval forms in English Department. May be repeated for credit.

5599 Research And Thesis (1-9). A student, with permission of the graduate committee, may write a thesis for 3 hours credit.

5600 Introduction To Doctoral Study In English (3). Introduction to research skills necessary for doctoral work, particularly for writing the thesis; attention will be paid both to traditional skills such as bibliography and to computer skills.

5650 Doctoral Seminar (3).

5691 Doctoral Research In Selected Fields (3). Individual study under the direction of a senior member of the department leading to the writing of a formal or scholarly paper. May be repeated for credit.

5699 Research And Dissertation (1-15). Research and preparation for doctoral dissertation.

5899 Required Graduate Enrollment (1).

Entrepreneurship Courses

5515 Entrepreneurship Boot Camp (3). This course is designed to provide students with an understanding of the process for identifying and evaluating entrepreneurial opportunities. Students will also learn how strategy, marketing, financial, legal matters, and cash flow impact opportunities in terms of execution and growth and how to position a new firm for success. The course will encourage students to reflect on their own entrepreneurial potential and to

evaluate entrepreneurship as a potential career path. Even those who do not feel that they are entrepreneurs will benefit by discovering how to function more effectively in entrepreneur-led organizations. Furthermore, those responsible for technical innovation and business development within existing organizations should find this course helpful. This course is open to all UMKC graduate students.

5525 Entrepreneurship: Managing Creativity And Innovation (3). The course examines the nature of creativity and innovation and how entrepreneurship involves the ability to identify market opportunity based on new ideas. Detailed attention is given to the entrepreneurial process: the concepts, skills, know-how and know-who, information, attitudes, alternatives and resources that entrepreneurs need to manage creativity in the process of creating something with tangible economic value.

5535 Small Business Management And Entrepreneurship (3). This course focuses on the nature of the entrepreneurial organization; its volatility and flux, where standard operating procedures are lacking and organizational structure, culture and leadership style are created anew each day. Successful small business management requires that a series of developmental challenges be identified and addressed if the venture is to succeed.

5541 Personal Entrepreneurial Strategy (3). This course is a cooperative offering between UMKC, University of Kansas, and Rockhurst University and is taught at Kauffman Legacy Park. The course applies the case method to allow the student to learn about the entrepreneur and the entrepreneurial process, understand the sacrifices and benefits of being an Entrepreneur, and develop professional skills relevant to entrepreneurial activity. Prior approval require for enrollment. Prerequisites: BA 531, BA 532, BMA 506.

5542 Technology And New Ventures (Tnv)I (3). This course will build skills needed to create successful, high-value enterprises with technology. Emphasis will be on markets for technology, and venture capital. Case studies will emphasize the information technologies and energy/environmental technologies. Prerequisite: None

5543 Technology And New Ventures (Tnv)II (3). This course will draw upon the skills developed in ENT 542 to enable student teams to prepare business plans for new ventures they might actually like to start. The information technologies and energy/environment will be emphasized, but students are welcome to propose any technologies. Prerequisites: ENT 542, Technology and New Ventures I

5545 Entrepreneurship And New Venture Creation (3). The objective of this course are: (1) to build personal appreciation for the challenges and rewards of entrepreneurship in an independent mode by examining/simulating its environment; (2) to present and examine, through the use of complex case studies and high level guest/lectures, economic, legal and managerial mechanisms proven useful in creating new wealth; and (3) to foster continued development of venture ideas, suitable as career entry options or for investments, using a tutorial approach to business plan development, presentation and evaluation. Suggested Prerequisites: BA 531, BA 532, BMA 506, and one of the following. ENT 525, ENT 535, or ENT 541.

5545E Innovation And Entrepreneurship I (3). (two-course sequence) Covers the entrepreneurial and innovation process from conception to birth of the new business. It looks at both process and people involved in assessing ideas, exploiting opportunities, and converting concepts into high-growth businesses. Application of these processes will be extended to both start-ups and well as new business groups within existing organizations, with an emphasis on nurturing a climate of innovation. Students will identify opportunities for high-growth potential new enterprises, develop a business plan, and present their plans to a panel of potential investors and/or senior managers. Topics covered include organization form, funding sources, the start-up team, and the product launch.

5545IE Innovation And Entrepreneurship (3). (two-course sequence) Covers the entrepreneurial and innovation process from conception to birth of the new business. It looks at both process and people involved in assessing ideas, exploiting opportunities, and converting concepts into high-growth businesses. Application of these processes will be extended to both start-ups and well as new business groups within existing organizations, with an emphasis on nurturing a climate of innovation. Students will identify opportunities for high-growth potential new enterprises, develop a business plan, and present their plans to a panel of potential investors and/or senior managers. Topics covered include organization form, funding sources, the start-up team, and product launch.

5585 Venture Capital Finance And Investment (3). This course is designed for students who wish to learn about or become involved in the venture capital market as investors or intermediaries in emerging growth companies seeking capital. With this goal, the course will define the venture capital market and where it fits relative to other sources of capital, examine how private equity funds are raised and structured, how investments are sourced, selected, and negotiated, and the role of the value-added investor through investment to liquidity. The course presents and provides applications for various frameworks of valuing and structuring investment opportunities. Suggested

Prerequisites: BA 531, BA 532, BMA 506, and one of the following ENT 525, ENT 535, or ENT 541.

5587 Seminar In Entrepreneurship (1-6). A course on advanced and/or new topics. This course is designed to facilitate at least one of two purposes: an initial offering of a new course (prior to formal approval) or an initial and possibly final offering of new topics. New topics include those that are contemporary, cutting edge, or advanced topics that are not currently covered by existing courses. Prerequisite: Various, including permission of instructor.

5587F Seminar In Entrepreneurship (1-6). A course on advanced and/or new topics. This course is designed to facilitate at least one of two purposes: an initial offering of a new course (prior to formal approval) or an initial and possibly final offering of new topics. New topics include those that are contemporary, cutting edge, or advanced topics that are not currently covered by existing courses. Prerequisite: Various, including permission of instructor.

5591 Small Business Management Practicum (3). An integrated management course designed to examine the principles of business management applicable to solving the problems of small and medium size businesses and assisting in their development. Prerequisite: Completion of stage I requirements.

5597 Independent Research (3). Study and research in Entrepreneurship under individual faculty direction. Prerequisite: Consent of instructor

5681 Multivariate Statistical Methods-II (3). Theoretical and research applications of MANOVA, Canonical Correlation, Multi-Discrimination Analysis, Factor Analysis, and introduction to Structural Equation Modeling using appropriate software. Students are expected to undertake a major research project during this class and to apply appropriate multivariate statistical analysis to their chosen academic research topic. Prerequisite: BDS 548 Offered: Every Winter

5682 Structural Equation Modeling (3). This course presents structural equation modeling (SEM) including a review of regression and the study of path analysis, including model specification, methods of estimation, recursive and non-recursive models, direct, indirect, and total effects, methods of estimation, single and multi-group analyses, moderators, mediators, structural equation model specification, identification, methods of estimation, second-order factor analysis, and the assessment of casual structure. Students are expected to continue a research project started in IEI 681. Prerequisite: IEI 681 Offered: Every Fall

5683 Mathematical Models For Entrepreneurship (3). the purpose of this course is to provide an introduction to mathematical models in entrepreneurship and related disciplines. Classes will focus on the use of mathematical models to characterize the nature of various entrepreneurship-related decisions in complex environments. For each topic considered (e.g. R&D investment decisions, new product entry, diffusion, and marketing mix variables), a few articles have been chosen. Presentations and discussions are designed to help students understand and critique existing models and to stimulate the development of new theoretical viewpoints. Prerequisite: Doctoral standing or with instructor's permission. Offered: Every Winter

5691 Doctoral Seminar In Theoretical Foundations Of Entrepreneurship I (3). IEI 691 is designed as a broad survey of major topics in the field of entrepreneurship. Its objective is to familiarize students with some of the primary theoretical underpinnings of the field as well as some of the common and/or promising methodological approaches to the study of entrepreneurial phenomena. Topics covered in the course include a theoretical overview, entrepreneurs, environment and organizational founding. Prerequisite: Doctoral standing Offered: Every Fall

5692 Doctoral Seminar In Theoretical Foundations Entrepreneurship II (3). IEI 692 is designed as a continuation of IEI 691 providing a broad survey of major topics in the field of entrepreneurship. Its objective is to familiarize the student with some of the primary theoretical underpinnings of the field as well as some of the common and/or promising methodological approaches to the study of entrepreneurial phenomena. Topics covered in the course include: entrepreneurship's links with other disciplines, venture capital and venture capitalists, new venture strategy, new venture performance, growth processes and challenges, and entrepreneurial networks and alliances. Prerequisite: IEI 691 Offered: Every Winter

5693 Technology, Innovation, And Entrepreneurship (3). This seminar will explore academic literature of technology innovation and entrepreneurship. Specific topics include emerging technologies, evolutionary theory, building capabilities based on networks, organizational learning, technological innovation, institutional economics, network externalities, knowledge transfer, technological trajectories and path dependencies. Prerequisite: Doctoral standing Offered: Every Fall

5694 Doctoral Seminar In Theories Of The Firm And Strategy (3). In this course, students will become familiar with and develop an in-depth understanding of the concepts, models, and paradigms that collectively form the foundation for strategic thinking. Students will develop the ability to

critically integrate findings from strategic research programs. Employing an appreciation for the inter-disciplinary nature of strategic marketing and management, the purpose is to develop a keen awareness of major gaps that exist in the strategic literature. Students will strengthen the skills needed to conduct original strategic marketing research that can be published in the leading academic journals. Prerequisite: Doctoral Standing Offered: Every Winter

Euphonium Courses

5500A Graduate Euphonium-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One-half hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Euphonium - Master's Performance (4).

5601 Graduate Euphonium - Doctoral Performance (4).

Flute Courses

5500A Graduate Flute-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One Half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance study. Consent of instructor required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Flute - Masters Performance (4).

5601 Graduate Flute - Doctoral Performance (4).

Foreign Language Courses

5899 Required Graduate Enrollment (1).

French Courses

5500CF Courts and Culture in the Middle Ages (3). This cluster course offers an interdisciplinary approach to the study of the Middle Ages. Focusing on medieval cultures in Europe. Arranged around a series of themes, the cluster will read a variety of documentary and literary texts to investigate not only the "high culture" of the courts but also the interaction of people from various social backgrounds in Western Europe. Prerequisites: admission to the graduate program in Romance Languages or permission of the instructor.

5512 17th-century French Literature (3). Selected readings in the literature of the 17th century, with an emphasis on non-dramatic works. Also offered as French 412. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5513 18th-century French Literature (3). Emphasis on philosophical and social significance. Authors may include Marivaux, Beaumarchais, LeSage, L'Abbe Prevost, Montesquieu, Rousseau, Diderot. Also offered as French 413. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5514 Medieval Literature (3). Selected readings in various genres including epic, romance, theater and lyric. Emphasis will be placed on the intertextual relations and the cultural and historical context surrounding text production in the Middle Ages. Also offered as French 414. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5517 16th-century French Literature (3). Selected readings in prose and poetry from Marot through Astree. Authors may include Rabelais, Ronsard, du Bellay, Montaigne, Marguerite de Navarre. Also offered as French 417

5520 Non-Dramatic 17th-century French Literature (3). Evaluation and reading of the works of Malherbe and contemporaries, of Descartes and Pascal and contemporaries, and of the great authors at the height of the classical period.

5524 19th-century French Literature (3). Selected readings in various genres from Romanticism through symbolism. Also offered as French 424.

5526 20th-century French Literature (3). Selected readings from the Belle Epoque to the contemporary period. Also offered as French 426.

5540 Medieval Romance (3). The various movements of French medieval romance from the 12th through 15th centuries with an emphasis on the 12th and 13th centuries. Analysis of literary technique and socio-historical context will be stressed. No knowledge of Old French is assumed. Also offered as French 440. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5544 Renaissance Poetry (3). French Poetry from the Grand Rhetoriqueurs through the Pleiade. Study of poetic forms, major poets and schools, and different approaches to analyzing poetry. Also offered as French 444. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5545 Epistolarity and the Novel (3). Explorations of the genre through the analysis of 17th- and 18th- century French novels. Introduced by a theoretical review. Also offered as French 445. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5546 17th-century French Drama (3). The classical period: Emphasis on Corneille, Racine and Moliere. Also offered as French 446. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5547 19th-century French Poetry (3). The study of the poetry and dominant poetic movements of the 19th century, with special attention given to different approaches to its analysis. Also offered as French 447. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5548 20th century French Theater (3). Analysis of major currents of French theater of the 20th Century, with emphasis upon the postwar period and its movements. Also offered as French 448.

5552 Medieval Poetry (3). A study of medieval poetry including religious and secular poetry, Provençal and Old French lyric, the influence of poetry in other genres such as romance and theater, later medieval poetry of the 14th and 15th centuries, as well as a discussion of the origins of the lyric. Also offered as French 452. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5554 The Intellectual Origins of the French Revolution (3). Study of philosophical and political texts by Montesquieu, Rousseau, Voltaire, Diderot, etc. on government, society, language, freedom and equality. Critical study of the Enlightenment. Also offered as French 454. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5555 Fin-De-Siecle and Belle Epoque (3). Study of the literary, cultural and historical context of this time period in French history, for example: Symbolism, Decadence, and the years 1900-1914. Also offered as French 455. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5556 20th-century French Poetry (3). The study of 20th-century poetry with special consideration given to different approaches to its analysis. Also offered as French 456. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5561 20th century French Narrative (3). The analysis of major currents in French 20th-century narrative, especially fiction and film. Courses will be organized around narrative themes or historical events and will include social and cultural components. Also offered as French 461. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5563 19th-century French Fiction (3). Studies in the birth, development, and variation of French Romanticism. Readings include de Stael, Senancour, Constant, Hugo, Stendhal and Merimee. The advent of realism and naturalism in France. Readings include Balzac, Flaubert, Daudet, De Maupassant, and Zola. Also offered as French 463. On demand.

5570 Studies in Critical Thought (3). Various currents of 20th-century literary criticism and their political and historical contexts. Also offered as French 470. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5571 Autobiography (3). Analysis of autobiographies and autobiographical texts such as diaries and memoirs together with theoretical texts on the genre. The concentration of different periods or issues may change from semester to semester, i.e. the art of autobiography as practiced by 20th-century writers, especially women. Also offered as French 471. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5572 Francophone Studies (3). Study of different national Francophone literatures. Reading may include writers from Quebec, Haiti, Africa, Louisiana, Vietnam, the French Indies, etc. Also offered as French 472. Prerequisites: Admission to M.A. in Romance Languages and Literature program or permission of instructor.

5580 Special Topics (1-3). Treatment of a particular genre or area of literature or language normally not offered through regular courses. May be repeated for credit when the topic changes. Prerequisite: Permission of the instructor. On demand.

5590 Directed Studies in French Literature (1-3). Intensive readings in a field or literary figure to be selected by the student in consultation with the instructor. Available by permission of chairman only when student cannot take regularly scheduled courses.

General Practice Courses

5710 Principles Of Pedodontics For General Practice (2). A lecture course presenting the basic concepts of diagnosis and treatment of the child in a general dental practice.

5716 Special Problems In General Practice Dentistry I (1-6). Courses designed to provide the student with opportunities to work with consultants and specialists on the faculty of the dental school on cases which require the attention of a specialist.

5717 Special Problems In General Practice Dentistry II (1-6). A continuation of GNPR. 5716.

5718 Special Problems In General Practice Dentistry III (1-6). A continuation of GNPR 5717.

5721 General Practice Clinic I (1-10).

5722 General Practice Clinic II (1-10).

5723 General Practice Clinic III (1-10).

5724 Hospital Residency In General Practice Iv (2).

5725 Hospital Residency In General Practice V (4).

5726 Hospital Residency In General Practice Vi (4).

5727 General Practice Clinical Pedodontics (1). Clinical training in treating normal and handicapped children at Children's Mercy Hospital. Training includes providing treatment under general anesthesia at the hospital.

5728 Dental Implantology (1). The course is designed to include the following topics: history of implantology, implant materials and designs, fibroosseous and osseo-integration theories, bioinert and bioactive retention, indication and case selection, technique methodology, anatomical considerations and reasons for failure, prosthetic considerations using several systems and necessary radiographic aids, surgical stent and laboratory with simulated insertion of an implant.

5729 Oral Endosteal Implantology II (2). A continuation of GNPR. 5728.

5730 Introduction To Periodontology (1-2). This course is designed to introduce graduate students who are not enrolled in the periodontics program to various current philosophies and clinical applications of Periodontics including etiology, diagnosis, pathogenesis and various treatment modalities in current use.

5731 Principles Of Minor Tooth Movement (2). This lecture and laboratory course gives the non-orthodontic student an introduction to craniofacial growth and development physiology of the stomatognathic system, to etiology, incidence, recognition and unfavorable sequelae of malocclusion, and to the fabrication of removable and fixedbanded appliances necessary for the correction of minor irregularities.

5732 Intravenous And Inhalation Sedation (2). A comprehensive study of nitrous oxide and valium sedation combining lectures and clinical problems.

5740 Interdisciplinary Seminar I (1). The integration of common areas of concern in the clinical disciplines of Oral and Maxillofacial Surgery, Orthodontics, Pediatric Dentistry, Periodontics and Prosthodontics as they relate to patient cases. Cases are presented that present problems in at least two clinical disciplines in the areas of Diagnosis, Treatment Programming or Therapy. The current literature is reviewed and the case discussed.

5741 Interdisciplinary Seminar II (1). A continuation of GNPR 5740.

5742 Interdisciplinary Seminar III (1). A continuation of GNPR 5741.

5743 Interdisciplinary Seminar Iv (1). A continuation of GNPR 5742.

5799 Research And Thesis (1-6). The satisfactory completion of an original research project. Results of the research and critical review of the pertinent literature are incorporated into a thesis.

5899 Required Graduate Enrollment (1).

Geography Courses

5502 Environmental Remote Sensing And Digital Image Analysis (3). This course will provide students with innovative techniques for landscape-level environmental analysis, geographic and geological studies, earth science research, and environmental resources management using remotely sensed data including satellite images. Students will be taught basic remote sensing concepts and technical skills, including energy radiative transfer processes, in

remote sensing, sensors and resolutions, computer-based image processing and classification, and remote sensing/GIS integration. Prerequisite: Geog 203 or permission of instructor

5503WI History And Philosophy Of Geoscience (3). A survey of geoscientific thought since antiquity. The substance of geography will be sought primarily in scholarly treatises, formal analytical systems, and cartography, but the course also addresses geographical principles emerging from the history of such matters as government, law economy, religion, and material culture. Readings, lectures, discussions, research, writing. Prerequisite: Baccalaureate degree or permission of the instructor. On demand. Also offered as Geography 403WI. Prerequisites: Baccalaureate degree or permission of instructor

5504 Biogeography And Landscape Ecology (3). Principles and applications of biogeography and landscape ecology, emphasizing distribution of major ecosystems and related plants and animal species on earth, biodiversity, landscape patterns and processes, and physical, biological, and human interactions. The course explores ecosystem and landscape analyses using advanced GIS, remote sensing, and spatial modeling methods for real problem solving in environmental and biological research, ecosystem conservation, and urban planning and studies. Prerequisites: Geog 203, Geog 402/5502, or permission of instructor.

5506 Global Environmental Change (3). This course will examine the current rates of global environmental change and potential causes in the context of Earth's natural climate variability. The course will follow a seminar format. Students will read and discuss published articles on current and emerging theories of forcing mechanisms in the Earth's systems. Additional in-depth research and written evaluation are required for graduate credit. Prerequisites: None

5507 Advanced Geographic Information Science (3). Prerequisite: Geography 203 or permission of instructor Offered: On Demand

5509 Urban Geography (3). Historical development, morphology and functions of urban places, including intercity relationships and the relationship between cities and their hinterlands; emphasis on American cities. Students will complete a series of reports and a term paper. Offered: On Demand

5510 Landscape, Language, Literature, And Law (3). An examination of the geographic underpinnings and implications of languages, literatures, and jurisprudence. The course explores languages' historic rootedness in the interactions between human beings and their surroundings; the varying geographic expressiveness and discrimination of languages; the effect and significance of literary evocations of landscapes; and the cultural and environmental geographic content of the language of law. Readings, lectures, discussions, writing. Prerequisite: Permission of the instructor. Offered: On demand. Also offered as Geography 410.

5515 History And Philosophy Of Cartography (3). An examination of the techniques, assumptions, psychology, and cultural implications of mapping from the Stone Age to the age of satellites and the computerized Geographic Information System. Readings, lectures, discussions, writing. Prerequisite: Baccalaureate degree or permission of the instructor. Offered: On demand. Also offered as Geography 415.

5526 Paleoecology: Microfossils And Climate Change (3). Paleoecology will focus on questions addressing past environments and past climates based on the ecology of microfossils. Micro-organisms are very sensitive to a wide variety of environmental conditions including temperature, precipitation, hydrology, water chemistry, salinity, habitat, and pollution. The fossil remains of these organisms are used as proxy indicators for reconstructing past environmental conditions, climate change, vegetation dynamics, and human impacts. Students will have the opportunity to process microfossils and make interpretations based on analysis of data. Offered: Every other Fall Prerequisite: Permission of Instructor

5530 Location Theory (3). An analysis and evaluation of the basic theories that have been developed to account for the spatial arrangements of economic activity. Emphasis on urban areas as nodes of economic interaction. Three hours lecture and discussion per week. Prerequisite: Geography 311 and six hours in economics or urban studies. On demand.

5542 Quaternary Environments (3). This course reviews earth climatic history and focuses on major mechanisms for global and regional climate change. Methods of paleoclimatic reconstruction are examined, including analysis of proxy data and climate modeling. Application of these methods toward prediction of future climate change is also explored. On demand. Also offered as Geography 442.

5544 Geo-Computation Methods For Earth And Environmental Sciences (3). This course will focus on advanced computation methods for the analysis and modeling of complex and often non-deterministic processes in the spatial and environmental sciences. Students will be introduced to innovative techniques for analyzing large datasets with attribute spaces of very high dimensionality, including hyper-spectral remote sensing data. Prerequisites: Geog 402 or permission of instructor.

5548 Satellite Climatology (3). Use of satellite observations to study the climate system. Discussions consider the development of satellite climatology, sensors, platforms and methodologies use to estimate climate variables from radiance measurements. Aspects of climate that are emphasized include cloud climatologies, cloud systems, atmospheric moisture, radiation budget, and land-surface conditions. Prerequisites: Geog 315 or permission of instructor. Offered: Every other Fall

5595 Graduate Seminar In Geosciences I (1). An introduction to graduate research in the Dept. of Geosciences. Students will attend lectures by faculty and become familiar with research techniques, equipment, and thesis opportunities. Prerequisites: Baccalaureate Offered: Every Fall

5597 Graduate Seminar In Geosciences II (3). Graduate students in the Geosciences Department will explore the different components of a research project through readings, lectures, writing, and oral presentations. Offered: Winter

5598 Special Topics In Geography (1-3). Advanced independent research in Cultural or Physical Geography. Prerequisite: Baccalaureate. By arrangement with instructor.

5598A Special Topics In Cultural Geography (1-3). Advanced independent research in Cultural Geography. Prerequisite: Baccalaureate. By arrangement with instructor.

5598B Special Topics In Physical Geography (1-3). Advanced independent research in Physical Geography. Prerequisite: Baccalaureate. By arrangement with instructor.

5598D Special Topics In Advanced Gis And Remote Sensing (1-3). Advanced independent research in geographic information science (GIS) and remote sensing. Offered: On Demand Prerequisite: Permission of instructor

5598F Special Topics: Geostatistics And Modeling (1-3). Advanced independent research in geostatistics and modeling techniques. Offered: On Demand Prerequisites: Permission of instructor

5598K Issues In Waste Management (1). This course focuses on the critical problems of managing the waste materials generated in our society. The course includes discussion of various types of waste-municipal solid waste, hazardous (industrial) waste, nuclear and medical wastes. Sources, handling, storage, transportation, treatment and disposal of these wastes are reviewed. Experts from government and the waste management industry give guest lectures. Prerequisites: None. Offered: Fall & Winter.

5599 Research And Thesis Geography (1-9). Students will conduct research and writing in support of a thesis topic, which will have been approved in advance by the appropriate graduate advisory committee. Credit load will also be approved in advance by the student's graduate advisor. Offered: On Demand Prerequisite: Baccalaureate

5690 Special Research Topics (1-3). Student will produce a major research paper suitable for publication under the direction of their instructor.

5699R Research And Dissertation (1-10). Research for dissertation in partial fulfillment of the Geosciences requirements for the Ph.D. degree.

Geology Courses

5512 Geology And Hazardous Waste Management (3). Nature, sources and characterization of hazardous waste; collection, transportation and disposal of hazardous wastes. Fundamentals of toxicology and risk assessment. Application of geologic principles and methods in the assessments and remediation of abandoned hazardous waste sites and contaminated aquifers. Review of selected case histories. Experts from government and private organizations will be invited to deliver guest lectures. An out-of-town field trip to a hazardous waste site is required. A term paper based on library research or an approved experimental project is required for graduate credit. Pre-requisites: Geol 325, 342 & 350 or permission of the instructor.

5525 Quaternary Geology (3). The study of Quaternary processes, surficial deposits, and land forms. Course content will cover both the glaciated and nonglaciated portions of the United States as well as the interrelations between Quaternary geology and urbanization. Three hour lecture. Field trips. Prerequisite: Geology 314, baccalaureate degree in geology or permission of the instructor.

5531 X-Ray Diffraction And Fluorescence Methods: X-Ray Mthds Geol/Anly (2). Theory and practical application of x-ray diffraction and fluorescence methods in characterizing geologic materials. Prerequisite: GEOL 312 or consent of instructor. Two hours lecture and one 2-hour lab per week for 8 weeks.

5532 Icpms Applications In Geology (2). Theory and practical application of Inductively-Coupled Plasma Mass Spectrometry in the geosciences and environmental sciences. Prerequisite: GEOL 312 or consent of instructor. Two hours lecture and discussion, and one 2-hour lab per week for 8 weeks.

5534 Hazardous Waste Operation Management (2). Overview of federal regulations dealing with hazardous waste management, toxicology, hazard

communication, site management, air monitoring, operating procedures, and health and safety. The course includes hands-on training on spill control, equipment use and emergency use and emergency response. Practical training involves physical stress and participants must be in good physical health. This course satisfies OSHA's 40 hour training requirement for hazardous waste personnel. Prerequisites: Geog/Geol 335 or permission of instructor. Offered: Every Summer

5535 Aqueous Geochemistry (3). This course is directed to two objectives. First it will equip the students with a basic understanding of the geochemical principles and calculations which are directly related to environmental problems and second, it will provide the student with a basic understanding of specific problem areas in environmental geochemistry. Prerequisites: Chem 211 and 212 or equivalents. Baccalaureate degree in geology or permission of the instructor. Offered: On demand.

5541 Seismic And Potential Field Methods In Environmental Geophysics (3). (3) Fundamental theory and near-surface applications of the geophysical methods; (1) seismic refraction, (2) seismic reflection, (3) gravity, and (4) magnetics. Emphasis will be placed on the use of these methods in environmental and engineering investigations, addressing such issues as water resources, contaminant transport, geotechnical properties and archaeological protection. Course will include a field component illustrating application of selected techniques to a local environmental problem. Prerequisites: Baccalaureate degree in Geology or permission of instructor. Offered: Fall

5542 Electrical Methods In Environmental Geophysics (3). (3) Fundamental theory and near-surface applications of the electrical geophysical methods; (1) electrical resistivity, (2) electromagnetics, (3) ground penetrating radar, and (4) induced polarization. Emphasis will be placed on the use of these methods in environmental and engineering investigations, addressing such issues as water resources, contaminant transport, geotechnical properties and archaeological protection. Course will include a field component illustrating application of selected techniques to a local environmental problem. Prerequisites: Baccalaureate degree in Geology or permission of instructor.

5551 Geotechnics (4). Integration of the basic principles and concepts from material sciences, rock and soil mechanics, and civil engineering. Mechanical properties, geologic aspects and engineering classifications of earth materials and the effects of physical forces on their engineering behavior will be emphasized. Three hours of lecture and two hours of laboratory each week. Field trips. Prerequisite: Physics 210, 220, 230, Geology 350 or permission of the instructor.

5555 Environmental Impact Analysis (3). A systematic analysis of the spectrum of environmental changes related to human use and occupancy in urban settings. Study of the nature of activities such as industrialization, mining, urbanization and transportation, and their effect on the specific site and general region. Methods of measuring aesthetic and economic quality of the urban areas will be explored in an attempt to facilitate writing environmental impact statements. Prerequisites: Baccalaureate degree in geology or permission of the instructor.

5559 Inquiry-Based Field Studies For Teachers (3-6). Inquiry-based studies in environmental science, environmental chemistry and geology involving collaborations between course participants, practicing scientists and professional educators. The course is designed especially for pre- and in-service teachers of all levels and contact areas to enhance critical thinking, problem solving and process skills as defined by state and national standards. Projects will balance field and lab studies with analysis and presentation of results through electronic, oral and written means. Prerequisites: Permission of instructor. Offered: On demand

5561 Geologic Mapping (3). Analysis of the stratigraphic section in the greater Kansas City area by field investigation. Compilation of descriptive data and the construction of detailed geologic maps. Practical problems to determine the most beneficial use of the land in an area that is rapidly becoming urbanized. Prerequisite: Baccalaureate degree in geology or permission of the instructor. Previous field mapping experience highly recommended.

5570 Hydrogeology (3). Geology and hydrologic factors controlling the occurrence, movement, quality, recovery and development of water supply and distribution. Problems relating to urbanization of flood plains. Prerequisite: Baccalaureate degree in Geology or permission of the instructor.

5571 Tectonics (3). A detailed inquiry into plate tectonics and the geophysical and geological data that define the motion of lithospheric plates. Global examples of divergent, convergent, and transform plate boundaries will be studied through lectures, discussions, problem sets, and term papers. Prerequisite: Geology 325 and 350. Offered: On demand.

5572 Earthquake Geology (3). This course is detailed inquiry into the study of present and past earthquakes as they are preserved in the seismological, geophysical, and geological record. Global examples of earthquakes will be studied through lectures, discussions, problem sets, term papers, field trips and field projects. Prerequisite: Geol 350 or permission of the instructor. Offered: On demand.

5595 Graduate Seminar In Geosciences I (1). An introduction to graduate research in the Dept. of Geosciences. Students will attend lectures by faculty and become familiar with research techniques, equipment, and thesis opportunities. Offered: Every Fall Prerequisite: Baccalaureate

5597 Graduate Seminar In Geosciences II (1-3). Graduate students in the Geosciences Department will explore the different components of a research project through readings, lectures, writing, and oral presentations. Offered: Winter Semester Prerequisites: Baccalaureate

5598 Special Topics In Urban Environmental Geology (1-3). Individual research into practical geoscience problems in the urban environment. Provides opportunity for individual research in applied geology. Topic and method to be established by student and academic supervisor prior to enrollment. Instructor: By arrangement.

5598A Special Topics In Urban Environmental Geology: Petroleum Geology (1-3).

5598B Spec Topics In Urban Environmental Geology: Soil/Rock Mechanics (1-3).

5598C Sp Topics In Urban Environmental Geol: Stratigraphy/Paleontology (1-3).

5598D Spec Topics In Urban Environmental Geology-Environmental Geology (1-3).

5598E Special Topics In Energy And Mineral Resources (1-3). This course provides students an opportunity for advanced independent research in energy and mineral resources. Prerequisite: Permission of instructor

5598H Special Topics In Urban Environmental Geology - Geochemistry (1-3).

5598I Special Topics In Urban Environmental Geology (1-3).

5598J Special Topics In Urban Environmental Geology: Environmental Sci (1-3).

5598K Issues In Waste Management (1). This course focuses on the critical problems of managing the waste materials generated in our society. The course includes discussion of various types of waste-municipal solid waste, hazardous (industrial) waste, nuclear and medical wastes. Sources, handling, storage, transportation, treatment and disposal of these wastes are reviewed. Experts from government and the waste management industry give guest lectures. Prerequisites: None. Offered: Fall & Winter.

5598M Special Topics In Geostatistics And Modeling (1-3). Advanced independent research in geostatistics and modeling techniques. Prerequisite: Permission of instructor Offered: On demand

5599 Research And Thesis: Geology (1-9). Individual directed research by the student leading to the preparation of a formal written thesis and oral defense. Instructor: By arrangement.

5690 Special Research Topics (1-3). Student will produce a major research paper suitable for publication under the direction of their instructor.

5699R Research And Dissertation (1-10). Research for dissertation in partial fulfillment of the Geosciences requirements for the Ph.D. degree.

5899 Required Graduate Enrollment (1).

Graduate Studies Courses

5501 Disability And Community Support (3). SGS 501 Disability & Community Support is an academic service-learning course that will integrate 15 classroom contact hours with 60 service hours within a framework of Disability Studies. Offered: On Demand Prerequisites: Law 815S or Psych 541/SW 580B

5590A Special Topics (1).

5590B Special Topics (1).

5590C Special Topics (1).

5590D Special Topics (1).

5590E Special Topics (1).

5590F Special Topics (1).

Guitar Courses

5500A Graduate Guitar-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One Half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JA Graduate Applied Jazz Studies (2). One hour lesson weekly. Consent of instructor and a jury examination are required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JB Special Applied Jazz Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. A jury for comments only may be held at the discretion of the faculty. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Guitar - Masters Performance (4).

5601 Graduate Guitar - Doctoral Performance (4).

Harp Courses

5501 Graduate Harp - Masters Performance (2-4).

5601 Graduate Harp - Doctoral Performance (2-4).

Harpichord Courses

5500A Graduate Harpichord-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One Half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

Health Administration Courses

5571 Financial Management Issues Health & Human Services Organizations (3). This course is intended to provide an overview of the financial management problems of health and human services organizations. A broad range of topics is examined: financial statements, ratio analysis, cost accounting, reimbursement and pricing, management of working capital, budgeting and programming, capital financing, and cash management.

5575 Long-Term Care Policy & Administration (3). This course provides an overview of long-term care policy and administration, both for institutional and community-based services. Topics include public and private financing, regulatory systems, organization and management of care, and quality assurance. The course also emphasizes new developments in the field, such as managed long-term care systems, capitation and case mix reimbursement, and technologies for quality monitoring and assessment.

5576 Managed Care Institutions (3). This course, offered by staff of the National Care for Managed Care Administration, emphasizes current issues associated with the provision of health care services through different kinds of managed care institutions. Particular attention will be given to issues surrounding cost-containment, quality of care, contracts, and regulation. Much of the discussion will focus on HMO's.

5577 Health Service Administration And The Health Professions (3). The development of the health professions and occupations is examined as their internal and external relationships influence the structure of health care organizations and the services provided to clients. The focus of the course is on problems that administrators may encounter as they attempt to negotiate services for clients, build professional coalitions, and provide leadership within or outside health care institutions.

5578 The Evaluation And Control Of Health Services (3). This course focuses on developing evaluative skills associated with controlling the level and costs of health services. Epidemiologic concepts are introduced using clinical and community health examples. The concept of "at-risk" clients and populations are reviewed, and various attempts to measure risk are assessed. Issues relating to quality assurance are discussed, along with several examples of cost-effectiveness analysis.

5585 Seminar In Health Services Administration (3). Intensive study and examination of selected contemporary issues and problems. Emphases include theoretical relationships and premises, social philosophy, current research and literature, methods of investigation and analysis, and dilemmas of administrative leadership. The focal point of this course changes from term to term.

5585A Seminar In Health Services Administration (3).

5586 Supervised Research In Health Services Administration (3). Supervised research into either a current problem or process of health services administration. Topics are selected in conference with supervisor, who will also guide the student in other stages of the project. The emphasis is usually on field research.

History Courses

5500CL Cluster Course: Nordic Culture (3).

5500CM Cluster Course: Mexico, Central America And The Human Condition (3). See course description for History 300CM.

5500CP Special Topics In History For Graduate Studies (1-3).

5500CY Cluster Course: The Ancient World And The Cinema (3).

5500CZ Special Studies History (1-3).

5500P Special Topics In History For Graduate Studies (1-3).

5500R Special Topics In History For Graduate Studies (1-3). See course description History 400.

5500RC Special Topics In History For Graduate Studies (1-3).

5500RD Special Topics In History For Graduate Studies (1-3).

5500Z Special Studies: Labor In Industrial America (3). This course examines the history of work and the working class in the U.S. from 1877 to the present. We will focus on the transformation of the workplace, the rise of the union movement, the nature of cultural and political organizations, workers' relationships with other social groups, and the role played by gender, race, and ethnicity in uniting or dividing the working class.

5501A Religion In America (3). An in-depth examination of selected aspects of the history of religions in America from the colonial period to the present. Special emphasis will be given to methodological issues in the study of American religious history. Offered: On Demand

5502 America, 1000-1763: The Formative Era (3). Early American history encompasses the formative era of many institutions and attitudes which still persist in present-day America. A study of how these patterns and policies emerged will enlighten us as to our current ways our society seeks to adapt to change.

5503 America, 1763-1783: The Revolutionary Heritage (3). The American Revolution created American history by creating a new nation. What the American Revolution depends to a large extent upon what Americans think they are or ought to be. The goals of this course, therefore, are twofold: (1) to probe the nature, causes and consequences of the American Revolution; (2) to assess the intentions and behavior of both the Framers of the Constitution in 1763-1783 and the inheritors of modern America.

5504 America, 1783-1828: The National Experience (3). See course description History 304.

5505 America, 1828-1852: The Jacksonian Period (3). See course description History 305.

5506 America, 1850-1877: Civil War And Reconstruction (3). See course description History 306.

5507 America 1877-1917: Development Of Industrial America (3). See course description History 307.

5508A America 1914-1945: The Era Of The World Wars (3). See course description for History 308B.

5508B America 1945-Present: Our Times (3). See course description for History 308B.

5511 Medieval Civilization I (3). See course description History 411.

5512 Medieval Civilization II (3). See course description History 412R.

5512A Women And Family In Medieval And Early (3). This course explores the roles of women in the social, economic, political, and cultural environments of medieval and early modern Europe. We examine the lives of women in all areas of life, from the ordinary to the extraordinary, in urban and rural environments, from the centers of religious and political power to the margins of society. Focus will be on the world of work for urban and peasant women and on the social and legal institutions of marriage, kinship, and the family. The course makes extensive use of primary source by and about women during this period.

5512B The Black Death And Late Medieval Society (3). This course examines all aspects of late medieval and early Renaissance society in Western Europe. The Black Death of 1348/1349 serves as the entry point into the historical study of the economy, demography, and culture during this transitional period.

5513 Renaissance (3). See course description History 413.

5514 Reformation (3). See course description History 414.

5515B 17Th And 18Th Century European History (3). This course is designed to present the upper-division undergraduate with a firm grasp of the major intellectual, cultural, political and economic development of 17th and 18th century Europe. It considers the bitter Thirty Years War in Century Europe, the rise of the Netherlands, the fall of Italy and Spain, the rise of constitutional and absolutist styles of government, the scientific revolution, the colonization by Europeans of the Pacific and Indian Ocean Basins,

Enlightenment political philosophy, the Agricultural Revolution, and the French Revolution. Also offered for undergraduates as 415B. Graduate students will be held to a higher standard in terms of additional, in-depth historiographic research, writing, and discussion.

5516 The French Revolution And Napoleon (3). See course description History 416R. Fall.

5517 19Th Century European History (3). This upper-division course will survey significant trends in warfare, politics, economics, social relations and culture in 19th century Europe, paying particular attention to the rise of modern ideologies and identities, world hegemony, and the social technologies of dehumanization that foreshadowed the unprecedented inhumanities of the 20th century. Also offered for undergraduates as 417R. Graduates will be held to a higher standard in terms of additional, in-depth historiographic research, writing, and discussion.

5518 20Th Century European History (3). This upper-division course traces the history of Europe in the 20th century. It will survey significant trends in warfare, politics, economics, social relations and culture, paying particular attention to the issues of modernity and postmodernity, imperialism and decolonization, dehumanization and genocide as well as the role of ordinary people in these systems of mass destruction. Also offered for undergraduates as 418R. Graduate students will be held to a higher standard in terms of additional, in-depth historiographic research, writing, and discussion.

5519 Contemporary European History: 1950-2000 (3). This upper-division course traces the history of Europe in the period of living memory. It will survey significant trends in warfare, politics, economics social relations and culture, paying particular attention to the rise of globalization and the condition of postmodernity, decolonization and neo-colonization, European unification and everyday life. Also offered for undergraduates as 419R. Graduate students will be held to a higher standard in terms of additional, in-depth historiographic research, writing, and discussion.

5523 Social History Of Recent America (3). See course description History 323R.

5525R European Criminal Justice History, 500-1900 (3). This course will survey European crime, criminal procedure, policing and punishment between 500 and 1900. Particular attention will be given to changing methods of proof (oaths, ordeals, juries); changing type of criminal activity (banditry, vagrancy, witchcraft, professional theft) and changing penal strategies (the stocks, breaking on the wheel, the workhouse, the prison, the penitentiary). English experiences are emphasized.

5526R The Scientific Revolution 1500-1700 (3). See course description History 426R.

5527 The Darwinian Revolution, 1650-1900 (3). See course description History 427R.

5528A History Of The Body (3). This advanced course will explore the new field of the history of the body, with particular attention to sexuality and gender. Topics will include the history of sexualities, the body and society, body disciplines, medical practices and representations of illness, beauty, and fashion, and the relationship between sexualities and nationalisms.

5528B Women & Medicine: Patients & Practitioners From Antiquity-Present (3). This course explores, in a selective fashion, the role of women in Western Medicine both as health care providers and patients. The subject of the history of medicine is too broad to be covered comprehensively in a semester, and so we will focus on diseases or physical conditions which were believed to be limited to women-childbirth, certain mental health conditions, reproductive health, breast cancer-as well as the increasing marginalization of women within the profession of health care providers to those branches concerned primarily with "women's problems."

5530 The Ordeal Of Total War Europe, 1900- 1950 (3). This upper-division course traces the history of Europe-on its own and in its relations to the rest of the world from its use of genocide "beyond" its shores to its systematic application in Europe. It will survey significant trends in warfare, politics, economics, social relations and culture, paying particular attention to the causes for war and the expansion of violence, modernization and modernity, democracy and totalitarianism, colonization and resistance, mass destruction and everyday life. Also offered for undergraduates as 43.0. Graduate students will be held to a higher standard in terms of additional, in-depth historiographic research, writing, and discussion.

5531 Medieval England, 1066 To 1485 (3). See course description History 431R.

5532 Tudor-England, 1485-1688 (3). This course covers the history of England from the accession of Henry VII in 1485 to the crowning of William and Mary in the Glorious Revolution. Its main emphasis is the Tudor dynasty 1485-1603 with special reference to the transformation of England into a modern state, Re-Reformation, the role of Parliament, etc. The course concludes with the major characteristics of the early Stuart period.

5533 Modern Britain, 1603-Present (3). This course examines the rise and fall of the Stuart dynasty and the effects of civil war, rebellion, and religious turmoil on the peoples of Britain. Next, the establishment of Cabinet government in the eighteenth century, and the loss of the American colonies will be discussed. The dramatic transformation of Britain from a largely isolated and agricultural society to an urban and the industrial one, will be analyzed with particular reference to class, race, and gender. Finally, the role of Britain in both world wars will be considered along with the institution of the welfare state and the transformation of Britain from a world power to a member of the European community of states.

5535R Early Modern German History: 1640-1890 (3). This course traces the emergence specific, centralized nationstates and empires as well as a particular, industrial society in the 250 years since the Thirty-year's War. It introduces students to the national histories of Germany in order to help them think critically about national historiography in general. We will compare the many variations within Central Europe: Prussia/Austria/the Third Germany, city/town/village, state/ society, as well as differences of caste/class/gender/sexuality/religion. All assigned readings will be in English; a background knowledge of European history is recommended. This course will be followed by History 536: the contents and assignments will be coordinated, but the former course is not a prerequisite for the latter.

5536 Modern German History: 1890-1990 (3). This course traces history of Central Europe from the fall of Bismarck to the reunification of Germany one century later. It will ask students to think critically about the relationship between state and society, elites and 'ordinary' Germans, in the various German-speaking regimes that existed over the course of this era: two empires, two interwar republics, two fascist dictatorships, and three post-fascist republics. All assigned readings will be in English; a background knowledge of European history is recommended. This course follows from History 435/535; the contents and assignments will be coordinated, but the former course is not a prerequisite for the latter.

5537 Nazi Germany (3). See course description History 437.

5544 Islam & The Arabs: The Formative Period (3). See course description History 444R.

5545 The Ottoman Empire In The Middle East To Wwi (3). See course description History 445.

5546 The Middle East From World War I To The Present (3). See course description History 446R.

5553 Immigrants And Immigration In American History (3). See course description History 353.

5554 Women In Modern America (3). See course description History 354R.

5555A Indians Of South America And The European Invasion (3). See course description History 355A.

5555BA Indians Of North America To 1789 (3). The history of the native peoples of North America from their origins to the era of the American Revolution. Prerequisite: None. Offered: Fall.

5555BB Indians Of North America Since 1789 (3). The history of the native people of North America (Indians and Inuit) and their interaction with the European invaders since 1789. This course is the sequel to History 555BA, Indians of North America to 1789. Prerequisite: None. Offered: Winter.

5556 Rise Of The City In The U.S. (3). See course description History 356.

5556R Kansas City: History Of A Regional Metropolis (3). See course description History 356R.

5557 The American West (3). See course description for History 357.

5558R History Of The American South (3). See course description for History 358R.

5559R The Confederacy And The Myth Of The Lost Cause (3). See course description for History 359R.

5561R American Foreign Relations (3). See course description for History 361.

5562J Japanese Civilization (3). A survey of Japanese civilization and cultural history from the prehistorical period to the present. Emphasis on the interplay between religion, the arts, politics, and social structure.

5563R Military History Of The U.S. (3). See course description for History 363.

5566R American Economic History Since 1865 (3). The course deals with the emergence of Industrial America since 1865. It will cover the rise to dominance of the large modern corporation, with the problem of economic and social instability and stability, with the rise of trade associations, cartels, and government regulation in an unstable economy, and with the evolution of American economic policy and national economic planning. This course is the same as economics 540r.

5566RR American Labor History (3). This course examines the history of work and the working class in the U.S. from 1750 to the present. We will focus on the transformation of the workplace, the rise of the union movement, the nature of cultural and political organizations, workers' relationships with other social groups, and the role played by gender, race, and ethnicity in uniting or dividing the working class. Offered: On demand.

5567RS Myth And Ritual (3). "Myth" and "ritual" have long been fundamental categories in the study of religion. This course will briefly survey some of the major theories and approaches to the study of myth and ritual from the Enlightenment to the present. Will not only trace the shifting meanings of "myth" and "ritual," but will critically evaluate the utility of diverse approaches to the study of religious phenomena designated by these terms. Reading will include theoretical works, as well as selected case studies.

5570 Introduction To Material Culture (3). See course description for History 370.

5570R Ancient Egypt (3). See course description for History 470.

5571R Ancient Greece (3). See course description for History 471.

5572R Ancient Rome (3). See course description for History 472.

5573R History Of Astronomy (3). See course description for History 473.

5575 Ancient Israel (3). Judaism has had a tremendous impact on our civilization and yet most Americans are only dimly aware of its origins and development. This course will trace the roots of the Jewish religion in its historical context from its beginning through the formation of rabbinic culture. The rise of Christianity will be examined in its original Judaic context, and recent discoveries, particularly those pertaining to the Dead Sea Scrolls, will be interpreted. Offered: Every Winter; or Every other Winter or Whenever History 475 is offered.

5575R The History Of Ancient Israel (3). See course description for History 475.

5576R Medieval Jewish History (3). See course description for History 476.

5577R Modern Jewish History (3). See course description for History 477.

5578R The Holocaust And The State Of Israel (3). See course description for History 478.

5581 Research Methodologies (3). An introduction to a variety of research tools and techniques including such topics as evidence, critical method, verification, bibliography, book review, computers, statistics, and archival methods.

5582 Colloquium In American History I (3). These courses are designed to acquaint the graduate student with the writings and theories of major American historians. Faculty lectures are combined with student bibliographical essays and the reading of important historical works in order to prepare the student for the final examination taken upon completion of M.A. course work. Books read in the course compose a large proportion of the departmental reading list. M.A. candidates in American history are required to take both courses. History 582 covers American history to 1865; History 583 covers the period since that date.

5583 Colloquium In American History II (3). These courses are designed to acquaint the graduate student with the writings and theories of major American historians. Faculty lectures are combined with student bibliographical essays and the reading of important historical works in order prepare the student for the final examination taken upon completion of M.A. course work. Books read in the course compose a large proportion of the departmental reading list. M.A. candidates in American History are required to take both courses. History 582 covers American History to 1865; History 583 covers the period since that date.

5584 Philosophy Of History (3). Reflecting the instructor's interests and familiarity with the subject, this course will treat the philosophy of history under two relatable forms: (1) the speculative systems of interpretation of world history from Voltaire, through Hegel and Marx to Spengler and Toynbee; and (2) the newer, critical approaches to history and historiography by historicist, analytic, and Marxist philosophers and historians of this past century, from Dilthey, through Collingwood and Ortega to Skinner and Braudel. Depending upon whether the instructor happens to be a specialist in European or in American History the emphasis of content during the course will be altered accordingly.

5585 Colloquium In European History II (3). The European History Colloquium II will examine some of the crucial problems or watersheds in European history from the Reformation through the 20th century. The course seeks to provide an in-depth study of specific topics and of the associated bibliography.

5586 Colloquium In World History (3). The World History colloquium encompasses the major fields of World history, non-western history and Judaic studies. Course requirements include weekly discussions on specific topics and a research paper or project due by the end of the semester. The methodology and ideas relating to each field will be discussed in a comparative perspective. Content will vary according to the field of the instructor. This course may be repeated with the permission of the instructor.

5587R Research Seminar (3). Students in this course will produce a major research paper under the direction of the instructor: a self-contained thesis chapter, an article for publication or the equivalent.

5587RA Research Seminar (3).

5587RB Research Seminar (3).

5591 Archival Methods (3).

5592 Archival Internship (1-3).

5593 Museum Science (3). This course is designed to acquaint students with specific careers in museums and historical agencies; to introduce students to the wide range of operating issues facing those working in the museum profession on a day-to-day basis; and to familiarize students with the organizations, reference works and resources available to develop the skills and training required for those who choose to make this their profession.

5597 Non-Thesis Research/Reading (1-6). Individual direction of student reading or research by selected, consenting faculty. This course can be taken only when faculty supervision is unavailable in colloquia or seminars.

5599R Thesis (1-6). A contribution to knowledge based upon extensive research and reflective of careful analysis. Before writing a thesis, the student must clear the topic and research design with the Supervisory committee.

5680 Doctoral Colloquium (3). This course will examine the writings and theories of major historians in a particular field of history. The authors, works and intellectual currents which form the basis of the colloquium will vary from semester to semester, depending upon the professor's expertise and design for the course.

5687 Doctoral Research Seminar (3). Students in this course will produce a major research paper under the direction of the instructor. This shall consist of a self-contained chapter of the dissertation or a work of publishable quality. May be repeated for credit.

5687RA Doctoral Research Seminar (3). Students in this course will produce a major research paper under the direction of the instructor. This shall consist of a self-contained chapter of the dissertation or a work of publishable quality. May be repeated for credit.

5687RB Doctoral Research Seminar (3). Students in this course will produce a major research paper under the direction of the instructor. This shall consist of a self-contained chapter of the dissertation or a work of publishable quality. May be repeated for credit.

5697 Doctoral-Level Independent Reading (1-6). Individual reading under the supervision of members of the History Doctoral Faculty in preparation for the Comprehensive Examination for the Ph.D.

5699R Dissertation (1-15). Course credits in dissertation.

5899 Required Graduate Enrollment (1).

Horn Courses

5500A Graduate Horn-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. an audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One Half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate French Horn - Masters Performance (4).

5601 Graduate Horn - Doctoral Performance (4).

Law Courses

8501 Contracts I (3). Formation and performance of simple contracts; consideration; express and constructive conditions, excuse of conditions; remedies for breach; contracts for benefit of third parties; assignment; impossibility of performance and discharge.

8502 Contracts II (3). Continuation of Law 8501.

8511 Torts (3). Wrongs to the person and to property; legal remedies through which compensation or other relief may be obtained.

8521 Civil Procedure I (3). Court systems; jurisdiction; venue; pleadings; parties; claims; intervention; class actions; choice of law.

8521M Missouri Civil Procedure (2-3). "Selected problems in Missouri civil procedure under Missouri statute and rules. Topics may include venue and personal jurisdiction, pleading and motion practice rules on joinder of parties and claims, statutes of limitation, trial procedure, post-trial motions & appellate procedure, discovery, and preclusion. (2-3) hours"

8522 Civil Procedure II (2-3). Motion practice; summary judgment; pre-trial conference; discovery; jury selection, summations, instructions, verdict; judgments and estoppel; appeals.

8531 Introduction To Law And Lawyering Processes I (3). Introduction to legal reasoning; case analysis and synthesis; case research; structure and style in legal writing with emphasis on expository writing, including office memoranda.

8531I Introduction To Law & Lawyering Processes International (1-3). Introduction to legal reasoning; case analysis and synthesis; case research; structure and style in legal writing with emphasis on expository writing, including office memoranda.

8532 Introduction To Law And Lawyering Processes II (2-3). Introduction to advocacy; introduction to interviewing, counseling and negotiation; statutory and computerized research; writing to and on behalf of a client, including a trial or appellate brief; oral advocacy.

8541 Property I (3). Introduction to the nature of property; basic personal property law; adverse possession; possessory estates; basic future interests; marital and concurrent interests; landlord-tenant relationships.

8542 Property II (3). Licenses, easements, real covenants, equitable servitudes; nuisances; basic water law; brokerage; financing, mortgages, deeds of trust; contract of sale, deeds, closing; title insurance, warranties; recording; eminent domain; zoning.

8552 Federal Taxation (3). Theory, history, and principles of federal income taxation; basic concepts of income, classification of income and deductions.

8601 Business Organizations (4). Partnership, limited liability company and corporation law; choice of business forms, formation of partnerships, limited liability companies and corporations; rights, duties, and powers of partners, members, shareholders, directors, and officers; closely held corporations; proxy regulation; derivative suits; dividends and stock redemptions; introduction to the Securities Act of 1933 and Securities Exchange Act of 1934.

8601R Doing Business In Ireland (1-5). A comparative study of the business entity laws of the United States and the Republic of Ireland. In addition, the course will examine the competition laws of the United States and the European Union and corporate taxation of multinational companies operating in the Republic of Ireland.

8603 Taxation Of Business Organization (2-3). Survey course of the taxation of business enterprises, particularly partnerships, corporations and subchapter S corporations. Prerequisites: Federal Taxation and Business Organizations.

8605 Antitrust And Competition Law (2-3). This course studies how antitrust laws work to create an environment in which free and open competition thrives. Course examines how antitrust laws seek to prevent unreasonable horizontal (competitors) and vertical (supply chain) restraints that harm consumers and to deal with markets where one competitor has attained monopoly power, conduct that is specifically exempted from antitrust regulation, who is entitled to seek redress for antitrust violations, and particular issues unique to antitrust litigation.

8609 Ethical Issues In Family Law Representation (1-2). Advanced study of the ethical obligations of public and private attorneys in estate, family, and juvenile law representation. Topics may include identification of the client, ethical and legal obligations of confidentiality and disclosure, competence and client communication, respect for third persons (particularly obligations toward children of clients) and other related subjects. Paper and presentation required. Pre-requisite: Professional Responsibility. Pre or co-requisites: Estates and Trust and Family Law. Limited Enrollment.

8612R Tax Planning With Life Insurance (1). An examination of the various tax consequences of using life insurance, including issues relating to the income, gift and estate tax consequences of life insurance ownership by an individual, and irrevocable trust, or business entity.

8614 Estate Planning And Drafting (3-4). Continuation of Estates & Trusts I using problems and cases as a basis for class discussion. Working in teams, students engage in the planning of estates for actual clients, proceeding through the entire process and culminating in the execution of wills, trusts or other appropriate instruments. Course is not open to students who have taken Estate Planning. Prerequisite: Estates & Trusts I.

8614R Estate Planning For Retirement Plan Benefits (1). The income, gift, estate and generation-skipping transfer tax consequences and rules related to the ownership, distribution and withdrawal of retirement plan benefits, including minimum required distributions, designating beneficiaries, spousal rights and rollover options

8615 Estate Planning And Practice (2-3). Tax-oriented examination of contemporary estate planning problems for the larger estates, with emphasis on issues of direct concern to practitioners. This course is designed for LL.M. students. Others may take the course with permission of the Associate Dean.

8615R Estate Planning For Charitable Giving (1). Survey of federal income tax and transfer tax laws governing gifts to charitable organizations, charitable remainder trusts and charitable lead trusts; procedural requirements to assure deductibility; and planning and drafting considerations.

8617R Elder Law For Estate Planners (1). An examination of the legal tools available for the elderly client for decision-making, both health care and financial, in the event of incapacity, and asset preservation, including Medicare and Medicaid qualification. The course will cover the use of trust; durable powers of attorney, and advance directives for health care and living wills and the relationship to court guardianship.

8621 Evidence (3). General principles relating to proof of facts in civil and criminal trials; presumptions; order of proof; relevancy; judicial notice; real and demonstrative evidence; authentication; best evidence rule; hearsay; competency; impeachment; rehabilitation.

8631 Constitutional Law I - The Supreme Court And The Bill Of

Rights (3). The origin and nature of judicial review, substantive due process in regard to regulation of economic affairs, retroactive legislation, inviolability of the person, freedom of expression and assembly, freedom of religion, equal protection of the laws, the electoral process, nationality and citizenship.

8632 Constitutional Law II - Powers Of Government (2-3). State and Federal constitutions; separation of powers; executive powers, legislative powers; the federal system; powers of Congress, residual powers of the states; relations between the States including extradition and interstate commerce.

8633 First Amendment Law (2-3). Basic themes and advanced problems relating to the law of the First Amendment to the United States Constitution, including exploration of the values behind the protection, subversive advocacy, regulation of speech in the public forum, access to the media, regulation of the press, symbolic expression, libel, obscenity, commercial speech, picketing, right of association, loyalty oaths, legislative investigations and government demands for information, separation of church and state, free exercise of religion, state aid to the religious schools, regulation of religion-based conduct.

8634 Criminal Law (3). Introduction to substantive criminal law, its role and purpose in our society; principles of liability, common law and statutory offenses; defenses; punishment.

8635 Criminal Procedure I (3). Introduction to the administration of criminal justice; constitutional rights of the accused; due process; privilege against self-incrimination; right to counsel; arrest, search, and seizure; wire-tapping; police interrogation and confessions; pre-trial identification procedures.

8635R Criminal Sentencing: Law Practice & Procedure (2-3). Study of sentencing issues and practice, including theories of crime and punishment, jurisdictional and constitutional issues, sentencing systems, sentence types and alternatives, and procedural issues; in-depth analysis of sentencing guidelines.

8635S Wrongful Convictions I (2-3). Interdisciplinary examination of the causes of wrongful convictions, remedied for those wrongfully imprisoned, and proposals for reforms. Topics include eyewitness identification use of informants, prosecutorial and police misconduct, scientific evidence (DNA, junk science), false confessions, incompetent lawyering compensation and media and investigative journalism, all with a focus on wrongful conviction. Students will have an opportunity to work on screening of inmate files to identify possible cases of wrongful conviction. Paper required. 2 credits. Limited Enrollment.

8635T Wrongful Convictions II (2-3). A follow-up class to Wrongful Convictions I, open only to students who have completed Wrongful Convictions I. The course will involve "hands on" work with cases that have passed through the first level of screening in Wrongful Convictions I with students receiving the transcripts and case documents in addition to the briefs and opinion in the case. Students will receive these documents and report on the likelihood that an inmate is innocent and the strategies available for pursuing the claim of innocence.

8636 Criminal Procedure II (2-3). Continuation of the study of the administration of criminal justice; exclusionary rules; bail; prosecutor's discretion; grand jury; preliminary hearing; jurisdiction, venue; joinder and severance of offenses and defendants; right to speedy trial; pleas of guilty; discovery; trial by jury; publicity; double jeopardy.

8637 Federal Criminal Law (2). Jurisdiction and responsibilities of federal law enforcement agencies, bases for federal criminal jurisdiction and federal/state relationships in the enforcement of criminal statutes. Specific federal criminal statutes, case law and policy considerations are studied in the following areas: Racketeer Influenced and Corrupt Organizations (RICO); schemes to defraud (mail, wire, securities and bank fraud); drug offenses; tax prosecutions; currency reporting and transaction offenses; fraud against and false statements to federal agencies.

8637R U.S. Attorney's Office Law Clinic (2-3). Up to four students, under supervision of an Assistant United States Attorney, are selected as interns to work in the United States Attorney's Office for the Western District of Missouri with members of the Strike Force, Narcotic Unit, General Crimes Unit or Civil Division. Activities include, legal research and writing, consisting of memoranda, motions and briefs; observations and participation in trials, pre-trial hearings and motions, as appropriate; and assistance with litigation. Students are expected to work a pre-approved schedule of six hours

a week for fourteen weeks with a minimum of eighty hours a semester and to attend regular conferences with their supervising attorney and faculty supervisor. Prerequisites: Three semesters of law school and attainment of at least a B+ cumulative grade point average. Eligible interested students are screened and selected. Ungraded. Pass/Fail.

8638 Applied Professional Responsibility: Law Practice Management (1). Law practice management in the context of applied professional responsibility, including: organizational structure, fee setting and allocation, trust accounting, systems for avoiding conflict of interest, insurance, work control systems, obligations of supervisory and subordinate lawyers. Prerequisite: Professional Responsibility during the same semester.

8638R Entrepreneurial Lawyering: Solo And Small Firm Practice (2-3). Course will focus on law practice management for solo and small firms. Topics include organizational structure, firm management, fee setting and allocation, and effective and ethical marketing. Course includes attendance at the Missouri Bar Solo and Small Firm Conference.

8641R Legislation (2-3). This course explores a variety of topics under the broad heading of "Legislation." Included among them are: electoral and representational structures, legislative drafting, canons of statutory interpretation, identifying and utilizing legislative history, the role of referendums and initiatives as a supplement to representative institutions, public choice theory, and other theories of legislation. The course also includes an opportunity for students to participate in the drafting of legislation for the Kansas for Missouri State legislatures. Paper optional.

8643 Advanced Legal Research (2-3). Course builds on Introduction to Law and emphasizes problem solving, systemic thinking about legal bibliography, and understanding of the issues confronting legal research. Topics include additional Lexis and Westlaw instruction, web-based research, transactional law, tax law, litigation, statistics, government agencies, international and foreign law, business intelligence and a specialty topic chosen by the student. Course work includes research problems and exercises and creation of a legal research guide.

8643L Advanced Legal Research-Litigation (1). Prepares students who wish to focus on advocacy and litigation (including students in litigation with respect to Family Law and Urban, Land Use and Environmental law). The course is also intended to facilitate research for the student's legal research and writing requirement. The course will refresh and refine research skills, help students to think systemically about legal research, and familiarize students with applicable resources. As the final project, students will have the opportunity to develop an in-depth research "path finder" or guide for an approved topic of their own choosing.

8650 Race And The Law Seminar (2-3). In-depth examination of the role that race plays in American society as a whole and in judicial decision-making in particular. Course will examine the effect of race on representative democracy, employment, education, housing, hate crimes, the legal profession, sex, popular culture, and other aspects of the law. Research paper.

8656 Public Defender Trials Clinic (3). As permitted by Missouri Supreme Court Rule 13, senior law students, under supervision, handle cases referred from the Public Defender. Students enroll for two semesters and are required to devote at least 10 hours per week to applied skills, weekly conferences, and lectures. Limited enrollment. Prerequisites: Criminal Law and Legal Writing I and II. Students must also have completed or be enrolled in Criminal Procedure I, Evidence, and Professional Responsibility. Ungraded. Pass/Fail.

8656A Missouri Attorney General's Office Clinic (2). As Permitted by Missouri Supreme Court Rule 13, second and third year law students, under supervision, work at the Attorney General's Office in Kansas City assisting with the duties and functions of the office provides the community. Students are required to devote at least 6 hours per week to formalized instructions, individual mentoring, and instruction and guidance from assistant attorney generals. Limited enrollment. Prerequisites: Rule 13 certification. Ungraded. Pass/Fail.

8656F Federal Public Defender Externship Clinic (2-3). Up to three students will be assigned to work in the Federal Public Defender's Office. Under the supervision of the Federal Public Defender, a student will prepare pleadings and represent federal indigent criminal defendants. Students will be expected to perform legal research, to write memoranda, motions and briefs, to observe and to appropriately participate in trials, pre-trial hearings, motion hearings and, in general, to assist in litigation. Students must meet eligibility requirements and be certified in compliance with the Local Federal Rules of Court. Student will work a pre-approved schedule totaling 6 hours a week for 14 weeks with a minimum of 80 hours a semester for two academic credit hours and to attend regular conference with their Supervising Attorney and with their Faculty Supervisor. Students must have completed three semesters of law school and must be in the upper half of their class. Ungraded. Pass/Fail.

8656P Jackson County Prosecutor Clinic (3). As permitted by Missouri Supreme Court Rule 13, senior law students, under supervision, appear in court and assist the Jackson County Prosecutor's Office with the duties and

functions the office provides the community. Students enroll for two semesters and are required to devote at least 10 hours per week to formalized instructions, individual mentoring, and instruction and guidance from assistant prosecutors. Limited enrollment. Prerequisites: Rule 13 certification, Evidence, Professional Responsibility, Criminal Procedure I, and Constitutional Law II. Ungraded. Pass/Fail.

8656R Federal Public Defender Externship Clinic (2-3). Up to three students will be assigned to work in the Federal Public Defender's Office. Under the supervision of the Federal Public Defender, a student will prepare pleadings and represent federal indigent criminal defendants. Students will be expected to perform legal research, to write memoranda, motions and briefs, to observe and to appropriately participate in trials, pre-trial hearings, motion hearings and, in general, to assist in litigation. Students must meet eligibility requirements and be certified in compliance with Local Federal Rules of Court. Student will work a pre-approved schedule totaling six hours a week for 14 weeks with a minimum of 80 hours a semester for two academic credit hours and to attend regular conferences with their Supervising Attorney and with their Faculty Supervisor. Students must have completed three semester of law school and must be in the upper half of their class. Ungraded. Pass/Fail.

8662 Court Clerkship (2). Second or third-year students with a GPA of at least 3.0 serve in a clerkship with a judge or magistrate of the U.S. District Court for the Western District of Missouri, or the U.S. Court of Appeals for the Eighth Circuit. Students work at least 70 hours at the court, and attend review conferences over the course of the semester. Ungraded. Pass/Fail.

8662F Family Court Clerkship (2-3). Second or third-year students will serve as law clerks to judges and commissioners in the family court of Jackson County. Students work at least 80 hours at the court and attend review conferences over the course of the semester. Pass/Fail.

8665A Animal Law (2). This course will begin with a brief overview of the philosophical and cultural issues underlying human/animal relationships, including basic theories of the legal systems's responses to social change. Legal issues relating to food animals, companion animals, laboratory animals, wild animals, and performing animals will be examined with reference to: (1) federal statutes (Animal Welfare Act, Endangered Species Act, Marine Mammal Protection Act, Wild Horses and Burros Act, Animal Damage Control Act, National Wildlife Refuge System Administration Act, Refuge Recreation Act, National Environment Police Act, and Humane Slaughter Act); (2) state statutes (anti-cruelty, wills and trusts, hunting, racing and fighting statutes); (3) local animal control regulations; and (4) extensive common law (standing, rights, free exercise of religion, property, landlord-tenant disputes, torts, marital dissolution and custody, and bailment).

8700 Trial Advocacy I (2). A practical skills course in advocacy which introduces students to the fundamental components of a typical civil and criminal trial and requires students to perform exercises involving each component and try a mock civil or criminal case from provided problem materials. The course is graded on a pass/fail basis. Prerequisite or corequisite: Evidence.

8702 Conflict Of Laws (2-3). Domicile; jurisdiction and limitations on the exercise of jurisdiction; judgments; full faith and credit; choice of law; conflicts problems in federal and international settings; conflicts problems in selected areas. Prerequisite: Civil Procedure.

8703 Trial Advocacy II (2). A practical skills course in the art of trial advocacy with an emphasis on technique, style, and methods of persuasion. During class sessions, students perform exercises involving the various stages of a law suit, and are critiqued on their performances. Following performance of the exercises, students are divided into teams and try a mock case in a trial competition, from which the Law School's National Trial Competition Teams are selected. The trials are evaluated by trial lawyers and federal or state judges. The course is graded on a pass/fail basis. A student may not enroll in this course and Trial Practice. Limited enrollment. Prerequisite: Trial Advocacy I

8705 Trial Advocacy III (2). Students, under the supervision of trial advocacy faculty, participate in trial competitions. Enrollment by invitation only. The course is graded on a pass/fail basis. Prerequisite: Trial Advocacy I and II.

8706 Complex Litigation (2-3). As related to litigation of complex cases, study of special issues of party joinder and intervention, class action requirements and limitations, discovery, case management, and estoppel by verdict or judgment. Prerequisites: Civil Procedure I and II.

8707A Advanced Legal Writing: Practical Skills Development (2-3). Preparation of students for writing problems commonly encountered in the first two years of law practice: jury instructions, general correspondence, opinion letters, simple contracts, litigation motions and pleadings including a complaint, answer and some discovery documents. Individual feedback provided. Prerequisites: None.

8707C Advanced Legal Writing: Litigation Drafting (2-3). Preparation of litigation documents and pleadings, including complaint or petition; cross-claim, counterclaim or third-party petition; answer; discovery documents

such as a set of interrogatories or requests to admit; dispositive motions; and settlement agreements. Prerequisites: Civil Procedure I & II.

8707D Advanced Legal Writing: Litigation Drafting-Criminal (2-3). Preparation of litigation documents and pleadings, including drafting search warrants, arrest warrants, indictments, information, motions, request for notice, and discovery.

8707E Advanced Legal Writing: Scholarly Writing (1). Preparation of students for scholarly writing including independent study, law review, and seminar papers. Focus will be on topic identification and refinement; developing a thesis; research strategies including reiterative and mediated searching, systemic evaluation of resources, problem typing and solving, and resources for specific topics in the law; proper attribution and use of authority; developing a working draft; and creating a balanced, thorough, and carefully reasoned and supported analysis.

8707T Advanced Legal Research & Writing: Transactional Law (1). Prepares students who wish to focus on transactional law. The course is also intended to facilitate research for the student's legal research and writing requirement. The course will refresh and refine research skills, help students to think systemically about legal research, and familiarize students with applicable resources. As the final project, students will have the opportunity to develop an in-depth research "path finder" or guide for an approved topic of their own choosing.

8709 Sales And Leasing (3). A survey of the law governing the sale and leasing of goods; Articles 2 and 2A of the Uniform Commercial Code and other relevant statutes, as well as international conventions; concepts introduced into contract law by the UCC; economic and social models used to analyze the function and application of the statutes. This class will satisfy the UCC requirement.

8710 Advanced Lawyering Processes (1-3). Legal analysis, research and writing; instruction and discussion of the research and writing process and related topics in legal method and legal education; supervised production of an expository writing, advocacy writing and scholarly writing; development of research and writing exercises for use in the first-year Legal Writing Program and service as Teaching Assistants in the Program; limited enrollment; admission by application to the instructor.

8711 Remedies (2-3). Remedies for violation of legally protected interests; history and development of equity jurisdiction and modern equity practice; injunctions; declaratory judgments; rescission; reformation; restitution; contempt; damages. Prerequisite: Civil Procedure.

8712 Problems And Issues In The Death Penalty (2). Issues and problems in the administration of the death penalty; the Missouri capital sentencing scheme; constitutional limitations, statutory schemes, state review systems, procedural matters and collateral review of death sentences.

8713 Death Penalty Clinic (1-2). The post-conviction process of collateral review in death penalty cases; training in legal representation of the postconviction petitioner. Pre- or Co-requisite: Problems and Issues in the Death Penalty.

8714 Gender And Justice (2-3). Students will examine and discuss legal issues of special importance to women. Topics will include (among others) sexual discrimination, sexual harassment, domestic violence, reproductive autonomy, and pornography. The course seeks to present each topic in its social context by supplementing legal readings with materials drawn from the social sciences, literature, and film. Paper required. Enrollment limited to fifteen students. Recommended: Constitutional Law I.

8714R Assisted Reproduction Seminar (2-3). An in-depth examination of assisted reproduction from a legal perspective. The course will include interdisciplinary study of the development of reproductive technologies and the implication for law and regulation. The course will attempt to situate the legal discussion within the context of the changing science and the nature of the industry. Discussion will therefore consider the international development of the industry, the importance of determinations of parenthood to its viability, potential exploitation of vulnerable patients, and the impact on the resulting children. Course topics will include consideration of the constitutional, family law and regulatory frameworks, posthumous reproduction, embryonic stem cell research and human cloning. An in-depth examination of assisted reproduction from a legal perspective. The course will include interdisciplinary study of the development of reproductive technologies and the implications for law and regulation. The course will attempt to situate the legal discussion within the context of the changing science and the nature of the industry. Discussion will therefore consider the international development of the industry, the importance of determination of parenthood to its viability, potential exploitation of vulnerable patients, and the impact on the resulting children. Course topics will include consideration of the constitutional, family law and regulatory frameworks, posthumous reproduction, embryonic stem cell a research and human cloning.

8714S Sexuality and the Law (1). An examination of sexual orientation, sexuality, and the law. This course will introduce students to

existing and emerging jurisprudence in these areas by examining case law with an eye toward how holdings in specific cases can be expanded or restricted in future litigation. The five-day course will examine the manner in which constructions of sexuality and sexual orientation have impacted the development of law in the areas of constitutional law (including speech and the right to privacy), employment, marriage, parenting, violence and military service.

8716 Cyberlaw And The Infosphere (2-3). Survey of the areas of the law with existing or potential application to computers (such as contract law, intellectual property law, criminal law, tort law and constitutional law) highlighting the legal issues involved in the areas studied.

8720 Secured Transactions (3). Secured Transactions in personal property under Article 9 of the Uniform Commercial Code, function and form of a security agreement, process of perfecting a security interest, priority among unsecured parties; secured sales of goods under Article 2 of the Uniform Commercial Code.

8721 Commercial Transactions (3). Law of negotiable instruments; bank collections; Articles 3 and 4 of the Uniform Commercial Code; electronic funds transfers.

8725 Water Law (2-3). Private acquisition of water rights through riparian ownership and prior appropriation; public rights to water existent in bed ownership easements and trusts; ground water management; water distribution organizations; federal allocation and control of water resources; interstate allocation.

8728 Law And The American Indian (2-3). An anthropological, historical and legal study of the American Indian, including a focus on American Indian traditional law and values, federal policy and current legal issues.

8729 Preservation Law (2-3). An exploration of the legal and economic issues impacting preservation of land, wilderness, buildings and archeological and historical sites, including a study of various federal and state preservation legislation, and private land use preservation measures.

8730 American Legal History (2-3). The development of American law from the colonial period to the present, including the formation of the Constitution and its subsequent interpretations, the evolution of common law categories, and the development of the legal profession and legal education, as well as the movements in American legal theory. Paper required.

8731 Professional Responsibility (2). Code of Professional Responsibility and the Model Rules of Conduct; role of the lawyer as a professional; confidentiality; conflict of interest; zeal within the bounds of the law; competency; providing legal services.

8732 Alternative Dispute Resolution (2-3). An overview of the emerging trend towards alternative forms of dispute resolution and some reasons for it, methods of dispute settlement, such as negotiation, mediation, arbitration and adjudication, the roles lawyers play in these various modes, problems and possibilities of non-adversarial methods of resolving conflict, particularly mediation.

8733 Children In The Law (2-3). The ways in which the legal system treats children differently from adults and the justifications for such treatment, who should make decisions for the child, decisional authority that should be granted to parents, children and the state in various contexts (e.g., abuse and neglect, health care for the child, foster care, adoption and education).

8733E Elder Law (2). A course providing a basic foundation for legal practice with older persons, including the following substantive topics: The Older Americans Act, the delivery of legal services to the elderly, ethical considerations, consumer protection, discrimination, Social Security and Supplemental Security Income, Medicare, Medicaid, capacity issues, guardianship and alternatives to guardianship, elder abuse and neglect, adult protective services, nursing homes, long term care, housing, healthcare decisions, end-of-life decisions, estate planning and grand parents' rights.

8733R Juvenile Offenders & The Law (2-3). An examination of our justice systems's historical treatment of juvenile delinquent and status offenders, and how the goals and objectives of the past have evolved into today's juvenile offender laws; the rights of juvenile offenders in contrast to those of adult criminals; pre-trial and trial procedural issues under the juvenile code; certification of the juvenile offender as an adult; dispositional/treatment alternatives for juvenile offenders; schools and the juvenile offender.

8734 Mediation (2). The process in which a neutral third party assists others in resolving a dispute or planning a transaction; introduction to the nature of the process, its possibilities and limitations, its current and future uses, and how lawyers can and should be involved in it; public policy and political issues surrounding the mediation movement; professional responsibility and malpractice.

8735 Seminar In Famous Trials (2-3). Historical and jurisprudential issues involved in a number of "political trials."

8735P Seminar in Pre-Twentieth Century Famous Trials (1). This seminar will explore six or seven of the most famous trials from ancient times to the

end of the nineteenth century. The trials covered will vary from year to year, but will be taken from a list that includes the trials of Socrates, Jesus, Joan of Arc, Sir Thomas More, Galileo, the Salem witches, John Peter Zenger, the British soldiers charged in connection with the Boston Massacre, Aaron Burr, the slaves of the Amistad, John Brown, the Lincoln Assassination conspirators, Susan B. Anthony, the Haymarket rioters, Lizzie Borden, and Oscar Wilde. Each trial will be examined from many perspectives, both with an eye to deepening students' appreciation for history and their understanding of the tactical and ethical questions faced by attorneys involved in these famous cases. Materials for the seminar can be found on the Famous Trials website. Grades for the seminar will be based both on an in-class objective examination and a short paper addressing an issue raised in a famous pre-twentieth century trial.

8735R Law Of The European Union (Part I) (1). An in-depth study of the legal and political framework and institutions of the European Union; the Commission, Council of Ministers, Court of Justice, Court of Auditors, and the European Parliament. Course will examine the interlocking web of European treaties, the expansion of the European Union, the European Union as a trade block and Ireland as a gateway to the European Union for non-bloc nations.

8736 Debtor-Creditor Rights (2-3). Creditors' remedies and debtors' rights; provisional remedies; secured transactions (Article 9 of the Uniform Commercial Code); liens and exemptions; overview of bankruptcy law.

8737R Law Of The European Union (Part II) (2). An examination of the substantive and procedural law governing the member states of the European Community including such topics as the nature and application of European Union Law, the relationship between European Union and national laws, remedies in national courts, enforcement actions, damages and money claims, free movement of goods and workers competition laws, intellectual property, equal treatment of women and men, and non-discrimination.

8738 Immigration Law And Process (2-3). Admission, exclusion, deportation, and naturalization of aliens; structure and powers of relevant federal agencies; categories of immigrant and non-immigrant visas and visa application procedures; asylum, extradition, and refugee status; rights of aliens; public policy issues and proposals for reform; practical problems in immigration.

8738P Immigration Law and Policy (2-3). A focus on the historical development of immigration law in the United States and fundamental questions of immigration policy. Immigration bills in Congress have been the subject of heated debate, particularly in recent years. This course provides a historical, statutory, and theoretical background for evaluating such proposals. Students will evaluate proposed federal and state legislation across the country and immigration reforms in foreign countries. Particular emphasis will be placed on post-9/11 reforms and the relationship between immigration law and the war on terrorism. The subject matter is useful for the student who intends to practice immigration law, as well as for the non-specialist interested in Immigration law as a policy matter

8740M Missouri Civil Procedure (2-3). "Selected problems in Missouri civil procedure under Missouri statute and rules. Topics may include venue and personal jurisdiction, pleading and motion practice rules on joinder of parties and claims, statutes of limitation, trial procedure, post-trial motions & appellate procedure, discovery, and preclusion. (2-3 hours)"

8740S Civil Procedure III-Post Trial Issues (2-3). This course will provide an in-depth study of the appellate court system- an advanced civil procedure course focused on the appellate process. It will cover important topics not typically covered either in civil procedure or complex litigation (or, for that matter, in appellate advocacy courses). Students will learn about the structure of appellate courts, preservation of error, standing to appeal, the final judgment rule and its exceptions, standards of review (e.g., de novo, abuse of discretion), rules and mechanics for initiating appeals, alternative dispute resolution at the appellate level, preparing the record for appeal, brief writing, oral argument, rehearing en banc, certiorari, selection of appellate judges, opinion writing, and judicial canons of ethics. While there will be significant focus on techniques for effective brief writing and oral argument, the bulk of the course will focus on legal rules and concepts, not on skills. The principal emphasis will be on federal courts, but significant attention will also be paid to state appellate courts, particularly those whose rules and practices differ markedly from those in federal court.

8743 Comparative Law (2-3). Historical and analytical study of the substantive and procedural nature of foreign systems, focusing on a comparison of the civil and common law traditions.

8744 Jurisprudence (2-3). Nature of law; principal schools of juristic thought; fundamental concepts in development of legal system; relation of law and society. Paper required.

8745 Law Review (1-3). Editorial work in connection with the "UMKC Law Review." Open to students selected on basis of scholarship. Ungraded.

8745R Law Review Board (1-5). The members of the Law Review Editorial Board edit articles and student notes and comments for publication in the University of Missouri Kansas City Law Review; and shepherd the articles and student pieces through the production process.

8746 Research & Writing Requirement (2). Completion of a paper of publishable quality, demonstrating intensive research and analysis under faculty supervision.

8746B Bridging the Research Gap: From Classroom to Practice (1). Research training, including firsthand observation at a courthouse of how a case moves through the legal system and hands-on use of print and electronic research tools for problem solving and analysis of results to help students make the transition from doing legal research for the classroom to the practice setting. Students will use Lexis' Total Litigator package of resources; Westlaw sources for transactional research; sources for legislative history, administrative law and secondary sources; and learn to develop research strategies and how to analyze the results for each.

8746I Internship (0).

8746W Introduction to Workers' Compensation Law and Practice (1). An introduction to the general history and purpose of the workers' compensation laws with a particular emphasis on Missouri law. Students will be presented with and guided through actual workers' compensation problems which will introduce them to the practical aspects of the practice in this specialized area. With permission from Jefferson City and the Department of Labor and Industrial Relations, the students will be exposed to actual workers' compensation hearings, mediations and other courtroom practices held at the law school and presided over by an Administrative Law Judge.

8747 Appellate Advocacy II (1). Preparation of memorandum (points relied on and summary of argument); presentation of two arguments before practicing attorneys. Ungraded.

8748 Appellate Advocacy III (2). Ellison Moot Court Competition; preparation of an appellate brief and presentation of two oral arguments before federal and state judges. Open to the 16 finalists from Appellate Advocacy II. Ungraded.

8750 Urban Lawyer (1). Staff members of the Urban Lawyer receive credit for writing case notes, annotations, and statutory developments, for editing articles, for editing comments and book reviews, and for participation in urban legal conferences. Research Editors of the Urban Lawyer receive additional credit for writing a major article or comment for publication in the journal. Ungraded.

8750B Urban Lawyer Board (1-5). Members of the Urban Lawyer Editorial Board, articles that are submitted and coordinates student written case digests and comments for publication in The Urban Lawyer. The members of the board ensure the articles and student pieces conform to publication standards and work the articles through the production process. Board members must take at least one credit in the fall semester and can carry over the remaining allocated credits to the winter semester. Ungraded.

8751 Family Law (2-3). Pre-marital contracts; marriage; annulment; paternity; parent and child; divorce; alimony; division of property; separation agreements; adoption.

8751P Interdisciplinary Perspectives On Women & Violence (1). Jointly-taught by Law School, Medical School, Nursing School and Graduate School of Social Work faculty, this interdisciplinary approaches to problems of violence and women, such as domestic violence, sexual assault, child abuse, women as perpetrators of violence, and others. Using a combination of readings, simulations, skills trainings, team preparations and presentations of case studies and individual reflective papers, the Course is designed to engage professional students in understanding each discipline's approach to describing the problem, interacting with patients/clients in identifying the problem and sharing perspectives on developing plans to prevent and address the problem with and on behalf of these patients/clients. Through interactive exercises the students from each discipline will learn to effectively collaborate with other professionals to provide coordinated responses to issues of violence.

8751S Family Violence (2-3). An in-depth examination of family violence from a legal perspective. Course topics will include interdisciplinary study of the dynamics and psychology of family violence, of historical and social policies, specialized problems of family violence (including intimidated partner violence, child abuse and neglect, gay and lesbian battering, and elder abuse) and legal responses. Students will receive practical training in safety planning, intake, review of community resources, case logistics, and advocacy for temporary orders.

8752G Guardian Ad Litem Workshop (1-2). Advanced study of guardian ad litem practice. (GAL). Topics may include adult and child orders of protection, requirements for guardian ad litem appointments, role of the GAL, ethical considerations, working with social workers and other professionals, and best practices in investigation, recommendation, and representation. Students will partner with volunteer attorneys to act as guardians ad litem in order of protection cases. Prerequisites: Rule 13 eligible. Limited Enrollment, Instructor approval required.

8752R Family Law Practice (2). A practical skills course in family law in which students participate in all phases of family law practice, including the initial client interview; the drafting of questionnaires, pleadings, motions

custody and discovery plans, support and maintenance proposals, orders and other documents; negotiation, and preparation for litigation. Students work in teams and perform exercises which simulate "real world" situations. Prerequisite: Family Law.

8752S Child & Family Services Clinic (2-3). Students represent the Missouri Department of Family Services in representing children in foster care or otherwise under the authority of the Department. Students work under the supervision and direction of clinic faculty and faculty directors, receiving classroom instruction in the substantive law and procedure governing juvenile court actions. Students must be Rule 13 eligible. Pass/Fail.

8753 International Law (2-3). Survey of international legal studies; nature and role of international law, its effectiveness in dealing with international problems and its application in domestic jurisdictions.

8753L Transnational Litigation & Arbitration (2-3). Legal issues involved when litigation crosses international borders, including such issues as: International service of process, international discovery, extraterritoriality, sovereign defenses and foreign legal environments (courts, lawyers, clients, laws).

8754 International Business Transactions (2-3). Legal problems encountered in international business; jurisdiction and choice of law; enforcement of judgments; methods of protecting foreign investments; extra-territorial application of United States regulations, e.g. anti-trust law.

8757 Business Planning (2-3). Problem-method study of choice of entity and various other legal issues and planning challenges in forming a closely held business entity and in private and public financing of an existing enterprise. The course includes practical training from drafting organizational documents to conducting simulated client interviews and providing written advice concerning hypothetical transaction. Limited enrollment.

8757L Special Topics In Entrepreneurial Lawyering (1-2). Examination of issues related to ethical and effective management and marketing of law practice, emphasizing solo and small firm practice. Topics will vary from year to year, but will generally address issues such as forms of practice, dissolution of practice, practice management systems (including technology assistance), human resources management, advertisement and solicitation, insurance and malpractice.

8757N Entrepreneurship & New Venture Creation (3). Jointly-taught by Law School and Bloch (Business) School faculty, this interdisciplinary course provides education in entrepreneurship to a combined class of students from law, business, engineering and perhaps other graduate-level disciplines. Using a combination of readings lectures, electronic blackboard discussions, team business planning projects and presentations, and individual presentations on selected topics, the Course is designed, from a law student's perspective, to both (1) familiarize the student with substantive knowledge of issues from multiple disciplines involved in creating a new venture to commercialize technology and (2) train law students in techniques designed to effectively communicate and resolve legal issues inherent in such projects in a collaborative manner with clients and their advisors from other disciplines.

8757R Entrepreneurial Law & Practice Clinic (2-3). Under faculty supervision, students will counsel start-up companies and their owners and implement business planning advice by drafting articles of incorporation and organization, by-laws, partnership agreements and other business contracts. Other business-related matters ranging from regulatory, consumer, licensing, and taxation requirements; copyrights, trademark, and patent creation; and 501(C)(3) applications for non-profits may also be covered in this course. Clinic students will also receive classroom instruction in the areas of client counseling and business planning and drafting of business documents. Prerequisites: Business Organizations, Commercial Transactions, Professional Responsibility (or concurrent enrollment). Missouri Supreme Court Rule 13 certification required for in-court representation.

8757S Special Topics in Business Law Practice (1). Specialized course of study in the following areas relating to transactional practice: conducting research in special areas of business and tax law, with related exercises; application of ethical rules to issues commonly arising in business/tax practice fact patterns; overview of deferred compensation techniques with which business and tax lawyers should be at least generally familiar; selected issues in corporate finance and venture capital, with emphasis on advanced/hybrid financial instruments not covered in detail in the Business Organizations course; and negotiation skills training, including a lecture on negotiation rules, etc., and review and critique a tape of negotiators in action. Completion of this course will satisfy both the advanced research and ethics requirements of the Business & Entrepreneurial Law Emphasis.

8758S Securities Regulation (2-3). Problem and policy method study of the Securities Act of 1933 and selected aspects of the Securities Exchange Act of 1934; financing of an enterprise; reorganizations; tender offers; proxy regulation; and securities fraud claims.

8760 Insurance (2). Life, fire, accident, and liability insurance; nature of insurance; nature of insurance contract; special rules of construction; standard policy provisions; regulation of insurance industry.

8763 Labor Law (2-3). Regulation of labor relations pursuant to the national Labor Relations Act, focusing on the establishment of collective bargaining relationships, unfair labor practices, collective bargaining, strikes, picketing and pre-emption.

8764 Administrative Law (1-3). Introduction to the administrative process; role, function, and processes of administrative agencies; policy issues of administrative government; judicial review.

8764D Food, Drug & Biotechnology Law (2-3). This course will focus primarily upon the regulation of food, drugs and the products of biotechnology, such as biologic drugs and genetically modified plants and animals. Much of the course will pertain to FDA law, but will also consider the roles of other regulatory agencies such as the EPA and USDA, and the interaction of state and federal law. This area of the law provides an interesting vehicle for exploring the adoption of interpretation of statutory law, the notice and comment rule-making process, administrative law and judicial review of administrative decisions, and the interplay of science, policy and the law.

8765 Federal Jurisdiction (2-3). Federal court system and jurisdiction of the federal courts; diversity of citizenship; removal of cases from state to federal courts; conflicts between state and federal judicial systems; original and appellate jurisdiction of the Supreme Court. Prerequisite: Civil Procedure.

8766 Land Use Planning (2-3). Legal and administrative aspects of land use and the problems and techniques of urban planning; statutory anti-nuisance devices; controlling land use by private methods (restrictive covenants, easements, and servitudes); zoning; subdivision controls; public acquisition of land; building and housing; urban renewal and redevelopment; environmental quality control (air, water, and conservation); relationship of lawyers, planners, private builders, and owners to governmental policies.

8768 National Labor Relations Board Clinic (2-3). One-semester clinic in which student(s) will be assigned to the Kansas City Office of the National Labor Relations Board. Under the direction and supervision of the Regional Director, the student(s) will participate in the investigation and prosecution of unfair labor practice charges filed by employers, unions and employees. The student(s) may participate in conducting elections to determine whether employees shall be represented by a union. The student(s) will also assist in Federal District Court litigation to obtain injunctions against NLRA violations. Tasks will include document review, witness interviewing, research and case preparation. Bi-weekly conferences with faculty supervisor and log of clinic activities also required. Prerequisite: Labor Law.

8768R Department Of Labor Clinic (2-3). Students work with the solicitor's Office of the United States Department of Labor assisting attorneys enforcing federal labor statutes, including the Fair Labor Standards Act, OSHA, ERISA, and the Davis-Bacon Act. Under the supervision of the Deputy Regional Solicitor, students perform legal research relating to enforcement actions, draft discovery requests review documents, participate in client and staff conferences, and assist in the investigation of violations. Clinic participants maintain a log of their activities and have bi-weekly conferences with the faculty supervisor to review and evaluate their clinic experiences and research work product.

8770 State And Local Government Law (2-3). Structure, powers, and divisions of local governments in metropolitan areas; role and powers of cities, counties, towns, school and special districts; decentralized and neighborhood governmental units and other local governmental units; legislative, home-rule, and constitutional sources of power; sovereign immunity; boundary adjustments; public employee relations; citizen participation; reapportionment; licensing and permits; ethics and public access to records; regional governance; intergovernmental cooperation; interstate compacts and authorities; function of local government with reference to solution of problems created by urban growth; role of judicial, administrative, and political processes.

8771 Public Finance (2-3). Fiscal, economic, and taxation problems and powers of local government in metropolitan areas; constitutional limitations; spending and public finance; property taxes; special assessments and exactions; interstate tax acts; local income taxes; debt financing; debt adjustment; public expenditures and contracts; financing education.

8773 Environmental Law (2-3). This course covers law developed to control pollution and to protect our country's physical environment. The course provides introductions to ecological theories and to early common law efforts to protect the environment. But the course mainly focuses on current environmental statutes (for instance, the Superfund Act, the Resource Conservation and Recovery Act, the Clean Air Act, and the Clean Water Act) and on current federal constitutional issues involving the environment. (Priorities in this mix may vary from year to year, depending on current events and related course offerings). Enforcement policies, citizen activism the needs of private industry, and the administrative process are also considered. No prerequisites.

8773R Environmental Law Clinic (2-3). Student(s) perform clinic activities at the United States Army Environmental Office, including performing legal research, writing position papers, attending state and federal regulatory hearings, participating in planning conferences and assisting with litigation.

Students are supervised by the Central Regional Environmental Chief Coordinating Attorney and attend regular conferences with a faculty supervisor who reviews copies of all clinic written work that may be so reviewed under the United States Army Environmental Office rules. Prerequisites: Environmental Law or Administrative Law. Ungraded. Pass/Fail.

8773T Environmental & Toxic Torts (2-3). An advanced torts course about compensation for damages caused by toxic contamination. It will address advanced theories of nuisance, trespass, negligence and strict liability. Particular emphasis will be given to proof and causation problems, and to novel and evolving legal theories for recovery. The course will also consider the problems posed by multiple parties, vicarious liability, and the interaction between common law and statutory remedies. The content will be tailored to supplement the environmental law curriculum. Offered: Winter Semester 2001

8775 Appellate Advocacy Iv (1). Participation on National Moot Court competition team. Ungraded.

8778 Workshop On Current Issues In Family Law (2). Under direction of professor, students provide editorial assistance in publishing Journal of the American Academy of Matrimonial Lawyers, write a paper on selected topics and prepare summaries and bibliography of current works. Limited enrollment. Prerequisite: Family Law.

8782 Environmental Law Seminar (2-3). This course provides the theoretically inclined student the opportunity to address broad issues of public policy and resource allocation in more depth than the basic environmental survey course allows. The seminar will also involve case studies and class problems to give the course real-world context. The seminar will typically focus on one particular ecological issue, such as environmental justice, sustainable development, or ecology as jurisprudence. No Prerequisites, but Environmental Law is helpful. Fulfills the "J" requirement.

8782R Us Environment Protection Agency Law Clinic Nat. Agr Cmpl Ast Ctr (2-3). students will be assigned to work with EPA's National Agriculture Compliance Assistance Center (AG Center). Under the supervision of an attorney with the Ag Center, a student will be expected to perform legal research, write memoranda, develop compliance assistance materials, respond to inquiries from the regulated community, and participate as appropriate in meetings, conferences, and training sessions with EPA, other federal agencies, trade associations, etc., and, in general, assist in the activities of the Ag Center. Students must have completed three semesters of law school. Preference will be given to students who have completed Environmental Law or administrative Law. Eligible interested students will then be screened and selected. Ungraded. Pass/Fail.

8782S U.S. Environmental Protection Agency Clinic, Region Vii (2-3). Students will be assigned to work at the EPS's Region VII Headquarters in Kansas City, Ks. Under the supervision of an EPA attorney, students will be expected to perform legal research, write memoranda, develop compliance assistance materials, respond to inquiries from the regulated community, and participate as appropriate in meetings, conferences, and training sessions with the EPA. Students will attend regular conferences with their Supervising Attorney and Faculty Supervisor, and will produce a final written project based on their experience. Students must have completed two semesters of law school. Preference will be given to students who have completed an environmental course at the Law School. Eligible students will be screened and selected. Positions limited. Ungraded, pass/fail.

8783 Natural Resources Law (2-3). Exploitation and conservation of natural resources; management of federal lands; water law; energy law; federal wildlife preservation; resolution of disputes involving use of natural resources.

8790 Legal Aid Clinic (2-3). Internship at offices of Legal Aid of Western Missouri. Students receive instruction in basic poverty law representation and techniques for experiential learning and, depending on placement, are given supervised instruction and practice opportunities in client counseling, fact investigation and discovery, case preparation and pleadings, community advocacy and trial techniques. Faculty and Legal Aid attorney supervision. Limited enrollment. Concurrent enrollment in certain courses may be required for some field placements. Ungraded. Pass/fail.

8791 Civil Rights (2-3). Elements of a Section 1983 case, enforceable rights and available defenses; procedural aspects of civil rights cases; suits against federal and state governments. Prerequisites: Constitutional Law I.

8792S Seminar On Gun Law & Policy (1-3). This course examines legal and public policy issues relating to firearms and the role they play in the United States, with a particular emphasis on debates about the meaning of the Second Amendment and attempts to hold gun manufacturers and sellers liable under tort law. Research paper required. No prerequisite courses.

8796 Economics And The Law (2-3). Tools of economic analysis which have particular application in the law; equity and efficiency are weighed in regulation, pollution, discrimination, monopoly, financial markets, human resources and government expenditure and taxation policy. Principles will be introduced and expanded upon using both lecture and case study techniques.

8797 Business Torts And Unfair Competition (2-3). The common law applicable to relations between businesses that compete against each other or that cooperate with each other in the production and distribution of the same product. Tort, contract and property law principles as remedies not available in parallel statutory schemes, such as the antitrust or patent laws. Statutes that codify the common law or create statutory procedures or remedies for common law rights. (Consent of the instructor required for students who have taken Copyright, Patent and Trademark Law).

8798 Copyright Law (2-3). Protection extended to works of authorship including literary works, computer programs, works of applied art, sound recordings, photographs, etc. under U.S. copyright law. How protection for works is achieved, the nature of rights protected, transfer of rights, and infringement actions. Related common law rights that may exist under doctrines such as implied contract, unfair competition, right of privacy, and right of publicity. (Consent of the instructor is required for students who have taken Copyright, Patent, and Trademark Law).

8800 Legal Research Thesis (1-8). Research for LL.M. thesis.

8807 Problems In Bankruptcy (2). Selected problems in bankruptcy with emphasis on procedure. Topics may include Chapter 11 reorganizations, consumer bankruptcy issues, wage-earner plans.

8808 Intellectual Property Law (2-3). Substantive and procedural law of intellectual property. Coverage includes copyrights and patents and other areas at the option of the instructor.

8808R Law Of Information Technology (1). The course will examine some legal issues that the use of Information Technology has created. The course will focus upon United Kingdom and Irish substantive law, informed by legislative developments prompted by European Union legislative initiatives. These measures and approaches will be contrasted with United States law and legislative proposals. No specific expertise in the use of computers is required of the students.

8813 Employment Discrimination Law (2). Substantive and procedural aspects of Equal Employment Opportunity Act and related matters.

8814R Employment Law (2-3). Survey of legal doctrines regulating the employment relationship, including the regulation of wages, hours and benefits; privacy in the workplace; workers' compensation; suits for unjust dismissal; drug and polygraph testing; and sexual harassment. May be offered as a seminar.

8815 Products Liability (2-3). Theory and practice in products liability cases; negligence; misrepresentation; strict liability; theories of product defect; applicability of the Uniform Commercial Code including warranties and disclaimers; actions among members of the distribution chain.

8815R Disabilities And The Law (2-3). An interdisciplinary study of the law relating to disabled persons in the areas of employment, education, and access to transportation, health, welfare and social services to provide an understanding of how the law affects individuals with disabilities and public and private entities. Legislation considered include the American with Disabilities Act, Section 504 of the Rehabilitation Act of 1973, the individuals with Disabilities Education Act, the Family and Medical leave Act, the Fair Housing Act, the Voting Accessibility for the Elderly and Handicapped Act, and the Title VII of the Civil Rights Act of 1964. The enrollment of graduate students from other disciplines, such as education, business, and health sciences is encouraged to allow for interdisciplinary discussion of the topics involved.

8815S Leadership In Disability Studies: A Multidisciplinary Approach (3-4). An overview of the history of disability issues, some individualized perspectives of persons with disabilities, the rationale for interdisciplinary approaches regarding disability studies, and opportunities for leadership development with regard to disability issues. The students will participate in a forum that encourages reflection, exchange of ideas, interaction with persons with disabilities and persons from various fields of study, and case analysis. After an orientation to the study of disabilities, various aspects of community membership for persons with disabilities will be addressed, particularly with regard to the workplace, the neighborhood, and the home. Emphasis will be placed on vital leadership roles that facilitate community membership and contribution of persons with disabilities to society.

8820 Criminal Trial Techniques (2). Strategy and tactics in handling a criminal case; effective representation of the accused at various stages of the criminal process; securing pre-trial release; plea bargaining; motion practice; discovery; voir dire; opening and closing statements; examination of witnesses; use of the expert; sentencing; appeal; collateral attack.

8820R Seminar In The Ethics Of Criminal Advocacy (2). Advanced study of selected topics relating to the ethical obligations of prosecutors and defense attorney. Topics may include special obligations of prosecutors, secrecy and confidentiality, conflict of interest, the limits of zealous advocacy, marketing and fees, competence and related subjects. Paper and presentation required. Pre-requisite: Professional Responsibility. Suggested pre- or co-requisite: Criminal Procedure I and II. Limited Enrollment.

8826 Seminar In Constitutional Interpretation (2-3). Current issues in constitutional law. Paper required. Prerequisites: Constitutional Law I.

8827R Seminar In Religion & The Law (1-2). This seminar will explore the complex interaction between religion and the legal system, including a study of famous trials raising issues of religion. Also emphasized, will be the interpretation given to the Establishment Clause and Free Exercise Clause by the Supreme Court, and the fundamental question of what role religious values can and should play in shaping our criminal law. Other topics to be addressed might include ministerial privilege, application of tort law to religious institutions, tax exemptions for religious institutions, conscientious objection, and efforts to apply religious doctrine in legal education.

8831R International Human Rights Law (1-3). Study of the law protecting individuals and groups against governmental violations of internationally guaranteed rights; historical antecedents and theoretical underpinnings; human rights in national law (the United States); post World War II developments; principal international human rights instruments; regional human rights arrangements; human rights of women, refugees, ethnic minorities; implementation of rights; international obligations of the United States; selected civil, political, economic and social rights.

8832 Law Of International Trade And Finance (3). Study of the World Trading System, focusing on policy and application, including the WTO, the NAFTA, U.S. trade remedies, foreign direct investments controls, and export controls.

8834 Tax Procedure (2). Problem-method study of procedures and taxpayers' rights when deficiencies are assessed by the Internal Revenue Service; tax liens; commencement of litigation in Tax Court, Federal District Court, and Court of Claims.

8834R Tax Clinic (1-3). Students counsel clients in federal, state and local tax controversy matters in the Kansas City Tax clinic, under the supervision and direction of tax faculty, clinic director, and volunteer attorneys. Classroom instruction in the area of tax controversy procedure and client counseling. Prerequisite: Federal Income Tax and Tax procedure (or concurrent enrollment). Method of grading: Pass/Fail.

8837 Negotiating Mergers And Acquisitions (2-3). Problem-method study of corporate, tax, securities, and business problems entailed in buying and selling a corporation; fundamental corporate changes: recapitalizations, mergers, sale of assets, sale of stock, and tender offers; corporate finance and rehabilitation of financially distressed corporations.

8838L Legal Accounting (1). Accounting as it relates to the work of a lawyer. Understanding financial statements (balance sheet, income statement, cash flow, shareholder's equity), analysis of financial statements; deferral concepts (inventory, depreciation, prepaid expenses), understanding accounting principles, valuation (present value, future value.).

8838R Tax Practicum I (1-3). Practical skills training in the sources and methods of tax research (including electronic database sources) using problem method approaches; analytical and planning skills are developed through in-depth case study research.

8843 Federal Income Taxation Of Estates And Trusts (2). Income tax problems of the fiduciary; grantor's trusts; income, estate, and gift tax problems relating to optional or discretionary acts of the fiduciary in retention and/or distribution of income or corpus.

8845 Deferred Compensation (2-3). Problem-method study of deferred compensation arrangements; qualified pension and profit sharing plans; individual retirement accounts; qualified stock option plans; other methods of deferred compensation.

8846 Professional Malpractice Litigation (2-3). Negligence by those in professions; consideration of the practice components of litigating legal malpractice claims, including investigation, jurisdiction, legal theory and defenses, pleading, discovery, trial, expert testimony, jury instructions and judgment. Prerequisite or co-requisite: Professional Responsibility

8848R State And Local Taxation (2-3). State and local taxation of income, sales and property, including the apportionment of tax obligations to multiple states. Restrictions imposed by constitutional doctrines such as the uniformity and equality requirement and the prohibition on interfering with interstate commerce.

8853R Seminar In Law, Science & Technology (2-3). A research seminar which provides a survey of cutting edge issues that arise when the law is forced to confront advances in science and technology and in which students working individually research, write and present on a current law and science or technology topic, such as the facilitation, funding, protection and commercialization of technology; the transfer of technology from the public to private sector; intellectual property issues; bioterrorism; industrial espionage and the protection of trade secrets; technology in the courtroom; scientific evidence; bioethics; forensic anthropology; agricultural biotechnology and cyber law.

8858 Consumer Protection (2-3). Protection of consumers from false advertising, unfair sales practices, and consumer credit and debt collection abuse. Topics which may be covered are Truth-in-Lending Act, Uniform Consumer Credit Code, Fair Debt Collection Practices Act; Interstate Land Sales Disclosure Act, Federal Trade Commission and Missouri Attorney General activity, Missouri consumer credit legislation, consumer warranties, consumer class actions, abusive collection practices.

8860 Communications Law (2-3). The First Amendment as it relates to the mass media; media access to sources of information; conflict between the right of a defendant to a fair trial and the rights of the media; governmental restraints on the publication of information; individual's right to recover for publication of false information or embarrassing facts; differential treatment of broadcast and print media; First Amendment limitations on the FCC's regulation of broadcasting in such areas as licensing, discussion of controversial issues, and advertising.

8861 Real Estate Finance (3-4). Real estate investment and development; basic financing instruments (e.g., mortgages, deeds of trusts, contracts for deed); foreclosure remedies; home finance, national housing market; financing of commercial and industrial properties; construction financing; mechanic's liens; priority disputes; bankruptcy issues affecting real estate security interests.

8867R Social Security Administration Law Clinic (2-3). Students assist an Administrative Law Judge in performing duties handled by the Social Security Administration, including reviewing files of pending cases; conducting legal research; attending hearings and participating in conferences, as assigned; preparing recommendations for the disposition of motions and for on the record decisions; and preparing draft decisions. Students are supervised by an attorney advisor and attend regular conferences with a supervising faculty member who reviews copies of all clinic written work that may be so reviewed under Social Security Administration rules. Prerequisite: Administrative Law. Ungraded. Pass/Fail.

8868 Trusts: Planning, Drafting, Administering & Litigating (2-3). Focus on advanced planning and drafting of inter vivos private express trusts for individuals, including proper use of readily available forms (tax-related drafting limited to marital and charitable deduction forms), consideration of trustee's duties, powers and liabilities pursuant to the Missouri Trust Code and related cases, and special emphasis on the recently-adopted Uniform Investor Act and the significant changes it has introduced to Missouri trust investment law. Estates & Trusts is a prerequisite to this course, and concurrent enrollment in Estate Planning & Drafting is advised.

8870R Education Law: Government & Legal Aspects Of Education (2-3). This course is designed to give students an introduction to the major legal doctrines that affect K-12 schools, as well as the policies that underlie or are changing those doctrines. Students should gain a working understanding of the impact of federal and state law on the operation of schools, the rights and responsibilities of teachers and administrators, and the rights of the students who attend those schools.

8874 Tax-Exempt Organizations (2). An in-depth examination of the state and federal laws that govern the formation and operation of tax-exempt organizations, with emphasis on Sec. 501 (c) (3) charities; criteria for tax-exempt status; IRS application and reporting procedures; unrealized business income tax issues.

8875 Real Estate Transactions (2-3). Practice-oriented course, including the development of drafting skills, in which questions involving basic residential and commercial real estate sales and civil and leasing transactions are considered, such as title, title insurance, contract conditions, contract remedies, commercial leasing (office and shopping center issues) and issues concerning and confronting brokers; special emphasis on Missouri and Kansas law.

8877 Bankruptcy Court Clerkship (2). The United States Bankruptcy Courts have jurisdiction over claims arising under federal bankruptcy law. Cases in these courts present issues arising not only under the Bankruptcy Code, but also in many other areas, such as secured transactions, contract law, labor law, and tax law. Student interns will, among other duties, observe court proceedings, assist in writing legal memoranda, and draft opinions. Enrollment in the Bankruptcy Court Clerkship Program is limited to students who have completed both Secured Transactions and Debtors & Creditor's Rights. Students work at least 70 hours at the court; and attend monthly conferences with the professor in charge of the program's over site.

8880 Consumer Bankruptcy (2). Comprehensive analysis of the options available to consumer debtors under chapters 7 and 13 of the Bankruptcy Code. While the primary focus will be on the debtor's options, creditor strategies will also be considered. Recommended: Debtor/Creditor Rights.

8881 Seminar On The Supreme Court (3). Students simulate the work of the Supreme Court on nine cases presently pending before that court. The student justices study the briefs and related material filed in each case, discuss and vote on the cases, and write majority and dissenting opinions. Enrollment in the seminar is limited-fittingly-to nine justices.

8882 Patent Law (2-3). This course will focus primarily on substantive U.S. patent law, including the laws governing the patentability of particular inventions, the patent procurement process, the rights granted by a patent, and patent enforcement and litigation. As time permits, the course will explore policy issues raised by the current patent system, discuss proposals for reform and international harmonization, and consider alternatives to patent protection such as trade secret and regulatory exclusivity.

8882R Patent Prosecution (2). This course will focus primarily on the practical application of substantive U.S. patent law, including the laws governing the patentability of particular inventions, the patent procurement process, the rights granted by a patent, and patent enforcement and litigation. In particular, this class will focus on teaching students how to draft a patent application and how to prosecute the application in the U.S. Patent and Trademark office. This class will be designed to mirror the substantive patent law being taught in the Patent Law course. For example, the Patent Law course will present the law and theory of obviousness or novelty; the Patent Prosecution course will instruct in how to deal with and respond to an obviousness or novelty rejection from the U.S. Patent and Trademark Office.

8882S Patent Law Seminar (2-3). Patent Law Seminar: A two-hour course for study of advanced patent law topics of current interest. The classes will analyze now-controlling Federal Circuit law on issues such as patentable subject matter, double patenting, post-issuance PTO procedures (reissue, re-exam), and infringement/validity of means-plus-function claims.

8883 Seminar In National Security Law (2). Consideration of lawyer involvement in the formulation and execution of national security policy. Concentration will be upon the practice of law in the public sector. In an interdisciplinary undertaking, this course will define national security and examine its historic and theoretical roots. Domestically, Constitutional principles and rules will be studied. Use of force will be explored from the vantage point of ethics, international law, and the law of war. Legal issues surrounding problems of control of international terrorism, low intensity conflict, planning and using rules of engagement, and supporting international peace-keeping and peace-making missions will be discussed.

8884 White Collar Crime (2-3). Examines substantive federal law in the areas of fraud, public corruption, financial crimes and conspiracy; it also includes examination of procedural and policy issues related to business and white-collar investigations. Prerequisites: Criminal Law and Criminal Procedure I.

8886 Corporate Taxation I (3). Tax treatment of corporations and shareholders with respect to formation, non-liquidating distributions, stock dividends, redemptions and liquidations. The course will also cover the personal holding company tax, the accumulated earnings tax, collapsible corporations, multiple corporations and an overview of S corporations.

8887 Corporate Tax II (3). Tax consequences of corporate reorganizations; survival of tax attributes; acquisition of loss corporations; and a survey of consolidated return reporting. Prerequisite: Corporate Taxation or Instructor's permission.

8888R Partnership Taxation (2-3). An in depth examination of the tax principles governing partnerships limited liability companies and other unincorporated organizations classified as partnerships for tax purposes, including questions involving the tax consequences of the formation of such organizations, operating distributions, basis computations, liquidating distributions, and sales of ownership interests.

8889 International Taxation (2-3). An introduction to the taxation of income of U.S. citizens, residents and corporations from foreign sources and the income of foreign residents and non-residents from U.S. sources. Topics may include sources of income rules, foreign tax credit provisions, the earned income exclusion for foreign source income, income tax treaties and a survey of the tax treatment of U.S. investments made offshore.

8890A Sports Law I, Amateur Sports Law (2-3). Coverage of various amateur sports law issues with a focus on the regulation of interscholastic, intercollegiate sports, Olympic and international sports, and sports broadcasting; including such topics as constitutional law, tort law, contract law, and Title IX gender discrimination; and a consideration of federal disability discrimination laws, the status of collegiate athletes who participate in big time sports programs, the regulatory authority of the National Collegiate Athletics Association, The National High School Athletic Association, international and Olympic sports organizations.

8890R Entertainment Law (2-3). An examination of the legal issues affecting the print and broadcast media. Topics covered may include copyright, antitrust, spectrum allocation, right of privacy, first amendment issues (prior restraint, obscenity, commercial speech, defamation and access to both information and judicial proceedings), licensing and new technologies including and beyond cable television.

8892R Taxation Of Estates, Gifts And Trusts (2-3). Problem method study of estate, gift and generation skipping transfer taxes and the income taxation of estates and trusts. Emphasis on lifetime and post-mortem planning as well as compliance requirements.

8895 The Jury: Practice And Perspectives (2). Examination of the American jury from both practical and theoretical perspectives; Constitutional issues relating to jury representativeness, use of peremptories, and alleged jury bias; jury selection techniques; juror information processing and the dynamics of jury deliberations; jury competence; jury size; juror misconduct; jury "nullification"; proposals for reform of the jury system.

8895S Jury Selection (1). Students study the purpose of voir dire and the law pertaining to jury selection and receive hands-on experience in selecting a jury role-playing as lawyers; jurors, and presiding judge in a concluding 2 1/2 hour courtroom simulation (where a jury is selected after making challenges for cause and exercising preemptory strikes); and learn that jury selection is an art not a science-which needs to be tailored to the facts of the case and the witnesses the attorney expects to present. An actual case involving a badly injured young plaintiff and a large corporate defendant-where liability is questionable-is used for the simulation. Students learn active listening skills and how to interpret non-verbal behavior. Examples form prominent, practicing lawyers are presented. The course is graded on a pass/fail basis.

8897 Seminar In Legal Education (1-2). Pedagogical philosophy of legal education; common themes in first-year legal education; techniques of cooperative learning of legal materials. Students may act as study group leaders for various first-year course subjects. Ungraded.

8898 Construction Law (2). The Construction Law course would emphasize state and federal construction law and would provide the students with practical experience in drafting contracts, negotiating disputes, and conducting a mock arbitration. The course would cover the contract responsibilities and remedies of contractors, subcontractors, design professionals, sureties and owners, including the United States Government. The course would emphasize the controlling state and federal statutes and regulations, as well as case law which illustrates the application of the statutes and other areas of law not covered by statute. The classroom sessions will include discussion of the practical aspects of legal practice in the construction industry, with instruction and examples regarding the drafting of documents and contracts, negotiation of disputes, and decision-making regarding the type of dispute resolution forum to recommend to a client.

8899 Required Grad Enrollment (1).

Life Sciences - Cell Biology and Biophysics Courses

5505 Molecular And Cellular Neurobiology (3). The molecular basis of chemical and electrical communication between nerve cells. Topics will include: neurotransmitters, neuropeptides, receptors, channels, second messengers, cytoskeleton, cell adhesion, development, neuronal plasticity and psychopharmacology. Prerequisite or corequisite: LSMBB 5561 and 5562.

5520 Eukaryotic Cell Biology (3). A presentation of the cellular and subcellular organization and function of eukaryotic cells. Discussions will emphasize basic concepts by which structure and functions are integrated. Prerequisite or co-requisite: LSMBB 5561 and 5562.

5530 Prokaryotic Molecular Biology (3). Molecular aspects of gene structure and function in microorganisms and their viruses. Emphasis on macromolecular synthesis, regulation of gene expression, genetic transfer and recombinant DNA techniques. Prerequisite or corequisite: LSMBB 5561 and 5562.

5538 Molecular Recognition In Cellular Biology (2). Graduate Research Seminar. Studies of the latest development leading to an increased understanding of cellular biology processes when the experimental tools for structure biology analysis and molecular genetics are applied. Prerequisites: LSMBB 5561 as co-or pre-requisite, or permission of SBS graduate advisor. Offered: Fall

5566 Membrane Biochemistry And Biophysics (3). Structure and function of biological membranes including architecture, dynamics, models, biochemical compartmentation, energy transduction, transport mechanisms, membrane protein structures, and cell surface receptors. Prerequisite or corequisite: LSMBB 5561 and 5562.

5569 Structural Biology, Methods And Strategies (3). Analysis of strategies and methodologies such as X-ray crystallography, nuclear magnetic resonance and advanced microscopy procedures including imaging analysis for the study of relationships of higher order macromolecular structures to biological functions. Prerequisites: LSMBB 5561 AND LSMBB 5562. Restrictions: Restricted to AU 60 and 73 students.

5583 Current Topics In Cell Biology And Biophysics (1-3). Current topics and recent developments in cell biology and biophysics with emphasis on rapidly developing research areas. Prerequisite or co-requisite: LSMBB 5561 and 5562. Restricted to SBS graduate students and Interdisciplinary Ph.D. students.

5591 Directed Individual Studies In Cell Biology And Biophysics (1-6). Intensive reading and/or research in an area selected by the graduate student in

consultation with the instructor. Prerequisites: Prerequisite or corequisite: LSMBB 5561 and 5562. Restricted to SBS graduate students and Interdisciplinary Ph.D. students.

5596 Advanced Experimental Cell Biology I (2). Structured laboratory work with individual tutorial sessions designed to familiarize first year Interdisciplinary Ph.D. students with concepts and techniques of modern cell biology research. 1-2 hr/wk tutorial and 15-20 hr/wk of laboratory work. Prerequisite or co-requisite: LSMBB 5561. Restricted to Interdisciplinary Ph.D. students with CBB or MBB as coordinating unit.

5597 Advanced Experimental Cell Biology II (2). Continuation of LSCBB 5596. Prerequisite or corequisite: LSMBB 5561 and 5562. Restricted to Interdisciplinary Ph.D. students with CBB or MBB as coordinating unit.

5599 Thesis Research In Cell Biology And Biophysics (1-12). Research and thesis preparation for M.S. degree candidates. Prerequisite or co-requisites: LSMBB 5561 and 5562. Restricted to School of Biological Sciences graduate students and Interdisciplinary Ph.D. students.

5612 Seminar In Cell Biology And Biophysics (1). Presentation and discussion of selected areas in cell biology and biophysics. This course may be repeated by doctoral students for a maximum of 3 credit hours. Prerequisite or corequisite: LSMBB 5561 and 5562.

5690 Analytical Methods In Cell Biology And Biophysics (1-4). A course that emphasizes the development of skills in experimental design, analytical methods and instrumentation as applied to problems of interest to modern cell biology and biophysics, and analysis of results. Can be repeated up to a maximum of eight hours total. Prerequisites: LSMBB 5561+LSMBB 5562; admission in I.Ph.D program with CBB as coordinating or co-discipline; can only be taken prior to reaching candidacy.

5699 Dissertation Research In Cell Biology And Biophysics (1-12). Research and dissertation preparation for interdisciplinary Ph.D. degree students who have Cell Biology and Biophysics as a discipline. Prerequisite or corequisite: LSMBB 5561 and 5562. Restricted to SBS graduate students and Interdisciplinary Ph.D. students.

Life Sciences - Molecular Biology and Biochemistry Courses

5503 Eukaryotic Molecular Biology (3). Molecular aspects of gene structure and function in eukaryotic organisms and their viruses. Emphasis on genome structure and organization, gene expression and regulation and the molecular basis of growth and development. Prerequisite or Co-requisite: LSMBB 5561 and 5562.

5538 Molecular Recognition In Molecular Biology (2). Graduate Research Seminar. Analysis of the impact of most recent developments in molecular genetics and structural biology as related to fundamental molecular recognition events. Prerequisites: LSMBB 5561 as co-or pre-requisite, or permission of SBS graduate advisor. Offered: Winter

5561 General Biochemistry I (4). The first semester of a two-semester sequence in general biochemistry. This course will emphasize the structure of biological molecules, thermodynamics and kinetics of biological reactions, and selected aspects of energy metabolism and metabolic pathways. Prerequisite: CHEM 322R.

5562 General Biochemistry II (4). The second semester of a two-semester sequence in general biochemistry. This course will emphasize selected aspects of the biochemistry of metabolism and macromolecular assemblies. The molecular basis of genetic and metabolic regulation will be discussed. Prerequisite: LSMBB 5561.

5565 Structure And Function Of Proteins (3). This course will discuss structure-function relationships of proteins. Topics will include: methods of structure-function analysis, catalytic mechanisms, and regulation of enzyme activity. Prerequisite or corequisite: LSMBB 5561 and 5562.

5567 Physical Biochemistry (3). Application of physical and chemical principles to elucidate structure and function of biochemical systems. The various modes of interactions between biologically important molecules and the specificity of their interaction will be examined through selected literature examples. Prerequisite or co-requisite: LS MBB 5561 and 5562.

5569 Current Topics In Molecular Biology And Biochemistry (1-3). Current topics and recent developments in biochemistry and molecular biology with emphasis on rapidly developing research areas. Prerequisite or co-requisite: LSMBB 5561 and 5562. Restricted to SBS graduate students and Interdisciplinary Ph.D. students.

5591 Directed Individual Studies In Molecular Biology And Biochemistry (1-6). Intensive readings and/or research in an area selected by the graduate student in consultation with the instructor. Prerequisite or co-requisite: LSMBB 5561 and 5562. Restricted to SBS graduate students and Interdisciplinary Ph.D. students.

5596 Advanced Experimental Molecular Biology I (2). Structured laboratory work with individual tutorial sessions designed to familiarize first year Interdisciplinary Ph.D. students with concepts and techniques of modern molecular biology research. 1-2 hr/wk tutorial and 15-20 hr/wk of laboratory work. Prerequisite or co-requisite: LSMBB 5561. Restricted to Interdisciplinary Ph.D. students with CBB or MBB as coordinating unit.

5597 Advanced Experimental Molecular Biology II (2). Continuation of LSMBB 5596. Prerequisite or co-requisite: LSMBB 5561 and 5562. Restricted to Interdisciplinary Ph.D. students with CBB or MBB as coordinating unit.

5599 Thesis Research In Molecular Biology And Biochemistry (1-12). Research and thesis preparation for M.S. degree candidates. Prerequisite or co-requisite: LSMBB 5561 and 5562. Restricted to School of Biological Sciences graduate students and Interdisciplinary Ph.D. students.

5611 Seminar In Molecular Biology And Biochemistry (1). Presentation and discussion of selected areas in biochemistry and molecular biology. This course may be repeated by doctoral students for a maximum of 3 credit hours. Prerequisite or co-requisite: LSMBB 5561 and 5562.

5690 Analytical Methods In Molecular Biology And Biochemistry (1-4). A course that emphasizes the development of skills in experimental design, analytical methods and instrumentation as applied to problems of interest to modern molecular biology and biochemistry, and analysis of results. Can be repeated up to a maximum of eight hours total. Prerequisites: LSMBB 5561+LSMBB 5562; admission into I.Ph.D. program with MBB as coordination or co-discipline; can only be taken prior to reaching candidacy.

5699 Dissertation Research In Molecular Biology And Biochemistry (1-12). Research and dissertation preparation for interdisciplinary Ph.D. program students who have Molecular Biology and Biochemistry as a discipline. Prerequisite or co-requisite: LSMBB 5561 and 5562. Restricted to SBS graduate and Interdisciplinary Ph.D. students.

Life Sciences Courses

5899 Required Graduate Enrollment (1).

Mathematics Courses

5509 General Algebra I (3). Groups, rings, modules, homology, fields and Galois theory, valuations, matrices, and multilinear algebra. Prerequisite: Math 410 or equivalent. Note: Continued in Math 5519.

5510 Complex Variables I (3). The group of linear fractional transformations, complex integration, Cauchy's theorem, the maximum modulus theorem, analytic continuation, Riemann surfaces. Note: Continued in Math 5520. Prerequisite: Math 402 and Math 407, or consent of instructor.

5513 Real Variables I (3). Theory of measure with applications to analysis. Riemann and Lebesgue integration. Note: Continued in Math 5523. Prerequisite: Math 402.

5514 Mathematics For Secondary Teachers: Algebra And Analysis (3). Designed for secondary-school teachers. Examine high school mathematics from a higher point of view. Real and complex numbers, functions, algebraic structures of equations, integers and polynomials, number system structures; analyses of alternate approaches, extensions and applications of mathematical ideas, discussion of historical contexts and connections between ideas that may have been studied separately in different courses, relationships of ideas studied in secondary-school to those students may encounter in later study. When taken for graduate credit as Math 5514, an extra project is required. Prerequisites: Math 220, Math 301, and one of Math 402 or Math 410 Offered: Every Winter

5517 Matrix Theory I (3). Unitary matrices, normal matrices, Jordan canonical form, nonnegative matrices and their applications, the symmetric eigenvalue problem. Prerequisites: Math 402 and 420, or consent of the instructor

5519 General Algebra II (3). Continuation of Math 5509.

5520 Complex Variables II (3). Continuation of Math 5510.

5521 Differential Equations (0-3). This course offers an introduction to the qualitative theory and applications of ordinary differential equation (ODE). The presentation of the course will be a blend of fundamental theory and examples. The basic results will be proved rigorously and more advanced results will be only illustrated by examples that demonstrate when and how they may be applied. Prerequisites: Math 345, Math 412 and Math 420, or consent of the instructor.

5523 Real Variables II (3). Continuation of Math 5513.

5524 Mathematics For Secondary Teachers: Geometry (3). Designed for secondary-school teachers. Examine high school mathematics from a higher point of view. Congruence, distance and similarity, trigonometry, area and volume, axiomatics and Euclidean geometry; analyses of alternate approaches, extensions, and applications of mathematical ideas, discussion of historical

contexts and connections between ideas that may have been studied separately in different courses, relationships of ideas studied in secondary-school to those students may encounter in later study. When taken for graduate credit as Math 5524, an extra project is required. Prerequisites: Math 220, Math 301, and one of Math 402 or Math 410 Offered: Every Fall on Demand

5530 Axiomatic Set Theory (3). Zermelo-Fraenkel set theory, transfinite induction equivalents of the axiom of choice, cardinal and ordinal arithmetic, the generalized continuum hypothesis, inaccessible cardinals.

5532 Advanced Numerical Analysis I (3). Error Analysis, Solving Systems of Linear Equations, Solutions of Nonlinear Equations, the Least-Squares Problems, and Approximating functions. Prerequisite: Math 402 and 420 or consent of instructor. Note: Continued in Math 5542.

5542 Advanced Numerical Analysis II (3). Eigenvalues and Eigenvectors, Linear Programming, Optimization, Numerical Differentiation and Integration, Numerical Solution of Ordinary and Partial Differential Equations. Prerequisite: Math 532 or consent of instructor. Note: Continuation of Math 5532.

5552 General Topology (3). Topological spaces, continuity, metric spaces, topological products, connectedness, compactness, separation axioms, convergence, metrization theorems, Tychynoff's Theorem. Other topics may include: homotopy, fundamental group, function spaces. Prerequisites: Math 402, or consent of instructor

5557 Functional Analysis (3). Hilbert spaces, linear operators, compact operators, Banach spaces, the Hahn-Banach theorem, the open mapping and closed graph theorems, the principle of uniform boundedness, locally convex spaces. Prerequisites: Math 402 and 420

5590 Special Topics (1-3). Selected topics in various fields of mathematics. May be repeated for credit when the topic varies. Prerequisite: Consent of instructor.

5699 Research And Thesis (1-16). Doctoral dissertation.

5899 Required Graduate Enrollment (1).

Mechanical Engineering Courses

5500 Problems (1-6). Supervised investigation in mechanical engineering to be presented in the form of a report.

5501 Advanced Topics In Mechanical Engineering (3).

5501E Advanced Topics In Mechanical Engineering (3).

5501F Advanced Topics In Mechanical Engineering (3).

5501G Advanced Topics In Mechanical Engineering (3).

5501H Advanced Topics In Mechanical Engineering (3).

5501HP Advanced Topics In Mechanical Engineering (3).

5501L Advanced Topics In Mechanical Engineering (3).

5501M Advanced Topics In Mechanical Engineering (3).

5501N Advanced Topics In Mechanical Engineering (3).

5501P Advanced Topics In Mechanical Engineering (3).

5501PL Advanced Topics In Mechanical Engineering (3).

5501R Advanced Topics In Mechanical Engineering (3).

5501T Advanced Topics In Mechanical Engineering (1-3).

5504 Advanced Metallurgy Principles (3). Advanced treatment of physical metallurgy principles to provide a theoretical understanding of engineering materials. Prerequisite: ME 324.

5505 Imaging Techniques In Materials Science (3). Introduction to imaging techniques, including x-rays, neutron beams, electron beams and acoustic energy, to study material properties and structure. Prerequisite: ME 324

5533 Statistical Thermodynamics (3). Statistical methods of evaluating thermodynamic properties. Elements of quantum mechanics, statistical mechanics and kinetic theory applied to topics of engineering thermodynamics. Prerequisites: ME 360 and ME 399

5534 Fracture Mechanics I (3). Mechanics of flawed structure. Concepts include Griffith theory, Barenblatt's theory, Irwin analysis, energy analysis of cracked bodies, fracture toughness testing, plane strain, plane stress, transition temperature concepts, subcritical flaw growth. Prerequisite: ME 324.

5535 Heat Transfer-Conduction (3). Techniques for determining temperature distribution and temperature history within solids. Prerequisite: ME 399.

5542 Introduction To Computational Fluid Dynamics And Heat Transfer (3). Introduction to the principles and development of the finite-difference approximations to the governing differential equations of viscous and inviscid fluid flow, as well as heat transfer. Introduction to discretization methods and the calculation of flow fields, convection, diffusion and conduction. Prerequisites: ME 399 and ME 441

5545 Instrumentation Theory (3). Applied theory of dynamical and energizing systems for analyzing, computing, control devices. Prerequisite: ME 362

5558 Dynamical Theory (3). Engineering principles and application in mathematical expression of energy, force, inertia system. Prerequisite: ME 485 and Math 345.

5595 Microscale Heat Transfer (3). Review of existing models. Concept of thermal lagging and the second-law admissibility. Applications to low temperatures, thermal processing of thin-film devices; amorphous materials; advanced composites. Prerequisites: ME 399.

5599 Research (1-99). Independent investigation in field of mechanical engineering to be presented as a thesis.

5601 Doctoral Topics In Mechanical Engineering (3).

5601A Doctoral Topics In Mechanical Engineering (3).

5601C Doctoral Topics In Mechanical Engineering (3).

5601E Doctoral Topics In Mechanical Engineering (3).

5601G Doctoral Topics In Mechanical Engineering (3).

5601R Doctoral Topics In Mechanical Engineering (3).

5601S Doctoral Topics In Mechanical Engineering (3).

5601SA Doctoral Topics In Mechanical Engineering (3).

5603 Directed Readings In Mechanical Engineering (3). Faculty supervised readings course. Prerequisite: Graduate Standing

5610 Seminar (1). Review recent investigations, projects of major importance in mechanical engineering.

5616 Theory Of Plasticity (3). Plastic yield conditions and stress-strain relations. Behavior of elastic-perfectly plastic members. Plain strain in plastic members. Prerequisite: ME 621; and ME 622 or instructor's consent

5618 Advanced Dynamics (3). Fundamental principles of advanced rigid body dynamics with applications. Special mathematical techniques including Lagrangian and Hamiltonian methods. Prerequisite: ME 385

5621 Continuum Mechanics (3). Introductory course in the mechanics of continuous media. Basic concepts of stress, strain, constitutive relationships; conservation laws are treated using Cartesian tensor notation. Examples from both solid and fluid mechanics investigated. Prerequisite: ME 351, MATH 345 and CE 276. Same as CE 621

5622 Theory Of Elasticity (3). Stress and strain at a point. General equations of elasticity. Plane stress, plain strain problems; torsion of prismatic bars. Energy methods. Same as CE 622. Prerequisite: ME 621

5623 Theory Of Plates And Shells (3). Bending of plates with various loading and boundary conditions. Deformations, stresses in thin shells. Same as CE 623. Prerequisite: ME 621

5624 Theory Of Elastic Stability (3). Buckling of columns, beams, rings, curved bars, thin plates, shells. Same as CE 624. Prerequisite: ME 621

5627 Dynamics Of Machinery (3). Dynamic balancing or rotating and reciprocating components of turbo-machinery and internal combustion engines. Gas torque analysis, vibration stress analysis and equivalent systems. Numerical and graphical techniques. Prerequisite: ME 484.

5630 Boundary Layer Theory (3). Fluid motion at high Reynolds Number. Derivation of Navier-Stokes equations and boundary layer equations. Methods of solution. Transition to turbulent flow. Completely developed turbulent flow. Prerequisite: ME 441.

5636 Heat Transfer-Convection (3). Principles of heat transfer by convection, review of boundary layer theory, laminar and turbulent heat transfer, temperature-dependent fluid properties, high velocity heat transfer and an introduction to mass transfer. Prerequisites: ME 399 and ME 630.

5637 Heat Transfer-Radiation (3). Advanced study of engineering radiation heat transfer. Concepts of electromagnetic theory. Development of thermal radiation laws from thermodynamic laws. Analysis of grey and non-grey systems with intervening gases. Study of recent literature. Prerequisites: ME 399.

5638 Introduction To Turbulence (3). Introduction to the physical phenomena of turbulence, supported by mathematical and statistical descriptions. Especially appropriate for engineers involved in research aspects of momentum, heat, and mass transport. Prerequisite: ME 441

5639 Introduction To Two Phase Flow (3). An introduction to the analysis of the mechanics and transport processes in two phase flows. Prerequisite: ME 441.

5644 Fracture And Fatigue Prevention In Engineering Practice (3). Practical design problems. Introduction to retrofit design, maintenance, product improvement and new design from a fatigue and fracture prevention philosophy. Fail safe and safe life designs are presented. Prerequisite: ME 534.

5651 Computational Fluid Dynamics (3). Principles and development of the finite-difference approximations to the governing differential equations of viscous and inviscid fluid flow. Application to selected model equations. Introduction to boundary layer and Navier-Stokes codes, and to grid generation. Prerequisite: ME 542.

5660 Combustion (3). Study of advanced topics in flames and combustion. Detonation and deflagrations, supersonic combustion, air pollution. Prerequisite: ME 441.

5676 Finite Element Methods (3). The concepts and fundamentals of the finite element method with applications to problems in solid and fluid mechanics. Prerequisite: ME 486 or CE 421. Same as CE 676

5679 Dynamics Of Structures (3). Study of the dynamic behavior of structures. Analysis of equivalent lumped parameter systems for the design of structures in a dynamic environment. Prerequisites: ME 484 and CE 276; or CE 421, Math 345, and ME 285

5685 Advanced Vibration Analysis (3). Advanced topics in vibration theory and its application to Mechanical systems. Topics include vibration analysis of multi-degree of freedom, distributed and nonlinear systems, random vibration analysis, and vibration control. Prerequisite: ME 484 or instructor's consent.

5699 Research And Dissertation (1-9). Doctoral dissertation research.

Nursing Courses

5515NA Role Of The Nurse Administrator (3). This course builds upon the fundamentals of advanced practice nursing by focusing on the subrole of the nurse administrator. Content focuses on essential knowledge for today's senior and executive level manager in health care. Core content are principles of administration, resource management, managed care, budgeting, marketing, health care delivery system evaluation, and utilization of theory and research. This course consists of three hours of lecture/discussion per week. Due to the experiential learning activity associated with time spent with a nurse leader this class meets every OTHER week. Prerequisite: Admission to the MSN program or permission of instructor.

5515NE The Role Of The Nurse Educator (2). This course will explore the role of the nurse educator. Emphasis will be the development and evaluation of the nurse educator in the functional areas of community education, staff education, and academic education. In each of these areas topics such as role transition, productivity, job duties/responsibilities, and role enactment evaluation, will be discussed and compared one to the other. Core content includes: role theory, subroles of the nurse educator (leader, learning facilitator, collaborator/consultant, inquirer, and clinical expert), adult education philosophy, the effect of education research on nurse education and trends of nursing education. Prerequisite: Admission to the MSN program or permission from instructor.

5516 Curriculum Development (2). This course is designed to facilitate curriculum development and evaluation for the nurse educator functioning in a variety of settings such as academia, staff development, and community education. The historical development of curriculum will be discussed. Furthermore, several definitions of curriculum will be identified and contrasted in relation to curriculum development and evaluation. Development of classes, courses, and programs will be differentiated and discussed in relation to the learner, regulatory bodies, and desired learning outcomes. Core content will include: pedagogy and andragogy, components of curriculum, steps of curriculum development, accrediting bodies appropriate to the setting, and development of an evaluation plan. Prerequisites: Admission to the Master of Science in Nursing program or permission of instructor.

5517 Teaching Strategies (2). This course is designed to explore a variety of instructional and testing/evaluation methods used by nurse educators in academia, staff development, and community education. Emphasis will be placed on the rationale for selection of appropriate instructional methods in relation to learning theories, the learners, the content, and the evaluation methods. Each instructional method will be discussed in terms of preparation, time frame, appropriateness, techniques and evaluation. Core content will include: theories of learning, principles of adult learners, learning objectives for the classroom, community and clinical settings, development of appropriate audiovisuals, and student evaluation in both the classroom and clinical settings. Prerequisites: Admission to the Master of Science in Nursing program or permission of instructor.

5518 Curriculum Development And Teaching Strategies (3). This course examines the theoretical base for development of the nurse educator role for undergraduate nursing education. Concepts of learning, instructional design, and curriculum design are examined. Issues in higher education and nursing education are considered as they impact the design of instruction for nursing. This is one of three courses in a series to prepare beginning nurse educators undergraduate nursing education. Students will be introduced to curriculum development, instructional design, teaching strategies, and evaluation methods. Prerequisite: BSN Degree

5519 C & I Field Experience (1). This one credit hour study will provide the student the opportunity to apply various principles of curriculum development and evaluation to various types of educational programs including staff education, community education and associate degree education. Prerequisite: N518

5526 Health Promotion Across The Lifespan (3). This course is designed to provide students with a strong knowledge base related to concepts of health promotion and health protection for clients across the life span. Clients are conceptualized as individuals, families and populations. An application of various developmental theories for the child, adult, older adult and family will provide the basis to individualize health-care needs for various age and family groups. Core concepts for the course include: theories of health and health promotion and protection, reasoned action, health belief model, epidemiology, disease and injury prevention, health education, growth and development, nutrition, and family systems theory. Prerequisites/Co-Requisites: N550 Theoretical Foundations in Nursing.

5527 Cultural Diversity & Values (3). This course explores how each individual's life context and social, cultural, political, historical, and economic influences (that is, one's culture) shape or, "construct" that individual's values, beliefs and behaviors. Applying concepts and theory from anthropology, philosophy, sociology, and nursing, the course expands students' basic knowledge of cultural diversity, approaches to culture and cultural competency, values and ethics-related terminology, theories of moral development, culture and value assessment skills, and ethical decision-making models for clinical practice. The values inherent in the development of advanced practice nursing are explored, and students examine their own understanding of the moral nature of advanced practice nursing. Core concepts for the course include: cultural awareness, cultural knowledge, cultural skill, cultural encounter, values clarification, ethical analysis, conflict of interest, and conflict resolution strategies. Offered: Every Fall, Every Summer

5528 Policy, Politics & Professional Ethics In Health Care (3). This course presents an overview of policy, politics, financing and professional ethics within the health care organizations and systems, with emphasis on current trends. Attention is given to the relationship between these issues and improving nursing health care delivery and outcomes. Offered: Every Winter & Every Summer

5530A The Experience Of Health In Aging: Physiological (1). This one-credit hour course is designed for students interested in understanding the role of health in the aging population. The 530A course will focus primarily on physiologic and psychological/cognitive functioning of the older adult. Theoretical, empirical and applied knowledge of the aging process is presented. This knowledge is utilized in assessing and interpreting the physiological and psychological influences of the aging on health. This knowledge may also be used in developing strategies for the promotion, restoration, and maintenance of health in the aging population. This course meets for five weeks. Additionally, a field experience encompasses assessment and written documentation of in-person interviews conducted with an older adult. Instructional class activities include lecture, group discussion, written reactions, dialogue with visiting speakers, and health assessment papers presented by students.

5530B The Experience Of Health In Aging: Relationship (1). This one-credit hour course is designed for students interested in understanding the role of health, environment and relationships in the aging population. The N530B course will focus primarily on loss/grief and relationships as these relate to the older adult. Theoretical, empirical and applied knowledge of the aging process is presented. This knowledge is utilized in assessing and interpreting the influences of relationships, intimacy, loss, grief, and dying on health. This knowledge may also be used in developing strategies for the promotion, restoration, and maintenance of health in the aging population. This course meets for five weeks. Additionally, a field experience encompasses assessment and written documentation of in-person interviews conducted with an older adult. Instructional class activities include lecture, group discussion, written reactions, dialogue with visiting speakers, and health assessment papers presented by students. Offered: Every Winter

5530C The Experience Of Health In Aging: Community (1). This one-credit hour course is designed for students interested in understanding the role of health, community, systems and service delivery in the aging population. The N530C course will focus primarily on community, health systems and service delivery as these relate to the older adult. Theoretical, empirical and applied knowledge of aging and the health system and delivery process is presented. This knowledge is utilized in assessing and interpreting the influence of the community and health care delivery systems on the health of older adults. This knowledge may also be used in developing strategies for the promotion, restoration, and maintenance of health in the aging population. This course meets for five weeks. Additionally, a field experience encompasses assessment and written documentation of in-person interviews conducted with an older adult. Instructional class activities include lecture, group discussion, written reactions, dialogue with visiting speakers, and health assessment papers presented by students. Offered: Every Winter

5547A Diagnostic Reasoning/Advanced Assessment (4). This course is designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals. The course builds on basic health assessment skills and emphasizes advanced assessment skills, lab work interpretation, validation, documentation and analysis of assessment findings. This course consists of 2-3 hours lecture/discussion and 1 hour of clinical/lab credit. Prerequisites: Free-standing Health Assessment Course.

5547C Diagnostic Reasoning/Advanced Assessment (4). This course is designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals. The course builds on basic health assessment skills and emphasizes advanced assessment skills, lab work interpretation, validation, documentation and analysis of assessment findings. This course consists of 2 hours of lecture/discussion and 1 hour of clinical/lab credit. Prerequisites: Free-standing Health Assessment Course.

5547F Diagnostic Reasoning/Advanced Assessment (4). This course is designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals. The course builds on basic health assessment skills and emphasizes advanced assessment skills, lab work interpretation, validation, documentation and analysis of assessment findings. This course consists of 2-3 hours of lecture/discussion and 1 hour of clinical/lab credit. Prerequisites: Free-standing Health Assessment Course.

5547N Advanced Health Assessment Of The Neonate (3). A developmental and systematic approach to the advanced assessment of physiological, psychological, sociocultural and developmental aspects of the fetus, mother in the prenatal period, and the neonate is discussed. The approach builds on basic assessment skills and emphasizes perinatal, genetic, and embryologic factors impacting neonatal development. Ways to assess the pregnant woman for problems, the use of special diagnostic tests, and the assessment of the neonate also are expected. This course requires 40 hours of laboratory/clinical activities during the semester, which provide opportunities to implement various assessment and diagnostic procedure, complete a perinatal history. This three credit hour course consists of two hours of lecture/discussion and five hours of clinical/lab per week.

5547PM Diagnostic Reasoning/Advanced Assessment (2). This course is designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals. The post-MSN student will build on previous advanced assessment skills and content with emphasis on adding advanced physical assessment skills, lab work interpretation, validation, documentation and analysis of assessment findings appropriate to their desired role area. Students will meet the same outcome standards of the track in which they are currently enrolled. This course consists of 1.5 hrs of lecture/discussion and .5 hours of clinical/lab credit (40 minimum clinical hours and approval of clinical hours by faculty). Prerequisites: Free-standing Health Assessment Course.

5547W Diagnostic Reasoning/Advanced Assessment (4). This course is designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals. The course builds on basic health assessment skills and emphasizes advanced assessment skills, lab work interpretation, validation, documentation and analysis of assessment findings. This course consists of 2-3 hours lecture/discussion and 1 hour of clinical/lab credit. Prerequisites: Free-standing Health Assessment Course.

5548 Advanced Pathophysiology (3). Advanced pathophysiology is the study of the alterations of normal physiological functioning in cellular, tissue, organ and organ systems. These alterations form the basis for understanding a variety of pathophysiological conditions and the manifestations and impact of abnormal physiological functioning on clients across the life-span. Advanced pathophysiology deals with both generalized processes and major organ system dysfunctions. This course consists of three hours of lecture/discussion per week.

5548C Advanced Pediatric Pathophysiology (3). In this course, embryology of the major organ systems, as well as specific physiologic and pathophysiologic processes relevant to the child from birth through age 18 will be studied. This course focuses on the implications for advanced nursing practice that result from alterations of normal physiologic functioning in cellular, tissue, and organ systems. Emphasis is placed on the relationship between pathophysiology, decision-making, and standards of advanced nursing practice. Prerequisite: Admission to the Master of Science in Nursing or permission of the instructor.

5548N Physiology/Pathophysiology Of The Neonate (3). Concepts of embryology, neonatal physiology and pathophysiology are used to provide an in-depth study of normal functioning and alteration of normal physiological functioning in cellular, tissue, organ, and organ systems. Alterations form the basis for understanding a variety of pathophysiological conditions and the manifestations and impact of abnormal physiological functioning on neonates.

Both generalized processes and major system dysfunctions are addressed. This three credit hours course consists of three hours of lecture and discussion each week. Prerequisites: Admission to the Neonatal Nurse Practitioner Track/Master of Science in Nursing or consent of the instructor

5549 Pharmacology For Advanced Nursing Practice (3). This is a course in clinical pharmacotherapeutics that builds on prior knowledge of drug classification, actions, interactions and adverse drug reactions. The major focus of the course is the pharmacotherapeutic use of medications for primary health care management by advanced practice nurses. Emphasis is placed on the clinical critical thinking process used to prescribe drugs in the management of specific illnesses. The Missouri laws for advanced practice nurse prescriptive authority will be addressed. Core concepts include pharmacodynamics, pharmacokinetics, pharmacotherapeutics, health-related information, medication compliance and issues that pertain to the prescribing of medications in advanced nursing practice. This course consists of three hours of lecture/discussion/in-class clinical module work per week. Prerequisite: N548

5549C Pediatric Pharmacology For Advanced Nursing Practice (3). This is a course in clinical pharmacotherapeutics that builds on prior knowledge of drug classifications, actions, interactions and adverse drug reactions. The major focus of the course is the pharmacotherapeutic use of medications for primary health care management of children from birth to eighteen years of age by advanced practice nurses. Emphasis is placed on the clinical critical thinking process used to prescribe drugs in the management of specific illnesses. The Missouri laws for advanced practice nurse prescriptive authority will be addressed. Core concepts include pharmacodynamics, pharmacokinetics, pharmacotherapeutics, health-related information, medication compliance and issues that pertain to the prescribing of medications in advanced nursing practice. Prerequisite: N548 Advanced Pathophysiology

5549N Pharmacology For The Neonate (3). Pharmacological agents used in the management of neonates are discussed. Pharmacologic principles are reviewed and applied to the use of drugs in the Level II or III NICU. The clinical use of drugs in the management of specific illnesses of the neonate are explored. In addition, legal considerations for the Advanced Practice Nurse are stressed. This three hour credit course consists of three hours of lecture/discussion per week.

5550 Theoretical Foundations In Nursing (3). This course focuses on critical analysis of theory and the utilization of various levels of nursing and nursing related theories as a base for nursing at the graduate level. It further examines the inter-relationship of theory, research and practice in the development of the scientific body of nursing knowledge. Methods by which knowledge is gained and validated will be analyzed. Students will synthesize several different theories from which to form the basis of their practice. Relationships of theory, practice and research will be discussed. Prerequisite: Admission to the MSN or PhD Program

5555 Research Methodology (3). This course is designed to provide the student with research knowledge and skills necessary for the master's prepared nurse. These include the fundamentals of research methods in nursing, as well as the terminology necessary to interpret research findings. Principles and techniques common to research are applied. This course consists of lecture/discussion each week. Prerequisites/Co-requisite N550 Theoretical Foundations in Nursing & an upper division statistics course

5556 Program Evaluation (3). This survey course is designed to introduce students to the philosophy, theory, and methodology of program evaluation. The end point of this course is that graduate students will be able to design, implement, and evaluate research, education and/or social programs within the context of their primary focus of study (i.e. clinical or role).

5557 Qualitative Methods In Nursing Research (3). This course is designed to provide the student with the skills necessary to the understanding and conduct of qualitative research. Various methods, including ethnographic, phenomenologic, historic, grounded theory and aesthetic inquiry are presented and discussed. Emphasis is placed upon the appropriateness of each method for different research problems. This course consists of three hours of lecture/discussion per week. Prerequisites/requisites: Nursing 550 and 555.

5558 Research Design (3). This course is designed to provide the student with experience in the development of a research proposal. Research skills acquired in previous courses will be synthesized to produce the components of a proposal. Prerequisite: N555

5564A Primary Care Of Adults II (5). This course is designed to prepare nurse practitioner students to manage common health problems of adults. The focus is on developmentally appropriate preventive health care and management of common acute/episodic illnesses. Students will integrate role competencies, professional standards, and legal requirements essential to the NP role. Core content includes differential diagnosis, therapeutic management, adherence, anticipatory guidance, patient/family education, legal and professional issues, standards of practice, and advanced practice role competencies. This course consist of 3 credit hours of didactic and 2 credit hours of clinical (165 hours). Clinical practice and clinical seminar comprise the clinical experience.

5564C Clinical II: Primary Care Of Children (6). This course is designed to prepare nurse practitioner students to manage common pediatric health problems. The focus is on developmentally appropriate preventive health care and management of common acute/episodic illnesses. Students will integrate role competencies, professional standards, and legal requirements essential to the NP role. Core content includes differential diagnosis, therapeutic management, adherence, anticipatory guidance, patient/family education, legal and professional issues, standards of practice, and advanced practice role competencies. This course consist of 4 credit hours of didactic and 2 credit hours of clinical (165 hours). Clinical practice and clinical seminar comprise the clinical experience.

5564F Primary Care Of Families II (5). This course is designed to prepare nurse practitioner students to manage common health problems across the life span. The focus is on developmentally appropriate preventive health care and management of common acute/episodic illnesses. Students will integrate role competencies, professional standards, and legal requirements essential to the NP role. Core content includes differential diagnosis, therapeutic management, adherence, anticipatory guidance, patient/family education, legal and professional issues, standards of practice, and advanced practice role competencies. This course consist of 3 credit hours of didactic and 2 credit hours of clinical (165 hours). Clinical practice and clinical seminar comprise the clinical experience.

5564N Neonatal Nursing I (3). This is the first of two courses that integrates the physiologic, pharmacologic, and assessment skills and principles in determining appropriate care of the ill neonate. Current research and evidenced-based practices are used as the course framework. The effects of critical conditions on the growth and development of the neonate, including subsequent chronic health problems as well as the short and long term consequences to the child's family are emphasized. The use of specific interventions and diagnostic procedures are demonstrated and applied in laboratory/clinical settings during forty hours of required clinical activities. Prerequisites: Nursing 549N.

5564PW Primary Health Care Of Women (5). This course will focus on the etiology, symptomatology, diagnosis and management of gynecologic and non-gynecologic primary health care problems in women, throughout the lifespan. Emphasis will be placed on caring for women within a holistic framework and recognizing how the changing roles of women in today's society can effect their lives and their health status. Concepts, theories and research related to health promotion, health maintenance and restoration and the prevention of illness and injury of epidemiologically significant problems and potential problems will be addressed. Through clinical experiences, students will integrate concepts of wellness and health promotion, illness prevention, and collaboration, as well as nursing and medical therapeutic modalities, to provide care to women in a comprehensive, interdisciplinary fashion. Core content: differential diagnosis; theories: stress/ adaption and crisis; therapeutic relationships; and advanced nursing skills. This course will consist of 2-3 credit hours of lecture/seminar plus 2 credit hours (165 clock hours) of clinical practice. Prerequisites: N547W, N548, N550 Co-requisite: N549

5566F Primary Health Care Nursing Of Families III (4). This course is designed to provide students with the opportunity to apply knowledge from previous family nurse practitioner courses to advanced primary care nursing of individuals and families across the life span. The focus of the course is on the application of the nursing process in the differentiation and therapeutic management of stable chronic health problems encountered by family nurse practitioners in the primary health care setting. Emphasis is on the integration of advanced nursing concepts and pharmacokinetic principles in the care of individuals and families. Core content includes stress and coping, adaptation, pain management, and grief and loss. This course consists of 2 credit hours of lecture/seminar plus 165 hours (2 credit hours) of clinical experience. Prerequisites: N549 and N564F

5566N Neonatal Nursing II (3). This is the second of two courses that integrates the physiologic, pharmacologic, and assessment skills and principles in determining appropriate care of the ill neonate. Current research and evidenced-based practices are used as the course framework. The effects of critical conditions on the growth and development of the neonate, including subsequent chronic health problems as well as the short and long term consequences to the child's family are emphasized. The use of specific interventions and diagnostic procedures are demonstrated and applied in laboratory/clinical settings during forty hours of required clinical activities. Prerequisite: Nursing 564.

5566NP Adult Nurse Practitioner Health Care Nursing III (4). This course is designed to prepare adult clinical nurse practitioner (NP) students in the care and management of adults populations with chronic health problems. The focus of the course is on the differentiation and therapeutic management of chronic health problems encountered by adult NPs in various health care settings. Emphasis is given to those health issues commonly encountered by adult NPs. The course enables students develop a research and theory based practice for disease state management of health care for adults. Core content: theoriesgrief and loss, chronicity, and pain; advanced nursing skills. This course consists of 2 credit hours of lecture/discussion and 2 credit hours of

clinical experience. The 2 credit hours of clinical experience consists of 165 hours. Clinical practice and clinical seminar comprise the clinical experience.

5566PC Chronic Child Health Care (4). This course is designed to provide students with the opportunity to apply knowledge and skill from advanced assessment, pathophysiology, pharmacology, health promotion, research and theory to advanced nursing care of patients and families experiencing complex or chronic health problems. Emphasis is placed on using models and theories that guide advanced practice and on determining the current research base on nursing assessment and management in several specific areas of knowledge. The organizing framework for this course is case management of chronic health states. Students will apply several theoretical models to acute and chronic health states of children at various developmental stages representing various socioeconomic and cultural groups, either in primary or specialized care settings. Core concepts are stress and coping, adaptation, pain management, grief and loss, nutritional support, ethical decision-making, case management, and symptom management. This course will consist of 2 credit hours of lecture/seminar plus 165 hours (2 credit hours) of clinical practice. Prerequisite: N564PC.

5566W Care Of The Childbearing Woman (4). This course will focus on normal adaption and pathologic alterations throughout the childbearing period. Emphasis is placed on caring for women and families from preconception through the puerperium. Concepts, theories and research related to the biopsychosocial and cultural aspects of childbearing will be addressed. Utilization of models and theories that guide advanced nursing practice will be the organizing framework for the course. Core concepts include adaptation, stress and coping, grief and loss, pain and symptoms management. This course will consist of 2 credit hours of lecture/seminar plus 2 credit hours of clinical practice. Prerequisite: N564PW-Primary Health Care of Women or Equivalent

5572 Advanced Nursing Practice: Synthesis Practicum (5). This course is a concentrated, experiential opportunity to function in an advanced practice nursing role of clinical nurse specialist, nurse practitioner, integrating clinical and functional role activities within a chosen setting. Core concepts include advanced nursing practice, functional role responsibilities and activities with emphasis on their relationship to patient outcomes. This course will entail 330 hrs of clinical/conferences (3-4 hours) and one hour didactic content for the semester. Prerequisites: All required courses except N598/599

5572II Preceptorship II (5). This is the second of two preceptorship experiences which can be taken concurrently or in consecutive semesters. This preceptorship course will be a minimum of 300 clinical hours. Opportunities to build upon knowledge and skills gained during Preceptorship I regarding the advanced therapeutic management of high risk neonates are provided. Emphasis is placed on therapeutic measures within a conceptual framework or model and applying findings from research relevant to comprehensive care of neonates. The client system will be the neonate and family. Prerequisites: Nursing 572I.

5572NA Advanced Nursing Practice: Synthesis Practicum (3). This course is designed to afford the student a concentrated, experiential opportunity to function in the role she/he has chosen to pursue professionally. This course consists of nine hours of clinical experience per week and a conference every other week. Prerequisites: All courses except N598/599.

5572NE Advanced Nursing Practice: Synthesis Practicum (3). This course is designed to afford the student a concentrated, experiential opportunity to function in the role she/he has chosen to pursue professionally. This course consists of nine hours of clinical experience per week and a group conference every other week. Prerequisites: All courses except N598/599.

5572NI Preceptorship I (5). This is the first of two preceptorship experiences which can be taken concurrently or in consecutive semesters. This preceptorship course will be a minimum of 300 clinical hours. Opportunities to apply knowledge and skills from advanced nursing roles, theory, research, and neonatal clinical courses to the advanced therapeutic management of high risk neonates are provided. Emphasis is placed on therapeutic measure within a conceptual framework or model and applying findings from research relevant to comprehensive care of neonates. The client system will be the neonate and family. Prerequisites: Nursing 564N and 566N.

5587 Research Utilization In Nursing (3). This course will prepare nurses to implement a research utilization model to validate practice. The theoretical basis for research utilization and practical instances of its application in nursing will be examined. Opportunities will be provided to develop a research utilization plan to address a clinical area of practice. Prerequisites: N550, N555

5597A Independent Study In Nursing/Patient Care-Elective (1-6). Guided study of selected topics and/or areas in nursing and/or patient care. Prerequisites: Nursing 550 and permission of faculty.

5597B Independent Study In Nursing/Patient Care-Equivalent (1-6). Guided study of selected topics and/or areas in nursing and/or patient care. Prerequisites: Nursing 550 and permission of faculty.

5597CD Independent Study In Nursing/Patient Care-Elective (1-6). Guided study of selected topics and/or areas in nursing and/or patient care. Prerequisites: Nursing 550 and permission of faculty.

5597D Independent Study In Nursing (1-6).

5597E Independent Study In Nursing (1-6).

5597EC Independent Study In Nursing (1-6).

5597HP Independent Study In Nursing (1-6).

5597IH Independent Study In Nursing/Patient Care-Equivalent (1-6).

5597NE Independent Study In Nursing/Patient Care-Elective (1-6).

Guided study of selected topics and/or areas in nursing and/or patient care. Prerequisites: Nursing 550 and permission of faculty.

5597PP Independent Study In Nursing (1-6).

5597PV Independent Study In Nursing (1-6).

5597RA Independent Study In Nursing (1-6).

5597WV Independent Study In Nursing (1-6).

5598 Directed Research (1-6). Individual research project for students to utilize beginning research skills in designing and conducting independent studies under the direction of the faculty. Prerequisites: Nursing 550, 555 and permission of faculty.

5599 Research Thesis (1-9). Individual study under the direction of a member of the faculty leading to the preparation and oral defense of a thesis. Prerequisites: Nursing 550, 555 and permission of faculty.

5600 Doctoral Seminar (1). This one credit hour four semester seminar course is designed to assist doctoral students in the process of socialization into a community of scholars. In a colloquium structure, students are exposed to and respond to current issues in nursing research. These issues are presented as discussion topics and in the context of responding to their colleagues' research activities and issues. Content may include such issues and concerns as theoretical models for research and education; collaboration and interdisciplinary research efforts; and the appraisal, interpretation and dissemination of research findings. Additional topics may include the processes undertaken in the submission of research proposals (e.g. IRB review, grant writing, peer review, etc.). Prerequisites: Admission to the Doctor of Philosophy in Nursing program.

5605 Philosophy Of Science In Nursing (3). An overview of philosophy and the history of science are briefly reviewed as the foundation for the rise of modern science. Issues specific to scientific knowledge are discussed, including how scientific knowledge is achieved, supported, and changed. The nature of science will then be addressed through the dialogue of competing philosophical perspectives, such as logical positivism, historicism and poststructuralism. Finally, contemporary nursing science, and its future are explored. Context topics include philosophic inquiry vs. scientific inquiry; the nature of truth, explanation, observation, confirmation, acceptance; and the roles of gender, culture and values in science. Prerequisite: Admission to the Doctor of Philosophy in Nursing Program or permission of the instructor.

5608 Theory Development In Nursing I (3). Selected readings in philosophy of science will be used as the context for exploring the philosophical underpinnings of nursing and the rise of nursing science. Students will discuss how changes and shifts occur in paradigms, world views, and bodies of knowledge. The discipline of nursing and the relationship among nursing theory, research, and practice will be discussed. Integration of theory into the development of research-based nursing knowledge will be explored, with emphasis on empirical evidence, hypothesis development, study design, research design, and translation into clinical practice. Prerequisites: 12 credit hours of master's level coursework, including theory

5610 Theory Development In Nursing II (3). Nursing and non-nursing models, frameworks and theories will be analyzed and critically evaluated using a variety of criteria. Students will identify the range of applicable theories for their area of research. Appropriate application of theories to independent and dependent variables, mediators, moderators, cofactors, correlates, and outcomes will be explored. Students will develop hypotheses, research goals and objectives that extend the implications and application of an identified theory in clinical nursing practice.

5614 Health Policy & Ethics (2). This course examines health policy and ethics as they intersect with other public policies. Legal, financial, and ethical issues associated with policy development and evaluation are critically examined. Prerequisites: Admission into the PhD in Nursing Program or permission of instructor.

5630 Health Care Systems (3). This course is a guided, in-depth exploration, analysis and evaluation of selected health care systems literature. Other nursing literature will be reviewed as appropriate. Prerequisites: Admission into PhD in Nursing program or permission of instructor. Offered: Every Summer

5631 Health Promotion & Protection (3). This course is a guided, in-depth exploration, analysis and evaluation of selected health promotion and protection literature. Other nursing literature will be reviewed as appropriate. Prerequisites: Admission into PhD in Nursing program or permission of instructor.

5632 Health Restoration & Support (3). This course is a guided, in-depth exploration, analysis and evaluation of selected health restoration & support literature. Other nursing literature will be reviewed as appropriate.

Prerequisites: Admission into PhD in Nursing program or permission of instructor Offered: Every Fall

5662 Psychometrics (3). This course focuses on application of psychometric theories and practices related to instrumentation in nursing research. The basic methodologies and techniques for constructing, testing, and evaluating instruments will be discussed and applied by students. Content will focus on theoretical foundations of measurement, item construction, instrument design, item analysis, validity and reliability assessment. Criteria for evaluating existing instruments will also be discussed. Prerequisites: Permission of the instructor.

5668 Quantitative Research (3). Quantitative research methods used to build nursing's body of knowledge are explored. Experimental, quasi-experimental, and correlational designs and clinical trials are analyzed. Emphasis is placed on design, data generation, analysis, and dissemination of findings. Issues pertaining to the use of quantitative methods will also be explored. Prerequisites: Psychology 516 (or equivalent) N610 Theory Development in Nursing II, or permission of instructor.

5670 Qualitative Research Methods (3). Qualitative research methods used to build nursing's body of knowledge are explored in this seminar course. Emphasis is placed on design, data generation and analysis, and dissemination of findings. Issues regarding qualitative research are identified and analyzed. Prerequisite: Admission to the Doctor of Philosophy in Nursing program or permission of instructor.

5676 Research Practicum (3-6). The research practicum is a structured educational activity that is preparatory to formal initiation of the dissertation process and typically takes place as the last course. The focus of the activity is on refining the skills required by an individual student to conduct the dissertation research. The precise structure of and the credit awarded for the research practicum is determined by the student's program committee. Prerequisites: Permission of the student's program committee.

5694 Directed Readings (1-3). Intensive readings in an area selected by the graduate student in consultation with the instructor. By the end of the semester, the student will be prepared to: 1. Analyze selected readings in relation to the context of the dissertation. 2. Integrate selected readings into the development of the dissertation.

5697A Special Topics Nursing Elective (1-6). This course consists of the guided study of special topics in areas of nursing theory and/or research. Prerequisite: Admission into PhD in Nursing Program Offered: On Demand

5697B Special Topics Nursing-Equivalent (1-6). This course will cover guided study of course equivalent topics in areas of nursing theory and/or research. Prerequisite: Admission into PhD in Nursing program Offered: On Demand

5697P Special Topics Nursing Elective (1-6). This course consists of the guided study of special topics in areas of nursing theory and/or research. Prerequisite: Admission into Ph.D. Nursing Program Offered: On Demand

5697PA Special Topics Nursing (1-6).

5697S1 Special Topics Nursing Elective (1-6). This course consists of the guided study of special topics in areas of nursing theory and/or research. Prerequisite: Admission into PhD in Nursing Program Offered: On Demand

5697S2 Special Topics Nursing Elective (1-6). This course consists of the guided study of special topics in areas of nursing theory and/or research. Prerequisite: Admission into Ph.D. in Nursing Program Offered: On Demand

5697SI Special Topics Nursing Elective (1-6). This course consists of the guided study of special topics in areas of nursing theory and/or research. Prerequisite: Admission into PhD in Nursing Program Offered: On Demand

5697SL Special Topics Nursing Elective (1-6). This course consists of the guided study of special topics in areas of nursing theory and/or research. Prerequisite: Admission into PhD in Nursing Program Offered: On Demand

5699 Dissertation Research (1-12). Individual directed research leading to preparation and completion of doctoral dissertation.

5899 Required Graduate Enrollment (1).

Oboe Courses

5500A Graduate Oboe-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One Half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Oboe-Master Performance (4).

5601 Graduate Oboe - Doctoral Performance (4).

Oral Biology Courses

5699 Dissertation Research (1-12). Ph.D. dissertation research.

5700 Embryonic Development Of The Face And Oral Cavity (2). The course presents an in-depth review of the embryonic development of the face, ears, tongue, mandible, maxilla, and teeth and their associated tissues. In addition, the histology of bone and cartilage, both formative and mature, will be discussed at light and electron microscopic levels. Offered: On Demand.

5807 Structure And Properties Of Calcified Tissues (2). An introduction to the development of calcified tissues as hierarchical structural/material systems. Starting at the cellular level, bone modeling, remodeling and mechanisms of mineralization will be introduced to be followed by analyzing bone's structural hierarchy and its effects on anisotropic material properties. Fracture mechanisms, viscoelastic and composite properties also will be studied. Experimental techniques measuring various material properties of these tissues will be introduced and/or demonstrated where appropriate. Prerequisite: Consent of instructor.

5899 Required Graduate Enrollment (1).

Oral Radiology Courses

5704 Oral Radiology Residency I (1-5). Clinical and didactic study of oral radiology.

5705 Oral Radiology Residency II (1-5). Clinical and didactic study of oral radiology.

5706 Oral Radiology Residency III (1-5). Clinical and didactic study of oral radiology.

5707 Oral Radiology Residency Iv (1-5). Clinical and didactic study of oral radiology.

5708 Oral Radiology Residency V (1-5). Clinical and didactic study of oral radiology.

5709 Oral Radiology Residency Vi (1-5). Clinical and didactic study of oral radiology.

5716 Special Problems Oral Radiology I (1). Assigned technical problems in oral radiology.

5720 Advanced Radiographic Anatomy (1). Correlation between normal anatomic structures of the head and neck region and the radiographic appearance of these structures on intraoral, panoramic, skull and conventional tomographic projections.

5721 Advanced Radiographic Interpretation (2). Radiographic interpretation of normal and pathologic processes of the oral and maxillofacial region. Developmental, degenerative, inflammatory, neoplastic, and metabolic conditions of the oral and maxillofacial complex are covered, including conditions involving the temporomandibular joint and paranasal sinuses.

5722 Radiation Physics (2). Basic principles of radiation physics in relation to medical and dental diagnostic radiology are presented. Topics such as the nature of radiation, x-rays and their production, interaction of x-rays with matter, measurement of x-rays, x-ray film and intensifying screens, and image characteristics are presented.

5723 Radiation Biology (2). This course covers the basic principles of radiation biology, as well as radiation safety and protection. Topics such as theories of radiation action, radiation chemistry, molecular, cellular and tissue effects, early and late effects of radiation, effects of radiation therapy on the oral cavity, and concepts of radiation protection and risk assessment are presented. Satisfactory completion of a project in the area of radiation biology is required for the additional credit hour.

5724 Advanced Imaging Modalities (2). This course will cover basic principles and interpretation of advanced imaging modalities, such as computed tomography, digital radiography, magnetic resonance imaging, nuclear medicine and ultrasound. Applications of these imaging modalities to dentistry will be addressed. Prerequisite: OR RAD 722.

Oral Surgery Courses

5700 Principles Of Oral Surgery I (1). A conference on diagnosis, treatment planning, surgical technique.

5701 Principles Of Oral Surgery II (1). A continuation of ORSG. 5700.

5702 Principles Of Oral Surgery III (1). A continuation of ORSG. 5701.

5703 Principles Of Oral Surgery Iv (1). A continuation of ORSG 5702.

5704 Clinical Oral Surgery I (3). The clinical application of the principles of diagnosis, treatment planning, and surgical techniques.

5705 Clinical Oral Surgery II (3). A continuation of ORSG. 5704.

5706 Clinical Oral Surgery III (3). A continuation of ORSG. 5705.

5707 Physical Diagnosis For The Oral & Maxillofacial Surgeon I (1). Basic physical diagnosis and review of systems as it relates to the practice of Oral and Maxillofacial Surgery.

5708 Physical Diagnosis For The Oral & Maxillofacial Surgeon II (1). Advanced physical diagnosis and review of systems as it relates to the practice of Oral and Maxillofacial Surgery.

5709 Physical Diagnosis For The Oral & Maxillofacial Surgeon III (1). Oral and Maxillofacial Surgery and the medically compromised patient.

5710 Physical Diagnosis For The Oral & Maxillofacial Surgeon Iv (1). A continuation of ORSG 5709.

5711 Physical Diagnosis For The Oral & Maxillofacial Surgeon V (1). A continuation of ORSG 5710.

5712 Physical Diagnosis For The Oral & Maxillofacial Surgeon Vi (1). A continuation of ORSG 5711.

5713 Advanced Physical Diagnosis For Oral & Maxillofacial Surgeon I (1). Advanced physical diagnosis and review of systems as it relates to the practice of Oral and Maxillofacial Surgery.

5714 Advanced Physical Diagnosis For Oral & Maxillofacial Surgeon II (1). A continuation of ORSG 5713.

5715 Advanced Physical Diagnosis For Oral & Maxillofacial Surgeon III (1). A continuation of ORSG 5714.

5716 Special Problems In Oral And Maxillofacial Surgery I (1).

5717 Special Problems In Oral And Maxillofacial Surgery II (1).

5718 Special Problems In Oral And Maxillofacial Surgery III (1).

5719 Special Problems - Oral & Maxillofacial Surgery Iv (1). A continuation of ORSG 5718.

5720 Oral Surgery Hospital Residency I (1). Two calendar years of hospital residency in an affiliated teaching hospital. The residency provides additional training in major oral surgery and didactic education in oral surgery and science areas, including anesthesiology, diagnosis, pathology, and radiology.

5721 Oral Surgery Hospital Residency II (1). A continuation of ORSG. 5720.

5722 Oral Surgery Hospital Residency III (1). A continuation of ORSG. 5721.

5723 Oral Surgery Hospital Residency Iv (1). A continuation ORSG. 5722.

5724 Oral Surgery Hospital Residency V (1). A continuation of ORSG. 723.

5725 Oral Surgery Hospital Residency Vi (1). A continuation of ORSG. 5724.

5726 Tumor Surgery Of The Head And Neck (2). A discussion of tumors of the head and neck and the surgical treatment of these diseases.

5727 Major Oral Surgery I (2). A comprehensive study of major oral surgery. Lectures are correlated with surgical exercises which are performed in the anatomy laboratory.

5728 Major Oral Surgery II (2). A continuation of ORSG. 5727.

5729 General Anesthesiology And Pharmacology I (1). The pharmacological principles of the various anesthetic agents and allied medications.

5730 General Anesthesiology And Pharmacology II (1). A continuation of ORSG. 5729.

5731 Clinical General Anesthesiology And Pharmacology I (2). The clinical application of various anesthetic and pharmacological agents.

5732 Clinical General Anesthesiology And Pharmacology II (2). A continuation of ORSG. 5731.

5733 Clinical General Anesthesiology And Pharmacology III (2). A continuation of ORSG. 5732.

5734 Clinical/Major General Anesthesiology And Pharmacology I (1). The clinical/major surgical application of various anesthetic and pharmacological agents.

5735 Clinical/Major General Anesthesiology And Pharmacology II (1). A continuation of ORSG 5734.

5736 Clinical/Major General Anesthesiology And Pharmacology III (1). A continuation of ORSG 5735.

5737 Pediatric General Anesthesiology And Pharmacology I (1). The pharmacological principles of various anesthetic agents and allied medications in the pediatric patient.

5740 Oral & Maxillofacial Surgery Independent Study (1-6). An advanced study and/or elective course in Oral and Maxillofacial Surgery related field(s) which enhances the compulsory curriculum.

5752 Seminar In Oral Surgery I (1). A discussion of current literature and research relating to oral surgery.

5753 Seminar In Oral Surgery II (1). A continuation of ORSG. 5752.

5754 Seminar In Oral Surgery III (1).

5755 Seminar In Oral Surgery Iv (1). A continuation of ORSG 5754.

Organ Courses

5500A Graduate Organ-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One Half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Organ - Masters Performance (4).

5601 Graduate Organ - Doctoral Performance (4).

Orthodontics Courses

5704 Orthodontics And Dentofacial Orthopedics I (1-6). Orthodontic theory, treatment techniques and treatment of patients; includes current and historical concepts.

5705 Orthodontic And Dentofacial Orthopedics II (1-6). A continuation of ORTH. 5704.

5706 Orthodontics And Dentofacial Orthopedics III (1-6). A continuation of ORTH. 5705.

5707 Orthodontics And Dentofacial Orthopedics Iv (1-6). A continuation of ORTH.5706.

5708 Orthodontic And Dentofacial Orthopedics V (1-6). A continuation of ORTH. 5707.

5709 Orthodontic And Dentofacial Orthopedics Vi (1-6). A continuation of ORTH 5708

5710 Orthodontic And Dentofacial Orthopedics Vii (1-6). A continuation of ORTH. 5709.

5711 Orthodontics And Dentofacial Orthopedics Viii (1-6). A continuation of ORTH. 5710.

5726 Cephalometric I (2). An introductory lecture and laboratory course in the principles of radiographic cephalometry and integrated cephalometric analysis.

5727 Cephalometric II (2). An advanced lecture and laboratory course with emphasis on the use of a computer in cephalometric analysis.

Pediatric Dentistry Courses

5700 Principles Of Pediatric Dentistry I (1-3). Lecture and discussion of the principles of children's dentistry. The subject matter consists of the prevention of disease, child cooperation, diagnosis and treatment planning, treatment and post-treatment procedures.

5701 Principles Of Pediatric Dentistry II (1). A continuation of PEDS 700.

5720 Pediatric Dentistry Hospital Residency I (1). (1). The clinical activities of the program are conducted at Children's Mercy Hospital. Students spend 24 months (6 semesters) as residents in the Department of Pediatric Dentistry. Patient care is provided both in the outpatient clinic and to hospital inpatients. Rotations in anesthesia, pediatrics, and the emergency room are included in the residency. Residents participate on several multidisciplinary teams at the hospital including the Cleft Palate Team, Crainiofacial Anomalies Team, Hemophilia Team, Cancer Care Team, Sickle Cell Anemia Team, and the Newborn Intensive Care Follow-up Clinic.

5721 Pediatric Dentistry Hospital Residency II (1). A continuation of PEDS 720.

5722 Pediatric Dentistry Hospital Residency III (1). A continuation of PEDS 721.

5728 Cleft Palate Problems-Team Approach (1). (1). Presentations by the members of the Cleft Palate Team at Children's Mercy Hospital. The role of genetics, speech, audiology, ENT, oral surgery, plastic surgery, orthodontics, pediatric dentistry, prosthodontics, social services, nutrition, and child psychology in the rehabilitation of the cleft palate patient will be discussed.

Pedodontics Courses

5899 Required Graduate Enrollment (1).

Percussion Courses

5500A Graduate Percussion-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One Half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JA Graduate Applied Jazz Studies (2). One hour lesson weekly. Consent of instructor and a jury examination are required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JB Special Applied Jazz Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. A jury for comments only may be held at the discretion of the faculty. Consent of instructor required. Prerequisite: Graduate status & permission of instructor Offered: Every Fall/Every Winter

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Percussion - Masters Performance (4).

5601 Graduate Percussion - Doctoral Performance (4).

Periodontics Courses

5700 Periodontic Residency I (1-2). Didactics, Seminars in Basic Periodontics with Clinical Practice.

5701 Periodontic Residency Vii (1-6). Didactic and Seminar in Periodontics with Clinical Practice.

5702 Periodontic Residency II (1-6). Clinical Periodontics with related didactic and seminar.

5705 Periodontal Residency III (1-6). Clinical Periodontics with Related Didactics and Seminars.

5706 Periodontics Residency III (1-6). A continuation of PERO. 5705.

5707 Periodontic Residency Iv (1-6). Clinical Periodontics with Related Didactics and Seminar.

5708 Periodontic Residency V (1-6). Clinical Periodontics with Related Didactics and Seminar.

5709 Periodontic Residency Vi (1-6). Clinical Periodontics with Related Didactics and Seminar.

5716 Periodontic Residency Ix (1). Didactic in Surgical Periodontics with Clinical Practice.

5717 Special Problems In Periodontics II (1). A continuation of PERO. 5716.

5718 Special Problems In Periodontics III (1). A continuation of PERO. 5717.

5719 Implantology (2). This 2 credit hour seminar is designed for a student in the Advanced Education Program in Periodontology to develop in-depth knowledge of the concepts and theories of implant dentistry as they relate to periodontist. It will provide basic and advanced information and guidance which will serve to complement course work in PERIO 5702 through PERIO 5709, and the clinical implant dentistry experience offered in the program, at a minimum to a level of competency.

5720 General Anesthesia (1). A rotation to the Department of Anesthesiology of K.C. Veterans Administration Medical Center. Students become familiar with operating room procedures, medical emergencies, venipuncture, airway maintenance and pharmaco-physiology of sedative, analgesic and anesthetic agents as well as drug interactions.

5727 Introduction To Internal Medicine And Diagnosis I (1). A seminar on internal medicine, physical diagnosis, laboratory medicine, dermatology and allergy. This course is designed to give the resident a broad knowledge of the above.

5728 Introduction To Internal Medicine And Diagnosis II (1). A continuation of PERO. 5727.

5729 Children's Periodontics (2). Children's periodontal disorders, etiology, diagnosis, and treatment. Emphasis is placed on preventive periodontics and on education of parents and children in oral physiotherapy.

5730 Biology Of The Periodontium (1-2). Biology of the Periodontium covers the embryology, histology, ultrastructure and biochemistry of stratified

squamous epithelium, fibrous connective tissue, bone and cementum. These four tissues are studied in health and during inflammatory disease and healing of surgical wounds. Major emphasis is placed on immune system interactions with bone and fibrous connective tissue components during inflammatory periodontal disease.

5751 Seminar In Periodontics I (2). A discussion of the classic and pertinent periodontal literature.

5752 Seminar In Periodontics II (2). A continuation of PERO. 5751.

5753 Seminar In Periodontics III (2). A continuation of PERO. 5752.

5754 Seminar In Periodontics Iv (2). A continuation of PERO. 5753.

5755 Seminar In Current Periodontal Literature/Treatment Planning V (2). A discussion of the current research and literature relating to periodontics and the utilization of current knowledge to patient treatment planning.

5756 Seminar In Current Periodontal Literature/Treatment Planning Vi (2). A continuation of PERO. 5755.

5757 Seminar Current Periodontal Literature & Treatment Planning Vii (2). A continuation of PERO. 5756.

5758 Seminar Current Periodontal Literature & Treatment Planning Viii (2). A continuation of PERO. 5757.

5799 Research And Thesis (1-6).

5899 Required Graduate Enrollment (1).

Pharmacy Courses

5507 Basic Pharmacology (3). Basic pharmacological concepts and important classes of pharmacologic agents. Prerequisites: Human anatomy, physiology and biochemistry. Fall, each year.

5509 Basic Toxicology (3). Principles of general toxicology and toxicology of industrial and household chemicals, agricultural agents, social poisons, and selected therapeutic agents. Prerequisites: Human Anatomy, Physiology, Biochemistry and PHARM 507 or 519. Offered: Fall, each year.

5515 Drug Absorption, Distribution, Metabolism And Excretion (3). A course dealing with the absorption, physiologic distribution, metabolism and excretion of drugs and other organic compounds and factors which influence these events. Three hours lecture a week. Fall, odd year.

5519 Pharmacology I (4). Pharmacology of medicinals with emphasis on basic concepts, the autonomic nervous system, and cardiovascular agents. Four hours lecture per week. Prerequisite: Human anatomy, physiology and biochemistry. Offered: Fall.

5520 Pharmacology II (5). Pharmacology of medicinals with emphasis on chemotherapeutic agents, drugs acting on the renal system, and drugs for endocrine disorders. Four hours lecture per week. Prerequisite: PHARM. 519. Offered: Winter.

5521 Advanced Organic Medicinal Chemistry (3). Chemistry, physicochemical properties, mechanism of action and structure-activity relationships of organic drug molecules. Fall, odd years.

5527 Analytical Methods (3). A detailed study of the methods used to detect, identify, and quantitate drugs, small molecules, enzymes, proteins, and biological molecules. The statistical foundation, core concepts, and practical implementation of analytical methods are areas of emphasis. State-of-the-art instrumentation and recent technological developments are also presented, including biotechnology based methods such as proteomics methods and quantitative PCR. Prerequisites: Two hours of lecture and three hour demonstration/laboratory a week. Offered: Fall

5531 Physical Pharmacy Equilibria (3). Advanced principles of aqueous solutions, acid-base equilibria, solubility and complexation. Mathematical solutions and state-of-the-art research applications. Three hours lecture a week. Prerequisite: B.S. in Pharmacy Permissions of instructor. Winter, even years.

5533 Biopharmaceutics And Pharmacokinetics (4). Study of (1) the kinetics of absorption, distribution, and elimination of drugs and the relationship of kinetic parameters to dosage form, biological factors, and dosage regimen; (2) the development of various models for pharmacodynamic-pharmacokinetic correlations. Four hours lecture. Prerequisite: MATH 345 (Ordinary Differential Equations) or equivalent. Fall, even years.

5550 Stability Of Pharmaceuticals (3). The course provides instruction in the processes responsible for instability of pharmaceuticals. Course content includes, but is not limited to, instability due to light, oxygen, and metal ions; the effect of temperature on the rate of drug decomposition; the effect of dielectric constant and ionic strength on degradation; and physical and chemical instability of newer polypeptide drugs. In addition, practical strategies to prevent instability of the active compound and excipients used in pharmaceutical formulations is provided. Prerequisites: MATH Calculus

(required) & Ordinary Differential Equations (recommended); Course Grade of "B" or better in both PHAR 202 and 203; Restriction: Consent of instructor
Offered: Fall semester even-numbered year.

5555 Religion, Culture And Health (3). This course addresses the impact of religious beliefs on the culture practices of contemporary society, and aims at examining the relationship between these beliefs, modern sciences and health. It will be offered to all students, in Fall semesters. No prerequisites. Offered: Every Fall

5580A Seminar In Pharmaceutical Sciences (1). Enrollment and participation required of all graduate students in the School of Pharmacy during each semester of graduate study. One hour each week. This course is graded on a credit/ no credit basis. Offered: Fall and winter.

5580C Seminar In Pharmacology/Toxicology (1). Enrollment and participation required of all graduate students in the School of Pharmacy during each semester of graduate study. Credit/no credit. One hour each week. Fall & winter.

5590A Special Topics Pharmacy (1-3).

5590B Special Topics Pharmaceutical Chemistry (1-3).

5599A Research And Thesis Pharmacy (1-9).

5599B Research And Thesis Pharmaceutical Chemistry (1-9).

5599C Research And Thesis Pharmacology (1-9).

5606 Biochemical Toxicology (3). Recent advances in organ-specific toxicity and the mechanisms of toxicity of drugs and environmental chemicals. Prerequisite: Consent of instructor. Winter, odd years.

5615 Methods In Pharmacology And Toxicology (3). Exposure to some of the techniques employed in research in pharmacology and toxicology. One hour conference and six hours laboratory per week. Prerequisite: Permission of instructor.

5616 Molecular Toxicology (3). Study of the molecular mechanisms of toxicity with emphasis on receptor theory and quantitative structure activity relationships. Three hours lecture or discussion a week. Prerequisites: PHARM 510 and 515 or permission of instructor. Winter, even years.*

5625 Synthetic Medicinal Chemistry (3). Medicinal chemicals are considered as to their synthesis and structure-activity requirements as well as to current research and technology in the area. Offered on demand.*

5631 Pharmaceutical Formulations I (3). Advanced theory and practice of Pharmaceutical formulations including classical and current research. This course will introduce the principles of biomaterial based drug delivery systems and unify knowledge from the fields of biology, materials science, and pharmaceuticals. Prerequisites: B.S in Pharmacy. Offered: Fall, odd years.*

5632 Novel Drug Delivery Systems (3). The course offers up-to-date information about drug transport mechanisms and drug absorption processes across various absorptive membranes i.e., buccal, nasal, dermal, corneal, pulmonary, and oral mucosae. The course material has been designed to provide current ideas and thinking about gene delivery, drug targeting to tumor cells and lipid and carrier mediated drug delivery. It provides unique information about cell culture models as a predictor of drug delivery as well as physical chemistry of surfaces in various microparticulates and lipid emulsion systems.

5633 Receptor Pharmacology And Signal Transduction (3). Molecular characterization of drug receptors involving quantitative description of functional studies with agonists and antagonists and binding of ligands to receptors; the molecular structure of receptors and the signaling systems that couple receptors to their pharmacologic functions. Prerequisites: Biochemistry 561/562 and/or Pharmacology 519/ 520. Offered: Every other Winter Other: When we have enough students willing to take course on demand.

5645 Cancer Biotechnology I (3). This course is designed to provide a basic understanding of tumor progression, molecular events and signaling mechanisms underlying tumor formation. Epidemiological approaches, etiology, and current methods of detection and diagnosis of cancer will be discussed. Current pharmacological management strategies of cancer and future therapeutic interventions will also be reviewed. Prerequisite: BIOL 202 or equivalent. Fall, even years.

5646 Cancer Biotechnology (3). Cancer Biotechnology II will focus on gene regulation of cancer cells with specific pharmaceutical agents. The course will target chemotherapeutic agents and examine current technology in gene therapy. Antisense and ribozyme DNA will also be discussed. Prerequisites: Phar 645 and Cancer Biotechnology I. Winter, odd years.

5690B Special Topics Pharmaceutical Chemistry (1-3).

5690BB Special Topics Toxicology (1-3).

5690C Special Topics Pharmacology (1-3).

5699A Research And Dissertation - Pharmacy (1-16).

5699B Research And Dissertation Pharmaceutical Chemistry (1-16).

5699BB Research And Dissertation Toxicology (1-16).

5699C Research And Dissertation Pharmacology (1-16).

5899 Required Graduate Enrollment (1).

Philosophy Courses

5521 Managerial And Administrative Decision Making And Ethical Values (3). Methods of problem definition and decision making in ethics are presented with the goal of providing the student with a matrix for case review. A series of cases is offered that serve to integrate approaches to ethical reflection with management and administrative decision making. Cases are chosen on the basis of topical, curricular and conceptual relevance.

5540 Seminar On Philosophy And Law (2). An examination from a philosophical perspective of the historical and conceptual relationships present in the evolution, development and analysis of law. Among the systems of analysis examined will be natural law theory, legal positivism and legal realism. Ordinarily the seminar will focus on a specific area of controversy in the law.

5546 Ethics And Government (3). An examination of ethical issues related to government, with the primary focus on national and local governmental bodies in the United States. Ethics in the executive, legislative and judicial branches are examined. Ethical standards for elected officials and appointed public servants are reviewed. Attempts to "legislate morality" are considered. The course includes a historical review of ethics and government and an analysis of the legal implications of legislation regarding ethics in the executive branch.

5620 Descartes To Hume (3).

5625 Aesthetics (3).

5638 Philosophy Of Biology (3).

5640 Philosophy Of Law (3).

5690 Research In Selected Fields: Graduate Studies (1-3). Intensive research in an area selected by the student in consultation with the instructor. By permission only. May be repeated for credit when the topic varies.

Physics Courses

5500 Methods Of Mathematical Physics I (3). Intended to provide the student with the advanced mathematical techniques needed for beginning graduate studies in the physical sciences. Content includes real variables, infinite series, complex analysis, linear algebra and partial differential equations. Offered: Fall.

5501 Methods Of Mathematical Physics II (3). A continuation of Physics 500 which includes Sturm-Liouville operators, special functions, Fourier transforms, distributions and Green functions, Laplace transforms, linear groups and tensor analysis. Offered: Winter.

5505 Survey Of Recent Development In Physics (3). Specifically designed to help high school and junior college science teachers keep pace with current developments in various subdivisions of physics and their impact on society and technology. (Not applicable for graduate degree in Physics). Prerequisite: Baccalaureate degree and one year science teaching experience. Offered: On Demand.

5510 Theoretical Mechanics I (3). A review of undergraduate mechanics precedes the study of generalized classical mechanics in this course. Topics include variational principles, Lagrangian and Hamilton methods, conservation laws and Hamilton-Jacobi theory. Offered: Fall.

5511 Theoretical Mechanics II (3). A continuation of Physics 510, this course covers topics such as normal coordinates, small oscillations, continuum mechanics and special/general relativity. Offered: On Demand.

5520 Electromagnetic Theory And Applications I (3). Electrostatics, magnetostatics and various approaches in solving boundary value problems of electromagnetism, Green's functions, conformal transformations and polynomial expansions, Maxwell's equations and waves. Offered: Winter

5521 Electromagnetic Theory And Applications II (3). Waveguides, fiberoptics, radiation systems and antenna for wireless communications, scattering and diffraction of electromagnetic waves, multipole fields, special relativity and relativistic particle dynamics and radiation. Offered: Fall

5530 Quantum Mechanics I (3). Review of elementary methods, formal preliminaries, axioms, commuting operators, angular momentum, static perturbation theory, Wigner-Eckart theorem. Offered: Fall.

5531 Quantum Mechanics II (3). Time dependent perturbation theory, scattering, applications to atoms, molecules and nuclei, reactions, relativistic methods. Offered: Winter.

5535 Optical Properties Of Matter (3). Maxwell's equations and the dielectric function, absorption and dispersion, free-electron metals, interband transitions, dispersion relations and sum rules, self-consistent field

approximation, current-current correlations and the fluctuation-dissipation theorem, plasmons and characteristic energy loss. Prerequisites: Physics 450, 460, 461, 471, 472, 500. Offered: Fall Even Years.

5540 Statistical Physics I (3). Statistical mechanics as a basis for thermodynamics; classical distribution functions; quantum statistical mechanics, kinetic theory, transport phenomena; application to systems of interacting particles. Prerequisites: Physics 410, 471, 472. Offered: Fall Even Years.

5541 Statistical Physics II (3). Special topics in advanced statistical physics including: second quantization, modern many body theory, interacting Fermi and Bose systems, superfluidity and superconductivity, renormalization group and computer simulation techniques. Prerequisite: Physics 540. Offered: On Demand.

5550 Atomic And Molecular Structure (3). Experimental results and theoretical models by quantum mechanics. Special emphasis on the interaction between radiation and matter. Offered: On Demand.

5560 Nuclear Physics (3). Fundamental properties of the atomic nucleus discussed in terms of experimental results and theoretical models. Quantum and statistical mechanics are used where appropriate. Offered: On Demand.

5570 Quantum Theory Of Solids I (3). Lattice dynamics and thermal conductivity. Neutron scattering. Symmetry principles in crystals and consequences. Point group, space group and irreducible representations. Energy band theory and methods of band calculation. Elementary Theory of Magnetism. Spin wave theory. Offered: Winter Odd Years.

5571 Quantum Theory Of Solids II (3). Topics will include crystal imperfections, impurities and defects, optical properties of metals and semiconductors, electron-lattice interaction and transport theory, superconductivity and theory of disordered systems. Offered: On Demand.

5580 Physics Seminar (1). Contemporary publications and research.

5590 Topics In Physics (1-3). Contemporary publications and research.

5590A Topics In Physics (1-3). Contemporary publications and research.

5595L Computer Interfacing Laboratory (3). An introduction to computer interfacing through the use of serial and parallel ports and digital-to-analog and analog-to-digital converters. The course also introduces digital filtering techniques, data analysis techniques, and graphical presentation of data. The programming techniques are taught using high level programming languages currently used in research and development labs. Offered: Fall Even Years.

5599 Research And Thesis (1-9). Research for thesis in partial fulfillment of the master's degree in physics.

5630 Advanced Quantum Theory (3). Scattering theory and reactions, relativistic quantum mechanics and quantum field theory, many-body problems and Green functions. Prerequisites: Physics 530-531 or consent of instructor. Offered: Alternate Years Fall.

5680 Research Seminar (1-2). Seminars on current research topics of research programs in the department and those of external distinguished scientists. (Must be taken by Physics Ph.D. students). Offered: Fall and Spring.

5690 Special Research Topics (1-3). A lecture course presenting advanced research-level topics. Prerequisite: Ph.D. candidacy or consent of instructor. Offered: On Demand. This course is intended to allow faculty and visiting scholars to offer special courses in selected research areas.

5699 Research And Dissertation (1-9). Research for dissertation in partial fulfillment of the Ph.D. degree requirements in physics.

5899 Required Graduate Enrollment (1).

Piano Courses

5500A Graduate Piano-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JA Graduate Applied Jazz Studies (2). One hour lesson weekly. Consent of instructor and a jury examination are required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JB Special Applied Jazz Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. A jury for comments only may be held at the discretion of the faculty. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Piano - Masters Performance (4).

5601 Graduate Piano - Doctoral Performance (4).

Political Science Courses

5505 Scope And Methods Of Political Science (3). This seminar surveys the various descriptive and quantitative approaches to the study of politics, government and public policy. It covers the methods used in various sub-disciplines and the models employed in political analysis.

5513 Comparative Politics: Asia, Africa, And Latin America (3). A comparison of politics in selected countries from one or more of these regions, with an emphasis on how and why processes differ and change.

5521 Judicial Politics (3). This course addresses broad trends of current research in the area of the judicial process based on empirical studies and the various methodological tools currently used by researchers. Case studies may be used to illustrate in depth the institutional aspects of the judicial process. Biographies may also be used to emphasize the personal and environmental factors which affect judicial decision making.

5522 Seminar In The Presidency (3). Critical examination of the American presidency, with in-depth research into selected themes and presidents. Prerequisites: Political Science 406 or permission.

5524 Urban Politics (3). A seminar on politics and government in urban areas with special attention to community leadership, power structures, interest group and party activity, political behavior, and movements toward local government reform.

5530 International Relations (3). This course examines major schools of thought that attempt to explain contemporary and historical international politics. Topics discussed include international systems, the balance of power, collective security, and international political economy, morality, and law.

5541 American Political Thought (3). This course will focus on intellectual reactions to the major periods in American history (the movement for independence, the writing of the constitution, the Jacksonian period, the civil war debate, the growth of big business, the rise of the positive state and contemporary America). Contemporary theorists will be included along with Jefferson, Madison, Hamilton and Marshall.

5542 Constitutional Interpretation (3). This course will provide an in-depth treatment of selected areas of constitutional development, related to various aspects of public policy developed under the Constitution through judicial interpretation, including federalism, equality, fundamental rights and freedom of expression.

5570 The Politics Of Social Security (3). This course will concentrate upon the principles of social insurance in general, and of the American Social Security system in particular. It will consider the system in relation to the history and traditions of American society. It will analyze popular misconceptions and will pay special attention to the political, economic, and demographic issues relevant to Social Security's current operation and to the program's future.

5575 Political Ideologies (3). Consideration of political ideologies and their effects, with in-depth research into selected topics.

5580 Government And Politics Seminar (3). Offered as a special seminar in the individual faculty member's area of research specialization. The seminar may be repeated for credit when the topic varies. The topic and instructor will be announced in advance.

5590 Directed Studies And Research (1-6). Under the direction of the instructor, students in this course will produce a major research paper: a self-contained thesis chapter, an article for publication or the equivalent. May be repeated for credit.

5599 Thesis (1-6). Directed specialized research.

5680 Traditions, Theories, And Trends In Political Science (3). This intensive survey of political science provides an opportunity for integration of the study of political values, behavior, and institutions with other social sciences.

5688 Doctoral Research Seminar (3). Students will produce a major research paper under the direction of the instructor. The research project will consist of a self-contained chapter of the dissertation or a work of publishable quality. May be repeated for credit.

5697 Doctoral-Level Independent Readings (3). Individual readings under the supervision of members of the Political Science Graduate or Doctoral Faculty in the specified topic or topics. May be repeated. May not be taken during an academic year in which a graduate course or seminar is offered on the topic.

- 5697A Doctoral-Level Ir: American National Politics And Institutions (3).**
5697I Doctoral-Level Ir: International Politics And Processes (3).
5697L Doctoral-Level Ir: Public Law (3).
5697O Doctoral-Level Ir: Public Opinion And Voter Behavior (3).
5697R Doctoral-Level Ir: Research Methods (3).
5697T Doctoral-Level Ir: Political Theory (3).
5697U Doctoral-Level Ir: Urban And State Politics (3).
5699 Research And Dissertation (1-12). Directed specialized research.
5899 Required Graduate Enrollment (1).

Psychology Courses

- 5504 Contemporary Issues In Learning (3).** A discussion and analysis of recent research and theoretical papers in learning. Prerequisite: Psychology 304 or equivalent. The student will have to demonstrate undergraduate competence in learning in the first few weeks of this course in order to remain enrolled.
- 5505 Motivation (3).** The definition of the concept of motivation is explored. Emphasis is placed upon integration of the concept of motivation into comprehensive theoretical explanations of phenomena. Students should have in their background a foundation in Learning Theory (or at least Theory Construction) and Experimental (Scientific Method). Previous laboratory experiences are desired.
- 5507 Cognitive Psychology (3).** An overview of the cognitive approach to the study of human behavior. Recent research and theoretical issues in the areas of perception, memory, and concept formation are emphasized.
- 5509 Assessment 1: Intellectual And Cognitive Assessment (3).** This course is designed to provide students with a foundation in the use of intellectual and cognitive assessment instruments in clinical evaluation. The course covers theoretical issues pertinent to intellectual and cognitive assessment, as well as basic assessment skills including administration, scoring, interpretation, and communication of results for commonly used measures. Prerequisites: Consent of instructor.
- 5510 Assessment Methods In Professional Counseling (3).** This course provides an understanding of assessment process and assessment techniques. Skills and practice in selection, administration, and interpretation of representative assessment instruments. Two semester hours lecture, two semester hours lab experience per week. Cross-listed: CPCE 515. Prerequisite: Course on assessment of intellectual functioning
- 5511 Principles Of Assessment In Psychology (3).** This will be a field practicum course in which test batteries will be used to assess and evaluate the intelligence, personality, and aptitude of the individual. Prerequisite: Psych. 510 and consent of the instructor.
- 5512 Contemporary Issues In Social Psychology (3).** A critical survey of the recent literature in social psychology with emphasis on experimental investigations. Prerequisite: Psych. 312.
- 5515 Advanced Systems And History Of Psychology (3).** In depth review of the major theoretical systems of psychology in terms of historical assumptions, methodologies and developments with the goal of enabling the student to better evaluate current theories and assumptions in psychology. Prerequisite: Psych. 415 or equivalent.
- 5516 Quant Analysis 1: Regression And Analysis Of Variance (3).** This graduate level statistics course for students in education and the behavioral sciences provides a strong conceptual understanding of two major statistical procedures with the context of the general linear model: multiple regression and numerous analysis of variance (ANOVA) models. Students will learn to select appropriate statistical techniques, tests the assumptions of the techniques, analyze data using statistical software, and report the results of their analyses in the format of the American Psychological Association (APA, 2002). Prerequisites: An introductory inferential statistics course (EDRP505, PSY 316) and basic knowledge of research design (EDRP505, PSY302). Cross-listed: EDRP605. Offered: FALL.
- 5517 Quantitative Analysis II: Advanced Topics In Regression And Mda (3).** This graduate level statistics course for students in the behavioral sciences and education provides a strong conceptual understanding of advanced topics in regression (interaction effects, logistic regression, path analysis) and various multivariate techniques (MANOVA, canonical correlation, factor analysis). Students will complete a series of data based projects that allow them to demonstrate their skills in analysis, reporting and interpretation of findings. Prerequisites: EDRP 605/PSY 516 and basic knowledge of SPSS or SAS software and research design (EDRP505, PSY302). Cross-listed: EDRP 606. Offered: Winter.
- 5518 Advanced Biopsychology (3).** This course assumes that the student has mastered the basics of biopsychology, and deals with this topic in greater depth and scope than Psych 418. It will begin with a brief review and update of basic

materials of neuroanatomy, neuronal conduction, and synaptic transmission but will quickly turn to an emphasis on biological influences on human psychology, in particular those biological factors that are of practical significance in the lives of patient and non-patient populations. Prerequisite: Psych 418 or equivalent.

5521 Advanced Social Psychology (3). The study of the individual in a social context. How social structure and interaction influence the behavior of an individual. Several contemporary systematic positions will be compared. Prerequisite: Psych. 312.

5522 Contemporary Issues In Developmental Psychology (3). A discussion of recent research literature in developmental psychology leading to an individual research project in this area. Prerequisite: Psych. 322.

5523 Seminar Personality Theory And Methodology (3). A study of the social-cultural, trait, learning, perceptual, motivational, and field theories of personality with special emphasis on research studies and the methodology of personality research. Prerequisite: Psych. 323.

5533 Psychopathology (3). A review of the experimental-clinical literature concerning the behavior disorders with special reference to their classification and etiology. Prerequisites: Consent of instructor required. Course generally will be restricted to students enrolled in license-eligible specialties who have had an undergraduate course in abnormal psychology.

5538 Development And Evaluation Of Assessment Tools (3). This survey course examines test theories, construction, and measurement theories. Within the context of a variety of conceptual frameworks and examples, students become knowledgeable about the various purposes, approaches, and computer software tools for measurement. Prerequisites: Psychology 516 and 517 Offered: Every Winter

5540 The Psychology Of Aging (3). This course will identify major issues concerning psychology related to aging. The major influences on the behavior, cognitive functioning and emotions of older adults will be examined. Consideration will be given to individual, group and environmental influences. Possible interventions will be identified. Cross-sectional and longitudinal research will be reviewed in order to examine the changes in individuals due to aging and the differences between cohort groups. Three major areas of information will be the focus: concepts, theory and methods in psychology of aging; biological and social influences on behavior; and behavioral processes. There will be a review of current literature.

5543 Adult Development And Aging (3). This course will identify major themes and issues of mid-life and older adults. It will examine major developmental theories of adult development and aging. A contextual approach is stressed, including research and theory on the impact of cohort, gender, race/ethnicity, socioeconomic status, and culture on development. Application to real life is integrated throughout the course. There will be a review of current literature.

5550 Field Practicum (4). Provides supervised experience working in community agencies/ organizations which address various human and social problems. Students receive training in community service oriented skills and approaches, e.g., advocacy, community organizing, program assessment, development and evaluation, outreach, and applied research. Ten hours per week at practicum site and class attendance are required. Prerequisite: Consent of instructor. Offered: Fall and winter.

5575 Professional Issues And Ethics In Psychology (3). Ethical and legal problems of research and practice will be discussed. Professional organizations in psychology and their publications will be reviewed.

5575A Professional Issues & Ethics (3).

5580 Special Topics (1-3). Offered by individual staff members as specialty course in his or her area. Prerequisite: Consent of instructor.

5580AD Special Topics (1-3).

5580SM Special Topics (1-3).

5582 Community Mental Health (3). A review of current theory and research. The emphasis is on prevention rather than treatment of mental health problems. The assets and liabilities of neighborhood communities for mental health problems will be discussed. Recent methods in crisis intervention are reviewed. Each student will be required to become familiar with a neighborhood with a high incidence of application for mental health care.

5586 Theory, Research And Practice Of Consultation (3). Theory and research on community, mental health, organizational and agency consultation. Entry, process, outcome and ethical issues surrounding each model of intervention will be explored. Each student will be expected to conduct and report on a consultation project.

5590 Directed Research (1-6).

5597 Directed Readings In Psychology (3). Intensive readings in areas of joint interest to the enrolled student and the cooperating faculty. Prerequisite: Consent of instructor. Offered: Every Semester

5599 Research And Thesis (1-9).

5601 Experimental Methods In Design And Analysis I (3). An examination of multifactor and multilevel designs and interactions. Topics covered will include randomized block designs. Latin square designs, complex trend analysis designs, covariance designs and multiple comparison of treatment means.

5604 Field Practicum In Community Psychology (3). Supervised experience in health care, social welfare, correctional, political, ethnic, and neighborhood agencies. May be repeated six times for up to 18 credit hours. Each semester.

5611 Theories & Methods Of Assessment & Intervention/Community Psych (3). Review of the assessment and intervention literature in social situations will be conducted. Students will design and carry out an assessment and an intervention project.

5612 Program Evaluation And Research Dissemination (3). A study of the area of applied research in which process and outcome characteristics of programs are related explicitly to a set of values, such as program goals, objectives and costs.

5614 Prevention Science I: Theories, Principles And Methods (3). Course provides a comprehensive overview of the field of prevention emphasizing basic concepts, conceptual models, and approaches associated with prevention in the field of psychology. The goal is to provide knowledge that will allow students to critically evaluate prevention programs in their communities. Students apply their learning by conducting a critical analysis of an existing community prevention and/or health promotion initiative. Prerequisite: none Offered: Every winter

5615 Prevention Science II: Applications (3). This advanced seminar is the follow-up course to Prevention Science I. Emphasis is placed on the application of prevention science to specific content areas (e. g., substance abuse, violence in schools physical or sexual abuse, AIDS/HIV infection, infant mortality, cardiovascular disease, promoting social competence.) A semester project involves an in-depth review of prevention efforts in the chosen area of interest, resulting in a comprehensive research proposal and/or public policy analysis. Prerequisite: Psych 614 (Prevention Science I) Offered: Even years, fall semester, beginning 2000

5622 Theoretical And Ethical Issues In Professional Psychology (3). This course is designed to introduce first year doctoral students to the fundamental concepts and methods of psychology conceived as the application of scientific and ethical reasoning to human problems. It will provide an in-depth examination of the American Psychological Association code of ethics and its application to the conduct of psychologists. Critical and analytical thinking will be emphasized in all aspects of the course. The course will cover broad models of clinical and counseling psychology and their historical and scientific foundations, issues in diagnosis, cross-cultural applications and professional problems in light of ethical principles, professional standards, scientific data & multi-cultural contexts. Prerequisite: consent of the instructor. Offered: Fall.

5623 Methods Of Counseling In Professional Psychology (3). This course is designed to introduce students to the fundamental concepts and methods of counseling in professional psychology. Students will apply ethical and multicultural principles to the helping relationship while learning the basic methods of humanistic, psychodynamic, and cognitive behavioral approaches as they related to the helping process. A main focus of this course is the acquisition of basic helping skills. Students will also become familiar with counseling outcome research and will increase their level of counselor self-awareness. Prerequisite: PSY 622. Cross-listed: CPCE 530 Offered: Winter.

5625 Health Research Methods: Intro To Epidemiology & Clinical Trials (3). This course will introduce graduate students in health-related disciplines to research methods utilized in understanding disease and health risk in humans and conducting intervention trials. Students will learn about how epidemiology contributes to: 1) identifying factors that cause diseases; 2) assessing the public health importance of diseases; 3) describing the natural history of diseases; and 4) evaluating procedures for preventing or treating diseases. After completing this course, students should be able to read and summarize epidemiological research papers and answer questions about a study's purpose, design, methods of procedure, results, and major strengths and weaknesses. Prerequisites: Admission to graduate standing; PSY 601, or equivalent. Offered: Every Winter

5631 Theoretical Foundations Of Health Psychology (3). This course will introduce students to the theoretical foundations of health psychology, including the Biopsychosocial model, individual and systems level theories of behavior change, stress and coping, disease prevention and health promotion, as well as adherence and relapse models. Upon completion of this course students will possess a broad understanding of how cognitive, behavioral, and social factors interact with biological parameters in influencing morbidity and mortality. In addition, students will become familiar with several substantive areas (e.g., chronic pain, HIV/AIDS, cancer, sleep disorders, cardiovascular risk reduction), research methods, and multicultural and ethical issues in health psychology.

5632 Health Psychology Interventions (3). This course will introduce students to a wide range of psychological assessment and intervention strategies that can be used in health care settings. Individual, group, community and policy interventions will be discussed. This course may be used for credit in the Health Psychology Discipline of the Interdisciplinary Ph.D. Program. Prerequisite: Psyh 631 and consent of instructor. Offered: Every Winter

5638 Seminar In Health Care Leadership (3). This course is designed to offer an educational experience that fosters both the knowledge and skills needed for leaders of healthcare in the future. The instructors will guide students through the process of generating new thinking, creating new knowledge, and enhancing interpersonal and professional effectiveness. Course topics will include what creates health and quality of life, social capital and health, healthcare policy, collaborative problem-solving, and transformational leadership and systems thinking.

5650 Clinical Practicum (1-6). Advanced supervised assessment and psychotherapy with individuals and groups in applied settings. Preregistration by application to instructor at least 60 days prior to the beginning of the semester. Approval by Psychology Director of Clinical training required. Prerequisite: Psych 623 and consent of instructor and Director of Clinical Training.

5660 Clinical Health Psychology Internship (1-6). Planned sequence of training experiences in an organized program designed to prepare students for the practice of professional psychology. Prerequisite: Consent of instructor

5696 Pre-Dissertation (1-12). Individualized research experiences to prepare students for the conduct of the dissertation. Pre-requisite: consent of instructor. Offered: continuous Every semester.

5699 Research And Dissertation (1-16).

5899 Required Graduate Enrollment (1).

Public Administration Courses

5509 Government Contracting (3). A comprehensive introduction to the field of government contracts which identifies and analyzes the types of price, cost and incentive contracts; bidding, negotiation; warranties; change orders; cost recovery; terminations and other concepts found in federal procurement for the purpose of developing familiarity with these practices as well as examining the impact of government procurement practices on national economic policy and technological development.

5510 Research Methods In Public Administration (3). This introductory course focuses on quantitative empirical research design and statistical analyses in relation to public administration issues and concerns.

5524 Public Policy Context for Business Decisions (2). This course is designed to provide intensive exposure to the forces and personalities in Washington, D.C. that shape America's business policy. EMBA participants learn how to understand and anticipate the impact of public policy on their businesses and how to become more effective participants in the national decision-making process. Prerequisites: Admission to the Executive MBA program. Offered: Winter

5525 Financial Accountability And Policy Development (3). Modern fiscal policy and its administrative implications to planning, budgeting, revenue administration, accounting and appraisal, and the process for assuring accountability in the development, timing, and execution of public programs. Prerequisite: PA 510.

5526 The Politics Of Administration (3). This course will introduce the subject of public administration from a political perspective. Special attention will be given to an examination of the administrative branch of government. More specifically, the course will focus on the demands directed to administrators from various sectors of the political system, ways in which administrators respond to those demands, and methods available for the analysis of public policies that help us assess the impacts that flow from administrators' actions.

5530 Capstone Seminar In Public Administration (3). This course examines theories of public organizational design, structure and change, including various issues in the administration of public organizations. Questions of professional ethics and management in the public interest are also considered. This is the final course in the MPA core curriculum. Prerequisites: PA 525, PA 526, PA 544, PA 548 or concurrent enrollment.

5535 Urban Policy And Administration (3). An examination of the formulation and administration of policies by urban governments. The course examines (a) the historical and intergovernmental contexts for decision making by urban governments, (b) the governmental forms and political processes employed in making these decisions, and (c) the various urban problems and service delivery issues which require decisions in the contemporary city.

5536 Managing Urban Economic Development (3). This course explores what managers in the public, nonprofit and private sectors need to know about urban economic development. Topics include (a) theories of urban economic

development, (b) varying forms of development (e.g., attraction of new industries, Central Business District development, neighborhood economic development), (c) policy managerial tools for stimulating development, and (d) issues of equity in economic development.

5539 Urban And Regional Planning For Urban Administrators (3). This course is designed to provide students in urban administration with a comprehensive overview of the planning process. Course topics include a review of planning and the problems of effective planning implementation.

5544 Program Evaluation And Analysis (3). Survey of the tools and procedures for evaluating and analyzing policies and programs in the public sector, including nonprofit and human services organizations. Consideration of such topics as definition of goals, developing measures of effectiveness, evaluation research designs, benefit-cost analysis, and the special problems of rational analysis in a political environment. Prerequisite: PA 510.

5548 Leadership For Public Service (3). The two core purpose of this course are for students to learn about effective and ethical leadership, and for students to understand and develop their own capacity for leadership. The course is organized around three general themes: 1) leadership as relations with subordinates, including issues of work motivation; 2) leadership as lateral relations, including organizational politics and conflict management and resolution; and 3) leadership as influence in the organization's environment.

5551 Strategic Management In Nonprofit Organizations (3). This is an advanced management course in the nonprofit management emphasis. Following review of the legal and economic uniqueness of private, nonprofit organizations, the course helps students develop a strategic management framework and apply the key concepts to the management of nonprofit organizations. Recommended prerequisites: PA 495 and PA 548.

5552 Community Organizations And Public Policy (3). This course includes examination of both neighborhood organizations and organizations intended to promote other communities of interest. In relation to neighborhood organizations, topics considered include the varieties of neighborhoods, the role of neighborhood organizations in local politics, the use of neighborhoods in administrative and political decentralization and federal policy toward neighborhood issues. In relation to other community organizations, topics considered include the basis of such organizations, their roles in public affairs and their effects on policy processes.

5553 Legal Framework & Financial Management Of Nonprofit Organizations (3). Utilizing a comparative approach the course examines the legal basis and tax treatment of private, nonprofit organizations in the U.S. Related topics also considered include concepts of fund and cost accounting, budgeting processes, earned income strategies, employee compensation and benefits practices, laws and regulations affecting lobbying, competition with business and unrelated business income tax.

5555 Topics In Nonprofit Fundraising (1-3). In order to flexibly treat the variety of strategies and techniques of charitable fundraising, these courses will usually be offered in variable credit hour segments, covering traditional and emerging fundraising topics. Each semester, two two-credit-hour segments and two one-credit-hour segments will be offered. The two credit hour courses - "Organizing for Successful Fund Raising" and "Creating and Implementing the Annual Development Plan" - cover the basics of fund raising. The one-credit hour courses allow students to explore several different issues related to fund raising such as direct marketing and planned giving. These courses are recommended for nonprofit management students. Prerequisite: None.

5555A Top In Nnrprt Fndrsng: Organizing For Successful Fund Raising (1-3).

5555B Top In Nnrprt Fndrsng: Creatng & Implemntng Annual Devlpmnt Plan (1-3).

5555C Top In Nnrprt Fndrsng: Dircr Mrktng & Dircr Mail In Fund Raisng (1-3).

5555D Top In Nnrprt Fndrsng: Planned Giving & Major Gift Solicitation (1-3).

5555E Top In Nnrprt Fndrsng: Cntmprary Trnds/Ethel Issues In Fund Rsng (1-3).

5555F Top In Nnrprt Fndrsng: Prospect Research And Proposal Writing (1-3).

5555G Topics In Nonprofit Fundraising (1-3).

5556 Innovation In Nonprofit Management And Leadership (3). This course provides an opportunity for students in the nonprofit management specialization to examine "breaking" innovations in nonprofit management and leadership. Intra- and inter-sectoral collaborative strategies and total quality management are illustrative examples. Other topics will be considered as warranted. This course is recommended for students who have completed PA 525, PA 548 and at least six hours of nonprofit management course work.

5565 Topics In Urban Administration (1-3). To flexibly treat the variety of strategies, information, and techniques in urban administration and leadership,

these courses will be offered in variable credit hour segments. Each semester combinations of one and two hour courses would be offered around traditional and emerging topics. An initial "basics" series will be offered on community development organizations, urban economic development and community development strategies.

5565A Community Economic Development: The Planning Context (1). Offered: Every Fall Prerequisites: None

5565B Community Economic Development Tools & Techniques (1). Offered: Every Winter

5565C Implementing Effective Community Economic Development (1). Offered: Every Winter

5570 Diversity In The Workplace (3). This course explores the many issues raised by the growing diversity of backgrounds (e.g., race, gender, culture) employees bring to the workplace. The course will examine diversity issues including demographics, relevant legislation, values questions, demands on management, and effects on service delivery to clients. To better illustrate the issues, some class sessions will feature guest lecturers representing a diversity of backgrounds and work settings.

5581 Seminar In Urban Administration (3). Advanced work on special topics in urban administration. Topics will vary. Prerequisite: PA 535.

5585 Seminar In Public Affairs (3). Advanced work on special topics in public affairs.

5585A Seminar In Public Affairs (3). Advanced work on special topics in public affairs.

5585B Seminar In Public Affairs (3). Advanced work on special topics in public affairs.

5585C Seminar In Public Affairs (3). Advanced work on special topics in public affairs.

5593 Internship Seminar (3-6). Combined classroom study and field internship. To be offered only when government agency internships approved by the Public Administration Committee are available. Prerequisite: 18 credit hours of completed courses.

5598 Supervised Research (1-6). Study and research in areas of special interest under individual faculty direction. Areas are (A) Nonprofit Management, (B) Public Works, (C) Urban Administration, (D) Public Management, (E) International Management, (F) Public Financial Administration, (G) Unspecified. Prerequisite: Pre-registration, consent of instructor.

5598A Supervised Research: Nonprofit Management (1-6).

5598B Supervised Research: Public Works Administration (1-6).

5598C Supervised Research: Urban Administration (1-6).

5598D Supervised Research: Public Management (1-6).

5598E Supervised Research: International Management (1-6).

5598F Supervised Research: Public Financial Administration (1-6).

5598G Supervised Research: Unspecified (1-6).

5599 Thesis (1-9).

5610 Inquiry In Public Administration And Affairs (3). This course is designed to provide Ph.D. students a thorough grounding in strategies of inquiry. Issues considered include competing metatheoretical paradigms and alternative conceptions of explanation in the social and policy sciences, the implications of such alternatives for empirical research, the variety and standards of qualitative and quantitative approaches to theory and research, theory construction, and research ethics. Contemporary problems in public administration and affairs research and theory are emphasized.

5620 Literature Of Public Affairs And Administration (3-6). This course grounds the student in the central ideas of the public affairs and administration literature and in the prominent themes of the discipline. The course is offered in two versions: A, in which the political science approach to public affairs and administration is emphasized; and B, in which the organizational theory and behavior approaches to public affairs and administration are emphasized. Ph.D. students whose coordinating discipline is public affairs and administration are ordinarily expected to complete both versions. Prerequisites for 620 A are completion of PA 525, 526 and 544 (or similar graduate level courses) and consent of the instructor. Prerequisites for 620 B are PA 548 and PA 530 (or similar graduate level courses) and consent of the instructor.

5620A Literature Of Public Affairs And Administration: Political Science (3-6).

5620B Literature Of Public Affairs And Admin: Org Theory & Behavior (3-6).

5630 Learning In Public Affairs And Administration (3). This course is designed to focus on dissemination of information to various publics served by public affairs and administration professionals. The course reviews delivery

systems, learning methodologies, and adult education concepts relevant to public affairs and administration.

5631 Teaching In Public Affairs And Administration (3). The student delivers information under the guidance of a faculty member who acts as a mentor and coach through observation, analysis, and discussion. The focus may be on critical thinking as an orienting goal for developing learning and learning environments for adults.

5650 Advanced Research In Public Affairs And Administration (3). The course enables the student to present advanced topics in their fields of research interest and to have detailed critique and contributions on that research by the faculty. Prerequisites: PA 610 and research requirements.

5699 Dissertation And Research In Public Affairs And Administration (1-12). Dissertation research and writing in the Public Affairs and Administration discipline. Prerequisite: Consent of instructor.

5899 Required Graduate Enrollment (1).

Religious Studies Courses

5500 Special Topics In Religious Studies (1-3). Special topics in religious studies. The focus of the course will vary by semester and instructor.

5505 Religion In America (3). An in-depth examination of selected aspects of the history of religions in America from the colonial period to the present. Special emphasis will be given to methodological issues in the study of American religious history. Offered: On Demand

5510 Religions Of The World (3). This course is designed to introduce graduate students to the major religions of the world, as well as to selected small-group religions. Our goal will be to learn to appreciate the similarities and differences in the structure and history of these religions. A primary focus will be on using the categories of the history of religions to examine and analyze the various dimensions of religion (e.g., historical, sociological, ritual, mythological, aesthetic). In addition, methodological issues of comparison will be addressed.

5567 Myth and Ritual (3). "Myth" and "ritual" have long been fundamental categories in the study of religion. This course will briefly survey some of the major theories and approaches to the study of myth and ritual from the Enlightenment to the present. Will not only trace the shifting meanings of "myth" and "ritual," but will critically evaluate the utility of diverse approaches to the study of religious phenomena designated by these terms. Reading will include theoretical works, as well as selected case studies.

5584RS Sacred Narratives And Texts (3). This course will study the "social lives" of sacred narratives and texts as they circulate within religious communities. Among the topics to be studied are methods of exegesis in different religious traditions, orality and literacy (including the reoralization of written texts), the canonization process, the emergence of interpretive specialists, text as amulets, reading and meditative practices and techniques, and narratives and the arts. The course is comparative, cross-cultural, and interdisciplinary in nature.

5586RS Methodological Approaches To The Study Of Religion (3). This course examines the various disciplines that undertook the critical, objective study of religion beginning in the second half of the nineteenth century and continuing into the present. The course examines how the disciplines of the social sciences and humanities emerged in the last century and how the study of religion emerged from its roots in Jewish scholarship and Christian theology to be included under the umbrella of the humanities and social sciences. The historical development of religious studies as a historical and intellectual contexts.

5587RS Research Seminar (3). Students in this course will produce a major research paper under the direction of the instructor: a self-contained thesis chapter, an article for publication or the equivalent.

5592 Cults Sects, And New Religious Movements (3). In this course, students will experience: (a) a variety of methods for analyzing and understanding new religious movements in society: sociological, historical, and textual; (b) an introduction to the broad spectrum of religious beliefs which exist (and flourish) outside the cultural mainstream; and (c) an introduction to some of the means by which dominant religious and secular culture has confronted the presence of NRMs-e.g., deprogramming exit counseling, and theologically oriented countermovement. Offered: On demand

5593 Sex And Religion (3). The course is designed to highlight issues related to the various ways in which religions of the world have integrated, embraced, or repressed one of the basic human experiencessexual expression. This is an elective course designed for graduate students with Religious Studies either as their coordinating or co-discipline. This is an advanced seminar, and as such does assume a certain measure of theoretical familiarity and background of study. Offered: On demand

5594RS Death In The History Of Religions (3). As a biological "fact," death would appear to be a human universal. Yet, human beings have imagined—and, thus experienced—the meaning of death in many diverse ways in different

cultures and over time. This course explores the conceptualization and representation of death and dying, as well as the ritual activities surrounding death, found in selected religious communities. The goal is to gain insight into how people have sought to (re) create a world of meaning in the face of death and to gain a critical perspective on our own contemporary situation.

5595RS Time And Space In The History Of Religions (3). Time and space are essential components of the lived worlds of human beings, yet the cultural and historical constructions of these are remarkably diverse and, moreover, are subject to change. This course is a cross-cultural, interdisciplinary, and comparative exploration of the constructions and experiences of time and space found in selected religious communities and historical periods. In addition, it investigates the pivotal role the categories of "sacred and profane time and space" have played in theorizing religion and in the study of religious myths and rituals in the modern period. Time and space are essential components of the lived worlds of human beings, yet the cultural and historical constructions of these are remarkably diverse and, moreover, are subject to change. This course is a cross-cultural, interdisciplinary, and comparative exploration of the constructions and experiences of time and space found in selected religious communities and historical periods. In addition, it investigates the pivotal role the categories of "sacred and profane time and space" have played in theorizing religion and in the study of religious myths and rituals in the modern period.

5596RS Body In The History Of Religions (3). The human body is the site of extensive imaginal and ritual activities in all religious traditions. This course explores some of the diverse ways religious communities have imagined and experienced the human body, as well as how the body had been manipulated and worked on in an effort to transform the human situation in the world.

5597RS Non-Thesis Research/Reading (1-6). Individual direction of student reading or research by selected, consenting faculty. This course can be taken only when faculty supervision is unavailable in colloquia or seminars.

5598RS Seminar In The History Of Religions (3). Advanced graduate seminar on a selected topic or problem in the History of Religion. Topic varies, but the seminar will have a methodical or theoretical focus. May be repeated for credit when topic is different.

5680RS Doctoral Colloquium (3). This course will examine the writings and theories of major scholars in a particular area of Religious Studies. The authors, works and intellectual currents which form the basis of the colloquium will vary from semester to semester depending upon the professor's expertise and design for the course.

5687RS Doctoral Research Seminar (3). Students in this course will produce a major research paper under the direction of the instructor. This shall consist of a self-contained chapter of the dissertation or a work of publishable quality. May be repeated for credit.

5697RS Doctoral-Level Independent Readings (1-6). Individual reading under the supervision of members of the Religious Studies Doctoral faculty and adjuncts in preparation for the Comprehensive Examination for the Ph.D.

5699RS Dissertation (1-15). Course credits in dissertation.

5899 Required Graduate Enrollment (1).

Research Methodology - Dentistry Courses

5700 Introduction To Research Methodology (2-3). This lecture/discussion course will facilitate student's understanding of terminology and key concepts of research methodology and design. Assigned exercises are designed to demonstrate application of research design principles, and to increase advanced education students' competency in evaluating and planning scientific studies. This knowledge is indispensable for conducting meaningful research in advanced education certificate, masters of doctoral level programs.

5701 Topics In Advanced Research Methodology (2-4). A lecture/seminar course on selected advanced research methodology topics which are to be determined in conjunction with participants. Such topics may include advanced experimental designs in the literature, etc. Prerequisite: Permission of instructor.

5702 Special Problems In Research Methodology (2-4). A student will work with a faculty member on methodological aspects of a research proposal or project. Prerequisite: Permission of instructor.

5703 Thesis Writing (1). The methods of preparing, organizing, and presenting research findings according to the format of scientific writing.

5704 Introduction To Biostatistics (2-3). A lecture/seminar course required for students pursuing a master's degree. This course focuses on an in-depth coverage of statistical designs commonly found in dental research, statistical techniques associated with these designs, application to them via the use of a computer based statistical software analysis package, and the interpretation of statistical tests. Prerequisite(s): RESM 5700.

5705A Design Of Clinical Research Studies (2). Students enrolled in this course will learn the elements of a good clinical research study. Additionally, students will develop a draft protocol for a clinical research project, estimate

time and budget needs for the project, and be sensitive to ethical issues in the conduct of clinical research.

5705B Statistical Analysis For Clinical Research (2). Techniques for analyzing complex clinical research designs are a major focus of this course. Students will also learn analytic techniques for estimating failure in biomaterials as well as epidemiologic techniques.

5705C Introduction To Statistical Software (2). Students enrolled in this course obtain hands-on experience with comprehensive statistical analysis programs, including SPSS and SAS. Students will learn to establish and verify data files, generate program files, and develop strategies for documenting files for improved accountability and reproducibility.

Research and Psychology Courses

5502 Advanced Educational Psychology (3). Critical examination of the contributions of psychological principles and findings to the field of education.

5505 Statistical Methods I (3). Non-theoretical approach to statistical procedure, including introduction to simple analysis of variance.

5508 Principles And Methods Of Research (3). Introduction to the analysis of research literature including types of research, methodology, design and data analysis.

5510 Child Behavior And Development (3). Growth, maturation, and learning processes in children. Offered: Every semester.

5512 Adolescent Development And The School (3). An overview of adolescent development from preadolescence to adulthood, focusing on major theories and aspects of adolescent development, critical issues of adolescence today, and the role of professional educators in facilitating positive development.

5513 Life Span Human Development (3). This course introduces students to the theories and research of biological, cognitive, social and personality development across the lifespan, within the layers of context of people's lives. Special attention is given to the role in development of social class, gender, ethnicity and culture. Offered: Every Winter

5522 Principles Of Testing (3). Measurement theory, uses and limitation of assessment procedure.

5575 Internship (3-16). Applied experiences in a planned, supervised program in research or educational psychology. Prerequisite: Consent of advisor.

5576 Educational Technology (3). History of responsive technology in education, principles of learning and strategies in programming instructional materials, methods of evaluation, and current research methodologies in educational technology.

5589 Special Topics In Education (1-6). A course designed to deal with a topic in educational research or educational psychology which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589CP Special Topics In Education (1-6).

5589DB Special Topics In Education (1-6). A course designed to deal with a topic in educational research or educational psychology which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589PR Special Topics In Education (1-6).

5589SE Special Topics In Education (1-6).

5590 Individual Studies (1-6). Review of the research and trends relative to selected problems in educational research or psychology: By prior arrangement with instructor.

5604 Cognitive Processes In Learning And Instruction (3). Examination of current research and theory in cognitive aspects of learning, thinking, comprehension and classroom processes, especially as they relate to classroom settings. Designed to present background essential for an understanding of much contemporary inquiry in many fields of educational thought and practice. Prerequisites: EDUC 5502 or EDUC 5510 or EDUC 5512.

5605 Quantitative Analysis I: Regression And Analysis Of Variance (3). This graduate level statistics course for students in education and the behavioral sciences provides a strong conceptual understanding of two major statistical procedures within the context of the general linear model: multiple regression and numerous analysis of variance (ANOVA) models. Students will learn to select appropriate statistical techniques, test the assumptions of the techniques, analyze data using statistical software, and report the results of their analyses in the format of the American Psychological Association (APA,2002). Prerequisites: An introductory inferential statistics course EDRP 5505, PSY 316) and basic knowledge of research design (EDRP 5505, PSY 302). Cross-listed: PSYCH 5516 Offered: Fall.

5606 Quantitative Analysis II : Multivariate Data Analysis (3). This graduate level statistics course for students in the behavioral science and

education provides a strong conceptual understanding of advanced topics in regression (interaction effects, logistic regression, path analysis) and various multivariate techniques (MANOVA, canonical correlation, factor analysis). Students will complete a series of data based projects that allow them to demonstrate their skills in analysis, reporting, and interpretation of findings. Prerequisites: EDRP 5605/PSY5516 and basic knowledge of and SPSS OR SAS software and research design (EDRP 5505, PSY302). Cross-listed: Psych 5517 Offered: Winter.

5608 Introduction To Graduate Research (3). This course is an introduction to quantitative and qualitative research methods. Students in the course develop a research proposal on an approved topic of their choice.

5610 Research Design & Methodology (3). An introduction of methodology and design in the behavioral and health sciences. The course will cover: (a) the key terms and concepts of design and methodology, (b) how to apply those concepts to the construction and criticism of designs., and (c) ethical issues for conducting human and animal research. Crosslisted with PSYCH 5601. Prerequisite: EDRP 5605

5615 Qualitative Research Theory & Design Educational Setting, Part 1 (3). Students will be introduced to qualitative research theory and design. Prerequisite: EDRP 5505 and 5508

5616 Qual Data Collection And Analysis In Educational Settings, Part 2 (3). Students will gain experience in qualitative data collection and analysis. Prerequisite: EDRP 5615

5625 Program Evaluation For Education & Social (3). Program evaluation is an applied research area that focuses on providing summative and formative data about the progress of an organization or program. This doctoral seminar will focus on learning to identify the goals, objectives and assumptions inherent in a program, and on designing a methodology to assess progress towards the goals. All students will develop a comprehensive evaluation plan for a program of their choice. Prerequisites: EDRP 5505, EDRP 5522, and EDRP 5508 or EDRP 5608.

5639 Educational Psychology: Focus On College Teaching (2-3). An introduction to theories and principles from educational psychology as they relate to learning, motivation, assessment, and instruction. Prerequisite: Doctoral Student Status

5640 Apprenticeship And Conference In College Training (1-3). Apprenticeship experience in preparing, conducting, and evaluating college teaching under the direction of and in conference with supervising professors. By arrangement. Pre-requisites: EDRP 5639

5690 Special Problems (1-6). Individual studies; thesis exploration, special reading.

5698 Dissertation In Educational Research & Psychology (1-16). By arrangement.

Saxophone Courses

5500A Graduate Saxophone-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JA Graduate Applied Jazz Studies (2). One hour lesson weekly. Consent of instructor and a jury examination are required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JB Special Applied Jazz Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. A jury for comments only may be held at the discretion of the faculty. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/Every Winter

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Saxophone - Masters Performance (4).

5601 Graduate Saxophone - Doctoral Performance (4).

Social Science Courses

5610 Philosophy Of Social Science (3). This course examines the development of the philosophy of science since the end of the 19th century. In this regard, Positivism, Conventionalism, and Realism as the three major

conceptions of science will be studied and their significance as philosophical foundations of the social sciences will be assessed. Particular attention will be given to the emerging philosophy of science (i.e., Scientific Realism) which has profoundly challenged the more established Positivism.

5620 Seminar In Social Theory And Policy Analysis (3). This seminar is designed to help the student develop, analyze, and evaluate objects of study. Considerable emphasis is placed on the integration of social theory and social policy. The course requires students to present a policy research project (or dissertation proposal) to the group. Each student is expected to give an oral and written evaluation of each proposal. Ideally, a member of the presenter's doctoral committee will participate in the class.

5690 Special Doctoral Reading in Social Science (1-3). Special Research Topics in Interdisciplinary Social Science At The Doctoral Level.

5899 Required Graduate Enrollment (1).

Social Work Courses

5510 Foundation Field Practicum I (3). Students spend 16-hours weekly in a generalist field practicum setting under MSW supervision. Participation in a 12-hour integrated field seminar on campus led by faculty is required. Must take one human behavior course (SW5530 or SW5531) prior to entering or concurrently with field placement. Must take SW 5532 concurrently.

5511 Foundation Field Practicum II (3). Students continue the field practicum experience from SW 5510 and participation in the integrated seminar on campus. Focus on generalist knowledge, values, and skills. Prerequisite: Completion of SW 5510 and SW 5532. Must take SW 5533 concurrently.

5512 Advanced Field Practicum I (3). Students are placed in a field setting in their chosen field-of-practice concentration approximately 16 hours per week under the supervision of an MSW field instructor. SW 5540 must be taken concurrently. One concentration seminar must be taken prior to or concurrently with entering this field placement.

5513 Advanced Field Practicum II (3). Students complete a final semester in their field-of-practice concentration agency setting approximately 16 hours weekly under MSW supervision. SW 5541 must be taken concurrently.

5530 Human Behavior: Individuals In The Social Environment (3). This theory course focuses on the interactional context of human behavior essential to all social work practice. A variety of perspectives are considered in the understanding of the individual; developmental, ecosystemic, biopsychosocial, traditional, and alternative. Diversity and resiliency are the key course concepts.

5531 Human Behavior: Families, Groups, Organizations, And Communities (3). This theory course applies social work's ecosystemic framework to the understanding of human behavior in families, groups, organizations, and communities. Knowledge and applied theories and paradigms are examined that honor social justice, human diversity, strengths/assets, and community-building to enhance effective social work practice. Prerequisite: SW 5530

5532 Foundations Of Social Work Practice I (3). This course examines the fundamental knowledge, values, and skills of generalist social work practice with a focus on person-in-environment. Course topics include values and ethics, collaborative approaches to helping, stages of the helping process, and beginning practice skills with at-risk populations. Concurrent enrollment in SW5510 is required.

5533 Foundations Of Social Work Practice II (3). This second generalist social work practice course examines effective helping approaches with diverse families, small groups, and communities of identity and/or place. The course also introduces values and working styles for professional practice in organizations. Pre-requisite: SW5532 and SW 5510. Concurrent enrollment in SW5511 is required.

5534 Social Welfare Programs And Policies (3). This course examines social policies that direct current social service trends at local, state, and federal levels. Students learn a model of analysis that examines the context in which policy decisions are made and the effects that social service programs and policies have on people's lives.

5535 Social Welfare Policy Practice (3). This course prepares students with a social justice/empowerment orientation and the knowledge, skills and values needed to become an effective policy advocate, particularly with people who experience the effects of poverty, discrimination, exclusion, and oppression. Pre-requisite: SW 5534

5536 Social Work Research Methods (3). This course introduces students to the fundamental knowledge and skills of social work research such as practice evaluation, program planning, and other facets of professional social work practice. Emphasis on application of social research methods in actual practice situations will be used to assist students in skill development.

5537 Quantitative Social Work Research Methods (3). This course is designed to prepare graduate level students to develop a comprehensive understanding of statistical method application to social work research. Students will gain a basic understanding of the research and statistical procedure that are needed for clinicians/researcher to operate within the field today. Students will become proficient in reading analyzing and assessing the results of social work publications. Prerequisite: SW 5536 Social Work Research Method

5538 Advanced Standing Seminar: Contemp Trends In Social Work Practice (3). This required seminar is designed for BSW's entering the Advanced Standing Program and serves to update and integrate social work practice approaches with contemporary perspectives of human behavior in the social environment. Restriction: Restricted to Advanced Standing Students.

5539 Adv Standing Sem: Emerging Iss In Soc Welfare Policy And Research (3). This required seminar in the Advanced Standing Program examines emerging policy issues and research developments in the field. Students prepare to choose a field-of-practice concentration and to enter the Advanced-level year of study. Restriction: Restricted to Advanced Standing Students.

5540 Advanced Social Work Practice I (3). This course prepares students with an advanced generalist social work perspective and to evaluate and integrate theory, values, and skills for assessment and direct practice with complex case situations in a rapidly changing service environment. Must Be taken concurrently with SW 5512. Prerequisite: Completion of foundation year.

5541 Advanced Social Work Practice II (3). This course extends the advanced generalist model of social work practice to working with challenging families and small groups. The course introduces leadership, organizational, and management competencies for professional practice in social service agencies and skills for coalition-building and collaboration in communities. Must be taken concurrently with SW5513. Prerequisite: Completion of foundation year.

5542 Social Services With Older Adults (3). This course provides an overview of social service practice with older adults. Students examine population demographics, identify normal and abnormal aspects of aging, and examine methods, paradigms, and approaches to effective advanced generalist practice in treatment and community settings. Prerequisite: Completion of foundation year.

5544 Families, Communities and Child Welfare (3). This course examines child centered, family centered and neighborhood based approaches to child welfare. Prerequisites: Completion of Social Work Foundation Sequence

5546 Mental Health and Substance Abuse in Social Work Practice (3). This course examines current practice approaches and policy/research issues in mental health and in the dually diagnosed. Students focus on service delivery systems of care with a variety of adult populations from an empowerment perspective. Prerequisite: Completion of foundation year.

5550 Program Evaluation and Management (3). This course is designed to train students in evaluation of direct practice, community needs and underserved populations. Students develop a new or enhanced model of service delivery to address needs. Strategic planning, management in theories and grant writing and major components of this course. Prerequisites: Completion of foundation year.

5560 Psychopathology: A Competency Based Assessment Model in Social Work Practice (3). The DSM will be used in conjunction with a competency-based assessment model that includes an ecological approach and systems theory to determine what biopsychosocial factors have contributed to the client's problem. The multi-axial system become a tool to gather information, that supports the competency-based assessment. Prerequisites: Foundation Coursework Offered: Every Fall

5562 Family Organization and Development: Multi-systems Interventions (3). This course examines developmental, structural, systemic family therapy and multi-system interventions. Prerequisites: Completion of Social Work Foundation

5564 Advanced Group Interventions in Social Work (3). This course provides both a didactic and experiential introduction to advanced group therapy for social work practice, explores the therapeutic factors, norms and their creation, the role of leader and termination as a group experience. Offered: On Demand

5568 School Social Work Practice (3). Students will learn the knowledge and skills required for performing roles and functions of school social work in K-12 settings. They will apply social systems and the strengths perspectives within the context of school as organizations interconnected to community environments. Offered: On Demand

5575 Advanced Generalist Community Practice (3). This seminar covers community social work practice at the advanced level addressing values, knowledge and skills essential for community social change. Models of

community practice are addressed to facilitate student skill applicant in social planning, community development, and community collaboration strategies. Each model requires knowledge of large systems practice. Prerequisites: Completion of 30 crs or Required Foundation Curriculum Offered: Every Winter on Demand

5579 Integrative Seminar of Advanced Generalist Practice (3). This course, taken in the last semester, serves as a final integration of advanced generalist competencies in an urban environment. Students prepare a major project for presentation in a public forum.

5580 Special Topics In Social Work (1-3). These seminars are designed to examine relevant and innovative areas emerging in social work practice which are not available in the regular course offerings. Topics, instructors, and prerequisites are listed in the semester bulletin. Prerequisite: Completion of foundation year.

5590 Readings And Investigations In Social Work (1-3). Under the direction of a faculty member, individual students may pursue an in-depth area of study in generalist social work practice, including a research project of the student's choice. Prerequisite: Permission of Director and Curriculum Committee.

Sociology Courses

5501 Social Theory I (3). Examines the development of social theory in Europe up to the beginning of the twentieth century, with a focus on its intellectual precursors of social theory, debates over the nature of society, and controversies over the distinct features of sociology as an emerging academic discipline. The major perspectives covered include the intellectual origins of sociological thought in Great Britain, France, and Germany, and the debates as reflected in the writings of Karl Marx, Emile Durkheim, Max Weber, and Georg Simmel. Prerequisite: undergraduate course in Sociological Theory. Offered: Fall.

5502 Social Theory II (3). Examines the major sociological theories developed during the twentieth century and contemporary debates over the nature of society and the nature of our knowledge about society. Theories to be examined include behaviorism, symbolic interactionism, structural functionalism, phenomenology, conflict theory, postmodernism, those that attempt to integrate social agency and structure, and feminist theory. Prerequisite: Sociology 501. Offered: Winter.

5503 Controversies In Contemporary Social Theory And Practice (3). This course critically examines central issues in contemporary debates among social theorists over the nature of society and how it should be studied. Offered: Fall

5506 Colloquium: Research And Dissertation Project (3). A colloquium of Ph.D. students to be taken during the Fall semester of their second year in the program. Students will be guided to develop their dissertation proposal under faculty direction and exchange their experience. The focus of the seminar is on students developing and refining a research agenda that will eventually result in their dissertation proposal. Issues to be addressed include how to state the research question, how to identify and evaluate theoretical perspectives, how to review the literature, how to determine the methodology to be used as well as the options for data collection, and how to put all of this information into a readable and operational research proposal. Note: Fall.

5510 Sociological Methods I (3). A survey of methods used by sociologists: selection and formulation of problem, research design, survey research, participant observation, sampling, reliability and validity, use of scales, and data analysis. Crosslisted with CJC 510. Offered: Fall Prerequisite: SOC 362 or equivalent.

5511 Sociological Methods II (3). Quantitative research is the primary focus of the course; emphasis is placed on problem formulation; research design; sampling procedures; questionnaire construction and interviewing techniques; data collection; problems of scaling, validity and reliability; uses of secondary data sets; data analyses and report writing. Crosslisted with CJC 511. Prerequisite: SOC 362 or equivalent. Offered: Winter.

5512 Qualitative Methodology (3). Experience in field research and participant observation methodology with focus on the research process including the role of the researcher, data collection and analysis, ethical issues, and the value and limitation of qualitative methodologies. Prerequisite: One semester of research methods.

5516 Intermediate Statistics (3). A systematic development of the logic and practice of selected statistical methods used in sociological research. Included are analysis of variance and covariance, regression analysis, multiple contingency, and non-parametric tests. Prerequisite: SOC 363 or equivalent. Crosslisted with CJC 516.

5523 Sociology Of Deviance (3). A seminar devoted to a critical examination of the predominant studies on the subject as well as to a discussion of some of the major forms of deviance in contemporary American society.

5525 Complex Organizations (3). Examination of the more important studies and theories concerning organizations such as business, factories, governmental bureaus, churches and universities. The communication-decision

process, status system, socialization, legitimization of power, and the interrelationships of formal structures.

5530 Anthropology Of Women (3). This class explores such global women's issues as cultural diversity, local and international politics, the economy and work, education and other ideologies, etc. We will inquire into women's lives in a variety of societies, during colonial contact, and in the current post-colonial New World Order to understand how the study of women through cultural anthropology informs all areas of life. In addition to the undergraduate course work, graduate students are required to submit a 15-page term paper at graduate-level quality.

5531 Feminist Theories (3). This class introduces the major feminist theories and their primary authors over the last 200 years. The class takes both an historical (we begin with two millennia of male-centered theories about women) and a conceptual approach (theories are grouped by common ground) and familiarizes the student with both the historical processes that necessitate feminist theories as well as with the breadth of the historically and currently available scholarship. Graduate students are expected to fulfill all undergraduate requirements at graduate-level quality, including independent research components; in addition, graduate students are required to be prepared to lead class discussions. Prerequisites: Introduction of Women's Studies Offered: Every Winter

5538 Gender, Work And Social Change (3). This course examines the role of gendered work and consumption in global social change. Drawing from sociological perspectives on gender and work, this course foregrounds a global comparative analysis of societal development and working contexts, including tourism employment, sex work, domestic work, and agricultural, garment, and informatics production. Graduate students are required to carry out independent research or complete work in the area of public sociology and academic-service learning. Students will write a conference paper or journal quality article from this research. Offered: Every Winter

5540 Urban Social Structure (3). An examination of the social structure of the American city with special reference to the historical development of American cities. Attention will be focused on the role of social institutions as they have changed in relation to urban problems.

5554 Sociology Of The Aging Woman (3). An exploration of the intersection of gender and aging issues with special attention to cultural images of women, the development of self-concept and identity in mid-life and beyond, caring roles in the family, work and retirement, and health and mental health issues. These issues are examined within the context of social class, race, and ethnicity. Implications for community programs and social policy are considered. Graduate students will be expected to carry out a research project and to lead a class session.

5556 Aging And Developmental Disabilities (2). This course explores the experience of aging with a developmental disability or mental retardation within the context or normative aging. Among the comparisons made between older persons with and without developmental disabilities are their demographic characteristics, physical and cognitive functioning, role transitions and losses, identities and self-concepts, and family and caregiving issues. Policies, programs, and emerging concepts of best practices are considered within the context of quality of life, ethical, and community inclusion bases.

5557 Practicum In Aging And Developmental Disabilities (1). Students gain experience in working with and defining issues of older persons with developmental disabilities through placements in sheltered workshops, senior centers, residential group homes, and other community-based programs. Students must be simultaneously enrolled in Sociology 556.

5558 Cultures Of The African Diaspora (3). The course will explore the cultures of African people and their descendants who settled in Europe, the Caribbean or the Americas due primarily to the impact of the Trans-Atlantic trade in human beings. The focus will be comparative, with emphasis on cultural adaptation, kinship systems, music and religion

5560 Sociology Of Death And Dying (3). This course examines attitudes, behaviors, and institutions related to death and dying in contemporary American society. Topics include the meanings of death in American society, social settings for dying, interaction with the dying, customs and practices surrounding death, role transitions of survivors, and suicide. Special attention is given to issues of aging and dying.

5580 Special Studies In Sociology (1-3). An opportunity to explore in depth topics not included in usual course offerings. One or more topics will be announced in advance of registration.

5595 Directed Research Experience (3). Research project supervised by faculty.

5597 Independent Readings (1-3). Intensive readings in an area selected by the student with prior consultation with the instructor.

5599 Thesis And Research (1-6). Directed specialized research. Before writing a thesis, the student must clear the topic and research design with the Supervisory Committee. The course also involves the writing of the thesis.

5699 Dissertation Research (1-12). Individual directed research leading to preparation and completion of doctoral dissertation.

5899 Required Graduate Enrollment (1).

Spanish Courses

5514 The Generation of 1898 (3). An examination of the intellectual, critical, historical and social problems as reflected in the writings of Ganimet, Unamuno, Valle-Inclan, Baroja, Azorin, and others.

5516 Medieval Spanish Literature (3). A study of selected medieval masterpieces in their Old Spanish form, with special emphasis on Romances, the Cantar de Mio Cid La Celestina, El Corbacho, Libro del buen amor, etc. Includes a short history of the Spanish language.

5519 Federico Garcia Lorca (3). A study in depth of the poetry and drama of Federico Garcia Lorca.

5520 Cervantes' Don Quixote, Part I (3). An intensive reading of the first part of Cervantes' novel, Don Quixote.

5521 Cervantes' Don Quixote, Part II (3). An intensive reading of the second part of Cervantes' novel, Don Quixote. Part One is not a prerequisite. Offered: On Demand

5526 Golden Age Drama (3). A study in depth of the creation of national theater by Lope de Vega and his followers.

5527 Pre-Columbian and Spanish Colonial Literature (3). A study of pre-Columbian works in drama, narrative, and poetry (Popol Vuh, Apu-Ollantay, Incan and Aztec poetry) along with a survey of Spanish-American colonial literature.

5528 Contemporary Spanish Poetry (3). A comprehensive and intensive study of 20th-century Spanish poetry. The poets and their poetry will be studied in the light of literary movements, foreign influences, political tendencies and philosophical ideas.

5529 Novel of the Mexican Revolution (3). The revolution as the principal focus of 20th-century Mexican fiction. The course will examine both the evolving understanding of the event/process and the sophistication of narrative technique employed in its presentation. Among the writers to be studied are Azuela, Guzman, Lopez y Fuentes, Yanez, Revueltas, Rulfo and Fuentes.

5530 Spanish Mysticism (3). An examination of the development of mysticism in Oriental and Occidental civilizations, with emphasis on the great periods of mystic experience as reflected in the literary production of the Spanish Golden Age. Readings could include the works of Fray Luis de Granada, Fray Luis de Leon, Saint John of the Cross and Saint Teresa of Avila. Offered: On demand

5531 The Golden Age Novel (3). A study of major prose works of the Golden Age. Possible topics include authorship, innovative narrative techniques, textual strategies and metafiction issues. Readings could include works by Alfonso Martinez de Toledo, Diego de San Pedro, Fernando de Rojas, Francisco Delicado, Cervantes, and Lope de Vega. Offered: On demand

5532 Pastoral Literature (3). A study of the development of pastoral literature during the Spanish Golden Age. Possible texts: Juan del Encina's Eclogues, Montemayor's Los siete libros de la Diana and Cervantes' Galatea. These works will be examined within their historical and cultural context. Offered: On demand

5533 Cervantes' Exemplary Novels (3). A study of Cervantes' Exemplary Novels within the context of 17th Century Spain. Attention will be paid to interpretive possibilities and how knowledge of historical contexts might influence readings of this rich and varied cultural output.

5534 The Picaresque Novel (3). A study of the development of picaresque fiction during the Spanish Golden Age. The course deals with novelists principally active during the Baroque period such as Mateo Aleman, Francisco Lopez de Ubeda, Miguel de Cervantes, and Francisco de Quevedo.

5550 Modern Classics of Latin American Literature (3). The goal of the course is to familiarize the student with the principal Latin American writers of the modern period. The focus will be dual: the progressive sophistication of literary technique, and the refinement of social conscience. Among the authors to be studied are: Asturias, Borges, Carpentier, Cortazar, Donoso, Fuentes, Garcia Marques, Paz, Rulfo, and Vargas Llosa. Also offered as Spanish 450.

5553 Spanish-American Short Story (3). A study of Spanish-American short stories from Romanticism to the present. On demand.

5580 Special Topics (1-3). Treatment of a particular genre or area of literature or language normally not offered through regular courses. May be repeated for credit when the topic changes. Prerequisite: Permission of the instructor. On demand.

5590 Directed Studies in Spanish & Latin American Literature (1-3). Intensive readings in a field or literary figure to be selected by the student in consultation with the instructor. Available by permission of chairman only when the student cannot regularly scheduled courses.

Special Education Courses

5506 Iep, Transition, And The Law (3). This course provides a background in historical and legal issues related to the field of special education. The course will focus on issues and practices related to developing individualized programs including Individualized Family Service Plans (IFSP), Individual Education Programs (IEP), and Individual Transition Plans (ITP). Salient features of the Individuals with Disabilities in Education Act (IDEA) will be examined with respect to court cases, amendments, and reauthorization.

5507 Introduction To Mild/Moderate Cross-Categorical Disabilities (3). This is the initial foundations course in the master's degree sequence in special education of children and youth with mild/moderate disabilities including learning disabilities (LD), emotional/behavioral disorders (EBD), mental retardation (MR), and physical and other health impairments (POHI). It is designed to provide candidates who are new to the field of special education with a foundation for working with students who have exceptional learning needs.

5508 Evaluation Of Abilities & Achievement In Special Education (3). This is a foundations course in the master's degree sequence in special education of children and youth with mild/moderate disabilities. The purpose of this course is to provide understanding and practice in formal and informal evaluation. This course is applicable to candidates who plan to work either directly (special educators) or indirectly (special education administrators) with students with exceptional learning needs and to engage in critical analysis of assessment issues confronting the field of special education. Prerequisites: Intro to MM/CC Disabilities & Methods of Teaching Students with MM/CC Disabilities

5509 Cognition & Lang Dev In Mild/Mod Cross-Categorical Disabilities (3). This is a specialized methods course in the master's degree sequence in special education of children and youth with mild/moderate disabilities. This course examines normal and atypical development and cultural and linguistic diversity of students with exceptional learning needs. Candidates will practice collaborative and reflective decision-making and problem solving in areas such as: (a) developmentally sequenced activities, (b) receptive and expressive language, and (c) communication and augmentative communication skills. Prerequisites: Intro to MM/CC Disabilities & Methods of Teaching Students with MM/CC Disabilities

5510 Apprenticeship Teaching In M/M Cross-Categorical Disabilities (1-4). The purpose of this course is to provide a field-based experience in a setting with students with mild/moderate cross-categorical disabilities. This field experience affords candidates classroom experience either in their own instructional settings or under the tutelage of a master teacher. Placement sites reflect the multicultural diversity found in special education classrooms (K-12). Prerequisites: TE 404 and Introduction to MM/CC Disabilities.

5513 Methods Of Teaching Students M/M Cross-Categorical Disabilities (3). This is the initial methods course in the master's degree sequence in special education of children and youth with mild/moderate disabilities. The central purpose of this course is to present unit-wide academic and behavioral strategies from eclectic theoretical perspectives. Candidates will examine validated practices and learning to apply such practices to plan instruction, deliver instruction, and evaluate student and teach performance.

5514 Soc & Affective Interventions M/M Cross-Categorical Disabilities (3). This is a specialized methods course in the master's degree sequence in special education of children and youth with mild/moderate disabilities. The purpose of this course is to provide candidates with behavioral assessment strategies and behavior management techniques. Candidates will learn validated practices for managing challenging behaviors, facilitating formal behavioral assessment, creating positive behavioral supports, conducting functional behavioral assessment, developing behavior intervention programs, and applications in social skills training.

5516 Philosophical & Family Issues In Special Education (3). This is a methods course in the master's degree sequence in special education of children and youth with mild/moderate disabilities. The course presents principles and procedures for fostering collaborative partnerships among family members, caregivers, educators, and human service personnel that lead to outcomes of individual and mutual empowerment. Candidates will engage in reflecting thinking on their personal philosophical beliefs and interweave these beliefs with the skills needed to work with the multicultural issues facing families of children and youth with mild/moderate cross-categorical disabilities.

5517 Characteristics, Hist & Thrys: Emotional Disturbance In Children (3). An investigation of theories, classification, etiology, incidence, and characteristics of children with emotional/behavioral disorders.

5570 Practicum In M/M Cross-Categorical Disabilities (1-6). This is the final clinical course in the master's degree sequence in special education of children and youth with mild/moderate disabilities. The purpose of this course is to provide a field-base experience in a setting where candidates will be fully

responsible for designing curriculum and teaching students with mild/moderate cross-categorical disabilities. Placement sites reflect the multicultural diversity found in special education classrooms (K-12). This course requires candidates to apply content learned throughout the master's degree program in an authentic setting.

5589 Special Topics In Education (1-6). A course designed to deal with a special education topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5598 Individual Studies (1-6). Review of the research and trends relative to selected problems in special education. By prior arrangement with instructor.

Statistics Courses

5501 Statistical Design Of Experiments (0-3). This course is designed to present a variety of experimental design techniques to students with moderate mathematical and statistical background. The course includes three major components: efficient factorial designs, linear and quadratic process optimization of the location parameter, and variability reduction. Students will be trained to use SPSS statistical software package. Prerequisite: Stat 436 or consent of instructor

5537 Mathematical Statistics I (3). Probability theory, distribution functions, sampling, statistical inference, topics in advanced applied statistics. Prerequisite: Math 402 or consent of the instructor. Note: Continued in Stat 5547.

5547 Mathematical Statistics II (3). Continuation of Stat 5537.

5551 Applied Statistical Analysis (3). Methods for analyzing data from experiments and observational studies; design-based and model-based inferences; model assessment; ANOVA; power analysis; SAS procedures. Prerequisites: Stat 436 or consent of instructor Offered: Every other Winter

5561 Time Series Analysis (0-3). This course is intended to present the basic knowledge (including models, methods and concepts) of time series analysis to students with a good background in intermediate mathematical statistics. Some elementary knowledge of basic linear regression analysis would be helpful but not necessary. The presentation will be balanced between theory and data analysis, with sufficient theory to understand the basis of methods and a broad variety of models and many real data examples. Case studies will be drawn from business and economics, network traffic and meteorology, and data will be analyzed by students using existing computer programs (SAS, Minitab and R). Students are also expected to understand proper use and limits of time series models. Prerequisites: Stat 441 or consent of instructor note: This course will be offered every other winter.

5565 Regression Analysis (3). Simple linear regression; multiple linear regression; correlation analysis; model selections; checking assumptions; regression diagnostics; combating multi-collinearity; nonlinear regression. Prerequisites: Stat 436 or consent of instructor Offered: On Demand

5572 Multivariate Analysis (3). Random vectors; multivariate normal distributions; Hotelling's T-square distribution; Wishart distribution; inferences on one mean vector; MANOVA; inferences on covariance matrices; profile analysis. Prerequisites: Math 420 or consent of instructor Offered: Every other Fall

5576 Probability (3). Existence and extension of measure, random variable, expectation and its properties, types of convergence, law of large numbers, weak convergence, central limit theorem, and martingale. Prerequisites: Stat 436 and Math 412 Offered: Every Fall

String Bass Courses

5500A Graduate String Bass-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JA Graduate Applied Jazz Studies (2). One hour lesson weekly. Consent of instructor and a jury examination are required. Prerequisites: Graduate status & Permission of instructor. Offered: Every Fall/ Every Winter

5500JB Special Applied Jazz Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. A jury for comments only may be held at the discretion of the faculty. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance

study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate String Bass - Masters Performance (4).

5601 Graduate String Bass - Doctoral Performance (4).

Theater Courses

5500RA Theatre Collaboration (1-2). A course for M.F.A. students exploring the collaboration/ communication process in preparing a production. Must be elected by all students assigned to design, direct, technical direct or stage manager within the current or the following semester. Maximum of 8 hours applicable towards degree.

5501R Voice Training (2). (A,B,C,D) Training for the speaking and singing voice, development of skills in vocal dynamics, physical control, and relaxation for the actor, dialects and verse structure. Four semesters required for acting emphasis.

5506RR French Drama And Theatre (3). Study of significant plays and production methods in France from medieval times to the present. Particular emphasis will be given to the plays of Moliere, Racine, and Corneille, and to internationally renowned contemporary directors.

5507 19Th-Century Continental Theatre (3). Production of significant French, German, Russian, Spanish, and Scandinavian plays and playwriting of the 19th century. Particular emphasis will be given to plays representative of romanticism, realism, naturalism, fin-de-siecle decadence, and intensive study of production history.

5508 20Th-Century Continental Theatre (3). Study of the production of significant plays of Continental Europe from Strindberg to the present. Dramatic literature will be related to artistic currents such as expressionism, surrealism, the absurd, and where applicable, to political currents.

5509 Russian Drama And Theatre (3). Study of the production of Russian and Soviet plays with reference to the development of theatre art from the Christianization of Russia to contemporary post-Soviet drama.

5510 History Of The American Theatre I (3). An exploration of the trends in and the development of the American theatre from Colonial times to 1900.

5511 History Of The American Theatre II (3). An exploration of the trends in and the development of the American theatre for 1900 to the present.

5512R History Of The English Stage I (3). The English stage and its arts, crafts and literature from the medieval cycles through the Restoration.

5513 History Of The English Stage II (3). Development of English and Irish theatre art and dramatic literature from the 18th century to the present.

5514 History of Design And Technology I (3). The study of period style and scenic, costume, lighting, and technical production practices from the ancient world through the 17th century. The course will emphasize the application of research toward the presentation of period plays and contemporary production.

5515R History of Design And Technology II (3). The study of period style and scenic, costume, lighting, and technical production practices from the 18th century to the present. The course will emphasize the application of research toward the presentation of period plays and contemporary production.

5516A Technical Production for The Practitioner (3). The course is an in-depth review of technologies in scenery, lighting and stage operations, expansion of that knowledge, and application of it to the individual class member's particular theatre. Classroom material is augmented by hands-on experience in a controlled laboratory situation. Students should have a prerequisite of a basic technical theatre course or considerable practical experience. This course can be repeated for credit.

5516B Technical Production for The Practitioner (3). See course description for theatre 5516A.

5520 Individual Performance Studies (1-2). (A,B,C) Private instruction for the advanced student. Prerequisite: Permission of the faculty member with whom the student will be studying.

5520L Individual Performance Studies (1-2).

5521A Professional Sound Design (3). Professional Sound Design is a series of four courses constructed to develop the designer's skills from research and initial sound collection, into interpretation, collaboration and idea development, concluding with the production of finished designs for the MFA productions. Each section deals with problems of increasing complexity beginning with "found" design material for early production and leading to indigenous designs created and layered for complex production support. The course may be taken once or twice for non-sound designers with the full cycle being required for the sound design emphasis.

5521B Professional Sound Design (3).

5521C Professional Sound Design (3). Professional Sound Design is a series of four courses constructed to develop the designer's skills from research and initial sound collection, into interpretation, collaboration and idea

development, concluding with the production of finished designs for the MFA productions. Each section deals with problems of increasing complexity beginning with “found” design material for early production and leading to indigenous designs created and layered for complex production support. The course may be taken once or twice for non-sound designers with the full cycle being required for the sound design emphasis.

5521D Professional Sound Design (3). Professional Sound Design is a series of four courses constructed to develop the designer’s skills from research and initial sound collection, into interpretation, collaboration and idea development, concluding with the production of finished designs for the MFA productions. Each section deals with problems of increasing complexity beginning with “found” design material for early production and leading to indigenous designs created and layered for complex production support. The course may be taken once or twice for non-sound designers with the full cycle being required for the sound design emphasis.

5530 Drafting for The Theatre (3). Practical laboratory course in drafting for the theatre encompassing floor plans, sections, designer’s evaluations, front and rear elevations, working drawings, and problems in communicating design ideas. Fall semester.

5531R Rendering Techniques for the Theatre Designer II (3). Continuation of Rendering Techniques with the introduction of color, pastels, watercolor and gouache. Skills are applied in developing projects for design in the theatre.

5532 Professional Costume Design (3). (A, B, C, D) The courses in Professional Costume Design are intended to develop the costume designer’s skills in research, rendering and drawing. Each section will deal with specific problems of design, such as period, line, silhouette, color and texture. Specific problems in design from realistic to stylized productions will be worked on by the students. The course may be taken once or twice by non-costume designers with the full cycle being required for costume emphasis.

5534 Costume Construction I (3). (A,B,C) Research and methodology into one or more of the following areas of costume construction for the stage: period pattern and tailoring adaptation, work with non-woven materials, and the cutting and finishing of costumes for the stage. May be repeated up to six hours with content change and permission of instructor.

5535 Technical Studies In Costuming And Makeup (3). (A,B,C) Concentration in one or more of the arts and crafts necessary to costume design. Areas to be chosen from include: fabric dyeing and painting, millinery, wig design and construction, latex prosthetic, and decorative accessories for the stage. May be repeated up to six hours with content change and permission of instructor.

5536 Professional Scene Design (3). (A,B,C,D) Professional Scene Design is a series of courses constructed to develop the designer’s skills from research and initial sketches to finished renderings, models and working drawings. Each successive section deals with problems of increasing complexity beginning with one-set realistic productions through unit-settings, stylization and multiple setting problems. The course may be taken once or twice for non-set designers with the full cycle being required for the scene design emphasis.

5538 Scene Painting (3). A practicum course in scene painting techniques and execution. Introduction to painting equipment and supplies, priming and preparation of surfaces and materials, standard techniques for painting ornament.

5539 Scene Painting II (3). A practicum course in scene painting techniques with emphasis on painting interior drops, exterior landscapes and three-dimensional pieces.

5540 Pattern Drafting And Cutting (3). Theory and laboratory study of the techniques and methods employed in drafting patterns for the professional stage.

5545 Professional Acting Techniques I (3). Theatre games, exercises, mask work, and some scene study to develop the first year acting/directing class into a training ensemble, instill a clear and uniform vocabulary, heighten awareness, and begin concentrated skill work. The semester will culminate in a class project.

5546 Professional Acting Techniques II (3). Continuation of Acting 5545 with emphasis on the application of the first semester’s work through scene study of contemporary plays and monologues.

5547 Professional Acting Techniques III (3). Concentration on non-naturalistic styles. Work on scenes from Shakespeare and other classical playwrights.

5548 Professional Acting Techniques Iv (3). Work on audition material and further scene work dealing with specific individual acting problems.

5549 Master Class In Acting (2). (A,B,C,D) Class in advanced studies in acting. May be repeated for credit up to eight hours as content and guest artist change. Permission of instructor or head of area required. Required for third year graduate acting students in the fall semester and may be repeated subsequently as elective.

5551 Rendering Techniques for the Theatre Designer III (3). Developing techniques for rendering in realistic settings: interiors, landscapes, fabric and furnishings.

5552R Rendering Techniques for the Theatre Designer Iv (3). Developing techniques for rendering in non-realistic styles with the emphasis on imaginative designs, light and air, created textures, etc.

5557 Theatre History I (3). Development of theatre art-including dramatic literature, staging, and performance styles-from the beginning through the 17th century. This course also looks at Asian theatre forms. Students read approximately 20 plays. Prerequisite: Graduate Status Offered: Every Fall

5560 Theatre History II (3). Development of western theatre art-including dramatic literature, staging, and performance styles-from the 18th century to the present. Students will read approximately 24 plays Prerequisite: Graduate status Offered: Every winter

5562 Actor Practicum (3). A contemporary scene study class for actors. Actors test their acquired process skills with major emphasis placed on characterization.

5563 Text Analysis I (3). Linear analysis of selected prose dramas with concentration on character delineation, images and motivation for actors and directors.

5564 Text Analysis II (3). Continuation of Theatre 5563 with emphasis on verse plays. Selected playwrights from the Greek and Elizabethan periods will be included along with modern verse dramatists.

5565 Introduction To Professional Directing (3). The first part of the class is devoted to an intensive study of various and diverse concepts related to the dramatic experience by dramatists, critics, and directors. The class also examines current production methods and practices for today’s functioning professional director. Systems related to stage management and actors are investigated.

5567 Professional Directing Practicum (3). This class will move from concept to production. Work will revolve around the presentation of production concept statements in which the director will select, organize and articulate the theatrical substance in support of his or her chosen concept. Intensive analysis will lead to the development of an image/metaphor for production. Term will include presentation of a full book justifying concept choices for scenic, costume, music and dance, and, finally, full production.

5568 Seminar In Dramaturgy (3). Critical analysis of dramatic structure and techniques, with special reference to modern and contemporary drama.

5569 Master Class in Directing (2). (A,B,C,D) Class in advanced studies in directing. May be repeated for credit up to eight hours as new material and guest artist change. Permission of instructor or head of area required. Graduate students elect theatre 5569.

5570 Professional Lighting Design (3). (A, B, C, D) Professional Lighting Design is a series of courses concerned with the study of light as a design element. Projects to implement design theory are primarily selected from the areas of dramatic, musical and opera theatre, and dance. Emphasis is on the design process with each successive section dealing with problems of increasing complexity. Areas of study and projects are chosen on the basis of individual levels of development. When elected by non-lighting designers the course may be elected for a maximum of two semesters.

5572 Stage Lighting Equipment (2). A comprehensive study of contemporary technical equipment and its usage to actualize a lighting design. Areas of emphasis include instruments, color and color theory, lighting control systems, projection, and optical special effects.

5573 Professional Technical Production (3). Detailed study and experimentation with recent scenic materials, scenery construction, rigging systems, use of metal and special effects.

5574 Theatre Regulations, Laws and Safety (1). Survey of fire, city and Equity codes, and insurance, liability, health rules and regulations related to theater operation. Union and legal contracts, philosophy and relations with theatre facilities and operations.

5575R Property Construction (3). Construction techniques and materials used to make and modify set and hand properties and set dressing.

5577 Advanced Materials (3). (A,B,C,D) The theatre technician and designer are dependent on a wide range of materials in the creation of their art. Each semester the student will pursue detailed study of a material area (i.e., wood, metal, plastics, textiles), the processes of its usage and its related process-products (i.e., adhesives, paints, dyes, etc.). Field trips and hands-on laboratory work are integral to the course.

5578 Professional Theatre Administration (3). Theories, problems and techniques preparing the student for effective interaction with professional theater administration, offering a foundation for potential theatre administrators as well as enrichment for students of directing, design, technical and stage management.

5579R Master Class In Design (2). (A,B,C,D) Class in advanced studies in design. May be repeated for credit up to eight hours as content and guest artist change. Permission of instructor or head of area required. Graduate students elect theater 5579.

5580R Graduate Technical Student Seminar (2). (A,B,C,D,E,F) Required in every semester for Design/Tech M.F.A. candidates choosing a technology emphasis. This continuing seminar course serves as a forum for all graduate technical students to analyze and discuss problems and solutions on current academic and KCRep productions. The course develops collaborative skills through the sharing of ideas and experiences. In addition, topics of general interest to the technician will be studied through guest lecturers and/or individual projects prepared by the faculty and students and presented to the class.

5583 Seminar on Technical Production Management (2). Seminar involving shop organization, scheduling, purchasing, lending and borrowing, rentals, personnel, job description, organizing structure, etc. Emphasis upon organization and techniques for repertory theatre operation.

5584 Master Class In Technology (2). (A,B,C,D) Class in advanced studies in technology. May be repeated for credit up to eight hours as content and guest artist change. Permission of instructor or head of area required.

5585 Advanced Technical Drafting (3). An intensive drafting course required for Design/Tech M.F.A. candidates with emphasis in technology. The course aims to equip the student to prepare clear shop working drawings from designer elevations. Topics include both conceptual planning techniques and developing mechanical drawing skills. One hour lecture, four lab hours, and extensive outside preparation. Previous completion of Theatre 430 strongly suggested.

5586 Structural Design for the Stage (3). A course in the structural design of scenic elements. The student learns to work within the visual restrictions imposed by the designer to build structures that will bear given load requirements with a minimum of deflection. Basic engineering and load analysis principles are studied and applied in the design procedure to find the best possible solutions in terms of strength, weight, safety and cost.

5590 Directed Graduate Studies (3-6). Individual projects on the graduate level. No more than three hours with any one instructor. Prerequisite: Consent of the instructor. Only one 590 each semester.

5590A Directed Graduate Studies (3-6).

5590B Directed Graduate Studies: Design (3-6).

5590C Directed Graduate Studies: Costumes (3-6).

5590D Directed Graduate Studies: Scenic Design (3-6).

5590E Directed Graduate Studies: Directing (3-6).

5590F Directed Graduate Studies (3-6).

5590G Directed Graduate Studies: Lighting (3-6).

5590H Directed Graduate Studies: Playwriting (3-6).

5590I Directed Graduate Studies (3-6).

5590J Directed Graduate Studies: Stage Management (3-6).

5590K Directed Graduate Studies: Technical Production (3-6).

5590L Directed Graduate Studies: Theatre Management (3-6).

5590M Directed Graduate Studies: Theory And Criticism (3-6).

5590N Directed Graduate Studies: Dramaturgy (3-6).

5590R Directed Graduate Studies (3-6).

5590S Directed Graduate Studies (3-6).

5590T Directed Graduate Studies (3-6).

5592A Seminar on Stage Management Practice (1). MFA student stage managers meet one hour a week with the Production Manager of of both Kansas City Repertory Theatre and Department of Theatre (and head of stage management training), to discuss current management problems and solutions for productions in progress. The seventeen productions mounted each year by the Department and the Rep will be examined. Students will become aware of problem solving procedures in both the professional and the academic theatre. Prerequisite: None, except to be a Graduate Stage Management Student. Offered: Fall and Winter Semesters

5592B Seminar on Stage Management Practice (1). MFA student stage managers meet one hour a week with the Production Manager of of both Kansas City Repertory Theatre and Department of Theatre (and head of stage management training) to discuss current management problems and solutions for productions in progress. The seventeen productions mounted each year by the Department and the Rep will be examined. Students will become aware of problem solving procedures in both the professional and the academic theatre. Prerequisite: None, except to be a Graduate Stage Management Student. Offered: Fall and Winter Semesters

5592C Seminar on Stage Management Practice (1). MFA student stage managers meet one hour a week with the Production Manager of of both Kansas City Repertory Theatre and Department of Theatre (and head of stage management training) to discuss current management problems and solutions for productions in progress. The seventeen productions mounted each year by the Department and the Rep will be examined. Students will become aware of problem solving procedures in both the professional and the academic theatre. Prerequisite: None, except to be a Graduate Stage Management Student. Offered: Fall and Winter Semesters

5592D Seminar on Stage Management Practice (1). MFA student stage managers meet one hour a week with the Production Manager of of both Kansas City Repertory Theatre and Department of Theatre (and head of stage management training) to discuss current management problems and solutions for productions in progress. The seventeen productions mounted each year by the Department and the Rep will be examined. Students will become aware of problem solving procedures in both the professional and the academic theatre. Prerequisite: None, except to be a Graduate Stage Management Student. Offered: Fall and Winter Semesters

5592E Seminar on Stage Management Practice (1). MFA student stage managers meet one hour a week with the Production Manager of of both Kansas City Repertory Theatre and Department of Theatre (and head of stage management training) to discuss current management problems and solutions for productions in progress. The seventeen productions mounted each year by the Department and the Rep will be examined. Students will become aware of problem solving procedures in both the professional and the academic theatre. Prerequisite: None, except to be a Graduate Stage Management Student. Offered: Fall and Winter Semesters

5597 Repertory Theatre: Internship (3-6). Assignments available in the following areas: directing, design, carpentry, lighting, costume, props, acting, stage management. Technical interns will be assigned by the appropriate heads of those areas. Acting interns may understudy and/or play roles with the Kansas City Repertory Theatre on the Spencer stage or in showcase productions. Also, interns will have some responsibility in technical areas such as change-over, props, costume, running crew, and stage management. Directing interns may assist director or assistant stage manager. Prerequisite: Selection by chairman of department.

5598R Research And Performance (1-6). Primarily for the M.F.A. student. Permission of the graduate faculty.

5599 Research And Thesis (1-6).

5697 Repertory Theatre: Residency (6). The residency consists of authorized participation with the Kansas City Repertory Theatre, the Department of Theatre, or an approved outside professional company, and is arranged under departmental advisement, with the chairman of the department, and in consultation with the artistic director of KCRep. The assignment will be determined by matching interest and degree emphasis with available production assignments.

5899 Required Graduate Enrollment (1).

Trombone Courses

5500A Graduate Trombone-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JA Graduate Applied Jazz Studies (2). One hour lesson weekly. Consent of instructor and a jury examination are required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JB Special Applied Jazz Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. A jury for comments only may be held at the discretion of the faculty. Consent of instructor required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz study in an area other than, and in addition to, their primary performance study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Trombone - Masters Performance (4).

5501 Graduate Trombone - Doctoral Performance (4).

Trumpet Courses

5500A Graduate Trumpet-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5500JA Graduate Applied Jazz Studies (2). One hour lesson weekly. Consent of instructor and a jury examination are required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JB Special Applied Jazz Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. A jury for comments only may be held at the discretion of the faculty. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5500JC Applied Jazz Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied jazz in an area other than, and in addition to, their primary performance study. Consent of instructor is required. Prerequisites: Graduate status & permission of instructor Offered: Every Fall/ Every Winter

5501 Graduate Trumpet - Masters Performance (4).

5601 Graduate Trumpet - Doctoral Performance (4).

Tuba Courses

5500A Graduate Tuba-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Tuba - Masters Performance (4).

5601 Graduate Tuba - Doctoral Performance (4).

Urban Leadership Courses

5501 Foundations Of School Leadership & Organization (6). Participants will study as cohort team members actively engaged in clinical/practical endeavors in schools, concepts and theories focused: 1) to understand and apply modern leadership and organization development theory in relation to school organizational cultures; 2) to understand both the development of productive school relationships and the theoretical concepts of the legal responsibilities of schools in the society; 3) to develop a plan for principal certification based upon participant needs and experiences; and 4) to build school cultures that are collaborative, participative, reflective, and self renewing.

5502 Building Administration And Management (6). Participants will study and apply theories and concepts as members of a Cohort Team doing clinical work in schools designed to study, learn, and practice the management and administrative responsibilities of building level leaders including principal roles, personnel issues, school business management, community relations, supervision of staff, and to know the legal responsibilities relating to teachers, student and public rights. Prerequisite: EDUL 5501

5503 Student, Staff And Organization Development (6). Participants will study as a member of a cohort team doing clinical work in school and developing the ability: 1) to gain knowledge of, and practice in developing "learning organizations"; 2) to assist teachers and other staff members of a school in structuring classrooms around the learning and development of all students; 3) to lead and develop urban schools that are culturally diverse where learner outcomes and performance are not related to race, class, or gender; and 4) to provide leadership related to developing school structures that are outcome oriented. Prerequisites: EDUL 5501 and EDUL 5502

5504 Elementary School Administration (3). Contemporary knowledge, understanding, and competencies for elementary administration. Focus on leadership, communication, group processes, organization, fiscal, and political areas. In addition, basic roles and responsibilities of the school principalship are addressed.

5505 Middle School Administration (3). Middle school goals, effective middle school leadership, change models for staff development, relevant curricula, auxiliary and support systems.

5506 Secondary School Administration (3). Organization and objectives of secondary education; curriculum trends; role analysis; principal-staff relations. Prerequisite: EDUL 5501 or consent of advisor.

5507 School Supervision (3). Principles of supervision, factors influencing effectiveness of instruction, including the evaluation of teachers.

5508 Special Education Administration (3). Provides special educators, special education and regular education administrators with knowledge and experience in the areas of special education process, policy development, data collection and funding, legal issues and program organization. Special emphasis is given to dealing with common problems which arise in public school special education programs.

5510 Planning Educational Facilities (3). Analysis of educational specifications; cooperative planning processes; analysis of trends in school facilities; financial considerations and construction research. Visitation of selected facilities included.

5511 Public School Business Administration (3). The business related aspects of administering a school district including budgeting and accounting, purchasing, transportation, insurance, and facilities management.

5512 School Finance (3). Sources of revenue for public education; distribution of monies for education; budget construction; accounting procedures; and theories for financing education.

5513 School Personnel Administration (3). Study of processes, policies and theory concerned with the personnel function in educational administration. Emphasizes the importance of human resources in developing effective educational systems.

5514 Public Relations In Education (3). Analysis of various public views on education; mass communications and social change; public relations programs.

5515 Governmental And Legal Aspects Of Education (3). Current and recent legislation affecting education; court cases related to education; emerging patterns of modern juris-prudence; administrators' responsibilities regarding legal decisions.

5516 Governmental And Legal Aspects Of Special Education (3). An examination of current and recent legislation affecting special education; emerging patterns of modern jurisprudence; and special education teacher and administrator legal responsibilities.

5520 School Administration In A Metropolitan Context (3). Sociological and philosophical study of school administration in metropolitan areas. Major trends: experimental projects conducted in urban school systems; organizational patterns and communication networks.

5522 School Organizational Culture As The Context Of Change (3). This course is designed to enable students to understand that schools as organizations develop cultures and that this culture establishes relationships and conditions in schools for students, teachers, and administrators. Students will develop an understanding of the culture of a school and its influence on efforts to achieve substantive change or reform.

5523 Administrative Roles For Instructional Leadership (3). This course meets a requirement for administrator certification in Missouri and Kansas in the area of school improvement and leadership. The course focuses upon leadership roles necessary for creating a supportive climate for change and for implementing improved instructional programs.

5524 Philosophical Inquiry And Education (3). An examination of issues, problems and controversies discussed in educational and related literature, utilizing criteria and techniques of logical and philosophical analysis. The focus is on the development of critical thinking abilities as applied to theories, positions and arguments in educational and related contexts.

5525 Cultural Foundations Of Education (3). Examines education and schooling as cultural phenomena. This course focuses on an analysis of education and schooling as both cultural transmission and cultural change and the practical implications. Also included is a philosophical/ theoretical examination of varying relationships between dominant and minority cultures.

5526 Philosophical Foundations Of Education (3). Introduction to the study of philosophical problems implicit in educational issues. Focuses on the application of a number of philosophical concepts and skills to a variety of controversies, policies, and theories in education.

5527 Historical Foundations Of Education (3). Study of the development of educational policy, practice, and theory in relation to changes in social institutions and thought. Focuses on the analysis of contemporary educational problems in the light of historical perspectives.

5528 Sociological Foundations Of Education (3). An analysis of issues involving the role of schools in society, the relationship between education and other social institutions, and contemporary social developments which have major implications.

5550 Organization And Administration Of Higher Education (3). Organizational patterns; administrative roles and procedures; establishment of

policies, institutional development; and public and private financing of higher education.

5551 Student Affairs Administration In Higher Education (3). Study of the objectives, organizational structure, and current issues of student affairs administration as they relate to the academic program, the campus environment, and the needs of students; analysis of the functions of different services.

5552 Financial Aspects Of Higher Education (3). This course is designed for graduate students with a basic understanding of the area of Higher Education Administration. The course examines basic concepts and principles of finance in higher education in the United States. Students are expected to: Develop an understanding of 1) the issues and fiscal problems of higher education, 2) the roles and responsibilities of financial officers in higher education, and 3) possible future trends in the financing of higher education.

5555 Community College (3). Investigation of the purposes, programs, and the problems in the American junior college movement; analysis of the structure, governance, and financial support of community colleges.

5556 The College Student (3). An examination of today's college students. Review and study of demographics, relationships of students and colleges, nature of student communities, new student populations and the impact of college on students and their educational development.

5557 Legal Aspects Of Higher Education (3). Study of legal issues within higher education. Focus is on state and federal law and regulations as they pertain to issues ranging from academic freedom to governance and administration. Focus on strategies for preventive law is a major component of the course.

5558 Advanced Student Development Theory (3). A focused and in-depth examination of developmental theories related to the college student. This course builds on information presented in EDUL 5556-The College Student. Offered: Winter Prerequisite: EDUL 5556

5559 Current Issues In Higher Education (3). A course responsive to the contemporary issues in college and university administration, addressing interesting and important topics that fall outside the scope of other courses in higher education curriculum. Students will have an overview of the organization of American higher education and will explore source materials available for higher education research.

5560 Leadership In Higher Education (3). Focus on leadership, connections among different approaches to leadership, different forms of power, and different leadership behaviors. A series of opportunities to think systematically about leadership and to increase a student's personal leadership capacities in higher education will be provided.

5562 Gender & Leadership In Educ: Implications For Prof. Effectiveness (3). This course is for women and men who want to understand better the unique challenges and opportunities facing leaders in today's educational organizations. Exploration of connections between gender and leadership is the focus of study. Students will probe linkages between gender and leadership for their own leadership and for organizational policy and practice.

5564 History Of Higher Education (3). Study of the evolution of the constituencies within different types of American higher education institutions. The development of professional, practical, and graduate education will be examined as will 20th century alternatives to the liberal arts colleges and research university models.

5565 Metropolitan University (3). This course presents past, current and emerging trends from both practices and research in the Metropolitan University. A variety of issues and topics, which reflect changes, will be examined. This is a seminar course which will require a significant degree of student participation in a classroom discussion where each student is expected to come with questions, insights and/or perspectives which address issues and concerns presented.

5566 Racial And Ethnic Diversity, And Cultural Understanding (3). An exploration of the ideological and historical construction of education for social in/equality, and subsequent issues of race, ethnicity, and class that influence colleges and universities in the U.S. today.

5567 Higher Education Capstone (0-3). This course will provide a culminating experience for students in the Higher Education Masters program. All aspects of higher education administration will be examined and synthesized to enhance student ability to understand and operate in a complex setting. Prerequisites: Final semester of enrollment

5570 Administrative Practicum Higher Education (3-6). Assigned administrative responsibilities under supervision of practicing higher educational administrator, seminar and written project accompany field experiences. Prerequisite: Consent of advisor.

5571 Internship In Higher Education (3-16). Applied experiences in a planned, supervised program. Seminar accompanies internship experiences. Prerequisite: Consent of advisor.

5572 Higher Education Administration: The Profession (3). A course to introduce the prospective or new student affairs professional to all facets of higher educational administration. The course provides a balance of presentations by student affairs professionals, participation and observation in a variety of higher education offices and individual research projects. It is anticipated that students will visit several institutions of higher education and will participate in a service-learning project.

5574 Administrative Practicum (3-6). Assigned administrative responsibilities under supervision of practicing educational administrators seminar and written project accompany field experiences. Prerequisite: Consent of advisor.

5575 Internship In Administration (3-16). Applied experiences in a planned, supervised educational administration program. Seminar accompanies internship experiences. Prerequisite: Consent of advisor.

5589 Special Topics In Educational Leadership (1-6). A course designed to deal with a topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589CP Special Topics In Educational Leadership (1-6).

5589EA Special Topics In Educational Leadership (1-6). A course designed to deal with a topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589ED Special Topics In Educational Leadership (1-6). A course designed to deal with a topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589EL Special Topics In Educational Leadership (1-6). A course designed to deal with a topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589ET Special Topics In Educational Leadership (1-6). A course designed to deal with a topic which is not available in the regular course offerings. Topics, instructors, and prerequisites to be listed on the semester bulletin.

5589SM Special Topics In Educational Leadership (1-6).

5590 Seminar (3). Discussion and evaluation of literature in Education Administration. Prerequisite: Consent of instructor.

5598 Individual Studies (1-6). Review of the research and trends relative to selected problems in education. By prior arrangement with instructor.

5601 Research In Education Administration: Qualitative Theory & Design (3). First of two courses in advanced qualitative research in higher education and educational administration. Focus is on the theory and design of qualitative work. Students will become familiar with the various ontological, epistemological, and methodological assumptions that guide research in the social sciences and be able to make informed choices about inquiry techniques for dissertation and future research.

5602 Seminar In The History Of American Urban Education (3). A study of the historical development of American urban educational institutions and ideas and of how that development is embedded within the broader context of social, political, and economic change in the United States.

5603 Research In Education Administration: Qualitative Data & Analysis (3). Second of two courses in advanced qualitative research in higher education and educational administration. Focus is on data collection and analysis in qualitative work. Students will become familiar with various data gathering techniques and devices for interpreting qualitative data and drawing meaningful conclusions. This information will guide students in dissertation and future research. Prerequisite: EDUL 5601, or permission of instructors.

5616 Analysis Of Educational Theory Formation (3). Study and application of criteria for evaluating the adequacy of educational theories and evaluating the relevance to theories of research studies.

5626 Theory In Educational Administration (3). Leadership theories and research; bureaucracy and organizational processes; new directions in organizational analysis; sociological and psychological concepts in school administration. Prerequisites: EDUL 501 or equivalent.

5627 Advanced Educational Supervision (3). Principles and concepts of educational supervision and implementation. Prerequisite: EDUL 5507 or equivalent.

5628 The Superintendency (3). Analysis and overview of the nature, functions and activities of the public school superintendency including: historical and philosophical foundations; board-staff and other governing body relationships and functions; professional staff relations and management; public relations and communication; inter-governmental relations and responsibilities, and the functions of planning, direction and supervision of the instructional enterprise. Prerequisite: Consent of instructor.

5635 Topics In Higher Education (3). Organization of higher education, public and private financing; accreditation; academic freedom; policy development; community relations; curricular patterns, selected current issues. Prerequisite: EDUL 5550 or equivalent.

5640 Apprenticeship And Conference In College Training (2-5).

Apprenticeship experience in preparing, conducting, and evaluating college teaching under the direction of and in conference with supervising professors. Some attention to student personnel and administration in higher education. By arrangement.

5655 Studies In Philosophy Of Education (3). Study of special topics in the philosophy of education. Prerequisite: EDUC 5523/EDUL 5526 or permission of instructor.

5660 Effective Practices II (3). This course builds on the general understanding of leadership and professional practices developed in Leadership in Education Effective Practices I. The course addresses key leadership challenges and decision making in today's complex work world. The course uses reading on selected issues, case discussions, and role plays to move beyond theory and understanding to application and effectiveness.

5685 Problems And Issues In Education & Urban Leadership (3). This course serves as the capstone class for all doctoral students in education. The course requires analysis of successful dissertations in urban education and prepares students to write their own dissertation relative to urban study and education.

5690 Special Problems (1-6). Individual studies; thesis exploration, special reading.

5690A Special Problems (1-6). Individual studies; thesis exploration, special reading.

5696 Dissertation Administration And Community Leadership (1-16). Culminating written research project for doctoral students in Urban Leadership and Policy Studies. Consent of advisor.

Urban Planning and Design Courses

5596 Directed Study In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

5596A Directed Study In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

5596B Directed Study In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

5596C Directed Study In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

5599 Special Topics In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

5599A Special Topics In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

5599B Special Topics In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

5599C Special Topics In Urban Planning And Design (1-3). Intensive reading and/or research in an area selected by the student in consultation with the instructor. Offered: On Demand

Viola Courses

5500A Graduate Viola-Secondary (2).

5500B Special Applied Studies (2). One-hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Viola - Masters Performance (4).

5601 Graduate Viola - Doctoral Performance (4).

Violin Courses

5500A Graduate Violin-Secondary (2).

5500B Special Applied Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Violin - Masters Performance (4).

5601 Graduate Violin - Doctoral Performance (4).

Voice Courses

5500A Graduate Voice-Secondary (2).

5500B Special Applied Studies (2). One hour lesson weekly. This course is for pedagogical or review purposes. An audition is required, and a jury for comments only may be held at the discretion of the division. May be repeated for credit. Consent of the instructor required.

5500C Applied Study Of A Second Instrument (1). One half-hour lesson weekly. Applied study for those students who wish to pursue applied study in an area other than, and in addition to, their primary performance study. No jury examination is required. Consent of the instructor.

5501 Graduate Voice - Masters Performance (4).

5601 Graduate Voice - Doctoral Performance (4).