and administrative tasks associated with school principalship. The course is under the guidance and direction of a supervising principal and requires a two-semester sequential commitment.

**EDLS 700**  
ISSUES AND TOPICS IN EDUCATIONAL LEADERSHIP (3) offered as a post-master’s degree course for active building and central office administrators. The course focuses on current and relevant issues and topics related to student learning. The course is designed to improve the instructional leadership skills of practicing administrators so schools become fully accredited and meet the requirement of Adequate Yearly Progress. The course is designed for individuals who hold the MEd and are seeking advanced professional development opportunities. The course may be repeated for credit.

**ENGLISH COURSES**

**ENGL 600**  
LITERARY THEORY (3) Focuses on the analysis of the relevant schools and methods of contemporary literary theory as practiced in current literary journals and books, as well as the application of those schools and methods to academic writing.

**ENGL 601**  
HISTORY OF THE ENGLISH LANGUAGE (3) This course surveys the development of the English language from its origins to modern-day English. Students gain understanding of the historical and social developments that shaped and continue to shape the English language. They also gain an understanding of the sounds, spelling, and grammar of the language as it has developed and learn to describe the changes in English pronunciation, writing, vocabulary, and sentence structure across time and place.

**ENGL 602**  
SEMINAR IN FICTION (3) A study of fiction as a genre, with emphasis on the process of reading and interpreting novels and short stories and on the development of the genre.

**ENGL 603**  
SEMINAR IN POETRY (3) A study of poetry as a genre, with emphasis on the process of reading and interpreting poems and on the means by which a poem creates its meanings.

**ENGL 604**  
SEMINAR IN DRAMA (3) A study of the genre of drama with emphasis on the interpretation of types of plays from different periods. Related dramatic criticism is also studied.

**ENGL 605**  
FIGURES IN LITERATURE (3) Extended study in the work of one to three writers of a given time and/or tradition.

**ENGL 606**  
INTRODUCTION TO GRADUATE STUDIES IN ENGLISH (3) Prerequisite: Graduate standing or permission of program chair required. This course is the required introductory course for graduate studies in English and should be taken in the first fall semester of a student’s graduate program. It introduces students to the type and level of work required for graduate study in English, including: the use of bibliographic materials, research methods and resources, and methods of presenting research. It may include readings and assignments preparatory to work in both critical and creative writing courses, but will emphasize the use and documentation of sources used in literary scholarship and the presentation of the material orally and in print in preparation for the successful completion and defense of a master’s thesis in ENGL 699.

**ENGL 610**  
THORNTON WRITING SEMINAR (3) [Writing] [Specific title changes annually.] This course in writing is taught by the Writer-in-Residence. Enrollment is limited to specially selected students; prospective enrollees should apply to the program director and be prepared to submit writing samples for admittance. The course is usually structured as a workshop and may be repeated for credit if the specific title and instructors are different. Students taking the class will be expected to compose a portfolio of original work to be submitted for publication.
ENGL 616  SPECIAL TOPICS IN ENGLISH (3) Intensive study of a problem or topic or a detailed examination of a single author’s work. Topic will vary according to professor and term offered.

ENGL 623  MULTICULTURAL LITERATURE (3) Exploration of different cultures and literatures, the effects of culture on perspective, the historical self-concepts of different peoples, and other peoples’ attitudes toward America, using such writers from around the world as Milan Kundera, Fae Myenne Ng, and Chinua Achebe.

ENGL 647  RELIGION AND LITERATURE (3) Examines how religious institutions, concepts, and values have been presented in and challenged within literary works. The course may take as its emphasis a given time period and/or religious tradition. Readings may include works by authors from various religious communities, as well as recent theoretical work by scholars working in the field of religion and literature.

ENGL 648  GENDER AND LITERATURE (3) Focuses on representations of women and men, constructions of femininity and masculinity, and sexual politics while engaging in current debates regarding the materials and methods of literary studies of sex and gender. Major issues include questions of canon and canonicity, difference, equality, sexuality, constructions of gender, intersections of gender with race, class, and nationality, and the role of reading and writing in processes of social change.

ENGL 649  TRANSNATIONAL LITERATURE (3) Study of literary movements, traditions, and legacies across national borders and continents.

ENGL 650  THE CRAFT OF POETIC FORMS (3) Examination of the creative process of poetic forms from the perspectives of aesthetics and techniques, illustrated from the work of selected authors, culminating in directed creative individual projects.

ENGL 651  THE CRAFT OF NARRATIVE PROSE (3) Examination of the creative process of narrative prose from the perspectives of aesthetics and techniques, illustrated from the work of selected authors, culminating in directed creative individual projects.

ENGL 652  THE CRAFT OF LYRICAL PROSE (3) Examination of the creative process of lyrical prose from the perspectives of aesthetics and techniques, illustrated from the work of selected authors, culminating in directed creative individual projects.

ENGL 670  INDEPENDENT STUDY (1, 2, 3) Prerequisite: Special permission required. Provides for the pursuit of individual interests and projects not covered in existing courses. These courses may be repeated if subjects of study vary.

ENGL 699  RESEARCH AND THESIS (3-6) Provides students with the opportunity to do extensive research on a topic of particular interest, culminating in the writing and defense of a thesis under a faculty director and a thesis committee. This course may be repeated once for credit.

ENVIRONMENTAL SCIENCE COURSES

ENVS 600  CONCEPTS IN EARTH AND ENVIRONMENTAL SCIENCE (3) Focuses on a variety of specific earth and environmental science content, concepts, and laboratory and field skills that teachers are required to address when teaching earth science at the middle and high school levels. Topics include plate tectonics, the rock cycle, Earth’s history, oceans, atmosphere, weather and climate, the solar system and universe, and land and water resource issues.
ENVS 610  ASTRONOMY (3) Addresses topics in modern astronomy from the solar system to the wider universe and to ultimate cosmological questions. The emphasis is on easily observed celestial phenomena and understanding their significance, current discoveries coming from interplanetary missions and what they tell us about our own planet, and the latest discoveries and speculations in astrophysics and cosmology. Relevant course content will be adapted by students into lessons and activities suitable for public schools and other educational settings.

ENVS 631  ENVIRONMENTAL HYDROLOGY (3) This course covers the fundamentals of surface and subsurface water flow and transport, emphasizing the role of groundwater in the hydrologic cycle, the relation of surface and groundwater flow to geologic structure, and the characterization of contaminants in surface and subsurface water. Special emphasis will be placed on improving the laboratory and field skills of middle and high school level biology and earth science teachers.

ENVS 645  PRACTICAL METEOROLOGY (3) This course covers all key aspects of meteorology ranging from basic atmospheric processes to human induced climate change. Various weather events, tropical weather, air pollution, and forecasting are all addressed, with an emphasis on practical applications and impacts on our daily lives. Special emphasis will be placed on improving the laboratory and field skills of middle and high school level biology and earth science teachers.

ENVS 650  WATER QUALITY (3) Focuses on integrated content in environmental science, chemistry, and biology that applies to water quality assessment. Appropriate laboratory and field skills for teachers, in any of the scientific disciplines listed above, are addressed. Topics include water quality issues, bacterial monitoring, chemical assessment, and biological assessment. Emphasis is on pedagogical approaches to applying these concepts in the classroom. This course is included within the graduate course sequence in biology.

ENVS 660  APPLIED GEOLOGY (3) Covers all key aspects of the earth sciences including basic geologic principles such as mineral and rock identification; geomorphic processes such as faulting, volcanism, mass wasting, weathering, and sedimentation; plate tectonics; and the interactions between geologic and hydrologic processes. Special emphasis will be placed on improving laboratory and field skills of earth science teachers at middle and high school levels.

ENVS 665  FUNCTIONAL OCEANOGRAPHY (3) This course explores the oceans, their functions, and their processes and addresses ocean currents, water chemistry, heat and energy transfer, sea floor geology, and coastal interactions across our planet. Special emphasis is placed on improving the laboratory and field skills of middle and high school level biology and earth science teachers.

ENVS 680  APPLIED GEOGRAPHY (3) Comprehensive overview of geographic principles with examples from the physical and social sciences. Technologies such as Geographic Information Systems (GIS) and Global Positioning Systems (GPS) will be used to understand and demonstrate topics, with an emphasis on pedagogical approaches to applying these concepts in the classroom.

HISTORY COURSES

HIST 601  SEMINAR IN RESEARCH METHODS FOR HISTORIANS (3) Required course to provide grounding in the following areas: Genres of historical writing, bibliographical search methods, libraries and archives, non-written sources, oral history, electronic sources, auxiliary disciplines, source and historical criticism, quantitative methods for historians, editing, documentation of sources, and reviewing books and articles.
HIST 602  HISTORIOGRAPHY (3) Survey of the history of historical writing from the ancient Greeks to post-modern historians, focusing on the contributions of major historians and historical schools of thought.

HIST 603  ATLANTIC WORLD (3) Required course to explore the historiography of the Atlantic World (a distinct historiography), as well as the history of the regions contributing to the Atlantic World. The course also may explore the themes that connect the regions together to create the Atlantic World.

HIST 610  SEMINAR IN EUROPEAN HISTORY (3) Semester-long seminar to explore in depth the major events of an area of modern European history which will vary from year to year. Common readings, as well as a study of current works and trends in the period under study, will be part of the course. Fluency in a modern foreign language is not required, but if a student’s research interest is continental, then knowledge beyond the introductory level is recommended.

HIST 611  SEMINAR IN UNITED STATES HISTORY (3) Semester-long course to fulfill the area requirement and to explore in depth various seminal events and concepts important to the history of the United States. Specific topics or themes will vary from semester to semester. Discussion of common readings will be part of this course.

HIST 612  SEMINAR IN THE HISTORY OF AFRICA AND THE AFRICAN DIASPORA (3) This semester-long course fulfills the area requirement and will pursue a thematic approach to the role of Africa and the African Diaspora in the Atlantic world. Themes may include the impact of Diaspora Africans in the Americas, the forced migration of Africans in the slave trade, the development of African cultures, the expansion of European power in Africa and Asia, and the impact of industrialization on the ending of the slave trade and on new European imperialist projects in Africa.

HIST 613  SEMINAR IN LATIN AMERICAN HISTORY (3) This semester-long seminar will explore the major trends and transitions in Latin American history from the pre-Columbian period through the twentieth century. Students will also explore the major schools of Latin American historiography to understand ways in which research in the field has changed and shifted. Students do not have to have knowledge of Spanish to take this course; however, if a student’s research interest is Latin America, a knowledge of Spanish will be required.

HIST 620  THE UNITED STATES AND THE WORLD (3) This course traces the history of American foreign relations from the Revolutionary period to the present within the context of national development and world politics.

HIST 621  WOMEN IN THE AMERICAS (3) This semester-long seminar fulfills the elective requirement and explores the important trends and transitions in women’s and gender history. Students also explore the major schools of historiography to understand how research in the field has changed and shifted. While the geographic focus is the Atlantic world, topics within that focus may vary according to instructor.

HIST 622  AGE OF EXPLORATION AND IMPERIALISM (3) A semester-long seminar fulfilling the elective requirement, this course explores the interactions among Europeans and other cultures resulting in the creation of what is now known as the Atlantic World. Students not only investigate these interactions but discuss the historiography of the period as well.

HIST 630  SEMINAR IN PUBLIC HISTORY (3) Public history is history that is seen, heard, read, and interpreted by a popular audience. Public historians expand on the methods of academic
history by emphasizing non-traditional evidence and presentation formats, reframing questions, and in the process, creating a distinctive historical practice. This seminar introduces students to the methodology and practical applications of this field.

HIST 635 HISTORICAL ARCHAEOLOGY This course will teach students archaeological methods and theory, artifact processing and identification, and interpretation of historical documents and material culture. The course will also provide the opportunity for students to consider issues of representation and public history interpretation. Finally, students will reflect on the value of archaeological evidence for historical inquiry.

HIST 670 INDEPENDENT STUDY IN HISTORY (3) This course offers the opportunity for a student to pursue in depth a historical topic of special interest under the supervision of a faculty member and conduct research in primary and secondary sources.

HIST 675 SPECIAL TOPICS IN HISTORY (3, 6) This course is an intensive study of a problem or topic in history or historiography. The focus varies according to professor or term. Students may receive credit for up to two special topics courses on different topics.

HIST 680 INTERNSHIP IN HISTORY (1-6) This course offers the opportunity for primary research in local history or supervised learning experience in public history at a museum or historical site.

HIST 685 READINGS FOR COMPREHENSIVE EXAMS (1-3) This semester-long course provides an opportunity for the student to work on an individual basis with a program faculty member to prepare for the comprehensive examination through a program of directed readings.

HIST 690 THESIS (3) The candidate for an MA in history completes the capstone requirement by producing a major piece of original historical scholarship, demonstrating skills of historical research, criticism, analysis, and writing on a topic related to the history of the Atlantic World. The student also conducts a successful oral defense of the thesis. After other requirements are satisfied, this course may be repeated once for credit until the thesis is successfully defended.

LATIN COURSE

LATN 680 MEDIEVAL LATIN FOR TEACHERS This graduate course shows how the Latin language and genres of writing such as legends, biographies, letters, and poetry developed during the period 500-1500 CE, following the fall of Rome in 476 CE. Thus it provides continuity from the study of ancient Roman culture, prose, and poetry, which spread throughout the empire, was preserved in manuscripts and printed books, and developed in new forms. The course includes reading and translation, an introduction to paleography or handwriting styles in manuscripts, and lesson plans for teaching. It is designed especially for graduate students planning to teach or teachers seeking certification credits in Latin.

LEADERSHIP STUDIES COURSES

LS 600 HISTORY AND FOUNDATION OF NONPROFITS AND MANAGEMENT (3) This course is intended to prepare students for management roles in the nonprofit sector by helping them gain an understanding of nonprofits in America. As such it will explore the development, history and nature of the sector, major issues it is facing, governance structures of nonprofit organizations, basic management and operating strategies. This course is focused on the integration of theory with practice.
LS 604 STRATEGIC COMMUNICATIONS AND PUBLIC RELATIONS (3) This course is intended to examine the fundamental role of communications and public relations. Students will learn to craft messages and communications materials for key constituencies and stakeholders. Students will learn about implementing tactics including public relations and advertising.

LS 606 CHANGE AND ORGANIZING IN THE COMMUNITY (3) This course will be exposed to a variety of change models and their inherent assumptions including but not limited to: revolution, labor, civic rights, and environmental movements of social change. Participants will conduct a community analysis for their nonprofit or for another nonprofit.

LS 608 NONPROFIT FINANCE (3) This course will prepare students to oversee the financial management of nonprofit organizations by focusing on five areas: financial policies and internal controls; financial statement presentation and analysis; revenues, expenses, liabilities, and cash management; budgeting; audit and tax reporting.

LS 610 LEADERSHIP RESEARCH, EVALUATION, AND ANALYTICS (3) This course prepares students to undertake the research, design and evaluation process employed in nonprofit organizations. Students will learn the fundamentals of 1) assessing community needs, 2) using theory to guide program design, 3) identifying and evaluating research literature that supports program development, 4) designing evaluation studies, and 5) modifying services based on evaluation results.

LS 612 LEADING IN A DIGITAL ENVIRONMENT (3) This course is intended to explore the use of technology to enhance the transparency and performance of organizations. It will also focus on the role of social media in engaging stakeholders in organizational priorities.

LS 614 LEADING BOARDS AND STAFF (3) This course intends to prepare students to develop and manage boards of directors of nonprofits, as well as human resources. Topics include legal and operating definitions, the purpose, function, role and appropriate board structures; supporting systems; how to assemble a board of directors; how to build positive board/staff relationships; how to coordinate the work of a board; how to prepare and manage board information flow; how to evaluate board effectiveness; and how to develop human resource management.

LS 616 FUNDRAISING AND GRANT WRITING (3) This course is intended to examine the fundamental role of fundraising and grant writing. Students will learn to develop support from individual donors and institutional funders (foundations, corporations, government agencies), and gain knowledge of common fundraising cycles and philanthropy programs. The course will also cover the cultivation and solicitation of individuals, the role of boards in fundraising, grant writing, and special events. Throughout the course, there will be discussions on ethical issues, technical tools and skills and the management of the fundraising department within an organization.

LS 669 SPECIAL TOPICS IN NONPROFIT LEADERSHIP STUDIES (1,2,3) Intensive study of a problem or topic in nonprofit leadership studies. Topic varies according to professor and term offered.

LS 670 INDEPENDENT STUDY IN NONPROFIT LEADERSHIP STUDIES (1,2,3) This course offers the opportunity for students to pursue in depth a topic of special interest within Nonprofit Leadership Studies under the supervision of a faculty member. Can be taken more than once.

LS 690 CAPSTONE: STRATEGIC PLANNING AND LEADERSHIP (3) This course will focus on methods of identifying strategic questions and directions for nonprofit organizations by taking students through planning processes with client.
Leadership Studies Courses

LS 800  HUMAN RESOURCE MANAGEMENT (3) This seminar is designed to introduce doctoral students to the basic functions and issues related to human resource management (HRM). The emphasis is mastering core concepts that drive research and practice, developing an understanding of the research foundations that underpin the field, and building an appreciation for the intellectual history and evolution of HRM from the perspective of organizational leaders. Topics include strategic human resource management, recruitment, selection, performance evaluation, training and development, compensation, and labor relations. While the primary goal of the course is to enhance students’ scholarly insight and understanding of the development and knowledge in the field, the course will also emphasize the practical application of the research knowledge to organizations.

LS 801  EPIDEMIOLOGY OF COMMUNITY PUBLIC HEALTH ISSUES (3) This examination of community health issues from an epidemiological perspective provides the principles for future leaders to assess and analyze health needs in an organization. Major areas addressed by leaders are concepts related to health promotion and disease prevention; ability to access accurate health information; ability to practice health-enhancing behaviors and reduce health risks; understanding the influence of culture, media, technology, and other factors on health; demonstrating the ability to use interpersonal skills to enhance health; and, demonstrating the ability to advocate for personal, family, and community health.

LS 802  QUANTITATIVE RESEARCH (3) Preparation for students to inquire, explore, and engage in quantitative research design, implementation, and reporting. It further addresses generating cooperative approaches with stakeholders to solve identified problems in organizations using quantitative strategies and collecting data, analyzing data, and drawing reasonable conclusions from those data.

LS 804  QUALITATIVE AND ACTION RESEARCH (3) Integration of major concepts and practices of qualitative and action research methodology. A critical overview of theory and practice is delivered as it considers mainstream qualitative research traditions, including case study, phenomenology, ethnography, grounded theory, and participatory/action research to prepare students for conducting qualitative and action research in the course and for the dissertation. This course addresses the role of action research in studying the underlying problems that occur in educational and community organizations.

LS 805  COMMUNITY DYNAMICS (3) Students will explore areas related to cross-cultural and community dynamics. The course will emphasize the synthesis of issues of diversity and leadership within organizations and the development of appropriate strategies for improving communities through cooperative and joint efforts.

LS 806  PUBLIC POLICY (3) Exploration of policy-making as a problem-solving process and a political process. It provides students with a set of conceptual frameworks for analyzing the political environment of public policy and policy research and analyzing public policy problems. Students learn how to formulate effective strategies to address public policy challenges.

LS 807  GOVERNMENT, POLITICS, AND LEADERSHIP (3) Consideration of the problem of political leadership, commonly assumed to be necessary, but often also feared as dangerous. Beginning with Machiavelli’s classic study, The Prince, students consider a variety of approaches to the problem, with special attention to the U.S.’s constitutional democratic order. Having established that context, the course explores the implications of various models of political representation and leadership as applied to the conduct of local government institutions and nonprofit organizations. Course materials are drawn from readings in political philosophy, constitutional history, biography, and contemporary social science.
LS 808 DISSECTATION SEMINAR: RESEARCH AND READINGS IN LEADERSHIP STUDIES (3) Students are exposed to a variety of leadership literature to prepare them for dissertation completion. Students are expected to come to the course with an understanding of their potential dissertation topic and leave the course with a dissertation proposal including review of the literature, statement of the problem, and a researchable question.

LS 809 ORGANIZATIONAL LEADERSHIP AND CHANGE (3) Principles for future leaders to assess and initiate appropriate and effective organizational change. Strategies are presented, examined, and discussed about ways to lead an organization forward in a collaborative manner for the betterment of colleagues and the mission of the community agencies, non-profits, schools, colleges, or businesses.

LS 811 ORGANIZATIONAL COMMUNICATION (3) Focus on a variety of issues associated with professionals working in management or supervisory positions in organizations. Students engage in practice and application of organizational communication theory in areas such as internal communication strategies, public presentations to groups, communicating with the media, and crisis communication.

LS 812 PLANNING FOR THE FUTURE: ECONOMIC TRENDS IN THE 21ST CENTURY (3) This course provides leaders with the economic tools and concepts needed to make sense of changes taking place within the regional economy. Special emphasis is placed on acquiring skills and competencies needed to identify emerging economic, demographic, technological, and cultural trends, and to analyze the implications of these trends for organizational operations.

LS 813 SYSTEM DESIGN AND TOOLS FOR SUSTAINABILITY (3) An overview of the importance of design systems that can help establish sustainable practices in homes, workplaces, and communities. Ethical and sustainable designs, infrastructures, and energy systems are reviewed along with examples and cases studies. Tools for understanding, measuring, and reducing the environmental impact of organizations on the environment are demonstrated, with an emphasis on how best to implement strategies that promote sustainability and are economically viable.

LS 814 RESEARCH DESIGN AND LITERATURE REVIEW (3) The purpose is to enable students to understand and apply key principles concerning appropriate research practice as related to design and methodology and to demonstrate the ability to communicate effectively in written form using appropriate professional writing style. The course will also focus research and written communication skills within the context of a study of leadership considerations in a particular domain (e.g., as related to diversity and disability within educational, governmental, non-profit, or business settings).

LS 815 LEADERSHIP MODELS AND PRACTICE (3) This seminar expands leadership capacity and is designed to engage candidates in the exploration of various leadership models and frameworks that energize organizations and expand the leadership capacity of others.

LS 869 SPECIAL TOPICS IN LEADERSHIP STUDIES (3) Intensive study of a problem or topic in leadership studies. Topic varies according to professor and term offered.

LS 890 DISSERTATION RESEARCH (6) This course gives students the opportunity to apply what they have learned in the program by identifying a problem in their organization, developing research initiatives, and implementing the research to improve the organization. Students will be expected to defend their dissertation proposal successfully.
LS 891 DISSERTATION CAPSTONE (6) Application of what students have learned in the program by identifying a problem in their organization, developing research initiatives, and implementing the research to improve the organization.

LS 892 EXTENDED DISSERTATION RESEARCH (3) Prerequisites: LS 890, LS 891. This course is intended as an option to provide doctoral students with an opportunity to extend their dissertation research. CAN BE TAKEN MULTIPLE TIMES.

MATHEMATICS COURSES
MATH 601 RATIONAL AND IRRATIONAL NUMBERS: THE FOUNDATION OF REAL ANALYSIS (3) This course explores the basic structure of the Real Number system, with a focus on the properties of rational and irrational numbers. Topics will include basic properties of numbers, rational and irrational approximation, and transcendental number theory.

MATH 602 POLYNOMIALS: AN EXPLORATION OF ALGEBRAIC STRUCTURES (3) This course explores the basic structure of abstract algebra using polynomials as the primary examples. Topics will include basic properties of groups, rings, fields, and properties of polynomials.

MATH 603 POINT SET TOPOLOGY (3) This course covers the beginning elements of general topology including: set theory, topological spaces, separation axioms, compact spaces, locally compact spaces, continuity and homeomorphism, and metric spaces.

MATH 604 THEORY OF NUMBERS (3) This course explores the properties of the integers and related structures through the use of various algebraic techniques, beginning with a study of the Euclidean algorithm, divisibility, primes, and congruence. Additional topics will be selected from the Chinese Remainder Theorem, Diophantine equations, residues, quadratic reciprocity, primitive roots, number-theoretic functions, continued fractions, unique factorization, algebraic integers, number fields, equations over finite fields, and other topics in Number Theory.

MATH 605 THE MATHEMATICS OF CODING THEORY (3) This course will explore the mathematics necessary for communicating information in the presence of noise. Topics will be selected from decoding algorithms, linear codes and basic vector space theory, Hamming codes, Reed Solomon codes, BCH codes, minimum weight and distance, and error detection and correction schemes.

MATH 606 MATH EXPLORATIONS (3) This course will allow students to explore the world of mathematical problem solving, focusing on the use of computers, models, and examples to investigate problems rather than formal rigid processes to uncover a solution. Selected topics will include, but will not be limited to, number theory, probability, mathematical modeling, graph theory, fractals, real analysis, and open math problems.

MATH 610 MATHEMATICS EDUCATION (3) This course will focus on the principles and practices of mathematics education (K-12) and will address appropriate research on effective strategies for enhancing mathematics learning among all students. The course will include attention to the development of curriculum, instructional methodologies, and assessment strategies.

MATH 669 SPECIAL TOPICS IN MATH (3) This course provides intensive study of a problem or topic in mathematics. The focus varies according to professor or term.
MASTER OF BUSINESS ADMINISTRATION COURSES

MBA 600 ADVANCED BUSINESS PRINCIPLES (6) This course covers key concepts in accounting, economics, statistics, and other business disciplines. Special attention is given to developing analytical tools and knowledge in support of the MBA curriculum.

MBA 601 HUMAN RESOURCES MANAGEMENT (3) A study of ways in which appropriate human resources can be provided for an organization. The course focuses on recruitment, selection, training, and performance appraisal. The principles of planning, organizing, motivating, and controlling will also be discussed as they relate to the management of human resources.

MBA 602 ORGANIZATIONAL BEHAVIOR AND MANAGEMENT (3) Managers are confronted by new challenges created by the global economy, pressures to improve performance, and demands to produce more with less. Students will learn how organizations operate as systems through diverse strategies. Materials are drawn from a range of perspectives including management, organizational psychology, and sociology. The course will integrate these perspectives and stress their application to organizations.

MBA 605 INVESTMENTS (3) Prerequisite: MBA 611 or permission of instructor. A study of financial assets, their valuation, and their allocation in efficient portfolios with emphasis on equities and fixed income securities. Topics covered include asset pricing models, theoretical analysis of market efficiency, stock and bond valuation, capital and money market mechanics and operation, and modern portfolio theory.

MBA 606 ENTREPRENEURSHIP (3) Prerequisite: ACCT 202 or MBA 600. Emphasis on aggressive strategic planning of entrepreneurial projects and integration of professional management and entrepreneurial values, concepts, and tools. Students are coached through development of strategic plans for their projects. The course is designed for senior-level and graduate students.

MBA 607 MANAGERIAL ACCOUNTING (3) Prerequisite: MBA 600. A study of management techniques as they relate to business problems. Emphasis is placed on the management control structure and management control process within organizations. Consideration is given to types of responsibility centers, performance evaluation, planning, and budgeting.

MBA 608 MANAGERIAL ECONOMICS (3) Prerequisite: MBA 600. A study of the use of economic theory in management decision-making. Emphasis is placed on marginal analysis, practical use of economic theory, and regression analysis. Demand and supply, cost analysis, economic forecasting, and pricing policies are important areas of study covered.

MBA 609 MARKETING MANAGEMENT (3) A study of the important role of marketing in today’s organizations and marketing’s relation to other functions. Strategic marketing thinking is promoted through an understanding of the contemporary marketing theories guiding marketing management’s decisions. These theories and strategies address the importance of facilitating an organization’s internal and external relationships while emphasizing the creation of mutual value in an ever-changing business environment. Strategic marketing thinking, analytical skills, and decision-making abilities are developed through readings, analyzing real-world cases, in-class discussions, and/or consulting projects.

MBA 611 MANAGERIAL FINANCE (3) Prerequisites: MBA 607, MBA 608. A study of corporate financial structure, sources of capital, cash forecasting, short-term borrowing versus long-term capital acquisition, capital expenditure budgeting, and related financial matters.
MBA 616  ADVERTISING MANAGEMENT (3) A study of decision theory and techniques used in planning, directing, and evaluating advertising strategies. Major topics include self-regulation and ethics, laws, and government regulation of advertising. Emphasis is case analysis.

MBA 617  MARKETING POLICY AND STRATEGY (3) A study of the principles and processes of strategic marketing planning. Emphasis is on development and implementation of strategic marketing plans and programs. Comprehensive case studies and/or computer simulations are used as a basis for analysis.

MBA 625  ONLINE BUSINESS (3) Prerequisite: Permission of instructor. A management-oriented course providing an opportunity to analyze, develop, and synthesize aspects of development and operation of an online business unit. The unit chosen for study can be part of an existing corporation or development of a new business venture. Topics include, but are not limited to, development issues of an online business, legal issues associated with an online business, design issues associated with a website, user-based issues, and current issues within the realm of online business and consumers.

MBA 633  GOVERNMENT REGULATION OF ENTERPRISE (3) An in-depth examination of the legislative restrictions placed on business enterprise, including a concentration on the agencies that implement such legislation. The primary focus is regulations dealing with a firm’s personnel.

MBA 636  EMPLOYEE BENEFITS AND RETIREMENT PLANNING (3) Prerequisite: MBA 611 or permission of instructor. Business and financial planners need to know how to help employees and clients be financially comfortable while employed and in retirement. The course covers the major employment and retirement issues that Americans face today.

MBA 642  HEALTH SERVICES MARKETING (3) A survey of contemporary marketing issues in health services and an ideal course for a first introduction to health services marketing. A basic working knowledge of the U.S. health system is beneficial but not necessary.

MBA 643  HEALTH SERVICES MANAGEMENT AND STRATEGY (3) In-depth study of health care institutions and organizations, their structure, types of care provided, operational strategy, and environment. A major emphasis is on understanding and analyzing the roles and functions of managing health services organizations within the context of the operational environment and its impact. Guest speakers introduce the types of institutions, organizations, operational strategies, and management models for health service organizations that serve as the basis for analysis and discussion.

MBA 644  HEALTH SERVICES FINANCIAL MANAGEMENT (3) Prerequisite: MBA 607 or permission of instructor. Provides an understanding of the general principles of accounting and financial management applied in the healthcare environment. The course includes an overview of revenue sources for various healthcare entities. The Diagnosis-Related Group (DRG) system of service classification and its relation to payment for providers and organizations also are examined. The fundamentals of strategic planning, cost concepts, and capital budgeting are applied in the healthcare environment. Issues surrounding the development and management of budgets are examined. This course provides students with theory, tools, and practical experience in healthcare financial management.

MBA 651  PRODUCTION AND OPERATIONS MANAGEMENT (3) Prerequisite: MBA 600. A tool-skills course that examines basic production systems. The course includes linear regression, forecasting, linear programming, transportation models, inventory models, scheduling techniques, and other applications of quantitative analysis.
MBA 655  LEADERSHIP AND ETHICS (3) A professional development course designed around multi-disciplinary concepts to help students become successful business and business ethics leaders. Students will be given an ethics model to use in decision making. Examples from classical literature will be used to analyze leadership styles and approaches to handling ethical issues.

MBA 657  MANAGEMENT INFORMATION TECHNOLOGY (3) An up-to-date, management-oriented overview of computer application and information systems from the perspective of a business professional. The course focuses on competitive uses, impact of information systems on individuals and organizations, alternative methods for building systems, factors leading to successful system implementation, and threats and risks associated with information systems.

MBA 670  RISK MANAGEMENT (3) Prerequisite: MBA 608. This course introduces students to essential strategies for assessing and managing a wide variety of business risks, including, but not limited to, project risk, supply chain risk, country risk, and currency risk. The course covers a variety of risk management/mitigation techniques and strategies, including, but not limited to, the use of insurance, hedging, diversification, forecasting, and process/structure reengineering. Primary emphasis is placed on the manner in which risk factors are optimally incorporated into organizational decision making. The course also addresses the distinction between risk and uncertainty, and introduces students to scenario planning techniques.

MBA 671  INNOVATION AND CHANGE (6) Prerequisites: MBA 602, MBA 607, MBA 608, and MBA 609. This interdisciplinary course draws upon case studies and contemporary research to explore the resource requirements and strategies needed to foster and sustain innovation and overcome resistance to change.

MBA 677  INTERNATIONAL BUSINESS STUDY TOURS (3) A study tour experience outside the country to deepen understanding of other cultures and to learn how the requirements for operating a successful enterprise differ from those in the U.S. A series of papers completed prior to and following the study-tour experience is required. (Students who may have participated in BUAD 377 are also eligible to take this course, since it focuses more on strategic management perspectives and higher order learning goals.)

MBA 680  PROJECT MANAGEMENT (3) This course introduces established norms, methods, processes, and practices in project management.

MBA 690  GLOBAL BUSINESS COMPETITION AND STRATEGY (3) Prerequisite: All required core courses except MBA 671. This is an analytic course designed to apply knowledge and skills learned from different courses through cases and a single integrative exercise. Team presentations are required.

MBA 696  SPECIAL TOPICS IN BUSINESS (1, 2, 3) Prerequisite: Consent of instructor. In-depth pursuit or advanced study in a special business topic not covered (or not covered as fully) in regular course offerings and taught in a traditional course format. Topics include tax law changes, leadership development and training, family business management, mergers and acquisitions, and international market planning (under the auspices of the Virginia Department of Economic Development International Trade Services program).

MBA 697  SPECIAL PROBLEMS IN BUSINESS ADMINISTRATION (1-3) Prerequisite: Consent of instructor. Includes research, special activities, and conferences offered on an individual or group basis. Subject to the development of a plan of study acceptable to a major professor and the dean of the School of Business and Economics, a student or group of students may pursue almost any business-related topic of special interest.
MBA 698 BUSINESS INTERNSHIP (1, 2, 3) Prerequisite: Graduate students with a 3.0 minimum QPA. Internships in cooperation with a faculty sponsor who is responsible for academic quality and who assigns the final grade. Student interns may or may not be paid for their work.

MASTER OF PUBLIC HEALTH COURSES

MPH 605 PUBLIC HEALTH NEEDS ASSESSMENT & PLANNING (3) This course will assist students in identifying and gaining proficiency in the application of a variety of skills utilized by the health professional in planning and designing health promotion programs. Students will learn to utilize theoretical models to conduct needs assessment, write program objectives and design model-driven intervention strategies for various public health settings.

MPH 610 BIOSTATISTICS (3) This course prepares the student in the development and application of statistical reasoning and methods used to gather, analyze and interpret health data in public health; healthcare; biomedical, clinical and population-based research. Fundamentals will include descriptive statistics, estimation, hypothesis testing, precision, sample size, correlation, problems with categorization for continuous variables, multiple comparison problems, and interpreting of statistical results.

MPH 615 ENVIRONMENTAL HEALTH (3) An introduction to the chemical, physical and biological factors affecting human health and disease, and how monitoring and control techniques can reduce the impact of the environment on global health.

MPH 620 SOCIAL ASPECTS OF PUBLIC HEALTH (3) An overarching goal of the Healthy People Initiative is to “achieve health equity, eliminate disparities, and improve the health of all groups”. From a social ecological perspective, this course examines factors contributing to health disparities and explores how to address determinants of health so that health equity may be achieved through the promotion of health and the prevention of disease among all groups.

MPH 625 PUBLIC HEALTH IMPLEMENTATION & EVALUATION (3) The second of a two-course sequence (MPH 605, MPH 625) that provides students with a comprehensive overview of the practical and theoretical principles and skills needed to plan, implement, and evaluate health promotion programs in public health settings. Emphasis is placed on specific methods and models used, public health data, an understanding and evaluation of health promotion theories, and applications made to the design to change the determinants of behavior.

MPH 630 EPIDEMIOLOGY (3) An introduction to epidemiology as a body of knowledge and a method for analyzing public health issues. Emphasis is on how to measure and describe the health of populations the natural history of diseases in population groups, standardization of rates, sources of data, study designs, measurements of risk, evaluation of screening tests, casual inferences and outbreak investigation.

MPH 635 COMMUNITY HEALTH ADMINISTRATION (3) An introduction to the structure and functions of the American health-care system, public health practice in the United States and basic managerial responsibilities. Emphasis is on management tasks and styles, structure and trends of the health-care system, legal and regulatory framework for public health, organizational and community assessment, public health settings and services.

MPH 640 ETHICAL ISSUES IN PUBLIC HEALTH (3) This course examines ethical theories and explores health-related ethical issues, preparing students to uphold professional ethics, to identify and evaluate ethical dilemmas, and to make ethical decisions within the context of health profession
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<tr>
<th>Course Code</th>
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<tr>
<td>MPH 650</td>
<td>PUBLIC HEALTH INTERNSHIP (3)</td>
<td>Apply knowledge of public health core competencies in a working public health setting under the supervision of a preceptor.</td>
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<tr>
<td>MPH 651</td>
<td>PUBLIC HEALTH INTERNSHIP (6)</td>
<td>Apply knowledge of public health core competencies in a working public health setting under the supervision of a preceptor.</td>
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<tr>
<td>MPH 652</td>
<td>PUBLIC HEALTH INTERNSHIP (9)</td>
<td>Apply knowledge of public health core competencies in a working public health setting under the supervision of a preceptor.</td>
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<td>MPH 655</td>
<td>PUBLIC HEALTH CAPSTONE SEMINAR (3)</td>
<td>Demonstration of the synthesis and integration of knowledge gained through the coursework and other learning experiences with the application of theory and principle to various public health issues. Students will write a prospectus paper building upon their internship experience to demonstrate how they will continue that work, and what outcomes they will accomplish in the coming 5-10 years.</td>
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<tr>
<td>MPH 669</td>
<td>SPECIAL TOPICS IN PUBLIC HEALTH (1,2,3)</td>
<td>Intensive study of a problem or topic in Public Health. Topic varies according to professor and term offered.</td>
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<tr>
<td>MPH 670</td>
<td>INDEPENDENT STUDY IN PUBLIC HEALTH (1,2,3)</td>
<td>This course offers the opportunity for students to pursue in depth a topic of special interest within Public Health under the supervision of a faculty member. Can be taken more than once.</td>
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**MUSIC COURSES**

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<tr>
<td>MUSC 504</td>
<td>GRADUATE MUSIC THEORY REVIEW (2)</td>
<td>Music theory course that covers basic and elaborated tonal harmonic languages, overview of sixteenth and eighteenth-century counterpoint and rudiments of forms and analysis.</td>
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<td>APPLIED MUSIC (1)</td>
<td>Private instruction in applied music. An extra, non-refundable fee is required. The student will arrange his/her lesson time with the instructor.</td>
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<tr>
<td>MUSC 601</td>
<td>PIANO</td>
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<td>MUSC 602</td>
<td>ORGAN</td>
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<td>MUSC 603</td>
<td>VOICE</td>
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<td>MUSC 604</td>
<td>WOODWIND</td>
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<td>MUSC 605</td>
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<td>MUSC 606</td>
<td>PERCUSION</td>
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<td>MUSC 607</td>
<td>STRINGS</td>
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<td>ENSEMBLE (1)</td>
<td>Each graduate student is required to participate for credit in one of the Music Department ensembles each semester for a total of four semester hours.</td>
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<tr>
<td>MUSC 612</td>
<td>GRADUATE ENSEMBLE--CHORAL UNION</td>
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<td>MUSC 613</td>
<td>GRADUATE ENSEMBLE--WIND SYMPHONY</td>
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<tr>
<td>MUSC 614</td>
<td>APPLIED CONDUCTING--CHORAL (1)</td>
<td>Private conducting lessons.</td>
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<tr>
<td>MUSC 615</td>
<td>APPLIED CONDUCTING--INSTRUMENTAL (1)</td>
<td>Private conducting lessons.</td>
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MUSC 621  RESEARCH METHODS IN MUSIC (3) A survey of materials and references in the field of music and bibliography and research in music that provides a foundation for basic methods of research. Areas of emphasis include bibliographical problems, practical research, and the writing of a research document.

MUSC 624  MUSIC AND LITERATURE OF THE BAROQUE ERA (3) This survey course traces the development of musical thought and expression from 1580-1750. This era in music history produced at its inception the innovative ideas of Monteverdi and Schultz and culminated with the works of Handel and Bach.

MUSC 625  MUSIC AND LITERATURE OF THE CLASSICAL ERA (3) This survey course traces the development of musical thought and expression from 1750-1825. An exploration of classical style, including the origins, confluence of performance practices, evolution of classicism, and the historical perspectives of this time era are emphasized.

MUSC 626  ANALYSIS AND PERFORMANCE (3) Prerequisite: A passing grade on the music theory diagnostic exam or successful completion of graduate theory review. This course involves advanced score analysis techniques that all conductors should know. Macrocosm to microcosm analyses lead to a better understanding of music and conducting preparation.

MUSC 627  MUSIC AND LITERATURE OF THE ROMANTIC ERA (3) This course traces the development of musical thought and expression from 1825-1900. An exploration of style, including the origins, confluence of performance practices, evolution of romanticism, and the historical perspectives of this time era are emphasized.

MUSC 628  MUSIC AND LITERATURE OF THE ROMANTIC ERA (3) This survey course traces the developments of musical thought and expression from 1900 to the present. An exploration of style, including the origins, confluence of performance practices, evolution of contemporary society, and the historical perspectives of this time era are emphasized.

MUSC 631  PRACTICUM IN CHORAL CONDUCTING (1) This is a practicum ensemble for choral conductors. The course stresses development of effective rehearsal techniques such as conducting gestures, error detection, and rehearsal pacing in a laboratory setting. Each conducting student chooses, prepares, and rehearses music with other students, and the instructor provides feedback on the student’s rehearsal and conducting effectiveness.

MUSC 632  CHORAL METHODS (3) This is a hands-on study of choral and vocal pedagogy for choral conductors. The course explores theories and practices of vocal/choral tone, their production, and their effect in both solo and choral singing, especially with regard to quality, dynamics, blending, intonation, and diction.

MUSC 633  CHORAL LITERATURE AND STYLE ANALYSIS (3) This course is an in-depth study of choral literatures with emphasis on historical context, performance practice, interpretive issues, performance techniques, and conducting problems.

MUSC 641  PRACTICUM IN INSTRUMENTAL CONDUCTING (1) A study of techniques and interpretive skills of the instrumental ensemble conductor to successfully realize the written score. Student participation in a lab setting is required.

MUSC 642  INSTRUMENTAL METHOD AND PEDAGOGY (3) A study of instrumental music education developed through the examination of instructional materials and curriculum organization.
Emphasis will be placed on pedagogical literature, administrative strategies, recruitment, and special interest groups (jazz/marching band) appropriate for instrumental music programs.

MUSC 643 SYMPHONIC LITERATURE (3) A survey of literature for the symphony orchestra from its inception to the present with an emphasis on standard works.

MUSC 644 HISTORIC WIND BAND LITERATURE TO 1950 (3) A study of historical, social, and stylistic trends unique to the wind band literature from the Renaissance period (Gabrieli) to traditional wind works of Mozart, Mendelssohn, Berlioz, Holst, Grainger, Poulenc, and others up to 1950.

MUSC 645 CONTEMPORARY WIND ENSEMBLE LITERATURE (3) A study of wind ensemble literature since 1950, with emphasis on performance analysis and conducting techniques in the works of Schuller, Hindemith, Persichetti, Arnold, Painter, Reed, and others.

MUSC 699 GRADUATE PROJECT (2) All students are required to present a full conducting recital. Students will select, study, and rehearse an approximately sixty-minute recital under the guidance of his/her major advisor. Graded pass/fail by the committee.

NURSING COURSES

NRSG 601 NURSING THEORY AND ROLE DEVELOPMENT (3) This course provides the foundation for the entering graduate nurse to develop an understanding of the concepts, philosophies, conceptual models, and theories that are relevant to master’s level nursing. The emphasis of the course will be on application of this content to practice as it relates to role development as a clinical nurse leader or nurse educator.

NRSG 603 HEALTH POLICY, CLINICAL DECISION AND ETHICS (3) This course examines and evaluates social policy and its impact on health policy, health status and health systems. Using an ethical framework, content examines issues such as financing, quality and safety in current health system practices.

NRSG 606 ADVANCED PHYSICAL ASSESSMENT (3) This course is designed to introduce the experienced clinical nurse to diagnostic reasoning, advanced clinical history taking and physical assessment for individuals across the life span. Content includes concepts, theory and skill practice.

NRSG 607 ADVANCED PATHOPHYSIOLOGY (3) Course content builds on students’ knowledge of anatomy and physiology emphasizing complex body function from the molecular to the systems level. Study focuses on the mechanisms involved in diseases of the major organ systems as well as general aspects of common pathophysiologial conditions and syndromes.

NRSG 609 ADVANCED PHARMACOLOGY (3) Content builds on prior pharmacologic study of the actions and effects of drugs on the human body and body systems across the life span. Course study establishes connections between current pharmacologic practice to the common pathophysiologial conditions and syndromes studied in NRSG 607.

NRSG 610 EVIDENCE BASED PRACTICE & RESEARCH METHODS (3) Prerequisite: A course in statistics. Students study the field of research and its application in health care while they apply critical analysis to relevant research to determine its usefulness and application. Synthesizing data, information and knowledge to evaluate and achieve optimal client outcomes are emphasized throughout the course. Ethical issues related to research are also highlighted and students will apply concepts during their practicum synthesis experiences.