M.B.A. PROGRAMS

The School of Business allows students to complete requirements for an M.B.A. using two distinct modalities.

The curriculum for the evening M.B.A. program is flexible and is designed for students with diverse undergraduate backgrounds. Students may elect an M.B.A. without a concentration or may choose an M.B.A. with a single or double concentration. Concentrations are available in business analytics, corporate finance, entrepreneurship and innovation, global business, health care management, information resources management, investments, real estate, and supply chain management. Most classes are held in the evening to accommodate working students’ schedules. Classes typically meet one evening a week from 7 to 9:40 p.m. or in the early evening from 5:30 to 6:45 p.m. For additional information about the program, visit the M.B.A. options website (https://business.vcu.edu/academics/mba-options/).

The Executive M.B.A. curriculum takes advantage of students’ midlevel and executive professional experience by using it as a foundation on which to build a more sophisticated understanding of business. Core program components and differentiators include its integrated structure, experiential exercises and real-world application, which enable students to transition easily between the business world and their studies.

The program’s innovative, integrated modular structure enables students to approach issues by module topic, which accurately reflects the multidisciplinary demands of the real business world. The program is targeted to rising business executives, entrepreneurs, nonprofit managers and service professionals. It differs from other master’s programs at VCU because of its unique modular curriculum, which integrates components of communication, technology, service/quality, globalization and strategy.

The Executive M.B.A. program is a lockstep program that meets alternating weekends, Fridays from 12:30 to 6:15 p.m. and Saturdays from 8 a.m. to 2:15 p.m. The program can be completed in approximately 20 months.

Traditional program options

- Business Administration, Master of (M.B.A.) (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-mba/)
- Business Administration, Master of (M.B.A.) with a concentration in business analytics (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-business-analytics/)
- Business Administration, Master of (M.B.A.) with a concentration in corporate finance (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-corporate-finance/)
- Business Administration, Master of (M.B.A.) with a concentration in entrepreneurship and innovation (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-entrepreneurship-innovation/)
- Business Administration, Master of (M.B.A.) with a concentration in global business (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-global-business/)
- Business Administration, Master of (M.B.A.) with a concentration in health care management (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-health-care-management/)
- Business Administration, Master of (M.B.A.) with a concentration in information resources management (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-information-resources-management/)
- Business Administration, Master of (M.B.A.) with a concentration in investments (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-investments/)
- Business Administration, Master of (M.B.A.) with a concentration in real estate (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-real-estate/)
- Business Administration, Master of (M.B.A.) with a concentration in supply chain management (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-supply-chain-management/)

Executive program options

- Business Administration, Master of (M.B.A.) [Executive] (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-mba-executive/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in business analytics (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-business-analytics/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in corporate finance (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-corporate-finance/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in entrepreneurship and innovation (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-entrepreneurship-innovation/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in global business (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-global-business/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in health care management (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-health-care-management/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in information resources management (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-information-resources-management/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in investments (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-investments/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in real estate (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-real-estate/)
- Business Administration, Master of (M.B.A.) [Executive] with a concentration in supply chain management (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-executive-supply-chain-management/)

Dual degree programs

- Business Administration, Master of (M.B.A.) with a concentration in supply chain management (http://bulletin.vcu.edu/graduate/school-business/mba-programs/business-administration-supply-chain-management/)
• Business Administration, Master of (M.B.A.)/Accountancy, Master of (M.Acc.) with a concentration in data analytics (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-macc/)

• Business Administration, Master of (M.B.A.)/Business, Master of Science (M.S.) with a concentration in finance (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-ms-bus-finance/)

• Business Administration, Master of (M.B.A.)/Business, Master of Science (M.S.) with a concentration in marketing management (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-ms-bus-mktg/)

• Business Administration, Master of (M.B.A.)/Business, Master of Science (M.S.) with a concentration in real estate (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-ms-bus-real-estate/)

• Business Administration, Master of (M.B.A.)/Decision Analytics, Master of (M.D.A.) (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-mda/)

• Business Administration, Master of (M.B.A.)/Economics, Master of Arts (M.A.) (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-ma-econ/)

• Business Administration, Master of (M.B.A.)/Information Systems, Master of Science (M.S.) (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-ms-isys/)

• Business Administration, Master of (M.B.A.)/Product Innovation, Master of (M.P.I.) (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-mpi/)

• Business Administration, Master of (M.B.A.)/Sport Leadership, Master of (M.S.L.) (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-msl/)

• Business Administration, Master of (M.B.A.)/Supply Chain Management, Master of (M.S.C.M.) (http://bulletin.vcu.edu/graduate/dual-degree-opps/mba-mscm/)

• Pharmacy, Doctor of (Pharm.D.)/Business Administration, Master of (M.B.A.) (http://bulletin.vcu.edu/graduate/dual-degree-opps/pharmd-mba/)

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Accounting

ACCT 507. Fundamentals of Accounting. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Theoretical and technical aspects for accumulating and reporting financial information for business. Emphasis on current financial accounting issues confronting businesses and interpretation of financial information reported by business. This is a graduate foundation course.

ACCT 591. Topics in Accounting. 1-3 Hours.
Semester course; 1-3 lecture hours (delivered online, face-to-face or hybrid). 1-3 credits. Study of current topics. Topics may vary; see the Schedule of Classes for the list of topics offered each semester.

ACCT 604. Advanced Auditing. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ACCT 406 with a minimum grade of C. Development of auditing theory, special disclosure issues, statistical sampling, and ethical, legal and social responsibilities of external and internal auditors. Emphasis on contemporary topics in auditing.

ACCT 608. Managerial Accounting Concepts. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: ACCT 507. The use of accounting information contained in reports to management. The functions of planning, decision making, and control are studied as accounting data are reported through the firm’s information system and in special analyses.

ACCT 610. Forensic Accounting. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ACCT 406 with a minimum grade of C. Study of forensic accounting topics, including fraudulent financial reporting, employee fraud, money laundering, litigation services, evidence management, computer forensics and business valuation.

ACCT 620. Accounting Research. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ACCT 507. The study of accounting methods, topics and data sources. Students will develop the skills needed to critically evaluate accounting research through experiential learning. An introduction to the steps of the research and publication process.

ACCT 621. Accounting Analytics. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisites: ACCT 507 and SCMA 524. Students will collect, prepare and translate accounting-related data into insights and visualizations for effective decision-making.

ACCT 662. Advanced Topics in Accounting Information Systems. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ACCT 307 with a minimum grade of C. Study of accounting systems, concepts and applications with reference to actual problems encountered in the analysis, design, implementation, use, audit and evaluation of accounting systems in a computer environment.

ACCT 680. Tax Research and Planning. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ACCT 301 with a minimum grade of C. Tax research methodology; the sources of tax law and their relationship to tax research.

ACCT 681. Tax Administration. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ACCT 301 with a minimum grade of C. The Internal Revenue Service and the practices and procedures involved and/or available for the settlement of tax controversies and common elections of accounting methods.

ACCT 682. Corporate Taxation. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ACCT 301 with a minimum grade of C. Corporate tax laws as related to the corporations involved and to individual shareholders; tax aspects of the creation, operation, reorganization, and partial liquidation of corporations; corporate distributions.
ACCT 697. Guided Study in Accounting. 1-3 Hours.
Semester course; 1-3 lecture hours. 1-3 credits. May be repeated for credit. Enrollment is restricted to accounting majors; the accounting department chair and graduate studies office in the School of Business must approve the proposed work before the student can register. This course may also be used by accounting graduate students to do research on problems in accounting. Students will be assigned reading and will prepare a written report. Graded as pass/fail.

ACCT 790. Research Methods Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Analyzes and critiques general theories, practices and functions in a specialized area of accounting research.

ACCT 791. Managerial Accounting Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Presents contemporary issues in managerial accounting and auditing research.

ACCT 792. Financial Accounting Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Presents and analyzes contemporary issues in financial accounting.

ACCT 793. International Accounting Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Presents contemporary issues and research in international accounting.

ACCT 794. Behavioral Research Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Provides knowledge and skills for advanced accounting research.

ACCT 795. Auditing Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Presents contemporary issues in auditing research.

ACCT 797. Guided Study in Accounting. 6 Hours.
Year course; 6 credits. Graduate students will work under supervision in completing a graduate thesis and in carrying out the thesis.

ACCT 898. Dissertation Research. 1-12 Hours.
Semester course; variable hours. 1-12 credits. Enrollment restricted to Ph.D. in Business students.

Economics

ECON 501. Introduction to Econometrics. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisites: ECON 203 with a minimum grade of B, ECON 205 with a minimum grade of B or ECON 210; and SCMA 301*, STAT 210 or STAT 212. Provides students with an understanding of the theory and properties of the ordinary least squares regression model with nonexperimental cross-sectional samples. Emphasis is placed on both the conditions under which the model produces unbiased and efficient estimates of the population parameters and, conversely, the conditions under which a given model should be expected to produce biased estimates. Applications include to models from labor and health economics and the hedonic pricing model. *Formerly MGMT 301.

ECON 604. Advanced Microeconomic Theory. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ECON 614. Theory of prices and markets; value and distribution. Partial and general equilibrium analysis.

ECON 607. Advanced Macroeconomic Theory. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ECON 614. An introduction to modern macroeconomics at the graduate level. Presents theoretical and computational tools necessary to understand modern macroeconomics research, as well as to improve students' ability to communicate this research to others. Core subjects will include economic growth, intertemporal decisions, public economics and general equilibrium.

ECON 610. Managerial Economics. 3 Hours.
Semester course; 3 lecture hours. 3 credits. M.B.A. students must take in conjunction with MGMT 641 or by permission of assistant dean of master's programs. Analysis of business decisions, applying tools of economic theory. Decisions on demand, production, cost, prices, profits and investments.

ECON 612. Econometrics. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ECON 501. Provides empirical content to theoretical concepts in economics by formulating and estimating models. Introduction to analysis with pooled cross-sections, time series and panel data. Focuses on analytic solutions when the classical OLS assumptions such as homoskedasticity and strict exogeneity are violated. Special emphasis on the difference-in-difference model, instrumental variable estimation and related approaches.

ECON 614. Mathematical Economics. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: ECON 203 with a minimum B grade and ECON 211; or ECON 210 and ECON 211. Economic analysis utilizing simple mathematical methods. Includes derivation and exposition of theories and the application of tools to widen the scope and increase the usefulness of economics.

ECON 617. Financial Markets. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: ECON 501, MGMT 524, STAT 541, or MGMT 302; and ECON 500 or FIRE 520. Theories of markets for loanable funds are related to empirical findings and institutional structures. Yields of financial assets, kinds of debt instruments, financial institutions, public policy, financial models, and the role of money and credit in economic growth are considered.

ECON 620. The Economics of Industry. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: ECON 301, ECON 303 or ECON 610. The application of economic analysis to the structure, conduct, and performance of industry; public regulation and policies to promote workable competition.

ECON 641. Econometric Time-series Analysis. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: ECON 501 and ECON 614. Provides the analytical and programming tools needed to adeptly handle the statistical analyses of econometric time-series data. Topics include: stationarity, unit-roots, univariate time-series models, vector autoregressions and co-integration. These tools will be used to analyze movements in interest rates, exchange rates and equity markets as well as the transmission of monetary policy actions.

ECON 642. Panel and Nonlinear Methods in Econometrics. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: ECON 501. Includes panel data analysis (fixed and random effects); identification and estimation of nonlinear models, limited dependent variable models (probit, logit, tobit, etc.), duration models; and hypothesis/specification tests. The techniques discussed in class will be used to analyze a variety of empirical questions. The course has an applications rather than a theoretical focus.
ECON 682. An Economic Approach to Environmental Issues. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECON 203 with a minimum B grade and ECON 211. The effect of externalities in terms of efficiency and equity considerations. The role and problems of benefit-cost analysis in decision making is developed. The interrelationship of air, water, and land quality issues is analyzed. The use rate of natural resources, energy consumption, and the steady-state economy and their impacts are evaluated.

ECON 691. Topics in Economics. 1-3 Hours. Semester course; 1-3 lecture hours. 1, 2 or 3 credits. Study of current topics. Topics may vary from semester to semester.

ECON 693. Field Project in Economics. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Students will work under the supervision of a faculty adviser in planning and carrying out a practical research project. A written report of the investigations is required. To be taken at the end of the program.

ECON 697. Guided Study in Economics. 1-3 Hours. Semester course; 3 lecture hours. 1, 2 or 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Graduate students wishing to do research on problems in business administration or business education will submit a detailed outline of their problem. They will be assigned reading and will prepare a written report on the problem. To be taken at the end of the program.

Executive MBA

FMBA 601. Team Building and Leadership. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations steer members toward what needs doing. Design, functions and creation of teams, engaging leadership and motivation processes to set and achieve organizational goals; management of emerging communication and evaluation processes; interacting with boards and with customers are developed across disciplines.

FMBA 602. Team Building and Leadership. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations steer members toward what needs doing. Design, functions and creation of teams, engaging leadership and motivation processes to set and achieve organizational goals; management of emerging communication and evaluation processes; interacting with boards and with customers are developed across disciplines.

FMBA 603. Business Foundations. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how to build a foundation in business quantitative techniques. Concepts of accounting/financial reporting, quality, finance concepts, control and hypothesis testing are developed and integrated across disciplines.

FMBA 604. Analysis and Decisions. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations define and choose. Concepts and tools of problem-solving for administrative decisions; concepts and tools of measurement, planning and control; management of conflict, cooperation, negotiation and implementation are developed and integrated across disciplines.

FMBA 605. Analysis and Decisions. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations define and choose. Concepts and tools of problem-solving for administrative decisions; concepts and tools of measurement, planning and control; management of conflict, cooperation, negotiation and implementation are developed and integrated across disciplines.

FMBA 606. Analysis and Decisions. 1-6 Hours. Semester course; 1-6 lecture hours. 1-6 credits. Presents how organizations define and choose. Concepts and tools of problem solving for administrative decisions; concepts and tools of measurement, planning, and control; management of conflict, cooperation, negotiation, and implementation are developed and integrated across disciplines.

FMBA 607. Global Challenges. 3 Hours. Semester course; 3 credits. Presents an educational tour for direct experience of influences and perspectives: France, Great Britain, Indonesia or Mexico.

FMBA 608. Organizational Culture. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations develop and operate. Concepts of information technology—adding values, environmental regulations/law, entrepreneurial culture, probability market orientation and management functions are explored.

FMBA 609. Productivity and Innovation. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations change and improve. Management of creativity, critical thinking and rewards; development of resources; implementing concepts of quality, effectiveness and change are developed across disciplines.

FMBA 610. Productivity and Innovation. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations change and improve. Management of creativity, critical thinking and rewards; development of resources; implementing concepts of quality, effectiveness and change are developed across disciplines.

FMBA 611. Strategic Management. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations define, plan and accomplish missions. Comprehensive integration of business functions and processes; systems thinking, managing shareholder value; anticipating and interacting with changing internal and external environments; formulation and implementation of strategy and integrated across disciplines.

FMBA 612. Strategic Management. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations define, plan and accomplish missions. Comprehensive integration of business functions and processes; systems thinking, managing shareholder value; anticipating and interacting with changing internal and external environments; formulation and implementation of strategy and integrated across disciplines.

FMBA 613. Strategic Management. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. Presents how organizations define, plan and accomplish missions. Comprehensive integration of business functions and processes; systems thinking, managing shareholder value; anticipating and interacting with changing internal and external environments; formulation and implementation of strategy and integrated across disciplines.

FMBA 614. Health Care Management I: National Perspective. 3 Hours. Semester course; 3 lecture hours. 3 credits. Students develop an understanding of how health care evolved in the United States and articulate major policy issues. Course emphasizes the major components of health care reform and what policy issues they are intended to address. Focus is on how information technology supports quality of care, the business of health care and health care reform.
FMBA 615. Health Care Management II: Employer’s Perspective. 3 Hours. Semester course; 3 lecture hours. 3 credits. Students will develop an understanding of the business and financing of health care. Course emphasizes the design of insurance costs, the associated costs and employer options. Also explores how wellness affects population health and health care costs.

FMBA 616. Health Care Management III: Industry Perspective. 3 Hours. Semester course; 3 lecture hours. 3 credits. Students will develop an understanding of the unique economic issues of health care, the importance of process improvement and compliance for health care organizations and the effect of costs. Course focuses on the roles of innovation and marketing in the health care industry.

FMBA 691. Topics in Business. 1-3 Hours. Semester course; 1-3 lecture hours. 1-3 credits. May be repeated for credit. Study of current topics. Topics may vary from semester to semester.

Finance, insurance and real estate

FIRE 520. Financial Concepts of Management. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Pre- or corequisite: SCMA 524, STAT/BIOM 543, STAT 541 or SCMA 301. A study of the essential concepts of financial management in a global environment, including working capital management, capital budgeting, capital structure planning and dividend policy. This is a foundation course.

FIRE 540. Financial Analytics. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: FIRE 311 or FIRE 520. Study of data skills of management, visualization and analysis of financial data. Students will work on analytics-based projects in the areas of accounting, markets, real estate, financial institutions, statistics, financing under uncertainty, investments and security analysis, risk management, and derivatives. Open to qualified undergraduates.

FIRE 610. Financial Modeling and Analysis. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: FIRE 520. The emphasis of this course will be to transition from financial theory to financial modeling using empirical data. The course will cover the following areas relating to financial modeling: asset returns and risk, portfolio theory, capital asset pricing model, stock valuation, option valuation, bond valuation and interest rate risk, and value at risk. The course will also introduce students to logical thinking and applicable programming languages.

FIRE 615. Foundations in Real Estate. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Provides a basic overview of the participants, processes, workings of different components of the real estate industry (including a variety of uses spanning from residential, office, retail and industrial to specialized) as well as the quantitative components of real estate decision-making. Additionally, students are introduced to an overview of the linkage between real estate markets and public policy.

FIRE 620. Introduction to Financial Management. 3 Hours. Semester course; 3 lecture hours. 3 credits. A study of essential concepts of financial management in a global environment, including time value, capital budgeting and valuation, cost of capital structure, divided policy, and working capital management, at a level appropriate to the Master of Management program.

FIRE 621. Cases in Financial Management. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Pre- or corequisite: FIRE 623. Applications of financial modeling and quantitative methods in analyzing financial problems and policies of firms, including capital management, capital rationing and cost of capital, and capital structure.

FIRE 622. Financial Intermediation and Analysis of Fixed-income Securities. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: FIRE 520. Examines the quantitative and qualitative aspects of financial intermediation within an economy. Quantitative modeling tools to manage risks. Valuation of a fixed-income security using no-arbitrage framework.

FIRE 623. Financial Management. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: FIRE 520. Examines the theoretical underpinnings and practical applications of corporate finance. Key topics include risk and return, financial policy, financial forecasting, capital budgets, and working capital management. Students are tasked with applying theoretical concepts via financial modeling and quantitative analysis.

FIRE 626. Risk Management. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: FIRE 520. Introduces risk management principles and their application in making good business decisions. Emphasizes techniques and tools, along with their limitations in the real world. Covers the core concepts of risk management in a global business environment, including market risk, credit risk, operational risk, investment risk and enterprise risk. Includes perspective on the relevant risks and applicable techniques from the viewpoint of financial intermediaries (e.g. banks) and institutional investors (e.g. pension and hedge funds), as well as hedgers (e.g. non-financial corporations).

FIRE 627. Real Estate Development. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. A study of the development process; including market analysis, site selection, pre-acquisition strategic planning, and project management.

FIRE 629. Cases in Real Estate. 3 Hours. Semester course; 3 lecture hours. 3 credits. Focuses on linking the investment with a particular investor, whether that be an individual or institution, whose objectives, attitudes toward risk, ability to borrow and tax situation may vary considerably. The issues covered provide an opportunity to develop qualitative and quantitative tools necessary for investment analysis.

FIRE 630. Real Estate Valuation. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Theory and practice of real property valuation from fundamental concepts to complex income-producing properties and partial-interest valuations. Technology-related tools are employed in the course, including financial modeling with various software programs.

FIRE 635. Investments and Security Analysis. 3 Hours. Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: FIRE 520. Understand investment concepts of diversification, leverage, short-selling and valuation of financial assets such as stocks, bonds, options and mutual funds. Study portfolio theories, asset pricing models and their applications to manage investment risks. Apply the investment concepts using real-life data and programming tools.
FIRE 638. Real Property Investment Law. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: BUSN 323* or MGMT 530. Covers legal aspects of real property development from acquisition through disposition; emphasizes selection of appropriate ownership form, financing, operation, and tax considerations. *Formerly MGMT 323, SCMA 323.

FIRE 639. International Finance. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 520. A study of financial management of multinational enterprises, banks, firms with foreign subsidiaries, exporters, and service industries. Additionally, financing trade and investments, international money and capital markets, foreign exchange risks, and governmental policies will be covered.

FIRE 650. Derivatives. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: FIRE 520. Introduces theoretical concepts and their application in valuing and using financial derivatives. Emphasizes quantitative techniques and computation tools to value such financial products, along with their practical applications and limitations in the real world. Study of valuation, pricing and use of derivatives to manage risk in a global environment.

FIRE 654. Short-term Financial Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 520. Techniques of short-term financial management (or working capital management) in a global environment for business firms, including understanding payment systems to achieve efficient cash management of accounts receivable, management of inventory, management of accounts payable, and short-term borrowing from banks and other suppliers of short-term credit.

FIRE 657. Current Issues in Investments and Markets. 3 Hours.
3 lecture hours. 3 credits. Prerequisite: FIRE 635. Advanced study of selected topics in global investments and securities markets using experiential exercises. Topics selected by the instructor. Readings from recent journals, cases, and/or software may be used. Possible topics may include: fixed income mathematics; portfolio management; advanced investments theory; factors explaining security price movements; advanced security analysis; using information to make investment decisions; and security market microstructure.

FIRE 658. Real Estate Finance and Investments. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Emphasizes economic and financial analysis of commercial real estate investments, alternative financing structures and surveys recent trends in the securitization of commercial real estate debt and equity markets.

FIRE 664. Current Issues in Corporate Finance. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 623. Advanced study of selected topics in corporate finance and financial management in global entrepreneurial settings. Topics selected by the instructor. Readings from recent journals, cases and/or software may be used. Possible topics include: theory and evidence concerning major corporate financial policy decisions, bankruptcy costs and agency costs that relate to capital structure and dividend policy issues in corporate control, alternative methods of issuing and retiring securities mergers and acquisitions, advanced valuation theory, advanced financial analysis, advanced capital budgeting, using information to make financial decisions.

FIRE 690. Research Seminar in Finance, Insurance and Real Estate. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. This course is designed to provide research experience for candidates not following the FIRE 798-799 program.

FIRE 691. Topics in Finance, Insurance and Real Estate. 1-3 Hours.
Semester course; 1-3 lecture hours. 1, 2 or 3 credits. Prerequisites vary by topic. Study of current topics. Topics may vary from semester to semester.

FIRE 693. Field Project in Finance, Insurance and Real Estate. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Graduate students wishing to do research on problems in business administration or business education in an international environment will submit a detailed outline of their problem. They will be assigned reading and will prepare a written report on the problem. To be taken at the end of the program.

FIRE 697. Guided Study in Finance, Insurance and Real Estate. 1-3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Graduate students wishing to do research on problems in business administration or business education in an international environment will submit a detailed outline of their problem. They will be assigned reading and will prepare a written report on the problem. To be taken at the end of the program.

Information systems

INFO 601. Database Management. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Focuses on relational databases for managing structured data and includes the entity relational diagram, transformation of ERD into relational schema, data normalization and structured query language.

INFO 602. Big Data Analytics with Cloud Platforms. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisites: INFO 364 or INFO 601; and INFO 350 or INFO 648. An in-depth, hands-on exploration of various cutting-edge information technologies used for big data analytics including the Hadoop environment, its architecture, MapReduce and its abstractions, and the Apache Spark software library. The course will also cover the importation of data from heterogeneous sources into big data platforms (extract-transform-load or ETL) using high-level scripting language and using big data analytics tools for data mining and text analytics. Students will use Java libraries for machine learning.

INFO 609. Data-centric Analysis/Planning. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Teaches methods of monetizing or otherwise valuing intangible data practice improvement opportunities in the context of organizational strategy as part of (potentially) semester-long participation with regional organizations. Students use data-centric re-engineering-based business case development to gain practical experience. Sets of students will work closely with organizational leadership during the projects to articulate a specific business case. Teams will evaluate data-centric means of improving operational effectiveness and/or innovation opportunities and recommend specific approaches and estimated benefits.
INFO 610. Analysis and Design of Database Systems. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Prerequisite: INFO 364. Designed to prepare students for the development of data-driven information systems using advanced database management techniques. Included are topics related to advanced SQL statements, procedural SQL programs and NoSQL databases.

INFO 611. Data Re-engineering. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Re-engineering data from one form structure to another – including big data technologies, network, hierarchical, relational and other types. This material exposes students to a range of methods, tools and techniques for understanding existing structures and using these as the basis for designing the next versions. Appropriate tools for data re-engineering and a real-world project provide students with practical experience.

INFO 614. Data Mining. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Prerequisite: MGMT 302, SCMA 302, SCMA 524 or permission of the instructor. A data mining process has the goal of discovering nontrivial, interesting and actionable knowledge from data in databases. The course introduces important concepts, models and techniques of data mining for modern organizations. Students gain a deeper understanding of concepts and techniques covered in lectures by doing a practical term project that applies one or more of the data mining models and techniques. Students also are given the opportunity to gain knowledge on the features and functionalities of state-of-the-art data mining software through their preparation of a research report.

INFO 616. Data Warehousing. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Prerequisite: INFO 610. Covers important concepts and techniques in the design and implementation of a data warehouse. Topics include the data warehouse architecture, the logical and physical design issues in the data warehousing development process, technical factors (i.e., hardware, client/server technology, data warehousing and DBMS technologies) and implementation considerations (i.e., data extraction, clean-up and transformation tools). Introduces online analytical processing and data mining. Crosslisted as: CISS 616.

INFO 617. Text Analytics. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Prerequisite: INFO 350 or INFO 648. Text analytics are the methods and techniques used to discover interesting patterns and extract valuable information from textual data to support the decision-making process. This course introduces the major techniques of text analytics with an emphasis on hands-on coverage of text mining and analytics using a programming language (e.g., Python).

INFO 620. Data Communications. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Computer network design, communication line control, and communication hardware and software.

INFO 622. Internet Security Management. 3 Hours.  
Semester course; 3 lecture hours.  
3 credits. Studies the principles of network security and secure operating systems. Included are topics relating to the use of intrusion detection, intrusion prevention and other related tools.

INFO 630. Systems Development. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Prerequisites: INFO 361 and 364. Covers business process and data requirements modeling for information systems, using advanced methods and techniques. Students will gain hands-on experience developing specifications and a functional prototype application with current CASE and development tools.

INFO 632. Business Process Re-engineering. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Critically reviews business process re-engineering methods and practices. Topics include strategy visioning, performance benchmarking, process modeling and analysis, and planning organizational change. State-of-the-art business engineering tool-sets are used to provide practical experience.

INFO 635. Ethical, Social and Legal Issues in Computer and Information Systems Security. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. Analyzing socio-political and ethical issues surrounding computer and information systems security. Topics include privacy laws, identity theft, information collection and retention policies, and enforcement.

INFO 636. Securing Cloud Infrastructure. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. This course provides hands-on comprehensive study of cloud concepts and capabilities across the various cloud service models (IaaS, PaaS, SaaS), with mainstream cloud infrastructure services and related vendor solutions covered in detail. The cloud security model and its associated challenges are presented, focusing on performance, visualization, cloud mobility, security, usability and utility of the secure solutions.

INFO 637. Introduction to Digital Forensics. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. The course is an introduction to the field of digital forensics as it relates to business. Lecture topics include introduction to digital forensics and e-discovery; current laws related to business data and networks, including compliance and reporting requirements; basics of file system, digital device, operating system and network forensics; cyber-security issues; business policies and procedures. This course is designed for information systems students, business students and business managers.

INFO 640. Information Systems Management. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid).  
3 credits. A detailed study of the issues, principles, techniques and best practices in managing information systems and enterprise knowledge as organizational resources. Managing enterprise knowledge and information systems involves taking a disciplined approach to managing the infrastructures and harnessing the collective knowledge capital and brain-power of individuals and organizations. Topics include: IT operations, issues in strategic management, establishing standards and procedures, performance evaluation and benchmarking, hardware and software acquisition, physical environments and security issues, outsourcing and partnerships, personnel, knowledge ontology, meta-knowledge and others.
INFO 641. Strategic Information Systems Planning. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: INFO 640 or INFO 661. Focuses on developing, implementing and evaluating strategic plans for corporate information systems. Assesses the role of information systems as a competitive tool. Methods and frameworks for strategic analysis are introduced. Mechanisms for establishing an information systems strategy are presented. Emphasis placed on understanding change management issues in IS planning for organizations.

INFO 642. Decision Support and Intelligent Systems. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisites: INFO 610 and 630. Focuses on the design and deployment of decision technology of two broad types: decision support systems, which are meant to be employed in an advisory capacity by their human users, and intelligent systems, which are generally designed as autonomous decision agents and so intended to displace human functionaries.

INFO 643. Information Technology Project Management. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: INFO 640 or 661 or permission from the director of graduate studies in the School of Business. Provides a clear understanding of project management techniques. Covers aspects of planning, organizing, controlling and implementing IT projects. IT project management processes, project scheduling and links with information systems strategy and change management are explored.

INFO 644. Principles of Computer and Information Systems Security. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Explores issues related to protecting information resources of a firm. Various tools and techniques useful for assessing CISS security concerns in organizations are introduced. Principles and models for CISS security and security management are presented and selected computer and CISS security topics are introduced. Material is presented and discussed from a management frame of reference.

INFO 645. Prescriptive Analytics. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, SCMA 301, SCMA 524 or STAT 543. Examines the formulation, analysis and solution of quantitative models for business problems. Applications relevant in diverse business disciplines will be investigated, and the models may include optimization, simulation and other advanced analytics-modeling paradigms. Current computer solution methods will be utilized.

INFO 646. Security Policy Formulation and Implementation. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Course covers aspects of policy formulation and implementation. A security policy is considered as a vehicle for executing good strategy. The course analyzes current problems with security strategy formulation and compliance. The content and context of security policies is evaluated to ensure effectiveness.

INFO 648. Business Data Analytics. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, SCMA 302, SCMA 524, STAT 543 or ECON 501. Techniques and skills for leveraging real-world data to support decision-making using computational software. Topics include the analytics workflow, data preparation, visualization, cluster analysis, predictive modeling and learning-enabled optimization.

INFO 649. Systems Interface Design. 3 Hours.  
Semester course; 3 lecture hours. 3 credits. Focuses on the design and development of user interfaces for business applications. Includes hands-on experience with various information analysis, business strategy formulation and change management, and selection, market research and supply-chain optimization.

INFO 650. Research Seminar in Information Systems. 3 Hours.  
Semester course; 3 lecture hours. 3 credits. Topics may vary from semester to semester. Topics may vary from semester to semester.

INFO 651. Topics in Information Systems. 1–3 Hours.  
Semester course; 1–3 lecture hours. 1, 2 or 3 credits. Study of current topics. Topics may vary from semester to semester.

INFO 652. Field Project in Information Systems. 3 Hours.  
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposal work is required by graduate studies office in the School of Business. Students will work under the supervision of a faculty advisor in planning and carrying out a practical research project. A written report of the investigations is required. To be taken at the end of the program.

INFO 654. Systems Interface Design. 3 Hours.  
Semester course; 3 lecture hours. 3 credits. Focuses on the design and development of user interfaces for business applications. Includes hands-on experience with various information analysis, business strategy formulation and change management, and selection, market research and supply-chain optimization.

INFO 655. Analyzing Business Applications. 3 Hours.  
Semester course; 3 lecture hours. 3 credits. Prerequisite: INFO 640 or 661. Focuses on the design and development of user interfaces for business applications. Includes hands-on experience with various information analysis, business strategy formulation and change management, and selection, market research and supply-chain optimization.

INFO 656. Strategic Information Systems Planning. 3 Hours.  
Semester course; 3 lecture hours. 3 credits. Focuses on developing, implementing and evaluating strategic plans for corporate information systems. Assesses the role of information systems as a competitive tool. Methods and frameworks for strategic analysis are introduced. Mechanisms for establishing an information systems strategy are presented. Emphasis placed on understanding change management issues in IS planning for organizations.

INFO 657. Decision Support and Intelligent Systems. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisites: INFO 610 and 630. Focuses on the design and deployment of decision technology of two broad types: decision support systems, which are meant to be employed in an advisory capacity by their human users, and intelligent systems, which are generally designed as autonomous decision agents and so intended to displace human functionaries.

INFO 658. Decision Support and Intelligent Systems. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisites: INFO 610 and 630. Focuses on the design and deployment of decision technology of two broad types: decision support systems, which are meant to be employed in an advisory capacity by their human users, and intelligent systems, which are generally designed as autonomous decision agents and so intended to displace human functionaries.

INFO 659. Information Technology Project Management. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: INFO 640 or 661 or permission from the director of graduate studies in the School of Business. Provides a clear understanding of project management techniques. Covers aspects of planning, organizing, controlling and implementing IT projects. IT project management processes, project scheduling and links with information systems strategy and change management are explored.

INFO 660. Principles of Computer and Information Systems Security. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Explores issues related to protecting information resources of a firm. Various tools and techniques useful for assessing CISS security concerns in organizations are introduced. Principles and models for CISS security and security management are presented and selected computer and CISS security topics are introduced. Material is presented and discussed from a management frame of reference.

INFO 661. Information Systems for Managers. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Provides an understanding of the importance and role of information systems in modern business decision making. Emphasizes choices about information technology and managing projects.

INFO 662. Information Systems for Business Intelligence. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Provides students with techniques and practices for modern decision-making in support of business/corporate performance. Includes hands-on experience with various information analysis, business intelligence and decision support techniques and tools with applications to various business problem scenarios, such as portfolio analysis, project selection, market research and supply-chain optimization.

INFO 663. Information Systems Planning and Implementation. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Examines the formulation, analysis and solution of quantitative models for business problems. Applications relevant in diverse business disciplines will be investigated, and the models may include optimization, simulation and other advanced analytics-modeling paradigms. Current computer solution methods will be utilized.

INFO 664. Security Policy Formulation and Implementation. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Course covers aspects of policy formulation and implementation. A security policy is considered as a vehicle for executing good strategy. The course analyzes current problems with security strategy formulation and compliance. The content and context of security policies is evaluated to ensure effectiveness.

INFO 665. Security Policy Formulation and Implementation. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Examines the formulation, analysis and solution of quantitative models for business problems. Applications relevant in diverse business disciplines will be investigated, and the models may include optimization, simulation and other advanced analytics-modeling paradigms. Current computer solution methods will be utilized.

INFO 666. Business Data Analytics. 3 Hours.  
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, SCMA 302, SCMA 524 or STAT 543 or ECON 501. Techniques and skills for leveraging real-world data to support decision-making using computational software. Topics include the analytics workflow, data preparation, visualization, cluster analysis, predictive modeling and learning-enabled optimization.

INFO 667. Guided Study in Information Systems. 1-3 Hours.  
Semester course; 1-3 lecture hours. 1, 2 or 3 credits. Study of current topics. Topics may vary from semester to semester.

INFO 668. Guided Study in Information Systems. 1-3 Hours.  
Semester course; 1-3 lecture hours. 1, 2 or 3 credits. Study of current topics. Topics may vary from semester to semester.
INFO 700. Survey of Information Systems Research. 3 Hours.
Semester course; 3 lecture hours. 3 credits. This course is designed to provide incoming Ph.D. students with an introduction to information systems research. Students will survey various research streams in the field of information systems by familiarizing themselves with the research undertaken by faculty in the IS department. During the semester, students will learn about the various research areas in light of theories that support research and the primary research methods used in these areas. In addition, students will review literature to identify critical research issues in a specific topic area chosen for research and propose solutions to address those issues.

INFO 701. Qualitative Research in Information Systems. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Enrollment requires permission of instructor. The course is designed to cover qualitative research published in the information systems discipline and an array of qualitative research methods, including but not limited to grounded theory, positivist case studies, interpretive case studies, hermeneutics, ethnography, action research and interviewing methods. Students will be exposed to the published literature of qualitative research in the IS discipline, as well as to the principles that distinguish qualitative research from other types of IS research. The research methods and techniques will be discussed using published examples of such research. Including a project, the course will help students conduct their own qualitative research.

INFO 702. Design Science Research and Methods in Information Systems. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Enrollment requires permission of instructor. The course is designed to explore the theories and methods that are used in the various phases of design science research. Students will be exposed to the principles that distinguish design science research from other types of information Systems research. The research methods and techniques used in the various phases of design science research will be discussed using examples from IS analysis and design, database, IS security, decision support and intelligent systems, knowledge management, or other subfields.

INFO 710. Database Systems. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Explores advanced concepts related to management of modern organizations' data resources. Focuses on data administration and the technical aspects of database systems. Some of the database research issues covered include: data quality, design, security, metadata, XML databases and data warehousing. Prepares students for further research into aspects of database systems.

INFO 720. Analysis and Design of Systems. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Covers the philosophical and theoretical foundations of information systems development methodologies and their evolution. Provides an intellectual foundation for students wishing to write a doctoral dissertation in this subject matter. Students will be required to read and analyze articles considered fundamental to the current understanding of the subject.

INFO 730. Information Systems Strategy. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Provides the basis for further Ph.D.-level work in information systems strategy. Covers the theoretical foundations of the subject area. In particular the economic, psychological, sociological and cultural aspects are considered. This focus helps students to identify different research orientations and helps develop an informed opinion on critical research areas.

INFO 740. AI-based Decision Support Systems. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Provides the basis for further Ph.D.-level work in decision support and intelligent systems. Explores the theoretical and technical aspects of the subject area. This course will help students identify different research orientations with respect to the notion of intelligent systems and build an informed opinion on critical research areas. Explores issues around classes of decision predicates and decision situations. The course also helps students understand technical innovations in decision technologies as they relate to the study of decision support and intelligent systems.

INFO 750. Information Systems Security. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Provides the basis for further Ph.D.-level work in information systems security. Covers the theoretical aspects of the subject area. It helps students identify different research orientations with respect to IS security and build an informed opinion on critical research areas. Explores issues around what IS security is (ontology) and how to acquire the relevant knowledge (epistemology). The course also helps students understand methods of social science research as they relate to IS security.

INFO 760. Knowledge Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Explores advanced concepts related to knowledge management and knowledge discovery in modern organizations. Material for the course is drawn from research papers and doctoral dissertations. Requires a high level of student participation, particularly in their critical reviews and presentation of relevant research materials.

INFO 790. Doctoral Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Analyzes and critiques general theories, practices and functions in a specialized area of information systems research.

INFO 798. Thesis in Information Systems. 3 Hours.
Year course; 6 credits. Graduate students will work under supervision in outlining a graduate thesis and in carrying out the thesis.

INFO 799. Thesis in Information Systems. 3 Hours.
Year course; 6 credits. Graduate students will work under supervision in outlining a graduate thesis and in carrying out the thesis.

INFO 898. Dissertation Research in Information Systems. 1-12 Hours.
1-12 credits. Limited to Ph.D. in business candidates.

Management

MGMT 540. Management Theory and Practice. 3 Hours.
Semester course; 3 lecture hours. 3 credits. A foundation course that presents theories, principles and fundamentals applicable to contemporary management thought and productive activities.

MGMT 633. Issues in Labor Relations. 3 Hours.
Semester course; 3 lecture hours. 3 credits. The conceptual framework of labor relations; the interconnection between labor-management relations and the sociopolitical environment.

MGMT 634. Collective Bargaining and Labor Arbitration. 3 Hours.
Semester course; 3 lecture hours. 3 credits. The negotiation and administration of collective bargaining contracts; the handling of grievances.
MGMT 637. Advanced Human Resource Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: MGMT 540 and MGMT 524. Provides exposure to the process of managing human resources; focuses on issues concerned with business decisions about acquiring, motivating and retaining employees. Topics may include HRM planning, recruitment, selection, training, performance management, compensation and strategic human resource management. Emphasis will be given to the development, implementation and assessment of human resource management policies and practices consistent with business, legal, environmental and strategic dynamics.

MGMT 641. Leading People and Organizations. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Enrollment restricted to students who have completed all M.B.A. foundation courses or equivalent, or by permission from the graduate studies in business office. An advanced course in management involving theories and models aimed at developing the managerial competencies needed to analyze, understand, predict and guide individual, group and organizational behavior.

MGMT 642. Business Policy and Strategy. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: completion of five of the following courses -- MGMT 641; MGMT 675; ACCT 608; ECON 610; FIRE 621 or FIRE 623; INFO 661; INFO 664; MKTG 671. Integration of principles and policies of business management from the fields of accounting, economics, marketing, finance, statistics and management in the solution of broad company problems and in the establishment of company policy. Emphasis on interaction of disciplines in efficient administration of a business. Course employs case analysis approach.

MGMT 644. International Business Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: ECON 500, MGMT 530, MGMT 540 and MKTG 570. Survey course for students interested in international and multinational management. Review of historical, governmental, monetary, and cultural issues affecting the transfer of resources and management knowledge across national boundaries; multinational business and management strategies; study of management practices in selected countries.

MGMT 649. Compensation Policy and Administration. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 637. Analysis of the concepts and processes involved in compensation systems. Includes evaluation of the internal and external dimensions of compensation, policy issues involved, concepts, and forms of compensation, administration of compensation systems, and current and future issues.

MGMT 654. Negotiations. 3 Hours.
Semester course; 3 lecture hours. 3 credits. An advanced course in management using an experiential approach to explore the practice and theory of negotiation. Topics will include basic approaches to negotiation and conflict management, negotiating in teams, negotiating with agents, ethics in negotiations and international negotiation.

MGMT 655. Entrepreneurship. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Individual and corporate entrepreneurship in high and low technology enterprises. Develops an understanding of the role of entrepreneurship in management theories and practices. Students will develop comprehensive venture analysis plans for presentation.

MGMT 656. Best Practices in Leadership. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing. A seminar and experiential exercise course designed to raise the student's practical awareness of major leadership behavior patterns and strategies that promote effectiveness in organizations; raise awareness, flexibility and skill with the student's own personal leadership style; and help students practice, discuss and develop the ability to influence others over whom they may or may not exert positional authority.

MGMT 657. Corporate Entrepreneurship. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Enrollment is restricted to students in the Master of Business Administration or Master of Science in Business programs. Few companies are immune to the forces of creative destruction. The corporate longevity forecast for S&P 500 companies anticipates average tenure on the list to grow shorter over the next decade. This trend speaks to the critical need for businesses (large, medium and small) to constantly examine their business models and look for innovative ways to keep themselves relevant. Students will be exposed to a corporate entrepreneurship framework used to develop new business opportunities (products, services, business models, etc.) inside an existing organization. Students will use this framework to examine how firms create value and generate sustainable revenue growth through entrepreneurial thought and action. This heavily revolves around innovation, business model generation, concept design, in-depth research, new product development and branding. An understanding of opportunity recognition, creative solutions and innovation will be emphasized.

MGMT 680. Health, Safety and Security Administration. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: MGMT 524; and MGMT 530 or 540. Study of design and development of an effective safety or risk-control program. Topics include organizational needs and assessment, program evaluation, design/implementation of critical program components, training, accident cost-accounting, cost containment. Also addresses management strategies, communication techniques, motivation and incentive programs and other special topics.

MGMT 682. Human Resource Staffing. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 637. Addresses the activities and processes that affect the staffing function. Subjects include attracting, selecting, and retaining people who will facilitate the accomplishment of organizational goals. Designed for the future human resource professional who will be involved with designing, administering, revising, and evaluating selection programs and procedures.

MGMT 684. Issues in International Human Resource Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 637 or MGMT 641. Focuses on issues affecting the application of human resource management practices in an international environment. Examines current challenges in the selection, appraisal, development, compensation and maintenance of expatriates, expatriates, host country nationals and third-country nationals. Includes contextual factors of industrial relations systems, legal environment, demographics and culture.

MGMT 691. Topics in Management. 1-3 Hours.
Semester course; 1-3 lecture hours. 1, 2 or 3 credits. Study of current topics. Topics may vary from semester to semester.
MGMT 693. Field Project in Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Students will work under the supervision of a faculty adviser in planning and carrying out a practical research project. A written report of the investigations is required. To be taken at the end of the program.

MGMT 697. Guided Study in Management. 1-3 Hours.
Semester course; 3 lecture hours. 1, 2 or 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Graduate students wishing to do research on problems in business administration or business education will submit a detailed outline of their problem. They will be assigned reading and will prepare a written report on the problem. To be taken at the end of the program.

MGMT 702. Causal Analysis for Organizational Studies. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: two graduate courses in statistics or permission of instructor. Focuses on conceptual and statistical issues involved with causal analysis with nonexperimental and experimental data. Course covers basic and advanced confirmatory factor analysis and structural equation techniques, with an emphasis on organizational and psychological applications. Crosslisted as: PSYC 702.

MGMT 703. Advanced Topics in Research Methods for Organizational Studies. 1,2 Hour.
Continuous course; 3 lecture hours. 3 credits. Prerequisites: MGMT 632 or equivalent and permission of instructor. Students must enroll for two semesters. Extensive coverage of applications of methodological and statistical analyses to an array of disciplines related to organizational studies. Emphasizes the skills essential in designing, conducting and interpreting research. Course contact hours spread over fall, intersession and spring semesters. Credits allotted one in fall and two in spring. May be repeated once for credit as topics change each year.

MGMT 737. Seminar in Human Resources. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 637 or equivalent and permission of instructor. Provides broad exposure to theory and research in the field of human resource management. Topics include strategic and operational human resource planning and staffing; employee relations, development and performance management; external factors such as legal and international environments; and compensation policy and practices.

MGMT 738. Special Focus in Human Resource Management: _____. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 637 or equivalent and permission of instructor. Provides broad exposure to research in the field of human resource management. Topics include strategic and operational human resource planning and staffing; employee relations, development and performance management; external factors such as legal and international environments; and compensation policy and practices.

MGMT 746. Cognitive and Emotional Processes in Organizations. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 524 or equivalent. This course examines organizational life in terms of cognitive and emotional processes at the individual, group, and organizational level. Special attention will be given to how people perceive and evaluate each other.

MGMT 747. Seminar in Human Resources: Macro Foundations. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 737 or equivalent, or permission of instructor. Provides broad exposure to theory and research of how firms can use human resource management practices to enhance individual and organizational performance. Topics include emerging theoretical perspectives related to HRM systems, human capital, contextual factors and other factors that influence the linkages between human resources and performance.

MGMT 749. History of Management Thought. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 540. Traces the history of management from its beginnings to current approaches and theories.

MGMT 750. Attitudes and Motivation in Organizations. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 524 or equivalent. Critical examination of classic and emerging research on attitudes and motivation in organizations, as well as their relationships to individual and organizational outcomes.

MGMT 757. Corporate Strategy and Long-range Planning. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: MGMT 642 or equivalent. Analysis and evaluation of current methods and research in the areas of corporate strategy and long-range planning.

MGMT 790. Doctoral Seminar. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Open only to Ph.D. students in business. Analyzes and critiques general theories, practices and functions in a specialized area of management research.

MGMT 798. Thesis in Management. 3 Hours.
Year course; 6 credits. Graduate students will work under supervision in outlining a graduate thesis and in carrying out the thesis.

MGMT 799. Thesis in Management. 3 Hours.
Year course; 6 credits. Graduate students will work under supervision in outlining a graduate thesis and in carrying out the thesis.

MGMT 898. Dissertation Research in Management. 1-12 Hours.
1-12 credits. Limited to Ph.D. in business candidates.

Marketing

MKTG 656. International Marketing. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Pre- or corequisite: MKTG 671. Orientation to the international market place. Formulation of international marketing strategies for firms participating in global trade. Emphasis on international environment, multinational economic blocs, international competition and development of international marketing strategies.

MKTG 657. Market Planning Project. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Pre- or corequisite: MKTG 671. This course is a comprehensive real-life, field-based research and strategic planning exercise. Students are matched with an organization that is interested in improving overall performance. Under the supervision of the instructor, the student team develops a global or domestic marketing plan for the client. The team functions as consultants to its assigned company.
MKTG 670. Essentials of Market Planning and Analysis. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Restricted to students enrolled in the Master of Management program. Presents and analyzes buyers and sellers in the marketplace, impact of external forces on marketing, customer-driven strategies and tactics, creation of market-driven competitive advantage, responsible and ethical marketing, Internet and global marketing.

MKTG 671. Marketing Management. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Detailed study of concepts and procedural alternatives in the delineation of the market target, the development and implementation of the marketing mix, and the control and analysis of the total marketing effort.

MKTG 672. Influencing Consumer Behavior. 3 Hours.
Semester course; 3 lecture hours. 3 credits. A study of how consumers think, feel and act throughout the decision process. This course explores consumer behavior theories and practices that are relevant to influencing behavior through effective marketing.

MKTG 673. Marketing Research. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: BIOS 543, SCMA 302, SCMA 524, STAT 541 or STAT 543; pre- or corequisite: MKTG 571. A discussion of the techniques of marketing research. Special emphasis will be given to marketing problem definition, determination of information needs and current methods of analysis of marketing data.

MKTG 674. Service Quality Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Pre- or corequisite: MKTG 301 or MKTG 671. This course enables marketing students to develop a better understanding of service offerings from both a theoretical and practical perspective. Learning will focus on both private and public-sector service organizations. Students will learn how to analyze the design of service offerings, including operations, environment and people, and make recommendations for improving the offerings. The importance of internal and external customer feedback and continually measuring customer satisfaction/dissatisfaction will be highlighted as an integral part of managing service quality.

MKTG 675. Digital Marketing. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Focuses on the basic digital tools available to marketers. The strategic value of digital marketing to the organization as it relates to the buyer behavior model is explored through lecture, cases, guest speakers and a group project. The group project teams partners with local companies to gain practical experience with digital marketing.

MKTG 676. Social Media Research. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Pre- or corequisite: MKTG 671. Improves knowledge of tools and skills to analyze social media data with an emphasis on developing insights for marketing research, strategy and communication. Focuses on contemporary social media listening tools and techniques.

MKTG 678. Marketing Analytics. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: SCMA 524 or STAT 541. Develops and sharpens students' analytical and statistical skills in preparation for advanced marketing decision-making. Analyses and statistical techniques covered include descriptive statistics, cross-tabulation, analysis of variance, regression and cluster analysis applied to marketing phenomena.

MKTG 679. Brand Strategy. 3 Hours.
Semester course; 3 lecture hours. 3 credits. This course will provide students with an understanding of how to formulate strategies for building, leveraging and growing strong brands in an increasingly dynamic and competitive environment. It will address a variety of relevant concepts, including customer and market analysis, brand positioning and brand equity. Students will consider how to design and implement effective brand-building programs and how to measure brand performance. Importantly, the course will emphasize the organizational and individual characteristics necessary for successful strategic brand management.

MKTG 690. Research Seminar in Marketing. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. This course is designed to provide research experience for candidates not following the MKTG 798-799 program.

MKTG 691. Topics in Marketing. 1-3 Hours.
Semester course; 1-3 lecture hours, 1, 2 or 3 credits. Study of current topics. Topics may vary from semester to semester.

MKTG 693. Field Project in Marketing. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Students will work under the supervision of a faculty adviser in planning and carrying out a practical research project. A written report of the investigations is required. To be taken at the end of the program.

MKTG 697. Guided Study in Marketing. 1-3 Hours.
Semester course; 3 lecture hours. 1, 2 or 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Graduate students wishing to do research on problems in business administration or business education will submit a detailed outline of their problem. They will be assigned reading and will prepare a written report on the problem. To be taken at the end of the program.

MKTG 701. Theory and Its Application in Marketing. 3 Hours.
Semester course; 1 lecture and 2 seminar hours. 3 credits. To help students identify their research interests, the course introduces marketing theories, models and their application in scholarly research.

MKTG 710. Marketing Strategy. 3 Hours.
Semester course; 1 lecture and 2 seminar hours. 3 credits. This course covers a range of strategic marketing management topics with a focus on theory, methods and models.

MKTG 720. Consumer Behavior, Judgement and Decision-making. 3 Hours.
Semester course; 1 lecture and 2 seminar hours. 3 credits. This course provides an interdisciplinary approach to the study of information processing, choice and consumer decision-making while exposing students to behavioral research methodologies.

MKTG 740. Advanced Topics in Marketing. 3 Hours.
Semester course; 3 seminar hours. 3 credits. This seminar emphasizes conceptual and methodological developments in specialized marketing topic areas.

MKTG 797. Doctoral Guided Study in Marketing. 1-3 Hours.
Semester course; 1-3 independent study hours. 1-3 credits. May be repeated for credit to a maximum of nine hours for seminars with different content. Focused inquiry for marketing doctoral students. Note: Students are required to submit a detailed outline of the proposed study topic for approval by the instructor.
Supply chain management

SCMA 524. Statistical Fundamentals for Business Management. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BUSN 171*, BUSN 212**, SCMA 500 or MATH 200. Develops an ability to interpret and analyze business data in a managerial decision-making context. Applications are stressed in the coverage of descriptive statistics, contingency tables, probability, sampling, correlation, confidence interval estimation, hypothesis testing and regression analysis. Business-oriented computational software will be used for data visualization and analysis. This is a foundation course.

*Formerly MGMT 171, SCMA 171; **formerly MGMT 212, SCMA 212.

SCMA 530. Fundamentals of the Legal Environment of Business. 3 Hours.
Semester course; 3 lecture hours. 3 credits. The legal environment of business is examined in view of common law principles, statutory provisions and administrative regulations affecting various forms of business organizations and management obligations to the company, its owner and the public. Role of ethics and key commercial law areas are examined including Uniform Commercial Code Provisions.

SCMA 602. Global Supply Chain Management. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. This course explores supply, operations and logistics processes and how these processes are integrated with other functions within the firm and across organizations. The objective of this course is to provide students with knowledge of the fundamentals of supply chain management and how those concepts apply to business practice in a global setting.

SCMA 603. SAP ERP and Supply Chain Management. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. This course focuses on the concept of enterprise information systems as the application of information technology to support the integration of organizational processes. SAP ERP software applications will focus on the design, plan and control of supply chain management processes. Students will have extensive hands-on activities, assignments and cases using a live SAP ERP system.

SCMA 606. Supply Chain Innovation. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Students are introduced to cross-disciplinary principles pertaining to creativity, design, invention and innovation. The focus is learning and applying problem-solving methodologies to address complex, open-ended supply chain problems. Innovation from individual and team perspectives is addressed to hone more comprehensively students’ problem-identification, information-gathering, conceptualization, evaluation and selection skills.

SCMA 615. Strategic Logistics Management. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Corequisite: SCMA 524 or verified equivalent. This course is intended to provide an overview of the logistics function within an organization — highlighting how logistics systems can be strategically designed while also demonstrating how they are managed and improved. Specifically, the course is designed to give exposure to both inbound (procurement) and outbound (distribution) logistics. In general, the course will have a strategic flavor to it where students will be exposed to, but will not have time to become proficient in, the array of techniques used by managers in the logistics function.

SCMA 632. Statistical Analysis and Modeling. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, SCMA 302, SCMA 524, STAT 543 or ECON 501. Statistical analysis and modeling for decision analytics. Topics covered have an applied focus and may include logistic regression, bootstrap estimation, permutation tests, categorical data analysis, model selection, sparse methods and Bayesian methods. Statistical analysis of data will be conducted using business-oriented computational software.

SCMA 642. Decision and Risk Analytics. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, SCMA 301, SCMA 524 or STAT 543. Decision analytics uses diagrams and models to structure complex decisions, decomposing the alternatives, uncertainties and objectives to reveal the best strategy. The course will focus on gaining an understanding of decision analysis tools and software and facilitating decision-makers and stakeholders in building decision models. The probabilistic and statistical underpinnings of good decision-making and the psychology of bad decision-making will be covered. Students will develop solutions for case studies and complete a decision project.

SCMA 643. Applied Multivariate Methods. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: SCMA 524, STAT/BIOS 543 or ECON 501. Study of multivariate statistical methods frequently used in business and analytics problems including principal components, factor analysis, discriminant analysis, MANOVA, logistic regression and cluster analysis. The focus is on applying these techniques through the use of a computer package.

SCMA 646. Legal Foundations of Employment. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: SCMA 530 or MGMT 637. Examines the laws concerning human resources in organizations. Equal Employment Opportunity, wage and hours laws, Equal Pay Act, the Employee Retirement Income Security Act, the Occupational Safety and Health Act and employee personal rights laws are emphasized.

SCMA 669. Developing and Implementing Forecasting Methods for Business. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, ECON 501, SCMA 302, SCMA 524, STAT 541 or STAT 543. Forecasting methods and applications appropriate for managerial decision-making. Methods covered include moving average and exponential smoothing, seasonal adjustments, time series, forecast averaging, new-product forecasting, and combining managerial judgment and analytical forecasts. Particular emphasis is placed on developing and implementing forecasting techniques and other analytical tools in an interactive organization and appreciation of issues and caveats associated with each technique. Course includes data acquisition and teamwork along with effective consulting, communication and presentation skills.
SCMA 675. Operations Management. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, SCMA 301, SCMA 524, STAT 541 or STAT 543. A systematic investigation of the concepts and issues in designing, operating and controlling productive systems in both manufacturing and services.

SCMA 677. Quality Management and Six Sigma. 3 Hours.
Semester course; 3 lecture hours (delivered online, face-to-face or hybrid). 3 credits. Prerequisite: BIOS 543, SCMA 302, SCMA 524, STAT 541 or STAT 543. Concepts of quality management and Six Sigma: quality strategies, organizational quality assessment, Six Sigma process management tools and techniques, process control and improvement tools, the voice of the customer and the voice of the employee.

SCMA 690. Research Seminar in Supply Chain Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Approval of proposed work is required by graduate studies office in the School of Business. This course is designed to provide research experience for candidates pursuing a non-thesis option.

SCMA 691. Topics in Supply Chain Management and Analytics. 1-3 Hours.
Semester course; 1-3 lecture hours. 1-3 credits. Study of current topics. Topics may vary from semester to semester.

SCMA 693. Field Project in Supply Chain Management and Analytics. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Students will work under the supervision of a faculty adviser in planning and carrying out a community-engaged research project. A written report of the investigations is required.

SCMA 697. Guided Study in Supply Chain Management. 1-3 Hours.
Semester course; variable hours. 1-3 credits. Prerequisite: Approval of proposed work is required by graduate studies office in the School of Business. Graduate students will submit a detailed outline of their research problem. They will be assigned reading and will prepare a written report on the problem. To be taken at the end of the program.