

ANDERSON COLLEGE OF BUSINESS AND COMPUTING

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Anderson College of Business and Computing Degree and Certificate Offerings

- Accounting Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/accounting-minor/>)
- Bachelor of Science in Accounting (<https://catalog.regis.edu/anderson-college-business-computing/programs/accounting-bs/>)
- Bachelor of Science in Business Administration (<https://catalog.regis.edu/anderson-college-business-computing/programs/business-administration-bs/>)
- Bachelor of Science in Computer Information Systems (<https://catalog.regis.edu/anderson-college-business-computing/programs/computer-information-systems-bs/>)
- Bachelor of Science in Computer Science (<https://catalog.regis.edu/anderson-college-business-computing/programs/computer-science-bs/>)
- Bachelor of Science in Cybersecurity (<https://catalog.regis.edu/anderson-college-business-computing/programs/cybersecurity-bs/>)
- Bachelor of Science in Finance (<https://catalog.regis.edu/anderson-college-business-computing/programs/finance-bs/>)
- Bachelor of Science in Information Technology (<https://catalog.regis.edu/anderson-college-business-computing/programs/information-technology-bs/>)
- Bachelor of Science in Marketing (<https://catalog.regis.edu/anderson-college-business-computing/programs/marketing-bs/>)
- Computer Information Systems Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/computer-information-systems-minor/>)
- Computer Science Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/computer-science-minor/>)
- Cybersecurity (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/cybersecurity-certificate/>)
- Cybersecurity Essentials (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/cybersecurity-essentials-certificate/>)
- Cybersecurity Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/cybersecurity-minor/>)
- Data Science (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-certificates/data-science-certificate/>)
- Data Science (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/data-science-certificate/>)
- Data Science Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/data-science-minor/>)
- DevOps (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/devops-certificate/>)
- Enterprise Engineering (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/enterprise-engineering-certificate/>)
- Enterprise Java Software Development (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/enterprise-java-software-development-certificate/>)
- Executive Project Management (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/executive-project-management-certificate/>)
- Finance Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/finance-minor/>)
- Full Stack (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-certificates/full-stack-certificate/>)
- Full Stack + (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/full-stack-certificate/>)
- General Business Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/general-business-minor/>)
- Health Care Informatics (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/health-care-informatics-certificate/>)
- Human Resource Management MBA (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/business-administration-human-resource-management-mba/>)
- Information Assurance Policy Management (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/information-assurance-policy-management-certificate/>)
- International Business Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/international-business-minor/>)
- Leading Technology Teams (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/leading-technology-teams-certificate/>)
- Management Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/management-minor/>)
- Marketing Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/marketing-minor/>)
- Master of Business Administration (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/business-administration-mba/>)
- Master of Nonprofit Management (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/nonprofit-management-mnm/>)
- Master of Science - Data Science (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/data-science-ms/>)
- Master of Science - Health Informatics (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/health-informatics-ms/>)
- Master of Science - Information and Cyber Security (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/information-cyber-security-ms/>)
- Master of Science - Information Systems (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/information-systems-ms/>)

- Master of Science - Software Engineering (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/software-engineering-ms/>)
- Master of Science in Accounting (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/accounting-ms/>)
- Master of Science in Organizational Leadership (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/organizational-leadership-ms/>)
- Mobile Software Development (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/mobile-software-development-certificate/>)
- Nonprofit Leadership (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/nonprofit-leadership-certificate/>)
- Project Leadership and Management MBA (<https://catalog.regis.edu/anderson-college-business-computing/graduate-programs/business-administration-project-and-leadership-management-mba/>)
- Project Management (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-certificates/project-management-certificate/>)
- Project Management Minor (<https://catalog.regis.edu/anderson-college-business-computing/undergraduate-minors/project-management-minor/>)
- Software Engineering (<https://catalog.regis.edu/anderson-college-business-computing/graduate-certificates/software-engineering-certificate/>)

Bachelor of Science

- **Accounting**
- **Business Administration**
- **Specializations**
 - Finance
 - General Business
 - International Business²
 - Management²
 - Marketing²
 - Project Management¹
- **Computer Information Systems¹**
- **Computer Science**
- **Cybersecurity¹**
- **Finance²**
- **Information Technology¹**
- **Marketing²**

¹ Courses for this program or specialization are primarily offered in accelerated 8-week format.

² Courses for this program or specialization are primarily offered in traditional 16-week format.

Undergraduate Academic Certificates

- Data Science
- Full Stack
- Project Management
- (Courses for undergraduate certificates are offered in accelerated 8-week format only.)

Master of Business Administration (MBA)

- **Specializations Included in the MBA**
 - Business and Data Analytics
 - Finance
 - Finance and Accounting
 - General Business
 - Health Industry Leadership
 - Marketing
 - Strategy and Innovation

Human Resource Management Master of Business Administration

Project Leadership and Management Master of Business Administration

Master of Nonprofit Management (MNM) Master of Science

- **Accounting (MSA)**
- **Optional Specializations**
 - Financial Accounting
 - Fraud/Forensic Auditing
 - IT Accounting
 - Managerial Accounting
- **Data Science**
- **Optional Specializations**
 - Data Engineering
- **Health Informatics**
- **Specialization**
 - Data Science
- **Information and Cyber Security**
- **Specializations**
 - Cyber Security
 - Information Assurance Policy Management
- **Information Systems**
- **Organizational Leadership (MSOL)**
- **Software Engineering**

Graduate Academic Certificates

- Cybersecurity
- Cybersecurity Essentials
- Data Science
- DevOps
- Enterprise Engineering
- Enterprise Java Software Development
- Executive Project Management
- Full Stack+
- Health Care Informatics
- Information Assurance Policy and Management
- Leading Technology Teams
- Mobile Software Development
- NonProfit Leadership
- Software Engineering

Core Requirements Traditional

| Code | Title | SHs |
|---|--|------|
| Oral and Written Communication | | |
| English, Communication | | 9 |
| RCC 200 | First Year Writing | |
| RCC 420J | Justice and the Common Good | |
| COM 210 | Speech Communication | |
| COM 211 | Technology-Based Public Speaking | |
| COM 250 | Speaking to Make a Difference | |
| COM 251 | Media Literacy | |
| COM 252 | Communication in Relationships | |
| COM 437 | Persuasive Communication | |
| EN 203 | Intermediate Composition | |
| EN 325 | Research Writing | |
| EN 475 | Business Writing | |
| EN/PL 482 | Elements of Successful Argument | |
| Engagement with Literature and Arts | | |
| English, Humanities, Fine and Performing Arts | | 6 |
| any 300-400 EN courses | | |
| all HU courses | | |
| all COM courses ¹ | | |
| EN 250 | Literature Matters | 3.00 |
| Any fine arts core course (FAC) | | |
| Language and Global Awareness | | |
| Modern Languages, Classical Languages, Archeology, History, Political Science, Economics, Geography, and Social Science | | 6-8 |
| RCC 410E | Global Environmental Awareness | |
| COM 400 | Intercultural Communication | |
| COM 412 | Cultural Intelligence | |
| CR 446 | Perspectives on Terrorism | |
| EC 4200 | Comparative Economic Systems | |
| HS 240E-W | Western Civilization: | |
| HU 435E-W | Voices of Humanity: | |
| HU 421E-W | Humanities in Contemporary Culture: | |
| SO 204 | Introduction to Cultural Anthropology | |
| SO 472 | Wealth and Power | |
| RC 458 | Judaism: Faith, History Culture | |
| RC 459 | Islam: Faith/history/contemporary Issues | |
| RCC 410E | Global Environmental Awareness | |
| Understanding Human Behavior, Diversity, and Culture | | |
| Anthropology, Economics, Education, History, Political Science, Psychology, Criminology, Peace and Justice Studies, Sociology, Social Work, or Women's/Gender Studies | | 6 |
| RCC 400D | Diversity & Culture Tradition | |
| all COM courses ¹ | | |
| all EC courses | | |
| all ED courses | | |
| all HS courses | | |
| all PY courses | | |
| all SO courses | | |
| all CR courses | | |

Quantitative Literacy

Quantitative Literacy ² 3-4

The Natural World

Astronomy, Atmospheric Science, Biology, Biochemistry, Chemistry, Ecology, Environmental Science, Geology, Oceanography, Physical Geography, or Physics 3-4

SCI 205E

SCI 206E

SCI 410E

SCI 411E

HSC 240 Fundamentals of Anatomy & Physiology

A natural science with corresponding laboratory.

Philosophical Inquiry and Reflection

Philosophy, Ethics 6

RCC 430M Search for Meaning

RCC 440A Cultures of Self and Other ³

RCC 440B Intercultural Reflection ³

RCC 440C Culture and Meaning ³

all PL courses

PL 270 Philosophical Explorations

Exploring Religious Traditions

Religious Studies, Theology 6

all RC courses

all RS courses

RT 201 Religion and the Human Quest

Total SHs 48-52

¹ excluding COM 210 Speech Communication, COM 211 Technology-Based Public Speaking, and COM 437 Persuasive Communication

² Computer Information Systems, Cybersecurity, and Information Technology students must complete MT 201 College Algebra, MT 250 Quantitative Skills and Reasoning, MT 270 Introduction to Statistics, or any 300-400 level MT courses to fulfill this requirement.

Computer Science students must complete MT 320 Introduction to Discrete Mathematics to fulfill this requirement.

Accounting, Business Administration, Finance, Human Resource Management, and Marketing students must complete MT 270 Introduction to Statistics to fulfill this requirement.

³ RCC 440A Cultures of Self and Other, RCC 440B Intercultural Reflection, and RCC 440C Culture and Meaning must total 3 semester hours and be taken in conjunction with a semester or year-long Regis-sponsored study abroad program.

Non-Traditional

| Code | Title | SHs |
|---------------------------------------|----------------------------------|-----|
| Oral and Written Communication | | |
| English, Communication | | 9 |
| COM 210 | Speech Communication | |
| COM 211 | Technology-Based Public Speaking | |
| COM 437 | Persuasive Communication | |
| EN 203 | Intermediate Composition | |
| EN 325 | Research Writing | |
| EN 475 | Business Writing | |
| EN/PL 482 | Elements of Successful Argument | |

| | | |
|---|--|-----|
| Engagement with Literature and Arts | | |
| English, Humanities, Fine and Performing Arts | | 6 |
| any 300-400 EN courses | | |
| all HU courses | | |
| all COM courses ¹ | | |
| HU 366 | Leading Lives That Matter | |
| Language and Global Awareness | | |
| Modern Languages, Classical Languages, Archeology, History, Political Science, Economics, Geography, and Social Science | | 6-8 |
| COM 400 | Intercultural Communication | |
| COM 412 | Cultural Intelligence | |
| CR 446 | Perspectives on Terrorism | |
| EC 4200 | Comparative Economic Systems | |
| HS 240E-W | Western Civilization: | |
| HU 435E-W | Voices of Humanity: | |
| HU 421E-W | Humanities in Contemporary Culture: | |
| SO 204 | Introduction to Cultural Anthropology | |
| SO 472 | Wealth and Power | |
| RC 458 | Judaism: Faith, History Culture | |
| RC 459 | Islam: Faith/history/contemporary Issues | |
| Understanding Human Behavior, Diversity, and Culture | | |
| Anthropology, Economics, Education, History, Political Science, Psychology, Criminology, Peace and Justice Studies, Sociology, Social Work, or Women's/Gender Studies | | 6 |
| all COM courses ¹ | | |
| all EC courses | | |
| all ED courses | | |
| all HS courses | | |
| all PY courses | | |
| all SO courses | | |
| all CR courses | | |
| Quantitative Literacy | | |
| Quantitative Literacy ² | | 3-4 |
| The Natural World | | |
| Astronomy, Atmospheric Science, Biology, Biochemistry, Chemistry, Ecology, Environmental Science, Geology, Oceanography, Physical Geography, or Physics | | 3-4 |
| SCI 205E | | |
| SCI 206E | | |
| SCI 410E | | |
| SCI 411E | | |
| HSC 240 | Fundamentals of Anatomy & Physiology | |
| Philosophical Inquiry and Reflection | | |
| Philosophy, Ethics | | 6 |
| RCC 430M | Search for Meaning | |
| all PL courses | | |
| RCC 440A | Cultures of Self and Other | 1 |
| RCC 440B | Intercultural Reflection | |
| RCC 440C | Culture and Meaning | |
| Exploring Religious Traditions | | |
| Religious Studies, Theology | | 6 |
| all RC courses | | |

all RS courses

Total SHs **46-50**¹ excluding COM 210 Speech Communication, COM 211 Technology-Based Public Speaking, and COM 437 Persuasive Communication² Computer Information Systems, Cybersecurity, and Information Technology students must complete MT 201 College Algebra, MT 250 Quantitative Skills and Reasoning, MT 270 Introduction to Statistics, or any 300-400 level MT courses to fulfill this requirement.

Computer Science students must complete MT 320 Introduction to Discrete Mathematics to fulfill this requirement.

Accounting, Business Administration, Finance, Human Resource Management, and Marketing students must complete MT 270 Introduction to Statistics to fulfill this requirement.

³ RCC 440A Cultures of Self and Other, RCC 440B Intercultural Reflection, and RCC 440C Culture and Meaning must total 3 semester hours and be taken in conjunction with a semester or year-long Regis-sponsored study abroad program.

Courses

Undergraduate

Accounting (AC)

AC 3200 Principles of Accounting I (3.00 credit hours)

Introduces basic accounting principles and procedures for sole proprietorship partnerships and corporations.

AC 3210 Principles of Accounting II (3.00 credit hours)

A continuation of AC 3200 introducing basic financial accounting and managerial accounting and managerial accounting principles and procedures for sole proprietorships partnerships and corporations.

Prerequisite(s): AC 3200.**AC 3300 Accounting for Managers (3.00 credit hours)**

Introduces students to the basic terminology and concepts embodied in accounting that are utilized by business organizations to facilitate sound decision making. The primary focus of this course is aimed at non-accounting students interested in better understanding how managers assess overall economic performance of companies when applying accounting tools and techniques that help measure that performance. This course may not be substituted for AC 3200 and AC 3210 although students may elect to take AC 3200 and AC 3210 in place of AC 3300.

Note(s): Non-majors only.**AC 4100 Intermediate Accounting I (3.00 credit hours)**

Provides an in-depth study of the history and current regulations of financial accounting. Introduces accounting theory and industry standards as well as details the functions of the accounting cycle resulting in the preparation and analysis of financial statements.

Prerequisite(s): AC 3210.**AC 4110 Intermediate Accounting II (3.00 credit hours)**

Provides an in-depth study of financial accounting. Accounting theory and standards for inventory fixed assets investments and liabilities are examined and practiced.

Prerequisite(s): AC 4100.**AC 4120 Intermediate Accounting III (3.00 credit hours)**

Provides an in-depth study of financial accounting. Accounting theory and practice for leases pensions shareholder wealth are examined and practiced. Preparation and analysis of the Statement of Cash Flows.

Prerequisite(s): AC 4110.

AC 4310 Accounting Information Systems (3.00 credit hours)

Examines information systems and their role in business processes. Focuses on the use of technology related tools and their value within accounting and the organization.

Prerequisite(s): AC 3210.

AC 4400 Cost Accounting (3.00 credit hours)

Provides an in-depth study of cost and management accounting procedures and techniques. Emphasizes current topics from CPA examinations.

Prerequisite(s): AC 3210.

AC 4500 Income Tax Accounting I (3.00 credit hours)

Studies income tax laws and regulations as they pertain to individuals partnerships corporations estates and trusts.

Prerequisite(s): AC 3210.

AC 4510 Income Tax Accounting II (3.00 credit hours)

A continuation of AC 4500 the study of income tax laws and regulations as they pertain to individuals partnerships corporations estates and trusts.

Prerequisite(s): AC 4500.

AC 4600 Governmental & Not-For-Profit Accounting (3.00 credit hours)

Accounting principles and procedures as applied to governmental and nonprofit organizations including hospitals colleges and universities and health and welfare organizations.

Prerequisite(s): AC 3210.

AC 4750 Advanced Accounting (3.00 credit hours)

Advanced accounting principles and procedures as applied to special areas including partnerships corporate liquidations estates and trusts foreign currency accounting segment accounting equity methods for investment consolidations and international accounting.

Prerequisite(s): AC 4120.

AC 4800 Auditing Principles and Procedures (3.00 credit hours)

Studies auditing principles and objectives in relationship to auditing standards and procedures.

Prerequisite(s): AC 4120.

AC 4830 Forensic and Fraud Audit (3.00 credit hours)

The study of accounting fraud and the examination of issues surrounding the prevention detection and investigation of fraud. The course analyzes the accountant's/auditor's roles related to fraud as well as the audit committee and management.

Prerequisite(s): AC 4800.

Note(s): Majors only.

AC 4900E-W Independent Study/Accounting: (1.00-6.00 credit hours)

Offers opportunity for independent study in special topics of interest not covered in regularly offered courses under the direction of a faculty member.

AC 4910 Accounting Ethics (3.00 credit hours)

Examines the ethical responsibilities of accountants in the business environment both individually and within an organization. Focuses on various frameworks for ethical decision making accounting codes of conduct accountants' responsibilities for ethical behavior and the current state of the accounting profession based on past and current ethical dilemmas faced by the profession.

Prerequisite(s): AC 4120 and AC 4800.

AC 4985 Accounting Senior Capstone (3.00-6.00 credit hours)

Provides the culminating experience of the major focusing on integration and application of theory through research. Must be completed as graded course work at Regis University. Successful completion of eighteen (18) upper division Accounting semester hours required.

Prerequisite(s): AC 4800 and AC 4120.

Note(s): Majors only and Senior standing.

AC 4994 Intermediate Accounting Apprenticeship I (3.00 credit hours)

The Intermediate Academic Apprenticeship connects vocation with academic learning. Goals of the internship are threefold: 1) to gain experience in a chosen professional setting integrating coursework knowledge in a work context 2) to engage students in a process of discerning one's professional aspirations upon graduation 3) develop professional behavior within a work culture. The academic portion of the internship requires face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

AC 4995 Intermediate Acct Apprenticeship II (3.00 credit hours)

The Intermediate Academic Apprenticeship connects vocation with academic learning. Goals of the internship are threefold: 1) to gain experience in a chosen professional setting integrating coursework knowledge in a work context 2) to engage students in a process of discerning one's professional aspirations upon graduation 3) develop professional behavior within a work culture. The academic portion of the internship requires face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

AC 4996 Advanced Accounting Apprenticeship I (3.00 credit hours)

The Advanced Academic Apprenticeship connects vocation with academic learning. Goals of the internship are threefold: 1) to gain experience in a chosen professional setting integrating upper division coursework knowledge in a work context 2) to engage students in a process of discerning one's professional aspirations upon graduation 3) develop professional behavior within a work culture. The academic portion of the internship requires face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

Business Administration (BA)**BA 2900 Introduction to Business (3.00 credit hours)**

Explores the contemporary business environment by introducing fundamental business concepts and models through business simulation. Provides a solid foundation for future business courses in the functional areas of business and emphasizes how these functional areas interact to encourage profitable sustainable and socially-responsible business practices.

BA 3366 Management Essentials (3.00 credit hours)

Examines managerial principles theory practices and problems applicable to a variety of modern organizations through a study of the fundamental functions of management. Specific trends techniques principles and skills for life-long learning critical thinking ethics and awareness of organizational and social issues are explored.

Prerequisite(s): BA 2900 and sophomore class standing.

BA 3400 Marketing Principles (3.00 credit hours)

Determines how marketing decisions centered on customer needs impact the strategic success of an organization. Effective integration of the marketing mix (4P's) and the ethical role of marketing decisions are analyzed.

Prerequisite(s): BA 2900 and sophomore class standing.

BA 3911 Business & Professional Communication (3.00 credit hours)

Introduction to basic skills principles and contexts of communication in business and professional settings. Focuses on organization adaptation and delivery of presentations for many types of business and professional settings.

Prerequisite(s): RCC 200 or EN 203 and COM 210 COM 250/250C COM 251 or COM 252/252C.

BA 4100 Business Finance (3.00 credit hours)

Introduces major topics in managerial finance essential for understanding how financial managers acquire and manage a firm's assets and how they finance these assets through debt and equity sources.

Prerequisite(s): AC 3210.

BA 4104 Derivative Securities and Markets (3.00 credit hours)

Introduces derivative related financial instruments (forwards futures and options) and their use in investment and corporate financial management. Provides insight into the use of hedging and risk mitigation through the use of financial instruments.

Prerequisite(s): BA 4100.

BA 4106 Advanced Corporate Finance (3.00 credit hours)

Comprehensive study of how corporations make investment decisions raise capital to finance their investments and manage their financial affairs to create shareholder value. Topics include capital budgeting and the cost of capital dividend policy capital structure and financial distress. Emphasizes developing analytical tools and problem solving.

Prerequisite(s): BA 4100.

BA 4115 Personal Financial Management (3.00 credit hours)

Examines the field of personal financial management and planning. Includes setting financial goals and planning for education retirement estates and insurance and the tax effects of different financial choices. Explores the role of the professional financial planner in helping individuals to make financial decisions.

Prerequisite(s): BA 2900.

BA 4120 Financial Analysis, Forcstng, & Planning (3.00 credit hours)

Financial statements provide information for managers investors and creditors. Introduces the skills necessary to understand and analyze financial statements and apply these skills in order to determine the value of a firm and its underlying securities.

Prerequisite(s): BA 4100 and junior class standing.

BA 4124 Corporate Capital Budgeting (3.00 credit hours)

Reviews cost of capital with an emphasis on risk analysis and management. Examines Sources of capital including money markets and capital markets lease financing venture capital and foreign markets.

Prerequisite(s): BA 4106.

BA 4140 Fundamentals of Investments (3.00 credit hours)

Studies the relationship between risk and return in the management of investment portfolios including the analysis of stocks bonds and other securities.

Prerequisite(s): BA 4100 AC 3200 and AC 3210.

BA 4149 Business Cycles and Financial Crises (3.00 credit hours)

Examines theoretical explanations of economic growth in advanced industrial economic systems and the causes of financial crises and of other deviations from the growth trend. Cross-listing: EC 4149.

Prerequisite(s): EC 3200 and EC 3300.

BA 4158 Money and Banking (3.00 credit hours)

Studies the nature and functions of money and credit including an understanding of the variety and growth of banking functions and the influence on banks of Federal Reserve operations. Examines the relationships among money interest rates business investment needs government borrowing and the gross national product.

Prerequisite(s): EC 3200 EC 3300 and BA 4100.

BA 4163 International Finance (3.00 credit hours)

Presents the economic issues of international finance including the history in International Finance fixed and flexible exchange rates and international agencies that help stabilize international financial markets. Examines issues faced by financial managers of multinational firms.

Prerequisite(s): EC 3200 EC 3300 BA 4100 MT 330 or MT 360A and junior class standing.

BA 4173 Public Finance and Public Policy (3.00 credit hours)

Examines the basic principles of public finance. Considers the role of government in the economy and how government might approach solving social issues through a political economy lens. Topics include the moral economy efficiency and equity aspects of taxation and redistributive programs private and public solutions to problems of externalities and public goods government provision of health care and social insurance programs budgeting and public debt.

Prerequisite(s): EC200 or EC 3200 and EC 3300.

Cross listing(s): PEC 473.

BA 4177 International Economics (3.00 credit hours)

Examines the theoretical underpinnings of international economics. Emphasizes international trade theory trade policy exchange rate determination factor movements underdevelopment balance of payments national income the international financial system and institutions and regional trading blocks. Cross listing(s): PEC 460.

Prerequisite(s): EC 3200 and EC 3300.

BA 4226 Leading Diverse & Inclsrv Organizations (3.00 credit hours)

Provides an in-depth exploration of diversity influences in organizations includes stereotypes and other blocks to equal treatment and the impact of increasing diversity on organizational objectives and career expectations.

Prerequisite(s): BA 3366 and junior class standing.

BA 4252 Management of Human Resources (3.00 credit hours)

Examines and develops the strategic skills and knowledge needed to manage human resources. Studies the areas of HR law staffing employee relations retention and engagement compensation and benefits and analytics. Emphasizes how HR managers can create a high performance work environment that values ethical decisions and makes a positive social impact.

Prerequisite(s): BA 3366.

BA 4260 Employment Law and Compliance (3.00 credit hours)

Identifies the federal and state laws and regulations that affect the employment relationship. Focuses on developing programs that help the organization meet its workforce needs in support of business requirements while preventing lawsuits from employees and federal agencies. Topics include Discrimination Law Wage and Hour Law Labor Law Benefits Law and other federal laws and regulations.

BA 4270 Strategies in Compensation and Benefits (3.00 credit hours)

Analyzes the theories concepts and practices related to managing strategic compensation and benefits programs. Focuses on the role of human resources in managing competitive rewards and pay plans. Specific topics include compensation administration job evaluation and pay structures base and incentive pay executive compensation and employee benefits plans including required voluntary and retirement options.

BA 4280 Talent and Performance Management (3.00 credit hours)

Identifies a framework for acquiring and maintaining diverse and talented employees in alignment with business requirements of the organization. Focuses on the recruitment selection and development systems that are part of the human resources function. Discusses approaches and practices to manage employee performance. Explores workforce diversity and its impact on talent management in the organization. Topics include recruitment selection and orienting new employees; training and development; performance management and workforce diversity.

BA 4290 Lab/Emp Relations & Workplace Safety (3.00 credit hours)

Identifies processes used to maintain effective relationships between employees and management as well as managing employee discipline to meet the requirements of the organization. Focuses on the role of human resources in the mediation and negotiation of labor/employee relations matters settlement of employee disputes and grievances and identifying practices and processes to maintain a safe workplace. Topics include collective bargaining negotiations alternative dispute resolution progressive discipline workplace investigations and workplace safety.

BA 4300 SEED Fellow I: Sustainable Mindsets (3.00 credit hours)

Provides comprehensive coverage of managerial principles applicable to numerous activities through a study of the fundamental functions of management. Studies recent developments and their effect upon management and management techniques. Cross listing(s): ENVS 429. **Note(s):** Junior class standing or higher and instructor consent is required.

BA 4308 Developing Your Leadership Potential (3.00 credit hours)

Leadership is the ability to influence a group of people and rally them behind a goal. This course is designed to provide the student with opportunities to develop and improve competencies that are fundamental to the practice of leadership in business and to provide a place to reflect on one's leadership potential.

Prerequisite(s): BA 3366 and junior class standing.

BA 4314 Diversity in the Workforce (3.00 credit hours)

Examines changing roles of African Americans Latinos Asian Americans physically disabled and elderly. Focuses on the internationalization of the workforce with respect to peace and justice. Provides an extended case application of theories of organizational behavior and change with an eye on globalization.

Prerequisite(s): BA 3366 and junior class standing.

BA 4327 Introduction to Entrepreneurship (3.00 credit hours)

Introduces entrepreneurship and the entrepreneurial process. The course explores how the functional areas of business are applied to new ventures. Students will also examine the role entrepreneurship plays in fulfilling their professional aspirations.

Prerequisite(s): BA 3366 and junior class standing.

BA 4331 Seed Fellowship II: Leading for Change (3.00 credit hours)

Examines the stories of entrepreneurs and their approach to business. Begins with a review of the iconic captains of industry such as Henry Ford and J.P. Morgan. Current corporate success stories and their prosperous managers will be examined. Explores the contributions made by small to mid-size businesses and lessons learned from business failures.

Note(s): Junior standing required.

BA 4333 Women in Business (3.00 credit hours)

Explores challenges for women in business from a historical perspective. Discusses the sociological and psychological barriers to women's success. Examines being champions for women. Cross listing(s): WGS 485 S.

Prerequisite(s): Sophomore class standing.

BA 4354 Organizational Behavior (3.00 credit hours)

Emphasizes organizational environment and behavior concepts. Focuses on human resources and system ideas motivating employees job satisfaction leadership managing change communication and group processes employee counseling and interpersonal and group dynamics.

Prerequisite(s): BA 3366 and sophomore class standing.

BA 4368 International Business (3.00 credit hours)

Explores scopes and challenges of doing business including marketing goods and services in foreign markets. Addresses cultural legal political geographic technological and economic (standard of living) influence management organizational and marketing practice. Examines the establishment of markets research distribution channels export processes.

Prerequisite(s): BA 3366 and junior class standing.

BA 4369 International Management (3.00 credit hours)

Studies the history and evolution of international business the international environment and the development organization and structure of the international organization. Includes cultural differences and business-governmental relations.

Prerequisite(s): BA 3366 and junior class standing.

BA 4380E-W Issues in Management (3.00 credit hours)

Focuses on various aspects of management. Provides perspective on current issues and practices in both for-profit and not-for-profit organizations. Explores legal and ethical behavior technology's impact on management and operations changing cultures and organizational structure demographic shifts and international competitive forces.

BA 4382 Values-Centered Management (3.00 credit hours)

Examines the nature and meaning of work from a historical perspective and traces work traditions through industrial past. Focuses on current work environments including issues of work/life balance spirituality and global developments.

Prerequisite(s): BA 3366 and junior class standing.

BA 4410 Consumer Behavior (3.00 credit hours)

Explores how individuals groups and organizations make purchasing decisions. Students identify opportunities for positive interaction in the buying process through customer analysis. Students examine social responsibility topic associated with buying and selling.

BA 4412 Advertising and Promotion (3.00 credit hours)

Introduces the concept of Integrated Marketing Communications (IMC) a promotions/communications approach integrating all elements of the promotional mix. Through the creation of an Integrated Marketing Communications plan students learn the importance of identifying the target customer the developing unique selling proposition developing unified messaging and the creation target-market driven media tools to enhance the efficiency and effectiveness of marketing communications.

Prerequisite(s): BA 2900.

BA 4423 Marketing Research (3.00 credit hours)

Familiarizes student with the basic objectives techniques and applications of market research used in a modern business environment. Develops proficiency in the research process building upon and applying knowledge of statistics to modern market research problems.

Prerequisite(s): BA 2900 BA 3400 and MT 270.

BA 4428 International Marketing (3.00 credit hours)

Examines the scope and challenge of marketing goods and services in foreign countries; and the cultural legal political geographic technological and economic influences on international marketing. Includes establishing markets market research distribution channels export processes and marketing strategies.

BA 4429 Strategic Web Design (3.00 credit hours)

Covers the full process of creating a WordPress website with images multimedia and content. Course includes securing a domain and site host selecting a WordPress theme and integrating social media. Will also cover site security client relationship management and basic search engine optimization.

BA 4430 SEED Fellowship I (3.00 credit hours)

Our worldviews drive our behaviors so change requires that we shift our mindsets. In Part I of the SEED Fellowship you will learn to lead from within and become a locus of change by developing self-awareness practicing reflection exercising sustainable behavior and developing a sustainability mindset. Through exercises and your own personal consumption challenge you will experience real progress toward creating change and will serve as a model for others in your community.

BA 4431 SEED Fellowship II: Leading Change (3.00 credit hours)

Accelerate your leadership skills to promote social and environmental sustainability. In Part II of the SEED Fellowship you will learn to communicate clearly and effectively form and motivate teams and leverage the science of behavior change in order to bring about social and environmental sustainability. By implementing the tools of social marketing you will create a real impact in your community. Cross listing(s): ENVS 431.

Note(s): Junior class standing or higher and instructor consent is required.

BA 4434 Professional Selling & Sales Management (3.00 credit hours)

Designed to prepare students to enter a sales force equipped with the knowledge and skills necessary to supports students' career interest in becoming successful sales professionals. Student learn the intricacies of sales strategies/techniques but also learn key sales skills such as written verbal and non-verbal communication; presentation skills; emotional intelligence and relationship building. Students will practice negotiation and closing tactics as well as after sale customer management.

BA 4443 Digital Marketing, Media Tactics & Tools (3.00 credit hours)

Explores the ever-changing dynamic world of digital marketing including topics such as website development social media marketing automation mobile marketing client relationship management databases and search engine marketing. Takes a hands-on approach so students will experience the process of engaging in their own digital marketing tactics and preparing a digital marketing plan.

BA 4454 Neuromarketing and Buyer Biology (3.00 credit hours)

Explores the human search for meaning from the perspective of neuromarketing neuroeconomics and consumer behavior. Drawing on the fields of biology neuroscience psychology economics and marketing.

BA 4465 Value Chain Management (3.00 credit hours)

Focuses on the chain of distribution from the supply of materials for product production the innovation and product development process the manufacturing of product and the distribution chain from the manufacturer to the end consumer. Examines the development of integrated distribution systems as a means of adding value to the product and for creating supply systems as a means of sustainable competitive advantage for an organization. Explores functions required of the supply chain complications and issues facing the members of the supply chain and creative alternatives to traditional supply chain management.

Prerequisite(s): BA 2900 and sophomore class standing.

BA 4483 Values-Centered Marketing (3.00 credit hours)

Provides an interdisciplinary framework for examining morals values and ethics in a marketing context. After critically evaluating philosophical religious and psychological perspectives on morality students will analyze substantive marketing issues including but not limited to labor rights and sustainability in light of the moral theories.

Cross listing(s): CAS 460I.

BA 4486 Research Practicum in Marketing (3.00 credit hours)

Provides students with the opportunity to design and conduct an original and independent/group research project. Entails comprehensive consumer study including problem statement literature review hypotheses data collection data analysis and reporting. Develops conceptual and analytical skills with goal of publishing.

Prerequisite(s): BA 2900 BA 3400 BA 4410 BA 4423 and BA 4434.

BA 4488 Marketing Social Change in Uganda (3.00 credit hours)

Explores extreme poverty in Africa through immersion experience; integrates multiple perspectives on extreme poverty and economic development as students conduct service projects with organizations that work to alleviate poverty in Uganda. Cross-listing: ENVS 451 PJ 451W WGS 485W.

Prerequisite(s): Junior standing.

Note(s): Travel to Uganda is required.

BA 4657 Process Mapping and Improvement (3.00 credit hours)

Emphasizes process mapping and examines the elements of process improvement. It identifies the methods and tools utilized in the identification examination and improvement of processes within an organization. Its focus is on the involvement of various elements of an organization to: identify customer requirements evaluate current processes against those requirements and lead the effort to make changes to processes that will both satisfy the customer and improve organizational performance in an ethical and socially responsible manner.

Prerequisite(s): BA 3366 and sophomore class standing.

BA 4658 Project Management (3.00 credit hours)

Identifies tools and processes of project management with emphasis on organizational structures and resources for successful management. Includes tools and techniques for project planning staffing and budgeting.

Prerequisite(s): BA 3366 and sophomore class standing.

BA 4820 Fundamentals of Innovation Engineering (3.00 credit hours)

Students use tools and disciplined systems to create communicate and advance or commercialize ideas in any field. These concepts help students with product development social innovation or simply making work more meaningful and effective. Students completing this course will receive an Innovation Engineering Blue Belt designation.

BA 4900E-W Independent Study/Business: (1.00-6.00 credit hours)

Enables students to pursue special topics of interest not covered in regularly offered courses. Developed under the direction of a faculty member. Regis College

Prerequisite(s): Junior standing and approval of Division Director.

BA 4950 Ethical Decision Making in Business (3.00 credit hours)

Focuses on ethical problems in the business environment including whistle-blowing employee rights privacy hiring compensation as well as corporate social responsibility and governance. Covers the fundamental philosophical theories that can be used to address these dilemmas. Individually students investigate specific dilemmas inherent in their chosen profession and analyze how those problems could be resolved by value-driven ethical standards.

Prerequisite(s): BA 3366 and sophomore class standing.

BA 4981 Business Law (3.00 credit hours)

Introduces the American legal system and provides essential background information on civil dispute resolution and the constitutional basis of law. Focus is on the fundamentals of contract law and legal issues that arise in business dealings with employees consumers and governments.

Prerequisite(s): BA 3366 (Business Administration students) or AC 3200 (Accounting students) and sophomore class standing.

BA 4985 Business Policy and Strategy (3.00 credit hours)

This capstone course for Business Administration majors addresses the business firm in its totality as a functioning entity in its environment both global and local. Analyzes actual policies and strategies of existing firms. Senior class standing required.

Prerequisite(s): Must have completed lower and upper division core courses prior to registering for this course.

BA 4986 Capstone: Applied Project (3.00 credit hours)

Culminating experience for the major requiring students to utilize integrated program concepts and theories to investigate and address a complex business problem need or opportunity. Senior class standing required.

Prerequisite(s): Must have completed lower and upper division core courses prior to registering for this course.

BA 4987 Senior Capstone (3.00-6.00 credit hours)

Provides culminating experience of the major focusing on integrating theory with application and implementation of research to a complex business problem need or opportunity.

Business - General (CBE)**CBE 4990 Intermediate Internship I (1.00-3.00 credit hours)**

The Business Academic Internship connects student vocational goals with academic learning. Goals of the internship are threefold: 1) to gain professional experience in a chosen field for integrating coursework knowledge in a work context 2) to engage students in a process of discerning career direction upon graduation and 3) develop professional behavior within a work culture. The academic portion of the internship is similar to an independent study with scheduled face to face meeting times scheduled individually to discuss progress with assignments.

CBE 4991 Intermediate Internship II (1.00-3.00 credit hours)

The Business Academic Internship connects vocation with academic learning. Goals of the internship are threefold: 1) to gain experience in a business setting for integrating coursework knowledge in a work context 2) to engage students in a process of discerning career direction upon graduation and 3) develop professional behavior within a work culture. The academic portion of the internship is similar to an independent study with scheduled face to face meeting times scheduled individually to discuss progress with assignments.

CBE 4992 Advanced Internship I (1.00-3.00 credit hours)

The Advanced Academic Internship is an opportunity to apply upper division academic learning in a business context. Goals of the internship are threefold: 1) to gain experience in a business setting for integrating coursework knowledge in a work context 2) to engage students in a process of refining future career direction and 3) cultivate professional behavior within a work culture. The academic portion of the internship is similar to an independent study with scheduled face to face meeting times scheduled individually to discuss progress with assignments.

CBE 4993 Advanced Internship II (1.00-3.00 credit hours)

The Advanced Academic Internship is an opportunity to apply upper division academic learning in a business context. Goals of the internship are threefold: 1) to gain experience in a business setting for integrating coursework knowledge in a work context 2) to engage students in a process of refining future career direction and 3) cultivate professional behavior within a work culture. The academic portion of the internship is similar to an independent study with scheduled face to face meeting times scheduled individually to discuss progress with assignments.

CBE 4999 Internship- General Business (0.00 credit hours)

The non-credit business internship is a work-based class that focuses on the acquisition of employability skills through a real world work environment. Students will focus on maintaining a professional demeanor in the work environment the development of a professional communication style and the acquisition of the knowledge and skills necessary when performing the internship role.

Computer Information Systems (CIS)**CIS 275 Foundations of Programming (3.00 credit hours)**

Entry-level course in which students use an object-oriented programming language called Xojo to learn basic programming concepts such as If-then-else looping strings lists arrays in a visual programming environment. Students will also be introduced to the Java programming environment.

CIS 300 Foundations of Information Systems (3.00 credit hours)

Introduces to contemporary information systems concepts. Focuses on business processes software hardware data and communication technologies and how these components can be integrated and managed to create business competitive advantage. Hand-on experience with SAP ERP software.

CIS 318 Ethics for the IT Professional (3.00 credit hours)

Focuses on ethical problems that arise in the Information Technology world. Explores the areas of IT crime privacy intellectual property software development and employer/employee issues. Introduces the codes of ethics for various IT professional associations and organizations.

CIS 325 Systems Analysis and Design (3.00 credit hours)

Studies the analysis and design of computer based information systems. Considers transformation processes and comprehensive design. Includes advanced technology emphasizing expert and knowledge-based systems. Considers human resources communications and computers in a systems framework.

Prerequisite(s): CIS 300 or equivalent.

CIS 375 Java Programming (3.00 credit hours)

Entry-level Java programming course in which students use the Java object-oriented programming language to solve real-world problems. This course builds on the skills gained by students in CIS 275 and helps to advance Java programming skills. Students will create Java programs using hands-on engaging activities.

Prerequisite(s): CIS 275.

CIS 445 Database Management (3.00 credit hours)

Introduces core concepts in data management. Students identify organizational information requirements convert conceptual data models into relational data models apply normalization techniques and utilize an Oracle relational database management system in a virtual lab environment.

Prerequisite(s): CIS 275 or CIS 300.

CIS 448 Agile Project Management (3.00 credit hours)

Provides a foundational and practical knowledge of project management principles. Identifies tools and processes for managing projects using Agile methodologies.

CIS 458 Business Process Management (3.00 credit hours)

Introduces key concepts and approaches to business process management and improvement. Examines how to identify document model assess and improve core business processes. Hands-on experience with SAP ERP software.

Prerequisite(s): CIS 325.

CIS 461 Business Analytics (3.00 credit hours)

Introduces business analytics in organizations. Explores practical methodologies strategies and best practices for performing descriptive predictive and prescriptive analytics. Students gain hands-on experience with SAP Business Analytics tools in a virtual environment.

Prerequisite(s): MT 270 or MT 274.

CIS 462 Supply Chain Management (3.00 credit hours)

Introduces students to this growing discipline through the use of case studies and simulations. Students will gain an understanding of how organizations build integrated relationships with customers and suppliers which often include information sharing joint planning and integrated information systems.

Prerequisite(s): CIS 458.

CIS 464 Enterprise Systems (3.00 credit hours)

Provides an understanding of the managerial/technical issues in planning designing and implementing enterprise systems. Demonstrates the integration of information and business processes across functional areas into a unified system. Hands-on experience with SAP ERP software.

Prerequisite(s): CIS 458 or CIS 462.

CIS 465 IS Strategy and Management (3.00 credit hours)

Explores how IT is changing and will continue to change organizations as we now know them by introducing the complex decisions facing real organizations through a number of mini cases and a cyber security simulator. These provide an opportunity to apply the models/theories/frameworks presented giving students the confidence and ability to tackle the tough issues regarding IT management and strategy and a clear understanding of their importance in delivering business value.

Prerequisite(s): BA 2900 or CIS 462 or CIS 464.

CIS 471 Visual Data Story Telling (3.00 credit hours)

Using Tableau and SAP Cloud Analytics tools students will learn how to present data in ways that help management better interpret analyze and act on it for maximum impact.

Prerequisite(s): CIS 462.

CIS 493 Senior Capstone (3.00 credit hours)

Provides the culminating experience of the major focusing on integration and application of theory. Must be completed as graded course work at Regis University.

Computer Science (CS)**CS 202 Computational Foundations (3.00 credit hours)**

An-entry level course introducing the foundational concepts of computer science as the study of algorithms and data structures with respect to their formal properties linguistic realizations hardware realizations and applications.

CS 210 Introduction to Programming (3.00 credit hours)

An entry-level course in which students practice software development using elementary selection looping method string array and object constructs implemented in a modern programming language.

CS 310 Data Structures (3.00 credit hours)

Studies structures for representing data and continued practice with software development. Uses algorithms to process these structures including linked list stack queue hash table and tree data structures along with various searching and sorting algorithms.

Prerequisite(s): CS 210.

CS 324 Algorithms and Analysis (3.00 credit hours)

Studies advanced data structures (balanced trees heaps graphs etc) and advanced algorithm analysis. Examines algorithm design techniques (greedy dynamic programming and divide-and-conquer including the Master Theorem) and algorithm complexity.

Prerequisite(s): CS 310 and MT 320 or MT 360A.

CS 336 Web and Database Applications (3.00 credit hours)

Introduces web-based multi-tiered distributed application development. Topics include using markup and scripting languages in the Presentation tier services (web and business) in the Logic tier and a relational database in the Data tier.

Prerequisite(s): CS 310.

CS 338 Mobile and Enterprise Computing (3.00 credit hours)

Introduces platform-based software development for tablets smart phones and servers. Students learn to solve contemporary software engineering problems by creating Graphical User Interface apps that communicate over a network with an Enterprise Server and Database.

Prerequisite(s): CS 310.

CS 370 Assembly Language (3.00 credit hours)

Describes the elements and techniques of assembly language programming for microprocessors used in the IBM compatible family of microcomputers. Introduces computer architectures and discusses the concepts of data representations processing instructions addressing modes macros functions and procedures and file I/O.

Prerequisite(s): CS 310.

CS 390 Principles of Programming Languages (3.00 credit hours)

Introduces the constructs upon which contemporary programming languages are based. Students investigate programs written in declarative and imperative programming languages including functional logic structured and object-based approaches. Prerequisite or co-requisite(s): MT 320.

Prerequisite(s): CS 310.

CS 431 Operating Sys Design/Analysis (3.00 credit hours)

Studies basic facilities provided in modern operating systems including processor scheduling memory management and file systems. Topics include: deadlock detection paging concurrency thread disk scheduling caching and virtual machines. BS in Cyber Security students must complete CS 310.

Prerequisite(s): CS 324 and CS 390.

CS 433 Computer Systems Security (3.00 credit hours)

Introduces the concept of security in computing. Topics include cryptography program security operating systems protection database security and network security. Students will explore current security models internal and external security threats risk analysis privacy issues and security laws and regulations.

Prerequisite(s): CS 324 and CS 390.

CS 440 Computer Organization and Architecture (3.00 credit hours)

Introduces Machine Architecture with coverage of digital logic machine level data and instruction representation ALU design and organization of the processor datapath and control. Examines performance analysis memory system hierarchy pipelining and communication. Prerequisite for Cyber Security students is CS 310.

Prerequisite(s): CS 324 and CS 390.

CS 444 Software Engineering (3.00 credit hours)

A capstone-style course examining contemporary software engineering that ensures development of well-designed reliable flexible modular and verified software systems. Topics include development lifecycle requirements UML model-based and Agile development.

Prerequisite(s): CS 336 or CS 338.

CS 445 Database Management (3.00 credit hours)

Introduces the theory of database design. Discusses techniques of database systems implementation physical file organization data integrity security techniques and management of the database environment. Explores data structures used in databases database management and data communications.

CS 450 Data Networks (3.00 credit hours)

Provides the concepts and terminology of data communications and network design. Includes transmission techniques network topologies protocols security network control and network architectures.

Prerequisite(s): CS 336 or CS 338.

CS 462 Computer Systems Performance Analysis (3.00 credit hours)

Covers mathematical models based on queuing theory stochastic processes Markov chains and mean value analysis. Discusses applications to computer systems for the purpose of optimizing performance. Includes problems and a project requiring the modeling contemporary disk technologies and system balancing techniques.

Prerequisite(s): CS 324 CS 390 and MT 360A.

CS 464 Machine Learning (3.00 credit hours)

An in-depth study of machine learning. Topics include regression classification neural networks and deep learning. Includes programming machine learning algorithms.

Prerequisite(s): CS 473.

CS 465 UNIX Operating Systems (3.00 credit hours)

Explores the architecture of the UNIX operating system. Provides hands-on experience in file management the UNIX shell using filters using and developing pipes security software development tools text processing tools and in-depth knowledge of how these aspects are incorporated into the UNIX system. Discusses how UNIX meets its design objectives its relative merits in comparison with other operating systems and interoperability issues.

Prerequisite(s): CS 310.

CS 468 Advanced UNIX (3.00 credit hours)

Expands upon knowledge of UNIX systems. Introduces systems administration tasks including software installation system configuration and managing user accounts. Studies risks faced by computer systems and UNIX security mechanisms. Explores UNIX system programming including signal and interprocess communication.

Prerequisite(s): CS 310 and CS 465.

CS 469 Distributed Systems (3.00 credit hours)

Explores theoretical foundations and fundamental design tradeoffs in distributed computing systems Topics include: distributed architectures processes and interprocess communication synchronization replication and consistency fault tolerance and security.

Prerequisite(s): CS 431.

CS 473 Introduction to Artificial Intelligence (3.00 credit hours)

Studies computer based agents that perceive and act rationally within an environment. Introduction to the technologies used to construct agents that represent knowledge search spaces reason with uncertainty perform inference and learn.

Prerequisite(s): CS 324 CS 390 and MT 472.

CS 475 Computation Theory (3.00 credit hours)

Introduces computational formalisms including Automata Lambda Calculus Turning Machines Recursive Functions and emerging theories. Explores the relation of formal languages and computation. Studies theoretical and pragmatic limits on computation including halting NP-Completeness P-Space and reducibility.

Prerequisite(s): CS 324 and CS 390.

CS 476 Introduction to Quantum Computing (3.00 credit hours)

Introduces quantum computation from a Computer Science perspective including basic Quantum Mechanics and Quantum: Circuits Algorithms Complexity and Programmin with comparisons to their Classical computing counterparts. Implications of quantum computing on society are also examined.

Prerequisite(s): CS 324 and MT 415.

CS 479 Ethical Leadership in Computer Science (3.00 credit hours)

A capstone-style course exploring the cultural social legal and ethical issues inherent in Computer Science and software development with an emphasis on the role that computer scientists play as leaders in service to others. BS in Cybersecurity students prerequisite is CS 310.

Prerequisite(s): CS 336 or CS 338.

CS 490E-W Indep. Study/computer Science: (1.00-3.00 credit hours)

Explores areas of interest. Content to be arranged. Concludes with a written report.

CS 492E-W Special Topics in Computer Science (3.00 credit hours)

Selected topics of interest in Computer Science through lecture presentation laboratory work and research projects. Content varies from term to term.

Prerequisite(s): CS 324 CS 390 and permission of department.

CS 493 Senior Capstone (3.00 credit hours)

A culminating experience requiring a major project that integrates and applies knowledge and skills acquired in earlier Computer Science courses.

Prerequisite(s): CS 444 CS 479 and eighteen credits of 400-level Computer Science courses.

CS 498E-W Internship/Computer Science (3.00 credit hours)

Involves placement of advanced computer science students in industry government or other agencies. Faculty approval supervision and evaluation of students' work required.

Cybersecurity (CSEC)**CSEC 210 Info Assurance & Cryptography Basics (3.00 credit hours)**

Introduces students to the fundamental concepts of information assurance and cyber defense covering the threats and adversaries associated with cyber defense the concepts of vulnerabilities and risks security life cycles role of IDS and IPS in securing a system data security the CIA model and basic security mechanisms.

CSEC 350 Policy, Ethics and Compliance (3.00 credit hours)

Provides an understanding of information assurance and computer security in context with the rules and guidelines which control them. The course looks at laws such as HIPAA FISMA SOX and Gramm-Leach-Bliley and discusses the ethical component associated with these outcomes.

Prerequisite(s): CSEC 210.

CSEC 380 Advanced Digital Forensics (3.00 credit hours)

Provides the ability to apply forensics techniques to investigate and analyze a particular media in context. In addition to the technical topics of hashes sparse/full imaging slack space hidden files/clusters/partitions this class will also cover the legal aspects associated with forensics analysis including acquisition and authentication of evidence verification and validation of the systems and associated laws. Focuses primarily on mobile systems (tablets smart phones GPS etc.).

Prerequisite(s): CSEC 350.

CSEC 401 Software Security and Design (3.00 credit hours)

Considers typical software vulnerabilities that can happen as a result of insecure programming practices. This course also examines software security from a design standpoint and examines secure software practices for both large-scale environments and in small-scale environments such as individual systems. Topics include design development testing integration and finally deployment of software.

Prerequisite(s): CS 210 CS 310 CSEC 210 and MT 320.

CSEC 403 Network, Concepts, Protocols and Defense (3.00 credit hours)

Provides an understanding of the components in a networking environment their roles and communication associated with the components. Students will understand techniques which can be used to protect a network from cyber threats. Topics covered in this class include the difference between IPv4 and IPv6 NAT and subnetting network analysis and troubleshooting how to implement a DNS Firewall and analyze network traffic.

Prerequisite(s): CSEC 401.

CSEC 405 Database Management Security (3.00 credit hours)

Focuses on the security of database systems and how the design of database systems can affect the security of such systems. Topics covered include how to protect confidentiality integrity and availability in a DBMS environment how inference aggregation and polyinstantiation can be used to exploit a system and how to protect your system against known vulnerabilities.

Prerequisite(s): CSEC 401.

CSEC 408 Cyber Threats and Defense (3.00 credit hours)

Examines options available to mitigate threats within a system and an understanding of threats which exist in a networking environment. This would include such topics as access and flow controls cryptography and its application in computer defense recognizing and understanding how to protect systems from malicious activity.

Prerequisite(s): CSEC 403.

CSEC 415 Computer / Network Forensics (3.00 credit hours)

Provides students with the ability to apply forensic techniques to investigate and analyze a host in a network. Examines the ability to apply forensics techniques to investigate and analyze network traffic. Specific topics include: registry analysis steganography live system investigation packet capture/analysis network intrusion detection and prevention interlacing of device and network forensics forensic imaging and analysis log file analysis.

Prerequisite(s): CSEC 403.

CSEC 430 Intrusion Detection and Respon (3.00 credit hours)

Provides students with knowledge and skills related to detecting and analyzing vulnerabilities and threats and taking steps to mitigate the associated risks. This course will cover deep packet analysis log file aggregation cross log comparison anomaly detection signature detection host based intrusion detection and analysis network based intrusion detection and analysis distributed intrusion detection and hierarchical IDS.

Prerequisite(s): CSEC 415.

CSEC 493 Senior Capstone/ Internship (3.00 credit hours)

Culminating experience of the major focusing on integration and application of theory. Must be completed as graded course work at Regis University.

Information Technology (CIT)**CIT 311 Enterprise Systems Architecture (3.00 credit hours)**

Presents design management and administration of simple to complex network topologies. Introduces Internet connectivity and protocols supporting networked applications over a distributed network and their relationship with end-users. Examines the concepts of user content applications services and infrastructure.

CIT 316 Networking Infrastructure (3.00 credit hours)

Introduces the foundations of network infrastructures and emerging network technologies. Covers OSI model in depth including TCP/IP. Investigates the standards design architecture and operation of LAN WAN and telecommunications services. Introduces basic switching and routing concepts.

CIT 330 Foundations of Cyber Security (3.00 credit hours)

Introduces the principles and practices of information security including security models internal and external security threats and attacks. Topics include cryptography network mobile host applications data access control and operational security.

Prerequisite(s): CIT 311.

CIT 331 Fundamentals of Security Management (3.00 credit hours)

Examines security management risk analysis disaster recovery business continuity planning and information security legal issues. Topics include planning for security security technologies risk mitigation vulnerability assessment and security laws and regulations.

Prerequisite(s): CIT 330.

CIT 380 Intro to Web Application Development (3.00 credit hours)

Introduces the design implementation and testing of web applications including related web app frameworks databases and interfaces. Covers frontend responsive UI design hybrid app design app tools backend services design integration and redeployment.

Prerequisite(s): CIS 375.

CIT 411 Human Computer Interaction (3.00 credit hours)

Investigates and analyzes user-centered methodologies in the development evaluation and deployment of IT applications and systems. Emphasizes HCI areas such as user and task analysis human factors ergonomics accessibility standards and cognitive psychology.

Prerequisite(s): CIS 325.

CIT 435 Cyber Forensics (3.00 credit hours)

Introduces the principles and practices of digital forensics including digital investigations data and file recovery methods and digital forensics analysis and invalidation. Topics include data acquisition digital forensics tools virtual machines network mobile device and cloud forensics.

Prerequisite(s): CIT 331.

CIT 444 Wireless Networks (3.00 credit hours)

Examines wireless technologies used in infrared spread spectrum microwave and cellular systems. Discuss integration of WLANs satellite communications and cellular systems in an organization. Includes protocols security practices and applications used on wireless technologies.

Prerequisite(s): CIT 316.

CIT 452 Systems Administration (3.00 credit hours)

Introduces operating systems concepts and system administration tasks including software installation system configuration and managing user accounts. Emphasizes server administration and management user and group management backup security resource and automation management.

Prerequisite(s): CIT 316 and CIT 380 (for Cyber Security undergrads only. CS 310).

CIT 462 Ethical Hacking and Defense (3.00 credit hours)

Explores security threats and vulnerabilities that face computer network engineers by using penetration testing techniques. Examines requirements for a formal hacking lab and discusses ethical boundaries between white and black hat hacking. Credit may be awarded for CIT 462 or CN 462 not both.

Prerequisite(s): IT 331.

CIT 463 Cyber Crime and IT Compliance (3.00 credit hours)

Examines societal ethical and legal issues involved in information assurance as implemented through ethics and laws. Analysis of compliance themes that affect IT environment for financial publicly traded and healthcare organizations as well as industry regulations

Prerequisite(s): CIT 331.

CIT 466 IT Audit and Risk Management (3.00 credit hours)

Investigates the principles of information systems audit IT audit tools audit procedures to help in detection and prevention of security breaches and fraud. Examines the solutions that can be used to prevent information loss or costly business interruptions the role of information technology governance in business organizations reporting requirements and industry standards for IT Governance.

Prerequisite(s): CIT 331.

CIT 478 Management of Enterprise Networks (3.00 credit hours)

Explores datacenter support and management requiring the integration of servers applications and data storage with business operations and goals. Examines the impact of ethical governance and legal concerns on business operations.

Prerequisite(s): CIT 452.

CIT 480 Web Software Development (3.00 credit hours)

Introduces web page development using HTML/HTML5 CSS/CSS3 and JavaScript. Students learn to design and develop a website structure and style its content and navigate/update the document object model (DOM).

CIT 481 Web Frameworks (3.00 credit hours)

Covers the most popular JavaScript frameworks including jQuery Angular JS and Google Maps. Students learn how to use the frameworks to do DOM manipulation AJAX single page applications and the display/manipulation of maps.

Prerequisite(s): CIT 480.

CIT 482 Web Visualization Frameworks (3.00 credit hours)

Covers popular visualization frameworks that facilitate the presentation of pertinent information to the end user. Student learn various techniques that transform raw data into information that is relevant to end users.

Prerequisite(s): CIT 481.

CIT 483 Web Mobile Frameworks (3.00 credit hours)

Covers popular mobile frameworks that enable the creation of mobile web page apps using HTML CSS and JavaScript. Students learn how to build rich interactive web applications that run on virtually all devices (e.g. Android IOS Windows).

Prerequisite(s): CIT 480.

CIT 484 Software Engrng Research & Devlpmnt (4.00 credit hours)

Introduction to research and development in Software Engineering. Student will propose prepare implement and complete a case-study research project which focuses on a specific architecture design pattern UI/UX and security framework.

Prerequisite(s): CIT 483.

CIT 493 Senior Capstone (3.00 credit hours)

Provides the culminating experience of the major focusing on integration and application of theory. Must be completed as graded course work at Regis University.

Prerequisite(s): CIT 478 and Senior standing and successful completion of eighteen (18) upper division IT semester hours.

Data Science (DS)

DS 212 Python Programming (3.00 credit hours)

Introduces computer programming using the Python programming language. It presents structured algorithmic programming by means of concepts like variables conditional code execution looping and functions. The course also covers Python libraries that extend the capabilities of Python for doing data science and other activities.

DS 400 Introduction to Data Science (3.00 credit hours)

Introduces foundational topics of data science including programming data curation statistics machine learning and data communication. Examines the end to end life cycle of data science projects. Topical discussions of methods and applications pertaining to health informatics business intelligence and natural and social sciences and the ethical considerations of data science.

Prerequisite(s): MT 270 and DS 212.

DS 410 Computational Statistics (3.00 credit hours)

Introduces and examines the applications of data science library packages for descriptive and probabilistic statistics including regression and correlation of univariate and multivariate analysis. Course content will include examples applied to health informatics business intelligence and natural and social sciences. Encompasses discussions of ethical communication and presentation of statistics.

Prerequisite(s): DS 400.

DS 420 Data Curation (3.00 credit hours)

Introduces storage and retrieval of data from data structures. Examines the collection of data from variety of sources merging data from multiple sources and cleaning data for analysis. Students will learn how to apply exploratory data analysis for important feature determination.

Prerequisite(s): DS 400.

DS 430 Visualization (3.00 credit hours)

Examines the effective communication of information through the creation and visual representation data using a variety of applications and programming languages. Encompasses design theory visual cognition and perception and ethical considerations of figures.

Prerequisite(s): DS 400.

Economics (EC)

EC 200 Economics for Responsible Citizenship (3.00 credit hours)

Explores the interdisciplinary nature and historical evolution of economic theory and policy with particular emphasis on its impact on attitudes politics society and the environment. Highlights the pressing problems of inequality and climate change as they relate to economics. Provides students with basic quantitative economic and financial literacy.

EC 200C Economics for Responsible Citizenship (3.00 credit hours)

Explores the interdisciplinary nature and historical evolution of economic theory and policy with particular emphasis on its impact on attitudes politics society and the environment. Highlights the pressing problems of inequality and climate change as they relate to economics. Provides students with basic quantitative economic and financial literacy.

Note(s): Enrollment is limited to students who took paired RCC 200 in the fall.

EC 200H Honors- Econ for Responsible Citizenship (3.00 credit hours)

Explores the interdisciplinary nature and historical evolution of economic theory and policy with particular emphasis on its impact on attitudes politics society and the environment. Highlights the pressing problems of inequality and climate change as they relate to economics. Provides students with basic quantitative economic and financial literacy.

EC 3200 Principles of Macroeconomics (3.00 credit hours)

Introduces macroeconomics emphasizing the forces that determine the level of national product and national income and the fiscal and monetary policies that are designed to influence their level. Explores the areas of public finance money and the banking system economic growth and international trade.

EC 3200C Principles of Macroeconomics (3.00 credit hours)

Introduces macroeconomics emphasizing the forces that determine the level of national product and national income and the fiscal and monetary policies that are designed to influence their level. Explores the areas of public finance money and the banking system economic growth and international trade.

EC 3300 Principles of Microeconomics (3.00 credit hours)

Analyzes economic models of consumer and producer decision-making demand supply equilibrium in markets. Examines the causes of different market structures and their influence on market conduct and performance. Explores microeconomic issues related to market outcomes such as market power market failure efficiency equity and international economic interdependence.

EC 3300C Principles of Microeconomics (3.00 credit hours)

Analyzes economic models of consumer and producer decision-making demand supply equilibrium in markets. Examines the causes of different market structures and their influence on market conduct and performance. Explores microeconomic issues related to market outcomes such as market power market failure efficiency equity and international economic interdependence.

Note(s): Course carries a communication focus in the course assignments and enrollment is limited to students who took the paired/linked RCC 200 course in the fall.

EC 4103 Sustainable Development and Change (3.00 credit hours)

Introduces global poverty inequality and other global ills and invites students to explore ways to be involved in sustainable development and change efforts. About 1 out of every 3 people (2 billion of the world's population) lived in extreme poverty as of the end of 2019. Fast-changing climate conditions and the COVID-19 pandemic continue to condemn more people into further poverty. Additionally growth in income and wealth inequality are worrying. There is however enthusiasm for the possibilities of addressing many of the global needs through concerted human development efforts like the Sustainable Development Goals (SDGs).

Note(s): Junior class standing required.

EC 4140 Fundamentals of Investments (3.00 credit hours)

Studies the relationship between risk and return in the management of investment portfolios including the analysis of stocks bonds and other securities.

Prerequisite(s): AC 3200 AC 3210 and BA 4100.

EC 4149 Business Cycles and Financial Crises (3.00 credit hours)

Examines theoretical explanations of economic growth in advanced industrial economic systems and the causes of financial crises and of other deviations from the growth trend. Cross-listing: BA 4149.

Prerequisite(s): EC 3200 and EC 3300.

EC 4158 Money and Banking (3.00 credit hours)

Studies the nature and functions of money and credit including an understanding of the variety and growth of banking functions and the influence on banks of Federal Reserve operations. Examines the relationships among money interest rates business investment needs government borrowing and the gross national product.

Prerequisite(s): EC 3200 EC 3300 and BA 4100 or EC 4158.

EC 4163 International Finance (3.00 credit hours)

Presents the economic issues of international finance including the history in International Finance fixed and flexible exchange rates and international agencies that help stabilize international financial markets. Examines issues faced by financial managers of multinational firms.
Prerequisite(s): EC 3200 EC 3300 BA 4100 and MT 330 or MT 360A.

EC 4200 Comparative Economic Systems (3.00 credit hours)

Compares and contrasts capitalism socialism and communism. Surveys the economic systems of various countries to discover strengths weaknesses and departures from the theoretical ideal. Includes the historical backgrounds of these various economic systems.

Health Information Management (HIM)**HIM 313 Intro to Health Info Mgmt (3.00 credit hours)**

Emphasizes form content and regulations impacting the health care record in the acute care setting. Explores legal reimbursement and computerized aspects of the health record as well as the functions and responsibilities of Health Information Services. Examines various health care delivery systems and health care practitioners.

HIM 320 Human Disease and Pharmacology (3.00 credit hours)

Provides an overview of disease processes symptoms and etiology organized by body systems. Includes basic diagnostic tests treatments and medications for common diseases along with basic pharmacologic principles.

HIM 350 Disease Classification Systems (3.00 credit hours)

Introduces the development and use of various disease classification and reimbursement systems. Emphasizes ICD coding and the diagnosis related groups (DRG) systems for inpatient reimbursement. Explores coding management issues. Discusses medications in conjunction with each body system and disease.

HIM 385 Directed Practice (3.00 credit hours)

Virtual clinical/internship experience allowing hands-on practice with various clinical and health care applications such as abstracting software Release of Information and coding software and other administrative systems used by health information professionals. Includes planning for the management practicum and identifying a volunteer/service activity to be completed at the end of HIM 485.

HIM 415 HIM: Data Systems and Structures (3.00 credit hours)

Introduces health care data sets data sources and the roles and functions of Health Information Management in all health care delivery systems: acute care home health long term care hospice ambulatory care and consulting practices. Focuses on the electronic health record and data standards such as SGML XML and HL7.

HIM 430 Health Law- Informatics/ Info Management (3.00 credit hours)

Examines legal concepts in informatics and health information management settings for compliance with laws standards and regulations protecting the use privacy security and confidentiality of health information across various enterprises. Managing access and disclosure of health information and protected health information as well as e-health information. Graduate level includes completion of a project focused on role of Risk Management and Quality Improvement programs in health care organization in responding to and preventing adverse events.

HIM 440 Healthcare Data Analytics (3.00 credit hours)

Examines current and emerging practices in the application of data analytics. Topics include clinical financial operations quality analytics and trends in practices customer expectations and regulations that impact analytics. It will also address ethical issues in gathering analyzing and reporting healthcare data. Including roles and applications of descriptive retrospective and prescriptive analytics in various settings through the use of case studies practice tools and techniques to analyze given data sets for specific outcomes.

Prerequisite(s): MT 270 or MT 274.

HIM 445 Management of E-HIM & Info Governance (3.00 credit hours)

The focus of this course is on the advanced concepts of managing digital clinical information and other electronic storage of information in healthcare facilities. Topics include: Identity management health information exchange and data sharing current trends in eHIM eDiscovery the personal health record and patient portals. The course will also cover components and strategies of Information Governance including; interoperability of data compliance data dictionary standards and factors that influence data integrity. Graduate level includes development of an eDiscovery response plan and information Governance assessment tool.

HIM 450 Health Care Informatics & Info Systems (3.00 credit hours)

Introduces foundational knowledge and skills to participate in the design selection implementation and use of clinical and administrative information systems. Familiarizes the student with new and emerging technologies in the health care field and includes concepts and principles of health care informatics in the health professions and health care delivery systems.

HIM 451 Reimbursement Mgt in Health Care Settings (3.00 credit hours)

Reviews the use of coding and classification systems and explores their use in the health care reimbursement system. Examines DRG and coding audits financial reports revenue cycle processes and other management strategies critical to health care facility revenues.

HIM 460 Health Stats/Research Methods (3.00 credit hours)

An applied course in basic health statistics and research methods intended to introduce common applications in the health care setting. Topics include commonly used health statistics epidemiology quality improvement and outcomes research with an emphasis on study design data collection data analysis data interpretation and data presentation skills. Emphasis is on the ability to analyze and interpret clinical and other health data for use in research health care decision-making and policy development.

HIM 470 Organizational Management in HIM (3.00 credit hours)

Examines the organizational system and the integration of quality improvement strategies performance management information management principles and strategies finance and budget constructs human resource components strategic planning and managing for change cultural and organizational improvements. Professional ethics related to HIM is also included.

Note(s): Majors only and senior standing.

HIM 480 Admin of Hlth Info Mgmt Svcs (3.00 credit hours)

Provides the student with opportunities to apply multiple elements from other courses as related to the organization and administration of a health information services department. Emphasizes project management operation analysis and planning current topics emerging issues and career management.

Prerequisite(s): Satisfactory completion of all prior HIM course work or permission of instructor.

HIM 485 Management Practicum (3.00 credit hours)

At the end of the senior year students complete an eighty hour management practicum at an approved health care facility with emphasis on completing a major project focusing on HIM management practices EHR acquisition or system implementation or other comparable project. Additional online course components address HIM professional ethics strategic management and HIM advocacy.

Prerequisite(s): Satisfactory completion of all prior HIM coursework.

HIM 490E-W Independent Study/HIM: (1.00-3.00 credit hours)

Offers an opportunity for a focused course of study within a specific practice area of health information management under the direction of an assigned instructor. Employs a variety of learning activities as specified in the learning contract to extend core knowledge and skills in a specific practice area. Enhances research and written presentation skills through development of a comprehensive topic portfolio. Majors only.

Prerequisite(s): Senior standing.

Health Sciences**HSC 240 Fundamentals of Anatomy & Physiology (3.00 credit hours)**

Designed to provide students with an understanding of the basic concepts of human anatomy and physiology. The student will learn basic terminology and the general organization of body systems including the tissue organ and organ system levels. The specific organ systems to be studied in this course include the integumentary (skin) skeletal muscular nervous special senses endocrine cardiovascular lymphatic respiratory digestive urinary and reproductive.

HSC 310 Medical Terminology (3.00 credit hours)

Provides and intensive study in the language used in the health care field. Includes the use of prefix suffix and root words to identify analyze define and interpret medical terms. Emphasizes the correct construction pronunciation spelling and use of medical terminology especially as applied in the interpretation of medical reports.

Mathematics (MT)**MT 201 College Algebra (3.00 credit hours)**

Includes algebraic operations equations and inequalities functions and their graphs solution of polynomial exponential and logarithmic functions and linear systems of equations.

MT 204 Contemporary Mathematics (3.00 credit hours)

Presents topics in contemporary mathematics of interest to the liberal arts student. Extensive use of technology to explore logic matrices probability exponentials graph theory linear programming game theory and problem-solving skills usable by a productive citizen.

Prerequisite(s): Placement by Department.

MT 205 Contemporary Math- Liberal Arts Students (3.00 credit hours)

Presents contemporary mathematics for liberal arts students. It emphasizes the use of mathematics in the natural world using concepts such as social choice networking scheduling symmetry in art and nature fractals growth the Golden Ratio music and poetry.

Note(s): Students cannot receive credit for MT 204 and MT 205.

MT 206 Contemporary Math- Business Students (3.00 credit hours)

Presents topics in contemporary mathematics for business students. It emphasizes the use of mathematics in everyday life using real world applications such as set relationships percentages statistics probability personal finance and business applications.

Note(s): Students cannot receive credit for MT 204 and MT 206.

MT 225 Mastery of Foundational Mathematics (3.00 credit hours)

Makes connections between K-12 experiences in math and college-level abstract mathematical foundations.

MT 250 Quantitative Skills and Reasoning (3.00 credit hours)

Emphasizes processing information applying quantitative skills and reasoning and interpreting conclusions in context. Topics include numeracy quantitative reasoning problem solving and algebraic reasoning in scientific and business contexts.

MT 260 Pre-Calculus (4.00 credit hours)

Reviews the fundamental topics from Algebra and Trigonometry that are necessary for success in calculus. Topics include graphs polynomials rational functions trigonometric functions exponentials and logs. Department.

Prerequisite(s): C- or higher in MT 201 or MT 250 ACT Math 22 or greater SAT Math 540 or greater or ALEKS score of 61 or greater.

Note(s): Course fee required.

MT 270 Introduction to Statistics (3.00 credit hours)

Presents standard topics in introductory statistics for students whose major is not mathematics. Topics include descriptive statistics probability distributions estimations hypothesis testing linear regression and correlation and other topics.

MT 270C Introduction to Statistics (3.00 credit hours)

Presents standard topics in introductory statistics for students whose major is not mathematics. Topics include descriptive statistic probability distributions estimations hypothesis testing linear regression and correlation and other topics.

Note(s): This course carries a communication focus in the course assignments and enrollment is limited to students who took the paired/ linked RCC*200 course in the fall.

MT 271 Statistics Recitation (0.00-1.00 credit hours)

Supplements introductory statistics courses by providing time and space for additional help instruction and practice with the material. Corequisite(s): MT 270 MT 270C MT 272 or MT 272C.

MT 272 Statistics for the Life Sciences (3.00 credit hours)

Presents introductory statistics emphasizing applications in biology psychology neuroscience and kinesiology. Includes descriptive statistics hypothesis testing regression t-tests Chi-square and ANOVA with particular emphasis to analysis using p-scores.

MT 272C Statistics for the Life Sciences (3.00 credit hours)

Presents introductory statistics emphasizing applications in biology psychology neuroscience and kinesiology. Includes descriptive statistics hypothesis testing regression t-tests Chi-square and ANOVA with particular emphasis to analysis using p-scores.

Note(s): This course carries a communication focus in the course assignments and enrollment is limited to students who took the paired/ linked RCC*200 course in the fall.

MT 274 Intro to Stats for Health Professions (3.00 credit hours)

Provides basic understanding of statistical analysis in the health sciences. Focuses on the interpretation and analysis of health care data as it applies to organizational and clinical decision-making. Uses case studies to demonstrate measures of central tendency position and variation. Explores quantitative epidemiology concepts as applied to analysis of the health needs of a population skills needed to evaluate inference in hypothesis testing including the t-test F-test and chi-square test.

MT 320 Introduction to Discrete Mathematics (3.00 credit hours)

Introduces mathematical tools used by computer scientists with an emphasis on developing problems-solving abilities. Topics include machine logic set theory Boolean algebra mathematical induction and data structures.

Prerequisite(s): C- or higher in MT 201 or MT 260.

MT 330 Business Calculus (3.00 credit hours)

Introduces standard topics of calculus including functions and their graphs exponential and logarithmic functions differentiation and integration and presents them in the context of examples from the business world. Course fee required.

Prerequisite(s): C- or higher in MT 201 or MT 250 ACT Math 22 or greater SAT Math 540 or greater or ALEKS score of 61 or higher.

MT 360A Calculus I (4.00 credit hours)

Treats standard topics of single variable calculus including limits continuity derivatives applications of derivatives and elements of integration.

Prerequisite(s): At least one of: C- or higher in MT 260 or equivalent ACT Math 26 or greater SAT Math 610 or greater or ALEKS score of 76 or greater.

Note(s): Course fee required.

MT 360B Calculus II (4.00 credit hours)

Continues treatment of single variable calculus including definite and indefinite integrals applications of integrals transcendental functions techniques of integration and infinite series.

Prerequisite(s): C- or higher in MT 360A or placement by the department.

MT 360C Calculus III (4.00 credit hours)

Presents topics of multivariable calculus including calculus of vector functions multivariable functions partial derivatives multiple integrals applications and other topics as time permits.

Prerequisite(s): C- or higher in MT 360B or placement by the department.

MT 401 Logic and Proof (3.00 credit hours)

Provides an introduction to mathematical reasoning and proof writing. Topics include set theory logic and methods of proof.

Note(s): MT360B must be completed with a grade of C- or higher.

MT 405 Numerical and Computational Methods (3.00 credit hours)

Uses Python or MATLAB in solving linear and nonlinear equations approximation theory numerical integration and differentiation numerical solutions of differential equations and linear programming.

Note(s): C- or higher in MT 360B MT 415 and MT 463 or permission of instructor.

MT 415 Linear Algebra (3.00 credit hours)

Studies vector spaces linear transformations matrices determinants systems of equations eigenvalues and characteristic matrices.

Note(s): C- or higher in MT 360A or placement by department.

MT 423A Abstract Algebra I (3.00 credit hours)

Provides an axiomatic treatment of basic concepts of groups rings and fields.

Prerequisite(s): C- or higher in MT 401 and MT 415 or permission of instructor.

MT 426 History and Foundations of Mathematics (3.00 credit hours)

Discusses topics in ancient methods of numeration and calculation the history and solution of classical problems including topics from number theory algebra geometry and calculus. Includes contributions of the great mathematicians under-represented groups (including minorities and women) and diverse cultures. Investigates the role of mathematics in civilization.

Note(s): C- or higher required in MT 360B.

MT 435 Applied Combinatorics (3.00 credit hours)

Studies methods for counting arrangements and selections generating functions recurrence relations the inclusion-exclusion principle elements of graph theory covering circuits trees and searching and network algorithms. C- or higher in MT 360B.

Note(s): Required for students preparing to teach secondary mathematics.

MT 437 Cryptography (3.00 credit hours)

Includes a brief history of code making and code breaking modern private key systems (AES) and public key cryptosystems.

Note(s): C- or higher in MT 415.

MT 441 Modern Geometry (3.00 credit hours)

Studies Euclidean and non-Euclidean geometries such as: Mobius hyperbolic elliptic absolute and projective geometries. Geometries are studied using analytic methods. Required for students preparing to teach secondary mathematics.

Note(s): C- or higher in MT 360B.

MT 445 Advanced Linear Algebra (3.00 credit hours)

Continues the study of matrices determinants systems of equations eigenvalues characteristics matrices and sparse matrices.

Note(s): C- or higher in MT 415.

MT 454 Real Analysis (3.00 credit hours)

Provides rigorous treatment of real numbers functions sets and limits- the foundations underlying Calculus. Studies sequences and series of numbers and functions basis topology continuity and differentiability of functions and integration.

Note(s): C- or higher in MT 401.

MT 463 Differential Equations (3.00 credit hours)

Studies solutions of first and second order differential equations applications linear differential equations series solutions laplace transforms numerical solutions and systems of linear differential equations with constant coefficients. Required for students preparing to teach secondary mathematics.

Note(s): C- or higher in MT 360B.

MT 470A Mathematical Statistics I (3.00 credit hours)

Introduces probability; distribution functions and moment generating functions correlation and regression; development and applications of binomial normal student's T chi square and F distributions.

Note(s): C- or higher in MT 360B.

MT 470B Mathematical Statistics II (3.00 credit hours)

A continuation of MT 470A.

Note(s): C- or higher in MT 470A or MT 472.

MT 472 Probability and Statistics (3.00 credit hours)

Introduces probability and statistics and the underlying mathematical theory discrete and continuous distributions sampling distributions estimation hypothesis testing and regression.

Note(s): C- or higher in MT 360B.

MT 475 Statistical Computing (3.00 credit hours)

Introduces Python computer programming concepts principles and practices. Continues with the use of Python to compute descriptive statistics and visualize data. Introduces computations for hypothesis testing sampling conditional probability and other statistical quantities. Concludes with machine learning for clustering and classification.

MT 480 Complex Analysis (3.00 credit hours)

Studies calculus of complex variables including: algebra of complex numbers analytic functions complex integration series for complex functions and residue theory. Focuses on applications in mathematics and science. Examines the difference between real and complex variables.

Note(s): C- or higher in MT 360B.

MT 490E-W Independent Study/Math: (1.00-3.00 credit hours)

Provides an opportunity for independent exploration of areas of interest.

MT 495E-W Advanced Topics in Mathematics (1.00-3.00 credit hours)

Provides an intensive examination of the theory and methods of a particular mathematical area of study.

MT 498E-W Internship/Mathematics (3.00 credit hours)

Gain experience working with professional mathematicians and scientists in a technical field. Students will be able to relate the mathematics which they are learning in the classroom to the work they expect to be doing after graduation.

Special Topics – Anderson (AND)**Graduate****Accounting (AC)****AC 6020 Interpreting Accounting Information (3.00 credit hours)**

Examines adjustment of financial statements used for analysis after assessing accounting policies used and other limitations of accounting model. Analysis of firm's financial ratios free cash flow earnings quality sustainable earnings creditworthiness and fundamental (intrinsic) equity value. Prerequisite(s) MSA Students: Program Foundation courses. Prerequisite(s) MBA Students: FIN 6000 or MGT 6000.

AC 6030 Financial Reporting Policy and Practice (3.00 credit hours)

Examines objectives recognition and measurement concepts and definitions of financial statement elements in the FASB's Conceptual Framework; accounting standards and guidance for the preparation of financial statements. An in-depth study of financial statement preparation and disclosure in accordance with standards.

AC 6040 Financial Communication (3.00 credit hours)

Examines the tools to approach a variety of audiences and clearly articulate complex information. Students will use written spoken and presentation formats to practice and improve communication skills.

AC 6050 Advanced Auditing (3.00 credit hours)

Examines cases of failed audits to assess audit risk; identify relevant assertions inherent risks and control risks; formulate audit objectives; and evaluate appropriateness of audit evidence. Examines earnings management incentives and devices; and threats to auditor's independence.

AC 6070 Accounting Non-Profit & Govt Orgs (3.00 credit hours)

Examines accounting for not-for-profit organizations and governments. Emphasizes the use of accounting information to help identify and solve problems encountered in the management of these organizations.

AC 6080 International Accounting (3.00 credit hours)

Examines International Financial Reporting Standards (IFRS) and convergence issues between US GAAP and IFRS. Reviews Accounting Standards (US GAAP) and other regulatory guidance for foreign exchange taxation transfer pricing and other reporting items.

AC 6090 Case Studies in Management Accounting (3.00 credit hours)

Develops students' management accounting techniques and skills needed to make ethical profit-maximizing decisions. Emphasizes data selection analysis decision making and evaluation of results in complex realistic situations.

AC 6100 Controllership (3.00 credit hours)

Examines the function role and responsibilities of the chief accounting officer of a business organization. Considers both financial and nonfinancial aspects of the controllership function.

Prerequisite(s): Program Foundation courses.

AC 6110 Tax Influence on Bus Decision-Making (3.00 credit hours)

Studies the structure of the tax code principles underlying it and impact on business transactions. Emphasizes tax planning.

Prerequisite(s): Program Foundation courses.

AC 6140 IT Auditing (3.00 credit hours)

Combines accounting regulation and IT security practices to educate students to protect organizational assets through establishment of auditing best practices current governmental reporting standards Sarbanes-Oxley requirements and secure management techniques.

Prerequisite(s): Program Foundation courses.

AC 6170 Accounting Information Systems (3.00 credit hours)

Identifies and defines the manual and automated systems necessary to provide accounting information. Studies and compares systems to prepare financial accounting cost accounting and tax documents. Develops efficient controlled systems that provide both required and management information.

AC 6175 Current Topics in Accounting Technology (3.00 credit hours)

Explores the growing use of technology and its impact on the accounting profession. Introduces students to the current and emerging technological changes and opportunities occurring in the accounting profession.

AC 6190 Forensic and Fraud Audit (3.00 credit hours)

Provides an opportunity to study contemporary financial statement fraud cases using a five-part fraud taxonomy: fraud perpetration fraud detection fraud investigation fraud prosecution and fraud prevention and the accountant's role.

AC 6230 Issues in Accounting Ethics (3.00 credit hours)

Explores issues in accounting ethics including how to deal with ethical dilemmas codes of ethical conduct for accountants cultural issues in companies that lead to ethical collapse US regulations for accountant's ethical conduct the importance of auditor independence and how to evaluate ethics cases.

Prerequisite(s): Program Foundation courses.

AC 6880E-W Seminar in Accounting (3.00 credit hours)

Seminar course exploring current issues in Accounting.

AC 6910 Accounting Ethics (3.00 credit hours)

Provides the knowledge insight and analytical tools necessary to make ethical decisions in accounting. Explores the ethical standards and challenges in tax accounting corporate accounting and auditing.

AC 6992 Advanced Accounting Internship I (3.00 credit hours)

The Advanced Accounting Internship is an opportunity to apply graduate academic learning in an accounting business context. Goals of the internship are threefold: 1) to gain real life experience in a business setting to integrate coursework knowledge in a work context requiring higher level thinking in a select career path 2) to engage students in a process of discerning what career direction to pursue upon graduation and 3) cultivate professional behavior within a work culture. The academic portion of the internship requires face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

AC 6993 Advanced Accounting Internship II (3.00 credit hours)

The Advanced Accounting Internship is an opportunity to apply graduate academic learning in an accounting business context. Goals of the internship are threefold: 1) to gain real life experience in a business setting to integrate coursework knowledge in a work context requiring higher level thinking in a select career path 2) to engage students in a process of discerning what career direction to pursue upon graduation and 3) cultivate professional behavior within a work culture. The academic portion of the internship requires face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

Business - General (CBE Core)**CBE 6020 Leading in a New Era (3.00 credit hours)**

Explores and examines the concept of shared leadership in organizations and how this paradigm impacts organization purpose mission vision culture and ethics. Explores concepts related to leading in a socially responsible manner.

CBE 6030 Business Intelligence & Analytics (3.00 credit hours)

Students gain insight into business intelligence and knowledge management systems. Students learn to utilize applicable tools including BI databases and analytics to examine complicated business problems and to select appropriate management decision models. Existing business databases are reviewed and recommendations for changes are made within this course.

CBE 6240 Entrepreneurial Innovation (3.00 credit hours)

Provides an understanding of entrepreneurship. Delivers practice in developing business concepts conducting a feasibility study evaluating potential customers and creating business actions toward building a business plan and business model for pitching business ideas to financial institutions and venture capitalists.

CBE 6880E-W Seminar in Current Business Topics (3.00 credit hours)

Under the supervision of the faculty facilitator offers the student the opportunity to act as a business consultant in one or more of the functional areas of an organization.

CBE 6890 Marketplace Ethics: Culture & Practice (3.00 credit hours)

Designed to allow students to collect data relating to the culture operations and organizational dynamics of an assigned small business or non-profit organization. Students will design and write an application for the BBB Torch Award for Marketplace Trust (See Torch Award explanation at <https://www.bbb.org/denver/denverboulder-torch-awards>) sponsored by the Better Business Bureau.

CBE 6900E-W Independent Study in Business (3.00 credit hours)

Provides an opportunity for faculty directed independent research in any field or topic in business subjects not covered in scheduled course offerings.

Prerequisite(s): Approval of degree chair.

Note(s): Offered as special study course only.

CBE 6990 Intermediate Internship I (1.00-3.00 credit hours)

The Intermediate Academic Internship is an opportunity to apply graduate academic learning in an organizational context. Goals of the internship are threefold: 1) to gain experience in a business setting by integrating coursework knowledge in a work context in an applied setting 2) to engage students in a process of refining their career direction to pursue upon graduation and 3) cultivate professional behavior within a work culture. The academic portion of the internship is similar to an independent study with face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

CBE 6991 Intermediate Internship II (1.00-3.00 credit hours)

The Intermediate Academic Internship is an opportunity to apply graduate academic learning in an organizational context. Goals of the internship are threefold: 1) to gain experience in a business setting by integrating coursework knowledge in a work context in an applied setting 2) to engage students in a process of refining their career direction to pursue upon graduation and 3) cultivate professional behavior within a work culture. The academic portion of the internship is similar to an independent study with face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

CBE 6992 Advanced Internship I (1.00-3.00 credit hours)

The Advanced Academic Internship is an opportunity to apply graduate academic learning in a focused context for students who have experience within the selected industry. Goals of the internship are threefold: 1) to gain experience in a chosen business setting by integrating coursework knowledge in a work context requiring analysis or synthesis in an applied setting 2) to engage students in a process of refining their career direction to pursue upon graduation and 3) cultivate professional behavior within a work culture. The academic portion of the internship is similar to an independent study with face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

CBE 6993 Advanced Internship II (1.00-3.00 credit hours)

The Advanced Academic Internship is an opportunity to apply graduate academic learning in a focused context for students who have experience within the selected industry. Goals of the internship are threefold: 1) to gain experience in a chosen business setting by integrating coursework knowledge in a work context requiring analysis or synthesis in an applied setting 2) to engage students in a process of refining their career direction to pursue upon graduation and 3) cultivate professional behavior within a work culture. The academic portion of the internship is similar to an independent study with face to face meeting times to be scheduled individually at the first meeting to discuss progress with assignments.

CBE 6999 Internship - General Business (0.00 credit hours)

The non-credit business internship is a work-based class that focuses on the acquisition of employability skills through a real world work environment. Students will focus on maintaining a professional demeanor in the work environment the development of a professional communication style and the acquisition of the knowledge and skills necessary when performing the internship role.

Economics (EC)

EC 6000 Managerial Economics (3.00 credit hours)

This course applies quantitative and qualitative economic principles to business analysis and business decision-making. Emphasis is placed on using the student's experiences as the context for applying economic principles. Analysis of demand and supply drivers cost behavior strategy based in market structure use of market research to estimate elasticity determination of the impact of macroeconomic policy on an enterprise's decisions and the role of Jesuit values in management.

Finance (FIN)

FIN 6020 Financial Decision Making (3.00 credit hours)

Examines the use of financial theories and techniques in making financial decisions under conditions of uncertainty. Emphasizes the critical evaluation of concepts to assess their usefulness in practical business situations. Uses computer applications to solve practical problems.

Prerequisite(s): FIN 6000 or MGT 6001.

FIN 6025 Financial Analysis & Decision Making (3.00 credit hours)

Prepares students to assess the financial viability of business projects and make financial decisions regarding the conduct of business.

Prerequisite(s): MGT 6000.

Note(s): MBA students only.

FIN 6030 Investments & Portfolio Management (3.00 credit hours)

Provides an understanding of the kinds of analysis and techniques used by individual investors and professional money managers to decide on investment objectives and select possible investment alternatives.

Prerequisite(s): FIN 6020 or FIN 6025.

FIN 6040 Financial Institutions Management (3.00 credit hours)

Provides a framework for understanding financial institutions and markets and the effects of government policy on financial institutions interest rates and levels of economic activity.

Prerequisite(s): FIN 6020 or FIN 6025.

FIN 6050 International Financial Management (3.00 credit hours)

Introduces financial management issues confronting multinational firms. Includes foreign exchange risk management positioning of funds and cash management and capital budgeting in the international setting.

Prerequisite(s): FIN 6020 or FIN 6025.

FIN 6125 Financial Planning & Capital Allocation (3.00 credit hours)

Prepares students to use various modeling and forecasting tools to value a business assess business opportunities and conduct forecasting to inform business decisions and capital allocation.

Prerequisite(s): MGT 6000 and MGT 6001.

Health Informatics (MSHI)

MSHI 600 Information Systems Concepts (3.00 credit hours)

Introduces information systems concepts architectures and technologies to health care professionals. Emphasizes information systems resources needed to meet organizational mission and objectives. Focuses on information systems from business viewpoint including processes value proposition and different types of information systems.

MSHI 625 Workflow Change Mgmt/Adoption Hlth IT (3.00 credit hours)

Examines human behavior in organizations focusing on the analysis of data and workflow diagrams SSC methodology (Start-Stop-Continue Design Decisions) developing an impact analysis training requirements process assessment at the micro and macro level affected by the new technology and introduces change management theories necessary to parallel system implementation. User workflows and processes are used as a basis for analysis.

MSHI 635 Design/Selection of IT Syst- Hlth Care (3.00 credit hours)

Introduces planning acquisition and implementation of systems which include migration paths functional requirements costs benefits realization and a critical analysis of the system proposed in addition to the technological infrastructure needed to support facility-wide systems. Activities include evaluating RFP's and RFI's and designing communication and clinical documentation guidelines. Graduate level includes writing an RFI or RFP and development of system evaluation criteria.

MSHI 645 Mgmt of E-Him/ Info Governance (3.00 credit hours)

The focus of this course is on the advanced concepts of managing digital clinical information and other electronic storage of information in healthcare facilities. Topics include: Identity management health information exchange and data sharing current trends in eHIM eDiscovery the personal health record and patient portals. The course will also cover components and strategies of Information Governance including; interoperability of data compliance data dictionary standards and factors that influence data integrity. Graduate level includes development of an eDiscovery response plan and information Governance assessment tool.

MSHI 650 Health Care Informatics & Info Systems (3.00 credit hours)

Introduces foundational knowledge and skills to participate in the design selection implementation and use of clinical and administrative information systems. Familiarizes the student with new and emerging technologies in the health care field and includes concepts and principles of health care informatics in the health professions and health care delivery systems.

MSHI 675 Health Care Performance Evaluation (3.00 credit hours)

Discusses rigorous evaluation tools and methods to assess clinical quality and clinical systems performance and create data driven actions that set the course for patient-centered care delivery.

MSHI 678 Nursing and Clinical Informatics (3.00 credit hours)

Focuses on the intersections of health information systems technologies and patient care. The course covers health informatics domain areas applicable to nursing workflows and it discusses health care technologies electronic health records systems clinical decision support and digital health care technologies supporting patient care.

MSHI 680 Healthcare Informatics Capstone (3.00 credit hours)

A capstone seminar including current theories of leadership and management including Ignatian leadership health care policy integration of technology into delivery settings data analytics stakeholder relations regulatory initiatives health care workforce challenges trends in IT adoption and completion of a research based project with a service component.

MSHI 692 Health Informatics Practicum I (3.00 credit hours)

Provides a hands-on Health Informatics lab experience that covers all phases of a typical health informatics project-clinical need discovery existing system and workflow evaluation system and workflow redesign implementation evaluation and communicating results. Concludes with a mock presentation to clinical stakeholders and system leadership.

Prerequisite(s): MSHI 600 MSHI 625 MSHI 635 MSHI 650 MSHI 675 and MSCC 697.

MSHI 696 Health Informatics Practicum II (3.00 credit hours)

Continues a hands-on Health Informatics lab experience that covers all phases of a typical health informatics project - clinical need discovery existing system and workflow evaluation system and workflow redesign implementation evaluation and communicating results. Concludes with a mock presentation to clinical stakeholders and system leadership.

Prerequisite(s): MSHI 692.

Human Resources (HR)**HR 6340 HR Data Analytics, Metrics & Info Systems (3.00 credit hours)**

Introduces the student to the field of human resource data analytics metrics and information systems. A central focus is the use of data to support managerial decision making and to improve the quality and cost efficiency of HR activities. The use of metrics to evaluate HR activities will be discussed. This course will introduce students to HRIS (Human Resource Information Systems) including an examination of the election development and use of HRIS systems.

HR 6350 Strategic Human Resource Management (3.00 credit hours)

Identifies the critical importance of human resources (HR). Examines how HR professional and organizational leaders can maximize human capital and potential to achieve individual team and strategic organizational goals. Delves into how professionals align HR efforts to the overall organization strategic plan to improve organizational performance. Examines the importance of creating a culture that increases employee engagement.

HR 6360 Employment Law & Compliance (3.00 credit hours)

Identifies the federal and state laws and regulations that affect the employment relationship. Focuses on developing programs that help the organization meet its workforce needs in support of business requirements while preventing lawsuits from employees and federal agencies. Topics include Discrimination Law Wage and Hour Law Labor Law Benefits Law and other federal laws and regulations.

HR 6370 Strategies in Compensation & Benefits (3.00 credit hours)

Analyzes the theories concepts and practices related to managing strategic compensation and benefits programs. Focuses on the role of human resources in managing competitive rewards and pay plans. Specific topics include compensation administration job evaluation and pay structures base and incentive pay executive compensation and employee benefits plans including required voluntary and retirement options.

HR 6380 Talent and Performance Management (3.00 credit hours)

Identifies a framework for acquiring and maintaining diverse and talented employees in alignment with business requirements of the organization. Focuses on the recruitment selection and development systems that are part of the human resources function. Discusses approaches and practices to manage employee performance. Explores workforce diversity and its impact on talent management in the organization. Topics include recruitment selection and orienting new employees; training and development; performance management and workforce diversity.

HR 6390 Employee Relations and Workplace Safety (3.00 credit hours)

Identifies processes used to maintain effective relationships between employees and management as well as managing employee discipline to meet the requirements of the organization. Focuses on the role of human resources in the mediation and negotiation of labor/employee relations matters; settlement of employee disputes and grievances and identifying practices and processes to maintain a safe workplace. Topics include collective bargaining negotiations alternative dispute resolution progressive discipline workplace investigations and workplace safety.

Leadership (LDR)**LDR 6210 Leading Change & Innovation (3.00 credit hours)**

Enables learners to understand that the need for change is both predictable and unpredictable and can include down-sizing and massive growth spurts that challenge organizational resources. Uses actual workplace situations to diagnose when innovation within organizations is catalyzing change and when innovation provides a solution for change.

LDR 6240 Organizational Development (3.00 credit hours)

Management of individual and team behavior in complex work organizations with emphasis on models of individual performance and effectiveness work-related stress communications and conflict. An introduction to models of organizational change and development including current practice and techniques in addition to an examination of management of individual interpersonal and intergroup relations.

LDR 6250 Transformational Leadership (3.00 credit hours)

Explores the subject of transformational change and the implications for us as individual leaders for our organizational cultures as well as structures. Course combines intellectual rigor with personal challenge and collaboration with creative expression.

LDR 6620 Foundations of Organizational Behavior (3.00 credit hours)

Explores how people and groups in organizations behave react and interpret events. Examines individual characteristics such as learning personality and motivation. Considers group formation development and structure.

LDR 6630 Organizational Culture & Design (3.00 credit hours)

Increases the understanding of the deliberate process of configuring structures processes reward systems and people practices to create an effective organization capable of achieving the business strategy.

LDR 6710 Strategic Leadership (3.00 credit hours)

Course is designed to equip strategic leaders with the skills and competencies needed to mobilize their followers and organizations for effective current-day action in preparation for future challenges threats and opportunities.

LDR 6830 Capstone: Strategic Corp Social Resp (3.00 credit hours)

Integrates program concepts such as strategic stewardship leadership financial analysis research organizational change project management and human resources to challenge students to examine these concepts from the perspective of corporate social responsibility. When students have successfully completed 27 semester hours of the required course work in the Master of Science in Organization Leadership program they are permitted to register to LDR 6830–Capstone: Strategic Corporate Social Responsibility and Stewardship the capstone course.

Note(s): All other courses may be taken in any order.

Management (MGT)**MGT 6000 Accounting for Managers (3.00 credit hours)**

Examines accounting concepts and principles used by managers for business decision making. The course focuses on costing principles used by management that affect short- and long-term business decisions. The course studies the basic concepts and principles of accounting the preparation and presentation of financial statements limitations of these statements and the ethical dimensions of financial reporting. This course cannot be used for MS Accounting credit. Students who have taken AC 6000 may not take this course for credit.

Note(s): Majors only.

MGT 6001 Finance for Managers (3.00 credit hours)

Examines finance concepts managers use in making decisions including capital investment analysis; financing strategy; working capital management; and projected financial statements. Students who have taken FIN 6000 may not take this course for credit.

Prerequisite(s): MGT 6000 AC 6000 or permission of instructor.

Note(s): Majors only.

MGT 6010 Ethical & Legal Environment of Business (3.00 credit hours)

Examines the intersection of law and ethics. Focuses on how businesses apply legal principles terminology and ethical theories. Topics include the structure of the American legal system business forms corporations agency/employment law along with product liability and negligence.

MGT 6013 Developing Effective Organizations (3.00 credit hours)

Effective organizations converge adaptable leadership engaged workforces and aligned processes. Explores concepts from organizational behavior(OB) organizational development(OD) and human resource development(HRD) and from case studies of current organizations.

MGT 6017 Operations Management (3.00 credit hours)

Provides practical course studies in Operations Management fundamentals including quality management forecasting capacity planning geolocation inventory and production control distribution systems and planning and scheduling. Provides overviews and interrelationships of general Operations Management subject areas.

MGT 6020 Issues in International Business (3.00 credit hours)

Examines issues essential to an understanding of international business activity. Includes the nature of international business international economic institutions and issues international monetary issues government activity affecting international trade social and cultural effects on international business human resource management and other related issues.

MGT 6110 Strategy Formulation and Implementation (3.00 credit hours)

Explores strategic practices from a business perspective through learning various strategic theories and implementation methods. The course includes cases and simulations that require students to develop and implement strategic theories for making business decisions.

MGT 6150 Managing Change (3.00 credit hours)

Focuses on business industrial change and control management. Explores change in industry standards through technology innovations markets and opportunities corporate skills portfolios and products and services. Identifies methods available to plan initiate and direct change for facilitating positive benefits for future forecasts.

MGT 6170 Power and Politics (3.00 credit hours)

A practical approach to assessing power and political relationships within a business organization and how to successfully maneuver within the system to achieve positive outcomes. Examines issues of different perspectives goals and personalities of oneself and others in the areas of general management change management and strategic management.

MGT 6505 Data Preparation (3.00 credit hours)

Creating data-driven business understanding starts with determining objectives and project goals. It continues by identifying available data to accomplish the project and determining its characteristics. In this course students will learn the processes and techniques for collecting examining preparing and verifying data for subsequent analysis and modeling.

MGT 6510 Data Modeling (3.00 credit hours)

By modeling data one obtains that ability to predict behaviors described by data. In this course students will learn statistical and machine learning techniques to model data for different project goals. Students will also learn techniques to evaluate the quality of the model.

Prerequisite(s): MGT 6505.

MGT 6515 Data Delivery (3.00 credit hours)

Ideally data-driven processes are used to inform business decision making across an organization. In this course you will learn techniques to operationalize data models by deploying through dashboards and other reports that drive organizational understanding and adoption. You will also explore techniques for creating effective visualizations and the use of storytelling.

Prerequisite(s): MGT 6505 and MGT 6510.

MGT 6880E-W Seminar- Strategic Management (3.00 credit hours)**MGT 6950 MBA Capstone (3.00 credit hours)**

Designed to be the penultimate experience for students seeking an MBA degree.? Rather than exploring additional discipline focused content they will be applying their knowledge and experiences to address real-world situations and problems.? In this course students will be organized into teams which will critically analyze problems of a real-world organization and design a recommended solution.? They will then deliver an implementation plan for their recommended solution that is appropriate for the resource constraints of their client organization.? Students will be expected to draw on their prior coursework learning skill development and competencies and work in a team-based environment to apply it all in a way that adds value to their client's operation.? This is where academic knowledge and competencies are applied to add value.

Marketing (MKT)**MKT 6020 Market Opportunity Assessment (3.00 credit hours)**

Assesses customer needs and match them with the capabilities of an organization to provide a solution that benefits the customer and the company. Learners will analyze forces that influence markets assess buyer behaviors and attributes evaluate external and competitive factors and define market segments that present the best opportunity. Market measurements and ratios will quantify and validate strategic business decisions. In a final project learners will complete a full market opportunity analysis that forms the first sections of a strategic marketing plan.

MKT 6040 Global Marketing (3.00 credit hours)

Examines international business and the marketing of goods and services including government policies and regulations; cultural differences consumer preferences and buying patterns; distribution and pricing differences; exchange rates and other financial concerns.

Prerequisite(s): MKT 6220.

MKT 6050 Strategic Brand Mgmt: Power of the Brand (3.00 credit hours)

Well-positioned brands are unique and distinctive and a valuable company asset with the ability to influence earnings. Successful brands connect with customers through social and cultural conversations. In this course students will explore the importance of brand management by examining successful brand strategies for identity messaging and product portfolio development. Students also will study the importance of brand valuation and the analytical framework and tools necessary to successfully build and protect a strong and competitive global brand.

MKT 6190 Digital Marketing & Promotion (3.00 credit hours)

Addresses digital marketing strategies including: web search social and mobile marketing. Students examine unique strengths of digital marketing components helping students generate innovative approaches to engage motivate and inspire buyer brand participation.

MKT 6220 Marketing Mix Decisions (3.00 credit hours)

Applies customer analysis to integrate marketing mix decisions that align product price distribution and promotion decisions critical to market success. Learners create promotion plans to move product or service to the marketplace.

MKT 6225 Product Design and Development (3.00 credit hours)

Comprehensive review of the product development process from a marketing and operations perspective. Create product/service opportunities. Identify customer needs and conduct product concept testing. Learn about product design architecture patents and intellectual property research expenses and revenue potential for your product. Finally build your project plan and timeline for your new product or service to implement in the marketplace.

Prerequisite(s): MKT 6220.

MKT 6230 Customer Relations: Development & Mgt (3.00 credit hours)

Development of a CRM data base from a Marketing perspective. Incorporates: Comparison of marketing databases understanding of customer prospecting acquisition tools creating customer engagement developing tracking database metrics and web analytics. Creates a customer loyalty and retention plan.

MKT 6240 Marketing Strategy (3.00 credit hours)

Explores the applications of marketing strategy principles to the basic marketing product and service decisions of a project for a business service learning organization. The key emphasis of this course is the development of a comprehensive service learning marketing plan that focuses on customer want and needs and the dynamic global environment.

MKT 6300 Product Management (3.00 credit hours)

Designed to be the penultimate experience for students seeking a Master of Marketing degree. Rather than exploring additional discipline-focused content they will be applying their knowledge and experiences to address real-world situations and problems. In this course students will be organized into teams which will critically analyze problems of a real-world organization and design a recommended solution. They will then deliver an implementation plan for their recommended solution that is appropriate for the resource constraints of their client organization. Students will be expected to draw on their prior coursework learning skill development and competencies and work in a team-based environment to apply it all in a way that adds value to their client's operation. This is where academic knowledge and competencies are applied to add value.

MKT 6880E-W Seminar in Marketing (3.00 credit hours)**Computer Information Sciences (MSC)****MSC 500 Programming Through Game Development (3.00 credit hours)**

Introduces foundations of programming through development of simple games using JavaScript. In-depth investigation of programming fundamentals: pseudo-random processing mathematical expressions variable assignment statements functions and conditionals through the development of simple games.

MSC 501 Object-Oriented Programming in Java (3.00 credit hours)

Introduces foundation of programming through simple development of programs using the Java programming language. In-depth investigation of programming fundamentals: mathematical expressions variables assignment statements functions and conditionals. Introductory use of Object-Oriented language features including classes objects data hiding inheritance polymorphism and exception handling.

MSC 505 Systems Analysis and Architecture (3.00 credit hours)

Studies the analysis and design of computer-based information systems. Explores the SDLC requirements analysis modeling techniques documentation and visualization tools. Also demonstrates basic systems architecture concepts supporting design management and administration of simple network topologies and protocols.

MSC 575 Statistical Computing (3.00 credit hours)

Introduces Python computer programming concepts principles and practices. Continues with the use of Python to compute descriptive statistics and visualize data. Introduces computations for hypothesis testing sampling conditional probability and other statistical quantities. Concludes with machine learning for clustering and classification.

MSC 690E-W Independent Study (1.00-3.00 credit hours)

Provides an opportunity for faculty directed independent research in any field or topic in computer information systems not covered in scheduled course offerings.

Prerequisite(s): Approval of Degree Chair.

MSC 695E-W Technology Seminar (3.00 credit hours)

Concentrates on leading edge technology in selected areas of interest to Computer Information Technology professionals based on topics relevant to current technological conditions.

Master of Science: Core (MSCC)**MSCC 610 Information Technology Concepts (3.00 credit hours)**

Introduces information systems concepts architectures and technologies. Emphasizes information systems resources needed to meet organizational mission and objectives. Focuses on information systems from a management perspective including applying information technology developing and acquiring information systems and managing them.

MSCC 630 Enterprise Architecture (3.00 credit hours)

Introduces Enterprise Architecture (EA) - the study of EA and its role in the organization. Begins with a short survey of various frameworks used by companies to implement an EA program and progresses to examining in depth two of the most common frameworks and their subcomponents.

MSCC 693 Graduate Capstone (3.00 credit hours)

Teams to critically analyze problems of a real-world organization and design a recommended solution. Case-base scenario used to simulate real-world application of Information Technology knowledge and skills. Simulates a real-world information technology organization where students enhance skills learned in previous courses.

MSCC 697 Information Technology Research Methods (3.00 credit hours)

Through discussions students become familiar with the foundational concepts of developing a problem statement for further investigation. Presents students with the skills and knowledge to develop their capabilities to identify categorize evaluate and synthesize a body of knowledge for a specific purpose.

MSCC 698 Graduate Thesis (3.00 credit hours)

Students complete a master's thesis that is a substantial body of original scholarly work in the area of Information Technology. Students must have successfully completed all other degree requirements for this program prior to completing this course. Prior to registering for MSCC 698 students must discuss thesis topic with the course instructor who will involve the faculty advisor to determine if admission to the course warrants approval. NOTE: Course fee required.

Prerequisite(s): MSCC 630.

Note(s): Pass/No Pass grading only.

Database Technology (MSCD)**MSCD 600 Database Architecture (3.00 credit hours)**

Provides an introduction to the internal structures and architectures of database management systems. Focuses on the Oracle10g ORDBMS architecture and associated processes and physical files. Covers general concepts such as design deployment and operation. Course fee required.

Note(s): Acceptance into the MS program.

MSCD 610 Database Concepts (3.00 credit hours)

Explores data modeling database design management concepts and SQL3 in-depth. Utilizes Oracle10g ORDBMS and Oracle command line interface SQL*Plus for all lab work. Provides hands-on experience with an enterprise class object-relational database management system.

Note(s): Course fee required.

MSCD 640 Oracle Database Administration (3.00 credit hours)

Examines key tasks and functions required of a database administrator in a production environment. Students create start up and manage a database. In addition students implement data security and integrity measures and grant access privileges to individual database users.

MSCD 644 Database Performance Tuning (3.00 credit hours)

Studies database servers from the perspective of optimization and performance. Focuses on techniques for improving data access and storage emphasizing performance diagnosis and resolution using real-world scenarios.

MSCD 650 PL/SQL Programming (3.00 credit hours)

Studies advanced SQL and SQL*Plus concepts and how to write PL/SQL procedures functions and packages. Topics include extending statements to include Set Operators and building correlated sub queries and hierarchical queries. Student creates and manages PL/SQL program units and database triggers as a basis for complex application development.

MSCD 661 Business Intelligence (3.00 credit hours)

Architectures theories methodologies and technologies that transform structured semi-structured and unstructured data into meaningful and useful information. Covers analysis of enterprise data requirements to develop queries reports and building OLAP cubes that use business analytics to answer complex business questions.

MSCD 664 Introduction to NoSQL Databases (3.00 credit hours)

Introduces the four types of NoSQL databases (e.g. Document-Oriented Key-Value Pair Column-Oriented and Graph). The topics for each of the NoSQL database types will include detailed architecture data modeling techniques the loading and querying of data and the best practices for achieving high performance when using the database. NoSQL database development tools and programming languages will also be examined as part of the course content. Hands-on NoSQL database lab assignments will allow students to use the four NoSQL database types via products such as Cassandra Hadoop MongoDB Neo4J Riak etc...

MSCD 665 NoSQL Database Concepts Using Cassandra (3.00 credit hours)

NoSQL Database Concepts using Cassandra course provides students the necessary skills to develop applications using Cassandra. Topics include data modeling partitioning and clustering keys managing data sharding and indexing using SOLR.

Prerequisite(s): MSCD 664 or permission of instructor.

MSCD 675 Database Technologies and SOA (3.00 credit hours)

Introduces SOA middleware with enterprise architecture interoperability and loose coupling. Explores technical and organizational perspectives and alignment using design principles and industry-standard organizational models. Includes hands-on implementation of distributed Web Services-based interfaces to database system.

MSCD 681 Data Warehouse Design (3.00 credit hours)

Data warehouse design includes in-depth exploration of organizational decision based on data repository focusing on requirements data warehouse design data extraction and data stores. Includes business intelligence systems implications with hands-on approach to design.

MSCD 692 Database Practicum I (3.00 credit hours)

Simulates a real-world information technology organization where students enhance skills learned in previous database courses. Provides a research platform that can be used towards the collection of data to fulfill the thesis requirement.

MSCD 696 Database Practicum II (3.00 credit hours)

Continuation of Database Practicum I. Simulates a real-world information technology organization where students enhance skills learned in previous database courses. Provides a research platform that can be used towards the collection of data to fulfill the thesis requirement.

Master of Science: Information Systems (MSCI)**MSCI 600 Strategic Information Technology (3.00 credit hours)**

Presents the importance of information technology as necessary component of a successful business. Focuses on the evolution of information technology from an enabling tool to a competitive business strategy. Illuminates roles of CIO.

MSCI 610 Ethics in Information Technology (3.00 credit hours)

Course illuminates ethical issues regarding information systems (access data storage and data utilization). Focuses on developing a set of ethical standards for professionals in information technology. As IS/IT professionals we need to seize ideals and principles in a variety of traditional ethical systems and apply these conceptual structures and guidelines to major problems and dilemmas in an IS/IT workplace.

MSCI 615 Business Process Engineering (3.00 credit hours)

Focuses on the strategic and organizational issues of process management and the use of Enterprise Resource Planning systems (ERPs). Topics include major strategic approaches used to understand analyze and implement efficient business processes workflow modeling techniques process modeling techniques and procedure models.

MSCI 625 Supply Chain Management (3.00 credit hours)

Focuses on supply chain management from order through delivery encompassing the interactions of suppliers and customers in a systematic process while utilizing the SAP platform to illustrate concepts and facilitate hands-on learning for students.

MSCI 640 Enterprise Technology Management (3.00 credit hours)

Introduction to Enterprise Resource Planning systems. Emphasizes impacts on organizations development of practical skills associated with Enterprise Resource Planning systems and the SAP platform.

MSCI 680 Information Technology Project Mgmt (3.00 credit hours)

Investigates prevalent PM approaches (e.g. Traditional Agile/Scrum) applicability and how blended best practices support project success. Analyzes project case failures to determine how to avoid failure and improve business outcomes. Covers PMO value-add.

Prerequisite(s): MSCC 610.

MSCI 685 Emerging Technologies (3.00 credit hours)

Covers the impact that advanced/emerging technologies and innovative management have on innovation diffusion within an organization. Critically analyzes case studies of innovation including emerging processes products and organizational structures to discern best practices and develop adoption processes.

MSCI 692 ITM Practicum I (3.00 credit hours)

Includes a real world information technology strategic project using knowledge and skills developed in previous ITM courses. Majors only.

Note(s): MSCC*697 and permission of instructor required.

MSCI 696 ITM Practicum II (3.00 credit hours)

A continuation fo ITM Practicum I. Includes a real world information technology strategic project using knowledge and skills developed in previous ITM courses. Majors only.

Note(s): MSCI 692 and permission of instructor required.

Data Engineering (MSDE)**MSDE 620 Data Collection and Preparation (3.00 credit hours)**

Data Analysis using the Python language and Pandas library along with other popular analysis libraries (e.g. NumPy Matplotlib). Students will learn to apply visualization and analytical evaluation to determine important data features transform the data address missing and null values and compare data modelling accuracy based on feature inclusion and transformation.

Prerequisite(s): MSDS 600 and MSDS 610.

MSDE 621 Data Wrangling (3.00 credit hours)

Examines various data sources for input into data science type experiments that do not fit the "row and column" style. Static sources are examined and techniques for preparing the data for importation by Pandas prior to analysis are considered. Data sources examined include relational and NOSQL databases web pages position-delimited files PDFs and Excel format.

Prerequisite(s): MSDS 600 and MSDS 610.

Note(s): Majors only.

MSDE 630 Big Data Architecture (3.00 credit hours)

Introduces a variety of methodologies for the design and documentation of a Big Data infrastructure for an enterprise. Students will learn how to create 3rd normal form models dimensional models (Data Warehouse) NoSQL Database models Hadoop/HDFS models and an enterprise Data Lake model. Students will learn Master Data Management Data Policy and Data Standardization. Students will evaluate the use of data architecture data modeling data governance and data management in the context of building/maintaining a sustainable Big Data infrastructure.

MSDE 631 SQL and NoSQL (3.00 credit hours)

Introduces Relational Database Technologies that are commonly used within the data infrastructure of most enterprises. Students will learn SQL for accessing data from various RDBMS compare and apply various technologies that support data infrastructure projects. In addition this course introduces students to Hadoop and NoSQL technologies that are used for Big Data infrastructure projects. Students will learn SQL-like languages that are used for the technologies that support large data stores.

Prerequisite(s): MSDS 600 and MSDS 610.

Note(s): Majors only.

MSDE 692 Data Engineering Practicum I (3.00 credit hours)

Provides a hands-on technical environment where students apply the knowledge gained from prior Data Engineering courses to build a data infrastructure for an enterprise. Students will integrate creative solutions for complex problems collaborate as a team member and then demonstrate the ability to work diligently as an individual contributor with respect to aligning technology to organizational objectives. Students will have additional training and lab exercises for Data Engineering.

Prerequisite(s): MSDE 621 MSDE 630 and MSDE 631.

Note(s): Majors only.

MSDE 696 Data Engineering Practicum II (3.00 credit hours)

Continuation of MSDE 692 using a hands-on technical environment where students apply the knowledge gained from prior Data Engineering courses and build a data pipeline that uses the data infrastructure that was built in DE Practicum I. Students will integrate creative solutions for complex problems collaborate as team members and then demonstrate the ability to work diligently as individual contributors with respect to aligning technology to organizational objectives.

Prerequisite(s): MSDE 692.

Note(s): Majors only.

Data Science (MSDS)**MSDS 600 Introduction to Data Science (3.00 credit hours)**

Introduces foundational topics of data science including data manipulation data analysis using statistics and machine learning techniques for working with Big Data communication of analysis using information visualization and ethical use of data analyses. Consult your admissions counselor academic success success coach or faculty advisor on details regarding the Python prerequisite.

Prerequisite(s): Completion of Python self-assessment MSC575 or Python coding experience.

MSDS 610 Data Engineering (3.00 credit hours)

Presents techniques for designing building and managing information with relational databases NoSQL databases and big data infrastructure. Provides a hands-on experience running the MapReduce algorithm on Hadoop ecosystem.

MSDS 640 Ethics/Prvcy/Soc Justice-Data Science (3.00 credit hours)

Examines the ethical and privacy concerns in data science through various case studies and proposed codes of professional conduct. Concludes with an examination of data science experiments that can be used for social justice concerns.

Prerequisite(s): MSDS 600.

MSDS 650 Data Analytics (3.00 credit hours)

Examines techniques for the discovery and communication of meaningful patterns in data. Techniques include experimental design statistical modeling machine learning computer programming operations research and data visualization. Introduces classification clustering and recommender systems.

MSDS 655 Business Intelligence (3.00 credit hours)

Architectures theories methodologies and technologies that transform structured semi-structured and unstructured data into meaningful and useful information. Covers analysis of enterprise data requirements to develop queries reports and building online analytical processing (OLAP) cubes that use business analytics to answer complex business questions.

MSDS 660 Statistical Methods- Experimental Design (3.00 credit hours)

Examines the statistical techniques of creating models from data using linear regression and multiple linear regression. Continues with an examination determining the statistical variability between populations using ANOVA. Concludes with an analysis of information gathering techniques.

Prerequisite(s): MSDS 650.

MSDS 662 Exploratory Data Analysis (3.00 credit hours)

Focuses on analyzing and summarizing the main characteristics of data sets including visual methods. Explores techniques for formulating hypothesis about data for testing and for new data collection and experiments.

Prerequisite(s): MSDS 650.

MSDS 664 Predictive Analytics (3.00 credit hours)

Examines the process of drawing conclusions about populations from sample data using statistical modeling machine learning and data mining. Techniques for determining the validity and the reliability of predictions are also considered.

Prerequisite(s): MSDS 650.

MSDS 670 Data Visualization (3.00 credit hours)

Examines the creation and study of visual representations of data with the goal of effectively communicating information. Encompasses visual analytics design theories and methods visual cognition and perception through the use of various visualization tools.

Prerequisite(s): MSDS 650.

MSDS 674 Geographic Information Systems (3.00 credit hours)

Introduces GIS software for the collection analysis visualization and interpretation of geographic data. Provides foundational background as to what types of questions can be answered using GIS technologies and spatial analysis. Also provides practical experience with the use of GIS software. Topics include data structures and basic functions methods for determining patterns in spatial data and basic cartographic elements.

Prerequisite(s): MSDS 610 and MSDS 650.

MSDS 680 Machine Learning (3.00 credit hours)

Examines the construction and study of software systems that learn from data. Includes supervised learning unsupervised learning and reinforcement learning techniques. Incorporates the use of various machine learning software systems and other statistical software systems for analysis of these techniques.

Prerequisite(s): MSDS 650.

MSDS 682 Text Analytics (3.00 credit hours)

Investigates linguistic statistical and machine learning techniques for modeling the information in textual sources. Includes information retrieval natural language processing text classification and sentiment analysis and the software systems for performing these analyses.

Prerequisite(s): MSDS 650.

MSDS 684 Reinforcement Learning (3.00 credit hours)

Investigates reinforcement learning problems which require making multiple decisions over time. The theory behind optimizing the decision-making process as well as algorithmic techniques for finding optimal decision sequences is examined.

Prerequisite(s): MSDS 680.

MSDS 686 Deep Learning (3.00 credit hours)

Introduces machine learning techniques for deep learning neural networks using Keras with Tensorflow. Emphasizes the use of deep learning and convolutional neural networks for image segmentation and classification. Introduces parallel GPU-based computation.

Prerequisite(s): MSDS 686.

MSDS 688 Artificial Intelligence (3.00 credit hours)

Introduces the techniques used to create intelligent agents solve problems by searching represent knowledge and perform reasoning. Concludes with techniques for learning as well as machine interaction with the world.

Prerequisite(s): MSDS 650.

MSDS 692 Data Science Practicum (3.00 credit hours)

Provides a hands-on Data Science lab experience that covers all phases of a typical data science project—data discovery data preparation model planning model building and communicating results. Concludes with a mock presentation to stakeholders—senior management or investors.

MSDS 696 Data Science Practicum II (3.00 credit hours)

Continues a hands-on Data Science lab experience that covers all phases of a typical data science project data discovery data preparation model planning model building and communicating results. Concludes with a mock presentation to stakeholders senior management or investors.

Prerequisite(s): MSDS 692.

Enterprise Systems Engineering (MSES)**MSES 602 Introduction to DevOps Engineering (3.00 credit hours)**

Introduces the methodologies tools and insights of the DevOps process and what it can do for an organization. The course covers development deployment and operations including infrastructure as code continuous deployment testing automation validation monitoring and security.

MSES 612 Enterprise Systems Engineering (3.00 credit hours)

Explores systems thinking by comparing and applying systems frameworks methodologies design techniques and management tools to problems. The student is provided a systematic approach in identifying stakeholders needs including human factors integration maintainability and serviceability/reliability; analyzing the problem developing solution requirements and designing a system to address those needs.

Prerequisite(s): MSCC 610.

MSES 614 System Architecture & Design (3.00 credit hours)

Expands on MSES 612 with a focus on the fundamentals of system architectures and the architecting process including practical heuristics for developing good architectures. Course looks inside the system boundary to develop a specification for a set of logical and physical elements that comprise the logical and physical architectures defined to meet the system requirements reviewed during SRR. The course culminates with a Preliminary Design Review (PDR) in which the system design is reviewed before detailed design can begin.

Prerequisite(s): MSES 612.

MSES 618 Continuous Integration (3.00 credit hours)

Explores rapid application development and integration processes designed to build maintain secure test and validate continuous integration processes. Covers the principles and processes of change management early validation integration test verification transition and live system validation within the Enterprise Systems Engineering discipline. The course enables students to more effectively integrate and prove-in solutions that meet system requirements and customer needs.

Prerequisite(s): MSES 614.

MSES 622 Systems Requirements Engineering (3.00 credit hours)

Theory and applications of requirements elicitation analysis modeling validation testing and writing for hardware software and enterprise systems. Students will define and prioritize customer expectations elicit and analyze functional and quality attribute requirements and develop artifact models meta-models and prototypes. Additional activities to derive and generate test cases from UML diagrams deploy validation verification and rapid development procedures & perform hazard analysis risk assessment and threat modeling.

Prerequisite(s): MSES 612.

MSES 642 Deploying & Mgmt Cloud Infrastructure (3.00 credit hours)

Introduction to provisioning operating and managing distributed application systems on a Cloud-based platform.

Prerequisite(s): MSES 602.

MSES 692 Enterprise Systems Eng Practicum I (3.00 credit hours)

Students apply enterprise systems engineering knowledge to one or more projects in support of Regis and/or community organizations. Activities include investigation into research topics and practice with a variety of software and hardware platforms.

Prerequisite(s): MSCC 630 and MSCC 697.

MSES 696 Enterprise System Eng Practicum II (3.00 credit hours)

A continuation of MSES 692. Students apply enterprise systems engineering knowledge to one or more projects in support of Regis and/or community organizations. Activities include investigation into research topics and practice with a variety of software and hardware platforms.

Prerequisite(s): MSES 692 and MSCC 630.

Information and Cyber Security (MSIA)**MSIA 605 Advancing to Cyber Security (3.00 credit hours)**

Instills students with a breadth-first approach that surveys the fundamental aspects of computer systems and establishes a context for subsequent courses in cyber security.

MSIA 670 Enterprise Information Assurance (3.00 credit hours)

Introduces the basic Information Assurance (IA) model; security of the database the application and the system. Examines current security standards best practices and auditing practices.

MSIA 672 Managing a Secure Enterprise (3.00 credit hours)

Provides the knowledge of designing and managing a secure enterprise. Includes aspects of enterprise security physical security disaster-recovery planning and business continuity planning.

MSIA 673 Legal Basics-Cyber/ Information Security (3.00 credit hours)

Legal interpretation of security policy and resulting obligations providing a background to create a stable set of processes frameworks and models capable of handling multiplying domestic and international laws and regulations.

Prerequisite(s): MSIA 672.

MSIA 674 Planning/Implementing Architecture Sec (3.00 credit hours)

Explores security policy development implementation and standards compliance and testing on corporate systems application and data. Examines target architectures: telecommunications and wireless enterprise corporate data network.

MSIA 675 Offensive Cyber Security (3.00 credit hours)

Exposes students to the different hands-on tactics used by offensive cyber security professionals. Topics include reconnaissance hijacking cracking vulnerability exploitation and malware deployment.

Prerequisite(s): MSIA 605 or permission of instructor.

MSIA 678 Risk Management (3.00 credit hours)

Prepares students to evaluate an organizations exposure to information technology security threats using rigorous policy and standards based analysis of the existing policy directives and the derived threat matrix.

MSIA 680 Computer Forensics (3.00 credit hours)

Explores computer forensics encompassing a variety of legal and technical challenges. Provides hands-on and theoretical experience with technology techniques and legal policy during investigation of computer components.

Prerequisite(s): MSIA 675 or permission of instructor.

MSIA 682 Network Forensics (3.00 credit hours)

Examines forensic analysis of networks utilizing unique and sophisticated sets of tools techniques and legal policies. Covers established concepts methodology and tools to enhance performance of network forensics.

Prerequisite(s): MSIA 675 or permission of instructor.

MSIA 683 Advanced Forensics (3.00 credit hours)

Continues the examination of forensic analysis of computer systems and devices utilizing appliances tools techniques and legal policies. Covers established advanced concepts and techniques to enhance performance of network forensics.

Note(s): Course fee required.

MSIA 684 IT Auditing (3.00 credit hours)

Combines accounting regulation and IT security practices to educate students to protect organizational assets through establishment of auditing best practices current governmental reporting standards Sarbanes-Oxley requirements and secure management techniques.

MSIA 685 Malware Analysis and Response (3.00 credit hours)

Learn to analyze malicious programs web pages and documents. This analysis can be used to identify other indications of infection and block further damage to the company targeted.

Prerequisite(s): MSIA 680 and MSIA 682 or permission of instructor.

MSIA 692 Information Assurance Practicum I (3.00 credit hours)

Students gain additional information assurance experience through detailed analysis of network datasets with known malware through the framework of a threat intelligence environment. This practicum while not limited to our Cybersecurity specialty focuses on the knowledge and skills acquired in the specialty.

Prerequisite(s): MSCC630 MSIA672 MSIA678 MSIA680 MSIA682 and minimum of ten degree program courses.

MSIA 696 Information Assurance Practicum II (3.00 credit hours)

Students gain additional information assurance experience by performing a low level vulnerability assessment of a series of machines and using that information create a series of policy and procedures which should have prevented this from occurring. This practicum while not limited our Policy Management specialty focuses on the knowledge and skills acquired in this specialty.

Prerequisite(s): MSCC630 MSIA672 MSIA673 MSIA678 and minimum of ten degree program courses.

Note(s): Instructor consent required.

Software Engineering (MSSE)**MSSE 600 Object-Oriented Software Engineering (3.00 credit hours)**

Introduces the Software Engineering Body of Knowledge and the Unified Modeling Language used to communicate the design of object-oriented software systems. Presents an Agile software development process that is enabled with the use of a layered software architecture.

MSSE 610 Software Requirements and Processes (3.00 credit hours)

Examines acquisition analysis specification validation and management of software requirements. Explores formal software processes including the definition implementation measurement management change and improvement of the software engineering process.

MSSE 635 Software Architecture and Design (3.00 credit hours)

Study of the concepts representation techniques development methods and tools for architecture-centric software engineering. Topics include domain-specific software architectures architectural styles architecture description languages software connectors and dynamism in architectures. The course covers the foundations and principles of software architecture as well as some of the more recent literature and research issues.

Prerequisite(s): MSSE 600 MSSE 670 and MSSE 672.

MSSE 640 Software Quality and Test (3.00 credit hours)

Introduces the software quality assurance process and the means to monitor control and evaluate software quality. Presents software testing techniques tools and processes. Covers both plan-driven and Agile techniques for software quality and test.

MSSE 642 Software Assurance (3.00 credit hours)

Provides a detailed explanation of software assurances practices methods and tools required throughout the software development life-cycle. Applies life-cycle knowledge in exploring common programming errors and evaluates common software testing tools.

MSSE 655 Mobile Software Engineering in Android (3.00 credit hours)

Introduces Android software development using the Java programming language Android Developer Tools (ADT) and Android Studio for Android mobile devices. Includes software development of a project in preparation for deployment to Android devices.

Prerequisite(s): MSSE 670.

MSSE 661 Web Software Development (3.00 credit hours)

Introduces web page development using HTML/HTML5 CSS/CSS3 and JavaScript. Students learn how to design and develop a website structure and style its content and navigate/update the document object model (DOM).

MSSE 663 Web Frameworks (3.00 credit hours)

Covers the most popular JavaScript frameworks including jQuery AngularJS and Google Maps. Students learn how to use these frameworks to do DOM manipulation AJAX single page applications and the display/manipulation of maps.

Prerequisite(s): MSSE 661.

MSSE 665 Web Visualization Frameworks (3.00 credit hours)

Covers popular visualization frameworks that facilitate the presentation of pertinent information to the end user. Students learn various techniques that transform raw data into information that is relevant to end users.

Prerequisite(s): MSSE 663.

MSSE 667 Web Mobile Frameworks (3.00 credit hours)

Explores popular mobile frameworks that enable the creation of mobile web apps using HTML CSS and JavaScript. Students learn how to build rich interactive web applications that run on virtually all mobile devices (e.g. Android iOS Windows).

Prerequisite(s): MSSE 661.

MSSE 670 Object Oriented Software Construction (3.00 credit hours)

Introduces use-case driven iterative software development techniques using a layered software architecture using the Java programming language. Topics include unit testing the use of various software patterns and refactoring code. Requires students to document and develop a project using layered software architecture.

MSSE 672 Component-Based Software Development (3.00 credit hours)

Introduces advanced features of the Java software development environment along with auxiliary software development tools. Topics include Eclipse the Ant build tool the use of Java exceptions and logging collections and generics JDBC and object-relational mapping with Hibernate XML processing client-server programming and multithreaded applications.

MSSE 674 Service-Based Software Development (3.00 credit hours)

Continues the advanced use of the Java 2 Platform. Topics include web applications and Java 2 Enterprise Edition. Emphasizes the use of Java Servlets and Java Server Pages (JSPs) to develop web application using a layered software architecture. Other topics include Custom Tag libraries Apache Struts request and response filters and security.

MSSE 690E-W Independent Study (3.00 credit hours)

Provides an opportunity for faculty directed independent research in any field or topic in software engineering not covered in scheduled course offerings.

Prerequisite(s): Approval of Degree Chair.

MSSE 692 Software Engineering Practicum I (3.00 credit hours)

Begins development of a distributed software system using the principles of Service Oriented Architectures. Encourages use of a cloud provider like Amazon Web Services Windows Azure or the Google App Engine.

MSSE 695 Software Engineering Rsrch & Dvlpmnt (3.00 credit hours)

Gain experience and knowledge about established and emerging topics in the field of Software Engineering R&D including a range of research approaches utilized to study and address significant research problems in the field of software engineering. Propose create and implement a database-driven software application which is congruent with emerging and/or established topics in the field of Software R&D. Conduct prepare and publish (i.e. conference presentation) a case study on a software system and/or application.

MSSE 696 Software Engineering Practicum II (3.00 credit hours)

Completes development of the software system begun in MSSE 692. Concludes with a presentation and paper to mock stakeholders such as senior management or investors.

Software Engineering and Database Technologies (MCT)

Note: Students must be accepted into the MSSED (MCT) program prior to enrolling in MCT courses.

MCT 609 Fundamentals of Programming (3.00 credit hours)

Foundational programming module suitable for students with no previous experience of programming and those with moderate previous knowledge. Provides a foundation in key concepts of functional programming as well as an appreciation of object-oriented programming.

MCT 610 Software Engineering (3.00 credit hours)

Introduces comprehensive concepts of software engineering including structured software analysis design and management techniques systems development lifecycle (SDLC) structured systems analysis and design techniques Computer Aided software Engineering (CASE) tools and software project management.

MCT 611 Computer Architecture & Operating Sys (3.00 credit hours)

Explores the concepts of computer architecture and operating systems including system components access methods numbering systems and digital logic. Examines operating system design including architectures input/output memory process management file management and security.

MCT 618 Object-Oriented Design (3.00 credit hours)

Introduces object oriented analysis and design techniques and industry standard notation UML (Unified Modeling Language). Students develop analysis and design models using CASE tools tracking systems from inception through analysis solution design and technical implementation.

MCT 619 Object-Oriented Programming (3.00 credit hours)

Explores object modeling class definition inheritance composition encapsulation polymorphism abstract classes and interfaces. Focuses on the Java programming language emphasizing applets graphics data storage multi-threaded programming and exception handling.

MCT 620 Distributed Systems (3.00 credit hours)

Investigates design and implementation of internet based distributed applications including APIs frameworks standard internet protocol stack client/server architectures network programming Java I/O multithreaded programming Sockets thin client/web server support Servlets JSP EJBs and web services.

MCT 621 Artificial Intelligence (3.00 credit hours)

Introduces the concepts and techniques of Artificial Intelligence (AI) including use of the Prolog language knowledge representation machine learning expert systems uncertainty neural networks and real world application of AI techniques.

MCT 624 Thesis Fundamentals (3.00 credit hours)

Assists students in developing a thesis topic working under an approved research director.

MCT 626 Thesis (3.00 credit hours)

Assists students in their thesis statement to explore various research methods to create a project plan and to begin their secondary research.

MCT 692 Database Practicum I (3.00 credit hours)

Simulates a real-world information technology organization where students enhance skills learned in previous database courses. Provides a research platform that can be used towards the collection of data to fulfill the thesis requirement.

Master of Nonprofit Management (MNM)**MNM 6010 Hist/Theory/Future of Nonprofits (3.00 credit hours)**

Examines origins and societal roles of nonprofit organizations in a global environment including social political economic cultural and ideological issues. Addresses types and characteristics of nonprofit organizations and trends and projections for the future of the third sector.

MNM 6030 Conflict Resolution for Leaders (3.00 credit hours)

Examines the principles and practices of effective communication with an emphasis on understanding oral communication styles. Explores techniques tools tactics and strategies on managing diverse communication styles in nonprofit organizations. Examines theory and practice of resolving conflict including understanding varying conflict management styles at the intrapersonal interpersonal and inter-group arenas.

Prerequisite(s): MNM 6010.

MNM 6070 Social Justice and the Civil Society (3.00 credit hours)

Examines the wide range of meanings of social justice using perspectives of philosophy and religion economics and politics. We explore the role of the nonprofit sector in growing an equitable and inclusive Common Good by addressing complex social issues including diversity human rights and poverty.

MNM 6100 Legal and Ethical Issues for Nonprofits (3.00 credit hours)

Introduces critical legal and ethical issues affecting nonprofit organizations. Explores nonprofit formation statutory requirements liability contract and employment issues applicable portions of the Federal Tax Code laws that affect lobbying and public advocacy and laws regarding fund raising.

Prerequisite(s): MNM 6010.

MNM 6240 Philanthropy and Grant Development (3.00 credit hours)

Provides an in-depth examination of all aspects of grant writing including foundation federal and corporate proposals. Examines the essentials of a successful grant writing strategy for nonprofit organizations.

Prerequisite(s): MNM 6010.

MNM 6440 Financial Management of Nonprofit Orgnz (3.00 credit hours)

Focuses on using financial information management for budgeting finance and investment decision-making in nonprofit organizations. Topics includes acquisition reporting taxation risk management and regulatory issues. Emphasizes unique problems of nonprofits in capital formation generating earned income managing endowments gifts and tax planning.

Prerequisite(s): MNM 6010.

MNM 6470 Program Development & Accountability (3.00 credit hours)

Designs evaluates and analyzes programs through the utilization of research methods and best practices to determine the effectiveness of programs while at the same time providing accountability to the organization's mission. Utilizes evidence-based and other data to evaluate and develop techniques and strategies that can produce effective program measurement.

Prerequisite(s): MNM 6010.

MNM 6480 Governance and Organizational Leadership (3.00 credit hours)

Examines accountabilities of nonprofit governance. Analyzes governing board and executive director roles in leading change decision processes and modeling ethical behaviors. Explores strategies which position organization for Third Sector leadership.

Prerequisite(s): MNM 6010.

MNM 6510 Research for Decision-Making (3.00 credit hours)

Focuses on various research techniques necessary for an effective investigation of social and organizational concerns in the nonprofit sector. Recommended

Prerequisite(s): Course is better taken in preparation for the capstone or after completing 27 graduate credit hours.

MNM 6550 Leading From Within (3.00 credit hours)

Explores the role of mindfulness in leadership. Investigates various practices that connect your beliefs and behaviors as it relates to your leadership.

Prerequisite(s): MNM 6010.

MNM 6700 Financial Resource Development (3.00 credit hours)

Examines the principles strategies and techniques of resource development. Topics include an overview of resource development from foundations corporations government and individuals proposal writing and presentation direct mail conducting special events and individual major gift programs.

Prerequisite(s): MNM 6010.

MNM 6770 Service Oriented Field Experience (3.00 credit hours)

Examines the historical factors political climate and unique contributions of the nonprofit sector in a variety of different national and international settings through hands on experience. Students will travel in other countries and/or regions.

Prerequisite(s): Course cannot be taken until 30 graduate credit hours have been completed.

MNM 6890E-W Graduate Seminar (1.00-3.00 credit hours)

Concentrates on contemporary literature and trending topics within the field of nonprofit management. Content varies by term based on topic's relevance to current nonprofit trends and happenings.

Prerequisite(s): MNM 6010.

MNM 6900E-W Indpdnt Stdy in Nonprft Mngmnt (1.00-4.00 credit hours)

Provides an opportunity for faculty-directed independent research in any field or topic in nonprofit management not covered in scheduled course offerings.

Prerequisite(s): Approval of Degree Chair.

Note(s): Offered as special study course only.

MNM 6970 Professional Project (3.00 credit hours)

Forms the capstone experience representing the creation development improvement or evaluation of a product or program or entails the writing of a thesis. Provides immediate applicability in a specific nonprofit agency or sector of the nonprofit world.

Prerequisite(s): Course cannot be taken until 30 graduate credit hours have been completed.

Project Management

PM 6510 Delivering Organizational Excellence (3.00 credit hours)

Prepares learners to lead change by using various contemporary tools and techniques to identify and explore process improvement opportunities through the use of analysis critical thinking and project management methodologies to deliver organizational excellence.

PM 6520 Agile Product Development (3.00 credit hours)

Focuses on a flexible iterative and incremental approach to product delivery following the values and principles expressed in the Manifesto for Agile Software Development. The course covers understanding Agile project management approaches and deciding how agile a project should be based on business objectives and strategy. Included in the course are the most common agile practices such as Scrum Kanban and hybrid approaches. Going beyond processes the course reiterates the people side of Agile Development including leadership team development and customer collaboration. Covers common Agile practices such as user stories backlogs sprints demonstrations and retrospectives. Although Agile principles emerged in the software development world this course will show Agile has expanded to multi-product development in general and can be applied to everyday life.

PM 6560 Strategic & Business Mgmt-Prjct Managers (3.00 credit hours)

Explores and examines the concepts of Strategic and Business Management in Projectized Organizations. Examines concepts related to project strategic alignment project benefit management/realization business models and structures project management client relationship and satisfaction industry knowledge and standards and operational functions.

PM 6570 Leading Projects in Contemporary Orgs (3.00 credit hours)

Explores project management from a strategic perspective focusing on development of leadership skills in the management of project teams. Examines the roles of the manager and management team; project selection organization and planning process; communications and negotiations; and the tactical and strategic implications in a project environment. Reviews management of business/computer information technology projects including development approaches technical aspects of project estimation and manual and automated project management tools.

PM 6580 Management of Project Performance (3.00 credit hours)

Examines aspects of project risk cost and schedule management. Identifies the management processes required to ensure the project is completed within budget and on schedule. Provides knowledge required to cost a project develop a project plan and allocate the necessary resources to manage a project; analyze risks and opportunities within projects identify methods for reducing and mitigating risks manage project performance including quality human resources communications and procurement.

Prerequisite(s): PM 6570.

PM 6590 Project Monitoring & Delivery (3.00 credit hours)

Examines various interrelated functions impacting project deliveries and how functions contribute to the strategic success of the enterprise. Provides the advanced knowledge required to develop analyze and change a project plan determine risk and allocate the necessary resources to effectively manage and complete a project in a client environment.

Prerequisite(s): PM 6570 and PM 6580.