

Computer Information Systems Concentration--Management Major

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To be successful and safe in today's computer-centric and security-conscious world, it is essential to have a solid foundation of information systems skills and knowledge. The concentration in Computer Information Systems (CIS) is designed to equip students in any major with the necessary skills to understand the complexity of today's global and corporate-computing environments. This includes learning a computer-programming language as well as strategies for coping with the many issues surrounding computer security, information assurance, software engineering, and networked systems.

Goals:

- Equip students with skills essential to understanding key concepts in any computing environment and a rich appreciation and knowledge of the information-systems world
- Augment any major course of study with a solid mastery of computer-system concepts, issues, and skills
- Prepare students to appropriately deal with personal and business-related information assurance, computer security and information systems issues
- Prepare students to uphold high standards of ethical conduct and professionalism in the use and delivery of information systems services

Outcomes:

Upon graduation successful students will competently demonstrate

- An understanding of, and an ability to apply programming-language syntax and logic in order to create software solutions to a range of business problems
- An understanding of information systems and their applications in the context of the student's major field of study, as well as other industries and businesses
- Knowledge and the application of personally-applicable and business-oriented information assurance and computer-security concepts, strategies, methodologies and procedures
- Appropriate application of information-assurance and computer-security concepts, methodologies and procedures in both personal and business contexts
- Understanding and respect for the rights and responsibilities of individuals, organizations, and information assurance as a practice
- High ethical, personal and professional standards, especially in regards to computer information systems and their impact on individuals, organizations, and society

Careers for this Minor:

Depending on the students major, augmenting it with the Computer Information Systems minor can also help prepare the student for the following careers

- Information Assurance Management
- Information Systems/Technology Management

Computer Information Systems (CIS) Concentration Courses

CS 100	Foundations of Computer Science and Information Assurance ¹	3
CS 140	Programming and Computing ²	4
CS 301	Software Engineering ³	3
IA 342	Management of Information Assurance	3
Major/Concentration Elective (see below)		3
Major/Concentration Elective (see below)		3
Total Credits		19

Major/Concentration Elective Courses

Choose any non-duplicate course from the following types:

AC		
CN		
CP		
CS		
DF		
EC		
FN		
FR		
GR		
IA		
MG		
QM		
SP, or		
AS 311	Air Force Leadership Studies	3
AS 312	Air Force Leadership Studies	3
AS 411	National Security Affairs/Preparation for Active Duty	3
AS 412	National Security Affairs/Preparation for Active Duty	3
MS 311	Military Science III	3
MS 312	Military Science III	3
MS 411	Military Science IV	3
MS 412	Military Science IV	3
NS 321	Naval Ship Systems I	3
NS 342	Small Unit Leadership Skills	2
NS 421	Naval Operations and Seamanship	3
NS 422	Leadership and Ethics	3
PY 210	Psychology of Leadership	3

¹ Enrollment requires override approval

² Prerequisite: "C" or higher in IS 100 or CS 100, or by instructor permission

³ Prerequisite: "C" or higher in IS 131 or CS 140

Accounting Courses

AC 201 Introduction to Accounting and Financial World 3 Credits

This course is designed strictly for the non-business major. It is a survey course of accounting and financial concepts, including the basic accounting equation, financial statement structure, financial statement analysis, cost structures (fixed/variable/breakeven analysis/overhead), cost systems, an introduction to basic capital markets, working capital management and present value concepts. Whenever possible the materials used in this class will use the context of the individual student's major area of study or future professional area of employment. 2 lecture hours and 2 laboratory hours.

AC 205 Principles of Accounting-Financial 4 Credits

An introduction to accounting principles and theory for the sole proprietorship. The recording of business transactions through the accounting cycle, from journalizing, posting, adjusting, and closing entries through work papers and preparation of financial statements, is studied. Related topics include: internal control, receivables and payables, the control of cash transactions, inventories, depreciation, intangible assets, and payroll accounting. Ethical business practices and client privacy issues are stressed throughout all phases of the course.

AC 206 Principles of Accounting-Managerial 4 Credits

The completion of the study of financial accounting and an introduction to and emphasis on managerial accounting. Topics covered include: partnerships, corporations, earnings per share, dividends, bonds payable, the Statement of Cash Flows, the analysis and interpretation of financial statements, the budgeting process and cost accounting concepts. Protection of proprietary information and information security is reinforced throughout the course. Prerequisite: AC 205.

AC 335 Intermediate Accounting I 3 Credits

Building on the foundations of Principles of Accounting the course provides a more in-depth study of accounting theory and practice. Beginning with a brief review of the accounting process, the course delves into the conceptual framework for accounting, the accounting standards setting process, and the hierarchy of accounting pronouncements. The course then explores the components of the financial statement package including such issues as the quality of earnings and the measurement and reporting of unusual, infrequent, and non-operating items; the Statement of Cash flows is also studied in depth. Accounting, reporting, and valuation issues surrounding cash, receivables, inventory and long-term assets are also covered including the impairment of tangible and intangible assets. Prerequisite: A grade of "C" or better in AC 205 and AC 206.

AC 336 Intermediate Accounting II 3 Credits

A continuation of the in-depth study of accounting theory and practice begun in Intermediate Accounting I. The course addresses the valuation, accounting, and reporting of both short and long-term investment securities, current and contingent liabilities, notes and bonds payable, and shareholders' equity. In addition, the accounting for leases, income taxes, pensions, stock-based compensation, earning per share, and accounting changes are also studied. Prerequisite: AC 335 or AC 205 and AC 206 with a grade of "C" or better and permission of the instructor.

AC 419 Taxation I 3 Credits

Designed to introduce the student to certain elementary tax concepts: tax rate structure, exemptions, deductible versus non-deductible expenses, depreciation basis, capital gains and losses, tax credits, withholding, and computation of the personal income tax. Within the context of the personal income tax, planning considerations will be stressed as well as legal and ethical issues concerning client confidentiality. Prerequisites: AC 205 and AC 206 with a grade of "C" or better.

AC 428 Auditing 3 Credits

A study of the auditing environment, including legal liability and professional ethics begins with the concept of auditing and the auditing profession. Additional topics concerning the audit process, including internal control, evidence, sampling and EDP auditing and specific audit procedures are examined. In addition the nature and types of auditors' reports are studied. Prerequisites: AC 336 or permission of the instructor. 3 lecture hours.

AC 441 Cost Accounting 3 Credits

A study of the basic elements of cost accounting concepts and procedures. Emphasis is on how cost data can be used as management tools. Cost behavior and control, cost-volume-profit relationships, job and process costing, activity-based accounting, budgeting and responsibility accounting, flexible budgeting and standards, income effects of alternative costing methods and cost behavior, costs and the decision process, and philosophy and organization of the master budget are analyzed. Prerequisite: AC 206.

AC 442 Advanced Accounting 4 Credits

An advanced course emphasizing accounting theory and practical applications in selected areas. Such areas include: partnerships, branches, business combinations, consolidated financial statements, segment reporting, forecasts, multinational companies, bankruptcy, and accounting for governmental units and other non-profit entities. Prerequisite: AC 336.

AC 450 Internship in Accounting 3 Credits

The internship program is designed for students who want to apply their studies by working in a public accounting firm or in private accounting within a business, industry, or public agency. The student will be required to work closely with a faculty supervisor to develop and implement a structured experience tailored to the career goals of the student. Prerequisites: junior or senior standing and written consent of the department chair and internship committee.

Computer Science Courses

CS 100 Foundations of Computer Science and Information Assurance 3 Credits

This survey of computing and information assurance fundamentals is required for computer science and information assurance majors. The course focuses on learning to use key concepts and terminology in information technology, computer science, networking, and information security. Discussions regarding computing ethics, safety, and professionalism are included throughout. Prerequisites: By permission only for non-computer science and non-CSIA majors.

CS 120 Business Applications & Problem Solving Techniques 3 Credits

An introductory course in management information processing. The course explores the most important aspects of information systems with specific emphasis on business applications, practical usage, and current information. The student will obtain skills in word processing, spreadsheet analysis, and presentation tools using professional software packages. Structured problem-solving techniques will be emphasized throughout the course. Practical implementation projects and case studies will be used to reinforce topics such as computer, academic, and professional ethics for an information-based society. Not open to CS or CSIA majors.

CS 140 Programming and Computing 4 Credits

An introduction to fundamental computing concepts and programming, designed for students with little programming background. The course uses a high-level language and emphasizes object-oriented design and implementation techniques. Good software engineering practice and language-specific concepts are introduced by means of programming projects that illustrate the importance of software quality attributes. This course serves as the basis for more advanced programming classes. Classroom 3 hours, laboratory 2 hours. Prerequisite: C or higher in IS 100 or CS 100, or by instructor permission.

CS 212 Assembly Language & Reverse Engineering 3 Credits**CS 221 GUI Programming 3 Credits****CS 228 Introduction to Data Structures 3 Credits**

An introduction to the basic concepts of algorithm analysis, data representation, and the techniques used to operate on the data. Topics include searching, sorting, linked lists, stacks, queues, trees, hash tables, graphs. Prerequisite: C or higher in IS 131 or CS 140.

CS 240 Database Management 3 Credits

A study of the concepts and structures necessary to design and implement a database management system. Various data models will be examined and related to specific examples of database management systems including Structured Query Language (SQL). Techniques of system design, system implementation, data security, performance, and usability will be examined. Prerequisite: C or higher in IS131 or CS 140.

CS 250 Virtual Systems Administration 3 Credits

This course includes a combination of classroom lecture on network and virtualization theory as well as a variety of hands on exercises to provide students with an understanding of how to configure and manage a VMware ESX environment. Students will also learn how to carry out administration tasks specific to the day-to-day operations of the NUCAC-DF. Some of these tasks will include how to build and maintain classroom environments, understanding requirements given by professors and instructors for classrooms, and overall maintenance of the systems in the Center for Advanced Computing and Digital Forensics.

CS 260 Data Communications and Networks 3 Credits

An introductory study in fundamental concepts of computer networks and data communication including a survey of major protocols, standards, and architectures. Students use concepts and terminology of data communications effectively in describing how software applications and network services communicate with one another. Students read and analyze network traces to monitor communications, diagnose issues, and evaluate protocols. Prerequisite: C or higher in IS 131 or CS 140.

CS 270 Operating Systems & Parallelism 3 Credits

An introduction to the theory and structure of modern operating systems, including hardware abstraction, process management, memory management, system performance, and security. Specific attention to multi-threaded processing, semaphores, locking and interprocess communication. Prerequisites: C or higher in IS 131 or CS 140.

CS 300 Management Information Systems 3 Credits

This course provides an overview of information systems, their role in organizations, and the relationship of information systems to the objectives and structure of an organization. Management of software projects, decision making with regard to systems development, and organizational roles with regard to information systems is also discussed. Not open to CS or CSIA students.

CS 301 Software Engineering 3 Credits

An in-depth introduction to the software development life cycle, the techniques of information analysis, testing, and the logical specification of software. Particular attention to project management, documentation, and interpersonal communication. Utilizing industry-standard methods, the student progresses through the phases of specification, design, implementation, and testing of information systems. Object-oriented design techniques are used to design new logical and new physical systems for business-related problems. Prerequisite: C or higher in IS 131 or CS 140.

CS 330 Ethics in Computing and Technology 3 Credits

The course examines ethical dilemmas resulting from current technological trends, as well as the ethical standards and creeds of a variety of organizations (e.g., Association for Computing Machinery). Students learn to evaluate case studies from an ethical perspective. Students are expected to conduct literature surveys, produce bibliographies, write literature reviews, and present oral summaries of research as well as offer critical evaluation of writings related to ethics and technology. This course meets the General Education Ethics requirement.

CS 406 Special Topics in Computer Science 3 Credits

A study of topics chosen from areas of current interest that are not offered as part of the permanent curriculum. Topics are chosen by instructors on a semester-by-semester basis. Students may take the course more than once, provided each semester taken covers a substantively different topic. Prerequisite: By permission of instructor.

CS 407 Politics of Cyberspace 3 Credits

This course explores the interrelations of modern computing and communications technology with politics, power, news, privacy, crime, and creativity. The course assumes only a rudimentary familiarity with the basic concepts and terminology of modern Internet usage and computing and is not a technology-focused course. Prerequisite: Open to 2nd-semester sophomores or higher, or by instructor permission.

CS 410 Computing Internship 3 Credits

Internships in computing and information technology provide computing majors with the opportunity to apply and expand their knowledge within the computing discipline. Students must be Junior standing, or higher and have good academic standing. The student must have the internship approved beforehand by a computing faculty member and have the written consent of the Chair or Director of Computing. In addition, a supervisor within the sponsoring organization must agree to provide a written description of the internship beforehand, and provide progress reports during and after the internship experience. Prerequisites: Good Academic Standing, Junior or higher status.

CS 420 Computer Science capstone I 3 Credits

A two-semester course sequence normally taken in the Senior year. Based on the subject matter mastered during their previous coursework, students (individually or in a group) identify a current topic to study in depth. As part of their studies, they develop either a working software project or produce a substantial data or hardware artifact. This course represents the first semester of a student's work towards such a project. Prerequisites: Junior standing or higher, Computer Science majors only.

CS 421 Computer Science Capstone II 3 Credits

As the second semester of the two-course capstone sequence, this course serves as a continuation of CS420. Prerequisites: CS420.

CS 430 Computer Science Undergraduate Thesis I 3 Credits

The computer science undergraduate thesis is a two-semester course sequence normally taken in the Senior year. The course introduces students to the breadth of tasks involved in independent research, including library work, problem formulation, experimentation, and writing and speaking. Based on the subject matter mastered during previous coursework, students (individually or in a group) identify a current topic to study in depth. Students produce an original research paper. This course represents the first semester of a student's work towards such a project. Prerequisites: Junior standing or higher, Computer Science majors only.

CS 431 Computer Science Undergraduate Thesis II 3 Credits

As the second semester of the two-course thesis sequence, this course serves as a continuation of CS430. Prerequisite: CS430.

Digital Forensics Courses

DF 242 Computer Forensics I 4 Credits

This course provides the student with an ability to perform basic forensic techniques and use appropriate media analysis software. Knowledge of the security, structure and protocols of network operating systems and devices are covered as students learn to gather evidence in a networked environment and to image and restore evidence properly without destroying its value. Students learn and practice gaining evidence from a computer system while maintaining its integrity and a solid chain of custody. Within the laboratory, students gain hands-on experience in the use of current investigative tools. Classroom 3 hours, laboratory 2 hours. Cross-listed as CJ442. Prerequisites: CJ341 or IA241 and a C or higher in IS130 or CS140.

DF 311 Network Forensics 3 Credits

Introduces digital forensic concepts and practices on local area networks, wide area networks and large scale networks such as the Internet. Lectures include topics based on table of contents in (Davidoff and Ham 2012) such as investigative techniques, and how to conduct an investigation, manage evidence and follow a cyber-trail. A large part of the course involves demonstrations and hands-on labs, including: use of network forensic tools such as packet monitors, security information and event managers (SIEMs), tracers, and other tools useful for analyzing events. Many of the labs involve analysis of packet captures of both actual attacks and theoretical malfeasance by offenders. Students have a final lab exercise instead of a final exam and are expected to research and present a final project. Prerequisite: IS 460 or CS 260.

DF 312 Malware Forensics 3 Credits

This predominantly laboratory-based course is an introduction to malware forensics including both static and dynamic analysis. Students study profiling, malware behavior, behavior of malware on computer networks, anti-reversing and anti-debugging techniques, and packers. Prerequisite: CS 212.

DF 395 Cyber Criminalistics 3 Credits

This survey course uses lecture, case studies and hands-on lab exercises in digital investigation and cyber forensics to introduce students to the investigation and analysis of cyber crime and cyber criminals. Topics include: cyber crime typology, cyber criminal profiling, network tracking, introduction to the tools of the cyber criminalist, techniques of cyber crime scene assessment, digital evidence management and analyzing the forensic remnants of a cyber event. During the course of the laboratory exercises, students create a personal lab notebook recording their lab exercises and manage evidence including maintaining a proper chain of custody. Prerequisites: Open to CJ 2nd semester sophomores or higher, or by instructor permission.

DF 411 Cyber Investigation 3 Credits

An introduction to cyber investigation, including elements of cyber crime, cyber warfare and cyber terrorism. The course examines investigative techniques for cyber investigators, case studies of representative cyber crimes and cyber warfare incidents, some cyber investigation tools and expert witnessing. The course builds up to a mock trial where students act as a cyber investigation task force on an actual case of cyber crime. This is a course that incorporates extensive reading as well as hands-on lab exercises. Prerequisites: Open to CS or CSIA 2nd-semester sophomores or higher, or by instructor permission.

DF 423 Advanced Digital Forensics 3 Credits

This course Expands upon concepts learned throughout the digital forensics concentration in the BSCSIA major. It is based upon the Certified Cyber Forensic Professional (CCFP) certification review class and covers the six domains (Ethics and Law, Forensic Science, Investigation, Digital Forensics, Application forensics and Hybrid and Emerging Technologies). Students completing this class successfully are prepared to take the CCFP certification exam and, if they pass, are qualified to become certified either as CCFPs or (ISC) Associates until they achieve three years of field experience. Prerequisite: DF 311, DF 411, DF 442 or permission of instructor.

Economics Courses

EC 106 The Structure and Operation of the World Economy 3 Credits

This course will introduce students to the operation of the world economy. Emphasis will be on the identification and description of economic concepts such as tariffs, multinational companies, stock markets, debt, international trade balances and international banking. These concepts will be developed utilizing examples from current world economic conditions. Prerequisite: This is a freshman course-permission of instructor required for any exception.

EC 201 Principles of Economics (Macro) 3 Credits

Description and analysis of the American economic system in terms of basic economic concepts and the determination of national income and its fluctuation. Prerequisite: one semester of college mathematics.

EC 202 Principles of Economics (Micro) 3 Credits

Study of the behavior of individuals in making decisions on the allocation of limited resources. This course examines how these decisions and behaviors affect the markets for goods and services. Prerequisite: one semester of college mathematics.

EC 300 Topics in Economic History 3 Credits

This course will focus on the progress and development of economic institutions of industrialized nations. These institutions, such as private property, free markets, financial intermediation and discretionary fiscal policy, will be discussed in a historical perspective. Prerequisites: EC 201 and EC 202. Offered in the spring odd years.

EC 301 Intermediate Price Theory 3 Credits

A study of the economic behavior of consumers and producers and their interrelationship in a market economy. Emphasis is on the application of economic theory and the tools of analysis to price determination and market behavior. Welfare economics and other modern analytical techniques are also introduced. Prerequisites: EC 201, EC 202 and either MA 108 or MA 121.

EC 302 National Income Analysis 3 Credits

The theory and policies of determining national income, achieving economic stability and maintaining economic growth. Attention is given to leading post-Keynesian and Monetarist economists' interpretation of current economic conditions. Prerequisites: EC 201, EC 202, and either MA 108 or MA 121.

EC 304 Labor Economics 3 Credits

Operation of labor markets from theoretical and policy perspectives. Topics include: human capital theory, the impact of labor unions and public policy issues relevant to collective bargaining, unionism, wages and income. Prerequisites: EC 201 and EC 202. Offered in the spring even years.

EC 310 Money and Banking 3 Credits

The principles and institutions of money, banking and finance as they influence the performance of the economy. The major topics covered are the nature of money, commercial banking and financial institutions, central banking, monetary theory, monetary policy, inflation and the international monetary system. Prerequisites: EC 201, EC 202 and QM 213 or permission of the instructor.

EC 331 Business and Government 3 Credits

A study of the institutional relationships between business and government, with stress upon public policies toward business and the role of government in fostering competition. Emphasis is placed upon the economic effects of the antitrust laws through outside readings and analysis of landmark court decisions. Other topics covered are concentration and mergers, restrictive business practices, monopoly and oligopoly. Prerequisites: EC 201 and EC 202. Offered in the fall even years.

EC 403 Comparative Economic Systems 3 Credits

The study of major economic systems. Theories of capitalism, socialism and communism and their implementation by major nations are discussed. Prerequisites: EC 201 and EC 202. Offered in the spring odd years.

EC 406 Public Finance 3 Credits

An investigation of the effects of government expenditures and revenues on the efficiency of resource allocation and the equity of the income distribution. Topics covered include public goods, externalities, benefit-cost analysis, the structure of major taxes and expenditure and tax incidence. Prerequisites: EC 201 and EC 202. Offered in the fall even years.

EC 419 International Economics 3 Credits

International trade and the theory of comparative advantage. Special attention is given to free world trade and economic development in other countries and groupings as in the European Common Market. Prerequisites: EC 201 and EC 202. Offered in the fall odd years.

EC 421 History of Economic Thought 3 Credits

Development of economic thought with emphasis upon the evaluation of economic theory as it has developed in response to problems of society. Prerequisites: EC 201 and EC 202. Offered in the fall odd years.

EC 499 Seminar in Economics and Finance 3 Credits

A capstone economics course designed to integrate the students' undergraduate studies in economics, management, accounting, information systems and finance. Prerequisite: senior standing and permission of instructor.

Finance Courses

FN 311 Corporate Finance 3 Credits

Development of the basic theoretical framework for decision-making in financial management, emphasizing the time-value of money and the analysis of cash flows. Areas of concentration are financial institutions and markets, financial statement analysis, the role of time value in finance, bond and stock valuation, capital budgeting decision process, risk and return analysis, cost of capital and dividend policy. Prerequisites: AC 206 or AC 201, EC 202, QM 213 or permission of the instructor.

FN 407 Corporate Finance II 3 Credits

Special topics in financial management including: international managerial finance, mergers and acquisitions, hybrid and derivative securities, working capital management, short-term and long-term financing, financial planning, leverage analysis and capital structure theory. Prerequisites: QM 213, FN 311. Offered in the spring-odd years.

FN 412 Investments 3 Credits

Methods of security analysis and portfolio management, including the current theoretical literature and thought. Discussion and analysis of current events and their implications for stock price behavior. Prerequisites: QM 213, FN 311. Offered in the spring-even years.

Information Assurance Courses

IA 241 Cyberlaw and Cybercrime 3 Credits

This course includes extensive discussion of the legal constraints, both civil and criminal, that underlie acceptable behavior using computers and networks today. Cross-listed as CJ341. Prerequisite: CJ 101 or instructor permission.

IA 340 Introduction to Information Assurance 3 Credits

This course introduces the foundations of information assurance, with focus on concepts and terminology used in describing, analyzing, and implementing information security. Topics include the history and mission of information assurance, history of computer crime, modern and historical cryptology, information warfare, penetrating computer systems and networks, malware, social engineering, spam, phishing, physical and facilities security, network security, identification and authentication, securing stored data, data backups and archives, patch management, and protecting digital rights. 3 hours; laboratory 2 hours. Prerequisite: C or higher in IS 131 or CS 140 or permission of instructor.

IA 342 Management of Information Assurance 3 Credits

This course focuses on management of the information assurance process. Topics include human factors in reducing security breaches, security incident detection and response, remediation, management's role in information assurance, and other considerations in framing and implementing information assurance policies. The final section reviews current topics of particular interest and activity in the field of information assurance. Prerequisite: IS 340 or IA 340 or permission of instructor.

IA 360 Network Security 3 Credits

This course focuses on the concepts, terminology and practice of network security. Topics include the fundamental goals of network security and practical applications of wired and wireless network security techniques such as applications of cryptology in network protocols, authentication, access control, network security devices such as firewalls and intrusion detection and prevention systems, incident response, log analysis, honeypots and honeynets. Classroom 3 hours, laboratory 2 hours. Prerequisite: IS 460 or CS 260.

IA 455 Contemporary Issues in Information Assurance 3 Credits

A capstone seminar for Computer Security and Information Assurance majors which will vary every term in accordance with the current issues of the time. Students work with the instructor as they explore today's issues and trends in preparation of a thesis or project. Emphasis is placed on critical thinking, research and evaluation of current issues. A comprehensive computer security exam is included in this course. Prerequisites: IS 342 or IA 342; Open to CSIA 2nd-semester sophomores or higher, or by instructor permission.

IA 456 Cyber Defense Practicum 3 Credits

This course provides practical application of the concepts learned over the course of the CSIA program. This is the technical capstone for the program and is a required course. The class is divided into three teams. Each team rotates through red (attack), blue (defend) and white (monitor/analyze) cells over the semester. Network attack analysis, intrusion detection systems and the use of network forensics in attaché analysis and defense are covered. Several open source and commercial tools during the class are used. Scenarios on a variation of the virtual network are ran. Blue teams harden the devices on the network to resist attack and are scored on how successful they are. Red teams develop a suite of attacks that allow completion of the scenario and are scored on the completeness of attack preparations. White teams analyze the read attacks and the blue responses and present analysis to the class at the close of the exercise. The scenario changes slightly for the iterations presented. This is a 100% lab class. Prerequisites: IS 340 or IA 340 and IS 460 or CS 260.

Management and Marketing Courses

MG 098 Junior Career Conference 1 Credit

This third year seminar focuses on evolving career decisions for Business & Management majors. Guest faculty are drawn from University Board of faculty members and associates with extensive real-world business acumen. Students will experience developing skills to prepare for entering the global workplace in their chosen fields and professions. 1 lecture hour.

MG 099 Senior Career Conference 1 Credit

This fourth year seminar focuses on evolving career decisions for Business & Management majors. Guest faculty are drawn from University Board of faculty members and associates with extensive real-world business acumen. Students will hone and finalize skills to prepare for entering the global workplace in their chosen fields and professions. 1 lecture hour.

MG 101 Introduction to Business 3 Credits

The purpose of this course is to introduce the student to the world of business. Students will learn about business organization and ownership and will survey union management relations, marketing, accounting, finance, international business, the legal environment, and the stock market. The course is designed to explore the relationship between social responsibility and profits in our free enterprise system. Prerequisite: permission of instructor required for upperclassmen.

MG 224 Principles of Entrepreneurship 3 Credits

This course provides an introduction to the creative and innovative managerial practices of successful entrepreneurship. This course reviews the significant economic and social contributions entrepreneurs provide to society, the intense lifestyle commitment, and the skills necessary for entrepreneurial success. This course provides an overview of the entrepreneurial process. Prerequisites: not open to freshmen students.

MG 305 Introduction to Sports Management 3 Credits

This course will provide an overview of the sports industry from the perspective of variety of stakeholders in the industry. It covers the major business disciplines of management, marketing, finance, operations, information technology, accounting, communications, ethics and law. 3 lecture hours.

MG 309 Management of Organizations 3 Credits

A study of the functions of modern management: planning, organization, staffing, leading, and controlling. This study is applicable to the management of military, government, educational and non-profit, as well as business organizations. The ethical and social responsibilities of management and contemporary challenges such as the internationalization of organizations are integrated in all aspects of this course. Prerequisites: junior or senior standing or permission of instructor.

MG 310 Production/Operations Management 3 Credits

Principles and applied study of the operation of manufacturing and service organizations. Managerial tools and diagnostics, decision-making, and financial management are introduced. Problems of small, medium, and large-sized businesses are studied. Prerequisites: QM 213.

MG 314 Marketing Management 3 Credits

This course immerses the student in the strategies and processes of marketing management - market analysis, segmentation, targeting and positioning, and the implementation and evaluation of marketing plans. When the student has completed this course they will understand how a marketing plan is developed and have the skills necessary to identify, analyze and solve marketing problems. Prerequisite: EC 202 or permission of instructor. 3 lecture hours.

MG 319 International Dimensions of Business 3 Credits

This course is designed to familiarize the student with the basic concepts and terminology of international business, and to gain an appreciation of the differences in social, political, and economic conditions among nations and how these affect the conduct of business and trade between nations. Topics include comparative cultural, political, and economic environments, international trade theory and policy, foreign exchange and exchange rate determination, the dynamics of international business-government relationships, and corporate policy and strategy of the multinational firm. Prerequisite: EC 201 or EC 202.

MG 341 Business Law I 3 Credits

A study of the law and legal system as they affect business. Topics include the court system, constitutional law, torts, criminal law, contracts, property, and the Uniform Commercial Code. In discussing business law, students will learn how morality and social responsibility are integrated into our legal system. Each student will be required to prepare a paper outlining ethical standards based on the student's life experiences. Prerequisite: junior or senior standing.

MG 346 Business Law II 3 Credits

A continuation of the analysis of the legal dimension of business operations that was developed in Business Law I. Special emphasis will be given to the legal environment as it relates to the accounting student's professional certification. Topics include bankruptcy, commercial paper, secured transactions, agency, corporations, and partnerships. Prerequisite: MG 341 or permission of instructor.

MG 351 Organizational Behavior 3 Credits

This course considers the individual, the nature of organizations, and the issues resulting from the dynamic relationship of people in organizations. The course addresses such topics as learning, personality, motivation, organization structure, leadership, ethics, communication, and change.

MG 360 Health Economics & Policy 3 Credits

This course introduces students to principles of health economics and public policy in health and social welfare. Topics include support for public health, policy intervention in health determinants, the relationship between government regulation and market competition, the demand for healthcare, and the supply of services. This course will enable students to apply economic reasoning to the health-care challenges facing society. Prerequisite: One semester of college level mathematics or QM 213.

MG 408 Human Resources Management 3 Credits

The management of human resources is one of the most challenging and critical aspects of contemporary organizational functions. This course addresses such issues as the nature of the American labor force, equal employment opportunity, personnel planning and staffing, compensation, employee well-being and job security, and collective bargaining. In addressing these issues attention is given to the ethical, legal, and moral questions involved. Prerequisite: MG 309 or permission of instructor.

MG 409 Organizational Leadership 3 Credits

This course prepares students to apply leadership principles to the roles they play as managers. Students will discover more about themselves and learn more about the connection between the individual and the organization. Other topics include organizational culture, structure, group behavior, motivation, power, politics, organizational change, and workplace conflict.

MG 411 Consumer Behavior 3 Credits

This course is designed to help the student understand the concepts of consumer behavior that provides the basis for marketing strategies. Students will gain an understanding of how consumers make decisions regarding the purchase and use of products and services and the internal and external factors that influence this process. Prerequisite: MG 314.

MG 416 Advanced Marketing 3 Credits

In this course students will examine the key concepts and issues in developing a marketing strategy from the perspective of the corporate and SBU decision-maker. The course will take students through the process for formulating marketing strategies under various market conditions, for developing strategic and tactical marketing action plans, and how to evaluate and control a marketing plan and budget. Students undertaking this course will be required to use knowledge gained from previous marketing subjects in completing course assignments. Prerequisite: MG 314.

MG 426 Marketing Research 3 Credits

This course explores the process and tools for data collection and analysis used to solve marketing problems. In addition, the subject addresses when marketing research is appropriate and how to define the research problem, as well as the role of marketing research in marketing decision making. This course will provide students with practical experience in the use of computer based data analysis techniques and make students aware of the biases and limitations inherent in various research methodologies. Prerequisites: QM 213, MG 314.

MG 429 Seminar in Advanced Management I 3 Credits

A topics course addressing managerial problems in various environments. Prerequisites: MG 309, MG 310, FN 311, and MG 314.

MG 441 Integrated Marketing Communications 3 Credits

This course will provide students with the necessary knowledge and skills to develop appropriate communication strategies consistent with strategic marketing principles. The role of communications in the client organization's marketing plan is emphasized. The concept of Integrated Marketing Communication (IMC) for coordinating the individual communication elements of advertising, direct marketing and public relations to achieve specific marketing objectives is stressed. Prerequisite MG 314. 3 lecture hours.

MG 441S Integrated Marketing Communications 3 Credits

This course will provide students with the necessary knowledge and skills to develop appropriate communication strategies consistent with strategic marketing principles. The role of communications in the client organization's marketing plan is emphasized. The concept of Integrated Marketing Communication (IMC) for coordinating the individual communication elements of advertising, direct marketing and public relations to achieve specific marketing objectives is stressed. Students will complete a 40 hours practicum working with the NU Athletic Program and 3 lecture hours, plus 1 cr. (40 hours) Practicum. Prerequisite MG 314. 3 lecture hours.

MG 448 Small Business Strategies 3 Credits

A course that integrates the functional areas of management-human resources, finance, marketing, and operations they uniquely affect the small business enterprise. Case studies and lectures develop the student's problem solving abilities. Prerequisites: MG 309, MG 310, FN 311, and MG 314.

MG 449 Administrative Policy and Strategy 3 Credits

A capstone course designed to integrate the students' undergraduate studies. Case studies, collaborative assignments, writing assignments and oral presentations provide opportunities to synthesize and apply the knowledge gained from courses in the management program. A comprehensive Division examination is included in this course. Prerequisites: MG 309, MG 310, FN 311, and MG 314.

MG 450 Internship in Management 3 Credits

The internship program is designed for students who want to apply their studies by working with a business, industry, or public agency. The student will be required to work closely with a faculty supervisor to develop and implement a structured experience tailored to the career goals of the student. Prerequisites: senior standing and written consent of the department chair and internship committee. Normally only available during the summer.

Quantitative Methods Courses

QM 213 Business and Economic Statistics I 3 Credits

A course emphasizing the development and presentation of statistical data for business and economic decision-making. Topics will include survey methods, statistical description measures, sampling distributions, statistical inference procedures, simple regression and time series analysis, and construction and use of index numbers. Prerequisite or corequisite: MA 107.

QM 317 Business and Economic Statistics II 3 Credits

A course in which the statistical concepts developed in QM 213 are continued. New topics developed are multiple correlation and regression theory and analysis, the assumptions of regression analysis and econometric problems, and an introduction to simultaneous models and advanced topics. Prerequisite: QM 213. Offered in the fall-even years.

QM 370 Quantitative Methods for Marketing & Finance 3 Credits

A course in which the statistical concepts developed in QM 213 are continued. The focus of the course will be the application of statistical techniques to real world issues in Finance and Marketing. Emphasis will be placed on problem solving, class participation, computer applications and completion of a term paper. Prerequisite QM 213. 3 lecture hours.