

upon completion of the major. Satisfactory completion of this project, including a written and oral presentation, will demonstrate a solid understanding of the major, as well as the confidence and skills to work with existing and emerging aspects of the professional field, to do independent research and effective problem solving, and to communicate effectively. *Prerequisite: Interdisciplinary Studies 206, Business 215 or Social Science 217, senior standing, and permission.*

Information Science and Technology (IST)

307 Database Design and Development (3)

A study of the methods of organizing data on peripheral devices and of accessing this information in an efficient manner. Upon completion of this course, students will understand the relationship between file systems and database systems, and will design and implement a database application using a popular DBMS. *Prerequisite: Information Science and Technology 145.*

341 Principles of Programming Languages (3)

A study of the principles governing the design of modern programming languages including: language syntax - representation and parsing; language processors - compilers and interpreters; language representations - data/control structures and binding; language styles - procedural, functional, object, logic, and data flow. One or more example languages are studied in some detail. Upon completion of this course, the student will have an understanding of how programming languages are developed and of the common principles that relate various programming languages. *Prerequisite: Permission.*

352 Operating Systems (3)

An introduction to operating systems. Students will leave the course with a better understanding of multiprogramming concepts such as CPU scheduling, deadlocks, memory management, virtual memory and protection, operating systems structures, and distributed operating systems. Current operating systems will be surveyed and discussed as they relate to these concepts. *Prerequisite: Permission.*

Information Systems Management (ISM)

101 Software Development I (3)

This course provides, through the development of small software applications, an understanding of the process of developing software, including the identification of a problem, and the design, analysis, and implementation of algorithms and data/file structures to solve that problem. Students learn how to implement algorithms and data/file structures in a high-level language, and how to test and verify that implementation. *Prerequisite: Information Systems Management 100. (Students may demonstrate competence to fulfill this requirement.)*

102 Software Development II (3)

A continuation of Information Systems Management 101, this course provides, through the development of larger software applications, an under-

standing of the process of developing software, including the identification of a problem, and the design, analysis and implementation of algorithms, and data/file structures to solve that problem. Students learn how to implement algorithms and data/file structures in a high-level language, and how to test and verify that implementation. **Students may demonstrate competence to fulfill this requirement. Prerequisite: Information Systems Management 101 or competence and Mathematics 115.**

201 Supporting Microsoft Windows 2000 Professional (3)

A course designed to help students learn how to set up and support the Microsoft Windows 2000 Professional operating system and prepare for the Microsoft Certified Professional examination. *(This is Microsoft course #2151.)*

202 Supporting Microsoft Windows 2000 Server (3)

A course designed to help students learn how to set up and support the Microsoft Windows 2000 Server operating system and prepare for the Microsoft Certified Professional examination. *Prerequisite: Information Systems Management 201. (This is Microsoft course #2152.)*

215 Information Systems Theory and Practice (3)

This course provides an understanding of the decision process and how information is used for decision support in organizations. Students develop an understanding of decision theory and practice essential for providing viable information to the organization and will be able to identify the various types of information systems. *Prerequisite: Information Systems Management 100.*

253 Information Technology Architecture (3)

This course provides the hardware and software technology background necessary to enable students to understand computer architecture for effective use in the business environment. Students learn the various hardware designs, how to choose and organize hardware, fundamental operating systems concepts, and basic networking components. *Prerequisite: Information Systems Management 102 or competence.*

271/371/471 Selected Topics (1-3)

An investigation of topics not offered in other courses, selected on the basis of student interest and available instruction.

301 Supporting a Network Infrastructure (3)

A course intended for new-to-product support professionals who will be responsible for installing, configuring, managing and supporting a network infrastructure that uses the Microsoft Windows 2000 Server Products. *Prerequisite: Information Systems Management 202. (This is Microsoft course #2153.)*

302 Implementing and Administering Microsoft Windows 2000 Directory Services (3)

A course designed to provide students with the knowledge and skills necessary to install, configure, and administer Microsoft® Windows® 2000 Active Directory™ directory services. The course also focuses on implementing

Group Policy and understanding Group Policy tasks required to centrally manage users and computers. Prerequisite: *Prerequisite: Information Systems Management 301. (This is Microsoft course #2154.)*

315 Systems Analysis and Design (3)

This course applies a student's understanding of the systems development and modification process as outlined by the systems development life cycle. It enables students to evaluate and choose a system development methodology. Students demonstrate their mastery of the analysis and design process acquired in this course and earlier courses by analyzing, designing, and constructing a physical system (implemented via either a DBMS or programming language) from a logical design. *Prerequisite: Information Systems Management 102 or competence.*

316 Communication, Technology, and Organizational Behavior (3)

This course examines the impact of technology on the way we communicate with others as well as communicative processes in the workplace. Students will examine essential communication and human relations concepts to help them recognize, define, and resolve change and productivity issues. The course attempts to develop in students an ability to understand human dynamics and communicate effectively to insure the integration of technology and other functions of the enterprise. *Prerequisite: Computer Systems Applications requirements.*

325 Software Engineering I (3)

An investigation and application of engineering principles to the development of software systems. Students will gain a better understanding of these principles through the completion of a software engineering project using the same software development environment learned in Information Systems Management 101 and 102. *Prerequisite: Information Systems Management 102.*

326 Software Engineering II (3)

Further investigation and application of engineering principles to the development of software systems. Students will continue to develop a better understanding of these principles through the completion of a software engineering project using a software development environment different from that used in Information Systems Management 101 and 102. *Prerequisite: Information Systems Management 325.*

342 Network Management (3)

This course provides in-depth knowledge of data communication and networking requirements, including telecommunication technologies, hardware, and software. Emphasis is on the analysis and design of networking applications in business. Management of telecommunications networks, cost-benefit analysis, and evaluation of connectivity options is also covered. Students learn to evaluate, select, and implement different communication options within a business and develop the skills for network administration. *Prerequisite: Information Systems Management 253.*

358 Network Technology (3)

This course provides in-depth study of data communications and networking topology requirements. Students learn to set up, install, and configure net-

working hardware and software. Emphasis is on network trouble shooting and technical support as students explore network performance measurement issues. *Prerequisite: Information Systems Management 253, 342, or competence.*

401 Designing Microsoft Windows 2000 Directory Services Infrastructure (3)

A course providing students with the knowledge and skills necessary to plan and implement Microsoft® Windows® 2000 Directory Services in an enterprise environment. *Prerequisite: Information Systems Management 302 or permission. (This is Microsoft course #1561.)*

402 Designing Microsoft Windows 2000 Networking Services Infrastructure (3)

A course providing students with the knowledge and skills necessary to develop a Microsoft® Windows® 2000 networking services solution for enterprise networks. *Prerequisite: Information Systems Management 302 or permission. (This is Microsoft course #1562.)*

403 Designing a Secure Microsoft Windows 2000 Network (3)

A course providing students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Microsoft® Windows® 2000 technologies. *Prerequisite: Information Systems Management 302 or permission. (This is Microsoft course #2150.)*

404 System Administration for Microsoft SQL Server 7.0 (3)

A course providing students with the knowledge and skills required to install, configure, administer, and troubleshoot Microsoft SQL Server client/server database management system version 7.0. Corresponding exam number: 70-28. *Prerequisite: Information Systems Management 302 or permission. (This is Microsoft course #832.)*

405 Secure Web Access Using Microsoft Proxy Server 2.0 (3)

A course covering installing, configuring, and troubleshooting Microsoft Proxy Server. It includes basic architecture of the server, security configurations, and integration with Microsoft Internet Information Server. *Prerequisite: Information Systems Management 302 or permission. (This is Microsoft course #836.)*

409 Project Management (3)

An introduction to the basic concepts of project management. Students become familiar with generally accepted project management knowledge and practice, learn all aspects of the processes of project management, and develop an understanding of the relationship of project management to other management disciplines. *Prerequisite: Business 242.*

421 Information Systems Management Internship (0-9)

Supervised on-the-job experience in a for-profit, not-for-profit, or governmental environment. *Prerequisite: Permission. (Pass/Fail)*

425 Network Administration (3)

In this course, students develop the skills necessary for computer systems network administration. They learn the administration requirements for current network operating systems, including both server and workstation sup-

port. Emphasis is placed on routine network administration management tasks, along with back up and disaster recovery procedures within a client/server environment. *Prerequisite: Information Systems Management 253, 342, 358, or competence.*

445 Modeling and Simulation (3)

Students learn to use techniques of modeling to simulate business operations for problem solving, forecasting, and decision making. The focus of the course is the practical application of simulation modeling. Each student builds an operational model/simulation for a local organization. *Prerequisite: Information Systems Management 215 or permission.*

496 Senior Seminar (3)

With the guidance of a faculty member, students will develop a research or experiential project which will demonstrate the knowledge and skills expected upon completion of the major. Satisfactory completion of this project, including a written and oral presentation, will demonstrate a solid understanding of the major, as well as the confidence and skills to work with existing and emerging aspects of the professional field, to do independent research and effective problem solving, and to communicate effectively. *Prerequisite: Interdisciplinary Studies 206, senior standing, and permission.*

Interdisciplinary Studies (IDS)

104 Reorientation to Higher Education (1)

A course designed to 1) help students understand the meaning of a liberal arts education and the organization and structure of college degree requirements; (2) build the student's confidence in the ability to study and learn in a formal academic setting; (3) diagnose current individual skill levels in the areas of writing, reading comprehension, reading rate, vocabulary, and math; (4) continue development of study skills for note-taking, textbook analysis, time management, test-taking, and listening; and 5) help students understand college-level writing requirements and demystify writing as a skill. (*Pass/Fail*)

109 American Sign Language I (3)

A beginning course in the visual-gestural processes of American Sign Language (ASL). Students develop basic receptive and expressive language skills in ASL, including signs, grammar syntax, and finger spelling, and will begin development of an understanding of the culture of the deaf.

206 Introduction to Research (3)

The study of basic research methodology and the tools of research with instruction in principles and procedures applicable to all disciplines. Students are introduced to the concepts and skills necessary for data collection and analysis.