

INFORMATION SYSTEMS AND OPERATIONS MANAGEMENT (ISOM)

ISOM 2100 Introduction to Information Systems 3 Credits

This course helps students understand the role of information systems in the contemporary business environment. It introduces them to the use of information systems concepts and techniques in solving a wide range of business problems. Working in small teams, students develop, analyze, and present solutions to a business problem using information technology. Previously IS 0100.

ISOM 2101 Operations Management 3 Credits

Prerequisites: ECON 3278 or MATH 1017 or MATH 2217; sophomore standing.

This course provides the primary exposure to service and manufacturing operations management within the business core curriculum. Topics include process modeling, quality management and control, decision analysis, capacity planning, supply chain management, and project planning and control. Special attention is given to showing how concepts and models presented in lectures and readings apply to real-world business situations. Examples of international operations are studied, and ethical issues are explored within the context of decisions such as where to locate facilities. Previously OM 0101.

ISOM 2135 Fundamentals of Web Design 3 Credits

Students learn the theory and practice of front-end web design. Theoretical content will primarily focus on website design, with a heavy emphasis on developing sites that conform to standards and are responsive to the needs of practical applications and mobile devices. Hands-on work will help develop technical skills, such as HTML, CSS, XML, and other web client technologies. Students will learn to use a professional-quality toolset and to follow generally accepted best practices. The course includes weekly web-programming assignments and a semester project. Previously IS 0135.

ISOM 2140 Project Management 3 Credits

Prerequisite: ECON 3278 or MATH 1017 or MATH 2217.

This course introduces students to project management and its role in business operations, with applications in such functional areas as accounting, finance, information systems, management, and marketing. Topics include the linkage between projects and organizational strategy, project planning and scheduling, project development and implementation, applying best practices and tools, evaluation methodologies and control techniques, and critical success factors. Special attention is given to showing how concepts and models presented in lectures and readings apply to real-world projects. Previously OM 0140.

ISOM 2980 Internship 1 Credit

Prerequisite: Sophomore standing.

Students may take up to two semesters of a department-approved internship. Students must have a GPA of 2.5 or higher. Previously IS 0393-0394.

ISOM 3240 Systems Analysis and Logical Design 3 Credits

Prerequisite: BUAN 2101.

Common wisdom dictates, "You can't get a job without experience, and you can't get experience without a job." While having experience helps tremendously in obtaining a job, one can get experience without a job, and that is the goal of this course. In this course, students will attempt to work on a live project with real clients, preferably a client with social goals, i.e., they aim to make a positive impact on the world by helping the less privileged, either directly or indirectly. Working on a real, live project, and interacting with real clients will teach students several of the skills they need as a systems analyst. As the course progresses, students will learn about requirements elicitation, and several diagramming techniques to analyze the system that will be built. Previously IS 0240.

ISOM 3980 Internship 3 Credits

Prerequisite: Junior standing.

Students may take up to two semesters of a department-approved internship. Students must have a GPA of 2.5 or higher. Previously IS 0391-0392.

ISOM 4310 E-Business Applications 3 Credits

Attributes: INEL International Studies / International Business Elective

Prerequisite: BUAN 3260 or ISOM 3240.

This course examines e-business applications such as knowledge management, enterprise resource planning (ERP), customer relationship management (CRM), and mobile applications in inter-organizational, national, and global business environments. Students explore new e-business applications, the economics of e-business, value chains and value networks, related legal and ethical issues, information privacy and security, disaster planning and recovery, and the impact of emerging e-business and mobile applications. The course includes a brief introduction to technical architecture, technology, solutions, and financing required for effective e-business applications. Students investigate emerging opportunities, challenges, and trends through interactive team exercises, case studies, and individual research projects and presentations. Previously IS 0310.

ISOM 4320 Systems Design and Implementation 3 Credits

Prerequisites: BUAN 3260, ISOM 3240.

Students work in collaborating teams to design and build a networked information system. Emphasis is placed on development as an ongoing iterative and incremental process. Standard CASE tools, design patterns, and business practices are used to ensure proper communication and integration across development teams. Previously IS 0320.

ISOM 4990 Independent Study 3 Credits

Students pursue topics of special interest through independent study, research, and/or completion of an information systems project under the supervision of a full-time faculty member. The department chair and dean must approve the work. The student and a faculty project advisor who agrees to conduct the work according to a mutually agreeable schedule must complete an application form. Once the form is completed and submitted to the registrar, the student may register for the course. If any work is expected to occur at any time other than the semester registered, students must obtain the approval of the faculty project advisor and the department chair prior to commencing of any work. Normally, students will complete at least two advanced information systems courses before taking this course. Previously IS 0399.

ISOM 5400 Business Operations **3 Credits**

This course introduces basic concepts and tools relevant to operations and supply chain management, including process mapping, quality management, decision analysis, capacity planning, supply chain management, project management, and operations strategy. Case studies are used to link the concepts and models to real-world business applications. Previously OM 0400.

ISOM 6520 Project Management **3 Credits**

Prerequisite: ISOM 5400 or ISOM 6500.

This course explores the process and practice of project management. Topics to be covered include project lifecycle and organizations, teambuilding and productivity, task scheduling and resource allocation, and progress tracking and control. Cases will be used to consider the implications for change management, consulting, IT implementation, and other related disciplines. Small team projects and experiential exercises will also be used to provide an active learning environment. This course is designed to count toward professional project management certification. Previously IS 0520.

ISOM 6550 Business Analytics and Big Data Management **3 Credits**

Prerequisites: DATA 6540, DATA 6545.

This course will survey state-of-the-art topics in Big Data, looking at data collection (via smartphones, sensors, the Web), data storage and processing (scalable relational databases, Hadoop, Spark, etc.), extracting structured data from unstructured databases, systems issues (exploiting multicore, security), analytics (machine learning, data compression, efficient algorithms), data visualization, and a range of applications. Each of these five modules will introduce broad concepts as well as provide the most recent developments in the area. Previously IS 0550.

ISOM 6900 Contemporary Topics Seminar **3 Credits**

This course draws from current literature and practice on information systems and/or operations management. The topics change from semester to semester, depending on student and faculty interest and may include: project management, e-business, management science with spreadsheets, e-procurement, executive information systems, ethics, and other socioeconomic factors in the use of information technology. Previously IS 0585.

ISOM 6990 Independent Study **3 Credits**

This course provides an opportunity for students to complete a project or perform research under the direction of an Information Systems and Operations Management (ISOM) faculty member who has expertise in the topic being investigated. Students are expected to complete a significant project or research paper as the primary requirement of this course. Enrollment by permission of the ISOM Department Chair only. Previously IS 0598.