

DEPARTMENT OF INFORMATION SYSTEMS AND SUPPLY CHAIN MANAGEMENT

Paul Hong, Chair

The Department Of Information Systems and Supply Chain Management offers undergraduate programs in information systems, and operations and supply chain management. These degree programs prepare our graduates for a range of career options that intersect people, processes, and technology.

Degrees Offered

- BBA Information Systems (<https://catalog.utoledo.edu/undergraduate/business-innovation/department-information-systems-and-supply-chain-management/bba-information-systems/>)
- BBA Operations & Supply Chain Management (<https://catalog.utoledo.edu/undergraduate/business-innovation/department-information-systems-and-supply-chain-management/bba-operations-supply-chain-management/>)

INFS 3150 Principles Of Structured Computer Programming And Problem Solving

[3 credit hours]

Introduction to fundamental constructs of computer programming. This course introduces data types, variables, constants, arrays, objects, properties, methods, arguments, events, subroutines, functions, data handling, and program control structures. Additionally the course helps students develop skills and logical reasoning used in solving business problems.

Prerequisites: BUAD 1020 with a minimum grade of D- or CMPT 1100 with a minimum grade of D- or Business Computer Prof-Score with a score of 39

Term Offered: Spring, Summer, Fall

INFS 3160 Business Application Development

[3 credit hours]

Building on programming skills developed in INFS3150 this course emphasizes database connectivity, data retrieval, design of user interfaces and business application development. The course will survey an object oriented language like C++, Java.

Prerequisites: INFS 3150 with a minimum grade of D-

INFS 3250 Business Data Analysis & Reporting

[3 credit hours]

This course is designed to acquaint students with the application and use of integrated software. The course will provide students with hands-on experience in data analysis and manipulation, macro recording and editing and other advanced features and functions of popular business software packages. Students will gain skills in computer based report writing and data visualization techniques.

Prerequisites: BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-

Term Offered: Spring, Summer, Fall

INFS 3370 Business Data Communications

[3 credit hours]

An introduction to data communications in business. Topics include local-area and wide-area networks, including the Internet; hardware and media; network topologies; client-server networks; and network operating system software.

Prerequisites: BUAD 1020 with a minimum grade of D- or CMPT 1100 with a minimum grade of D- or Business Computer Prof-Score with a score of 39

Term Offered: Spring, Fall

INFS 3380 Web Application Development I

[3 credit hours]

An introduction to business application program development on the web using contemporary technologies with emphasis on client-side applications. Implications of information technology projects on organizations will be discussed.

Prerequisites: BUAD 1020 with a minimum grade of D- or CMPT 1100 with a minimum grade of D-

Term Offered: Spring, Summer, Fall

INFS 3400 Principles of Information Systems Security

[3 credit hours]

This course aims to give students a broad understanding of technical and business issues in information systems security, systems security models, analysis of process and technology in systems security and security policies leading to information assurance.

INFS 3770 Introduction To Database Systems

[3 credit hours]

In this course, the design and implementation of database management systems are studied. Students will develop significant skills in data modeling, database design and SQL. Students will work in teams developing a database application.

Prerequisites: INFS 3150 with a minimum grade of D- and (BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-)

Term Offered: Spring, Summer, Fall

INFS 3780 Enterprise Wide Information Systems Management

[3 credit hours]

Introduction to ERP, Roles of SCM and CRM in Business Environment, Major Business Processes relating to functional areas of Business in an integrated software environment. Extensive hands-on exercises using an ERP software.

Prerequisites: BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-

Term Offered: Fall

INFS 3980 Contemporary Topics

[3 credit hours]

Selected current topics in Information Systems practice, trends and technology.

Prerequisites: BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-

Term Offered: Spring, Fall

INFS 4100 Business Intelligence Using Big Data

[3 credit hours]

This course aims to give students a broad understanding of technical and business issues in data analytics. Students will gain proficiency with reporting, data visualization and prediction using SAP Business Warehouse.

Prerequisites: BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-

INFS 4300 Web Application Development II

[3 credit hours]

Address web architecture, web server administration and security issues; analyze, design, develop, and implement extensive database oriented business processes using server-side and client-side processing.

Prerequisites: (INFS 3770 with a minimum grade of D- and INFS 3380 with a minimum grade of D-)

Term Offered: Spring

INFS 4320 Information Systems Planning And Outsourcing Management

[3 credit hours]

Issues of planning, control, outsourcing management, and the organizational impact of computer systems will be studied. Challenges and opportunities in outsourcing will also be the focus of the course.

Prerequisites: BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-

Term Offered: Fall

INFS 4510 Business Systems Analysis and Design

[3 credit hours]

Analysis, design and implementation of business information systems will be studied using Case tools and other appropriate software systems. Will also emphasize management of organizational change brought about by information technology projects.

Prerequisites: (BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-) and INFS 3150 with a minimum grade of D-

Term Offered: Spring, Summer, Fall

INFS 4620 Enterprise Database Systems

[3 credit hours]

In-depth exposure to database concepts including relational and Object Data Models, normalization, logical design, stored functions, procedures, triggers, forms and reports will be explored using a business database package.

Prerequisites: INFS 3770 with a minimum grade of D- and (BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-)

Term Offered: Spring

INFS 4680 Enterprise Systems Implementation and Integration

[3 credit hours]

This course will provide students an overview of the fundamental business processes and examination of how business processes interact with SAP ERP including the system configuration and implementation. Issues. Students will gain a deep appreciation for the role of enterprise systems in managing processes from multiple functional perspectives. Also, students will work on various hands-on exercises including configuration of a fictitious company and implementation of business rules using an enterprise system.

Prerequisites: BUAD 2020 with a minimum grade of D- or BUAD 3050 with a minimum grade of D-

INFS 4810 Enterprise Database Administration

[3 credit hours]

Designed for database administrators. Covers Physical Database Design, Indexing, performance monitoring and evaluation, partitioning databases, distributed and parallel processing. Exposure will be sufficient for certification exams.

Prerequisites: (INFS 3770 with a minimum grade of D- and INFS 4510 with a minimum grade of D- and INFS 4620 with a minimum grade of D-)

INFS 4940 Info Systems Internship

[3 credit hours]

A prearranged work-study program where students specializing in computer systems, operations management or decision sciences obtain on-the-job experience while learning and applying the basic concepts and techniques of their respective areas.

Term Offered: Spring, Summer, Fall

INFS 4990 Independent Study: Readings And Research

[1-3 credit hours]

Individual student study of a topic of interest to both the faculty member and student. Students are responsible for finding a faculty member to sponsor readings and research.

Term Offered: Spring, Summer, Fall

OSCM 3310 Computer And Model Based Business Decision Making

[3 credit hours]

An introduction to quantitative methods of decision making including linear programming, transportation, simulation, waiting line analysis, advanced decision theory and Markov chains. Computer packages and creative thinking will be emphasized.

Prerequisites: BUAD 2070 with a minimum grade of D-

OSCM 3340 Quality Management and Process Improvement

[3 credit hours]

Covers major aspects of lean processes and managing total quality functions in manufacturing/service operations. Includes: quality assurance, process control techniques, product liability and organization of the quality function as well as process improvement tools such as lean principles, process analysis.

Prerequisites: BUAD 3020 with a minimum grade of D-

Term Offered: Spring, Summer, Fall

OSCM 3600 Facility Planning

[3 credit hours]

The study of the design and planning of new facilities. Topics include product and process design, the application of CIM, FMS, capacity planning, facility location and layout, and job design.

Prerequisites: BUAD 3020 with a minimum grade of D-

OSCM 3610 Operations Planning and Scheduling

[3 credit hours]

A study of operations planning and its relation to organizational goals. Students learn concepts of developing materials and resources requirement plans, capacity management, just-in-time, resource scheduling in manufacturing and service organizations. Emerging concepts in the discipline will also be discussed.

Prerequisites: BUAD 3020 with a minimum grade of D-

Term Offered: Spring, Summer, Fall

OSCM 3660 Strategic Sourcing

[3 credit hours]

Relationship between supply management and firm's strategic goals, state-of-the-art supplier management, competing through effective supplier relationships, commodity strategy development, supplier negotiations, supplier selection and quality management, managing the RFP/RFQ process, cost management, and latest trends in sourcing and covered in the course.

Prerequisites: BUAD 3020 with a minimum grade of D-**Term Offered:** Spring, Summer, Fall**OSCM 3750 Applied Regression Analysis**

[3 credit hours]

This course emphasizes model formulation, tests of goodness-of-fit and significance of parameters for the traditional linear regression model. Business applications/cases and computer packages will be emphasized.

Prerequisites: BUAD 2070 with a minimum grade of D-**OSCM 3760 Management Science: Cases And Applications**

[3 credit hours]

A study of business applications emphasizing model formulation, identification and validation. The course includes linear programming, critical path methods, queuing and various modeling techniques using computer packages.

Prerequisites: OPMT 3310 with a minimum grade of D-**OSCM 4020 Statistics For Administrative Services**

[3 credit hours]

An introduction to statistical methods, including measures of central tendency and dispersion, probability and probability distributions, sampling theory, decision theory, regression and correlation. Specifically designed for the Administrative Services program.

Prerequisites: MATH 1270 with a minimum grade of D-**OSCM 4150 Supply Chain Analytics and Cases**

[3 credit hours]

This course focuses on developing skills in using techniques and software tools for the design and operational control of supply chains. Students will investigate issues relating to configuring supply chain networks (distribution systems), inventory deployment, planning and routing of transportation systems, warehouse and plant location and contract design etc. The focus will be on applications to practical situations. Necessary skills will be developed using cases, projects and presentations.

Prerequisites: BUAD 3020 with a minimum grade of D-**OSCM 4210 Project Management**

[3 credit hours]

This course covers planning, organizing and controlling projects. Topics such as project selection, scheduling, budgeting, resource management, project control, time-based competition and concurrent engineering will be discussed.

Prerequisites: BUAD 3020 with a minimum grade of D-**OSCM 4250 Business Analytics-Techniques and Cases**

[3 credit hours]

This course provides an introduction to the analytical tools and techniques used in business for decision making with focus on using data visualization, and data mining techniques. It also familiarizes and equips students with prescriptive and evaluative techniques. Industrial grade software along with case studies will be used.

Prerequisites: BUAD 2070 with a minimum grade of D-**OSCM 4420 Service Operations Management**

[3 credit hours]

The service sector is the dominant sector of the economy. Students will study various aspects of Operations Management as applied to service industries. Services for manufacturing will be emphasized.

Prerequisites: BUAD 3020 with a minimum grade of D-**OSCM 4450 Business Forecasting**

[3 credit hours]

A study of qualitative and quantitative forecasting techniques. The course will cover applications of these analysis techniques to various functions such as finance, operations and supply chain management, marketing and economics. Students will also gain experience in using statistical software packages for forecasting.

Prerequisites: BUAD 2070 with a minimum grade of D-**OSCM 4500 Supply Chain Strategy**

[3 credit hours]

The course examines firms' strategic management of resources, and discusses its importance and benefits to its overall competitiveness. The purpose of the course is to provide students with an understanding of the content of firms' supply chain strategy and the processes by which they are developed and implemented. Topics covered in the course are related to operations/supply chain strategy, including environmental analysis, sustainability, product/service design, structure and infrastructure, coordination strategy, logistics and risk management.

Prerequisites: BUAD 3020 with a minimum grade of D- and MKTG 3130 with a minimum grade of D- and (OSCM 3340 with a minimum grade of D- and OSCM 3610 with a minimum grade of D- or OSCM 3660 with a minimum grade of D-)**Term Offered:** Spring**OSCM 4750 Analysis of Variance**

[3 credit hours]

Analysis of variance and related topics such as factorial design and Latin squares. Experimental designs including repeated measures, factorial and nested designs.

OSCM 4760 Sim Mod/Anlys Spply Chn System

[3 credit hours]

This course provides an introduction to the use of computer simulation for business decision making. Students are introduced to modeling uncertainty in supply chain systems using various techniques including Monte Carlo simulation, waiting time analysis, discrete event simulation and other emerging techniques using simulation software (such as @Risk, Simul8 and ARENA) and business cases.

Prerequisites: BUAD 3020 with a minimum grade of D-

OSCM 4940 Internship

[3 credit hours]

A prearranged work study program where students specializing in OPMT or SCM obtain on the job experience while learning and applying the basic concepts and techniques of their respective discipline.

Term Offered: Spring, Summer, Fall

OSCM 4980 Contemporary Topics In Operations and Supply Chain

Management

[3 credit hours]

Selected current topics in Operations Management practice, trends and technology.

Prerequisites: BUAD 3020 with a minimum grade of D-

Term Offered: Spring, Fall