

# Undergraduate Management of Information Systems



In the modern workplace, it is imperative that technology works both effectively and reliably. Computer and information systems managers play a vital role in the implementation of technology within their organizations. They plan, coordinate and direct research, as well as facilitate a firm's computer-related activities. They help determine both technical and business goals in consultation with top management and make detailed plans for the accomplishment of these goals. This requires a strong understanding of both technology and business practices.

## At Ottawa University

The Management of Information Systems major provides knowledge and skills related to the programming, storage, networking, and communication of information in an organization. This preparation also includes basic concepts and principles of business practices, along with skills in planning, problem solving, decision making, and systems analysis. Students develop a computer proficiency and gain the ability to utilize information systems in organizations effectively, efficiently and responsibly, with an understanding of the critical nature of information management in a global economy.

## Careers

The U.S. Department of Labor, Bureau of Labor Statistics projects employment of computer and information systems managers to grow 16 percent by 2016, which is faster than the average for all occupations. New applications of technology in the workplace will continue to drive demand for workers, fueling the need for more managers.

## Education and Qualifications

A bachelor's degree usually is required for management positions, although employers often prefer a graduate degree. As computer systems become more closely connected with day-to-day operations of businesses, computer and information systems managers are also expected to be aware of business practices. They must possess strong interpersonal, communication and leadership skills because they are required to interact not only with staff members, but also with other people inside and outside their organizations. They must possess team skills to work on group projects and other collaborative efforts.



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## Foundation Courses

### ACC 20364 Accounting for Business Operations

Introduces operating activities of business. Emphasis on using income statements to plan and evaluate the operations of a for-profit entity.

### ECO 20163 Macroeconomics

Focuses on inflationary consequences of monetary and fiscal policies designed to eliminate poverty and unemployment, significance of money and government deficits on attainment of goals of high employment and economic growth in a non-inflationary environment and role of the dollar in international trade.

### ECO 20263 Microeconomics

Study of the role of prices in allocating and developing scarce resources to meet the needs and demands of consumers, the impact of the profit motive on business size and efficiency, the economic power of large-scale business firms, the interplay of private and public choice through price controls, business regulation and taxation.

### MAT 20143 Business Mathematics

Focuses on basic mathematics skills, business mathematics applications and problem solving strategies. Concepts include properties of real numbers, fundamental operations of rational numbers, fractions, decimals, percents, numerical and graphical descriptions of data, basic probability, and logical thinking. Alternate: MAT 20043 (Recommended) or MAT 10643.

### OAD 30763 Business Statistics

Focuses on basic methods of research design and analysis of data including descriptive and inferential statistics. Topics include mean, median, mode, frequency distributions, range, standard deviation, probabilities of sampling selection, Z-score, T-value, regression and correlation, hypothesis testing, analysis of variance, and Chi-square analysis.

### OAD 31664 Business Ethics

Introduces development of personal and group norms required for work places. Topics include moral reasoning in business, employee rights and responsibilities of corporations.

## Required Major Courses

### COM 30363 Organizational Communication

Explores theory and practice of communication within organizations, including interpersonal factors, motivation, change and conflict resolution, and communication audit practices and procedures. Participate in the communication audit of a local organization. Prerequisite: COM 30163 or consent of instructor.

### MIS 13063 Foundations of Information Technology

Provides understanding of organizational systems, planning and decision processes and how information is used for decision support in organizations. Quality and decision theory, information theory, and practice essential for providing viable information to the organization. Explores concepts of IS for competitive advantage, data as a resource, IS and IT planning and implementation, Total Quality Management (TQM) and reengineering, project management and development of systems, and end-user computing.

### MIS 30163 Database Management

Examines design, development and administration of large-scale database applications on a scale appropriate to needs of business organizations.

### MIS 30563 Enterprise Architecture

Explores the design, selection, implementation, and management of enterprise IT solutions, focusing on applications and infrastructure and their fit within business organizations. Covers frameworks and strategies for infrastructure management, system administration, data/information architecture, content management, distributed computing, middleware, legacy system integration, system consolidation, software selection, total cost of ownership calculation, IT investment analysis, and emerging technologies.

Prerequisite: MIS 13063.

### MIS 41464 Project Management

Provides theory and application in project planning, implementation, control, and completion. Includes network planning, project evaluation and review techniques (PERT), critical path methods (CPM), management by objectives, management by exception, cost analysis, and resource allocation/leveling.

### MIS 47163 Information Technology Infrastructure

Provides an introduction to IT infrastructure issues and covers topics related to both computer and systems architecture and communication networks. Includes an overall emphasis on the services and capabilities that IT infrastructure solutions enable in an organizational context. The course also focuses on Internet-based solutions, computer and network security, business continuity, and the role of infrastructure in regulatory compliance. Prerequisite: MIS 13063 Foundations of Information Technology

### MIS 48163 Systems Analysis and Design

In-depth study of systems development life cycle. Utilizes blend of traditional development and current techniques. Systems Analyst Toolkit includes cross-phase coverage of communications, economic analysis and project management.

### MIS 49100 Methodologies of Project Development

Capstone course that guides student to emphasize various methodological approaches to software acquisition, development, testing, and implementation, and understand relevance of methodologies to Capability Model Theory, interdependence of phase deliverables, quality control techniques and methods, and tools for testing.

### OAD 30063 Behavior in Organizations

Study of human behavior in work organizations. Focuses on individual satisfaction and motivation as related to organizational structure, nature of task and locus of power. Topics include small group formation, maintenance, organizational conflict, communications, and leadership.

### OAD 30563 Management

Discusses process for managing organizations, including planning, organizing, leading, and evaluating. Examines administrative role in organizations and concepts relevant to its function and historical development of administrative thought.

Prerequisite: PSY 12053