

# Information Systems Department (IS)

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College of Business Administration

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[www.uwlax.edu/academics/department/information-systems](http://www.uwlax.edu/academics/department/information-systems) (<https://www.uwlax.edu/academics/department/information-systems/>)

The Information Systems Department offers two majors: **information systems** and **business analytics**. In addition, the IS department offers minors in both information systems and business analytics. All programs prepare students to apply information systems to improve business performance.

## Information systems majors: Discover how to improve business processes where people, information and technology come together.

**Information systems** (IS) involves the planning, analysis, design, and implementation of information systems. Students develop and use computer-based information systems in business environments in preparation for careers in information technology-related areas. In the IS programs at UWL, students learn how to plan, analyze, design, and implement computer-based information systems, such as computer networks and database applications. Students gain in-depth knowledge of IS concepts and applications, learn how to analyze business data and operations to create innovative solutions and gain management skills. Businesses worldwide depend heavily on advanced information systems for managing information and business operations competitively. This calls for IS professionals in careers such as business/systems analyst, business analytics, web developer, information specialist, applications software engineer, security specialist, project manager, network analyst, and database administrator. These are just a few of the prestigious and well-paid positions available to IS program graduates.

## Business analytics majors: Succeed in a data-driven world by developing solutions to improve business performance.

**Business analytics** (BA) involves the collecting, storing and analyzing of data to shape and make business decisions. The BA programs feature a multi-disciplinary curriculum that focuses on developing new insights and understanding of business performance based on data and statistical methods. The undergraduate business analytics major will prepare students to succeed in a data-driven world, providing exposure to software platforms and techniques used to store, transform, manipulate, analyze and interpret small and large sets of data. BA is a growing field of study that can lead to a variety of career paths and opportunities within a range of businesses and organizations. Operational research analysts, market research analysts and management analysts are positions in high demand, and often offer salaries far above the national median.

## Why minor in information systems? Learn how to apply the benefits of technology.

Can you think of a future career that will not use technology in some way? An **IS minor** is a great way for students to enhance and complement their major with technology skills, business analytics, and

knowledge that will make them more valuable in their chosen major field. An IS minor is a great way to make yourself more attractive to potential employers and prepare for a career that will include the use of IS.

## Why minor in business analytics? Make an impact in today's data-driven business world.

BA is the ability to use statistics, quantitative analysis, and information modeling to shape and make business decisions. BA is a growing field of study that can lead to a variety of career paths and opportunities within a vast range of businesses and organizations. The **BA minor** provides students with introductory level business analytics knowledge and intermediate level skills development in technology and information systems needed to produce, manage, and apply the results for business decision making. The BA minor is a great complement to many areas of study.

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## 2024-25 Faculty/Staff

*The following is the department's faculty and staff as of the publication date of this catalog. This list will not be updated again until the next catalog is published in July.*

### Professor

Peter Haried (Department Chair)

### Assistant Professor

Ye (Hannah) Han

Botong Xue

### Associate Teaching Professor

David Annino

### Assistant Teaching Professor

Nicholas Breidel

### Administrative Support

Maureen Spencer

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## Majors

- Business analytics major - BS (<http://catalog.uwlax.edu/undergraduate/informationssystemsbusinessanalytics/>)
- Information systems major - BS (<http://catalog.uwlax.edu/undergraduate/informationssystemsinformationssystemsbusinessanalytics/>)

## Minors

- Business analytics minor (<http://catalog.uwlax.edu/undergraduate/informationssystemsbusinessanalyticsminor/>)
  - Information systems minor (<http://catalog.uwlax.edu/undergraduate/informationssystemsinformationssystemsbusinessanalyticsminor/>)
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## Courses

IS 220 Cr.3

### **Information Systems for Business Management**

This course provides the basic level of management information systems literacy. The course introduces the building blocks of information systems, the various organizational aspects of utilizing information systems, and the role of information systems in the digital economy. Students gain familiarity with spreadsheet and database applications that provide useful information to business functional areas. Prerequisite: sophomore standing. Offered Fall, Winter, Spring, Summer.

IS 250 Cr.1-3

### **Information Systems Internship**

An information systems internship provides an opportunity for declared information systems majors to earn academic credit for experiential learning when working for cooperating business, government, or civic organizations. Credits earned will not count toward information systems major requirements. Repeatable for credit - maximum six credits. Prerequisite: cumulative GPA of at least 2.50; declared information systems major. Consent of department. Pass/Fail grading. Offered Fall, Winter, Spring, Summer.

IS 300 Cr.3

### **Data Management for Business Problem Solving and Decision Making**

This course provides an understanding of data management used to help solve business problems and make sound business decisions. In addition to the conceptual and academic foundations of data management, the course also explores the application of software tools to manage, manipulate, analyze, and visualize data. Prerequisite: IS 220 or healthcare analytics management minor. Offered Fall, Spring.

IS 310 Cr.3

### **Information Systems in Networked Environments: Technical Foundations and Applications**

This course provides fundamentals of data communications and business networking requirements, and examines the linkage of information technology strategies and technological solutions for enabling effective business processes within and between organizations in emerging environments. Major topics include fundamentals of data communications and business networking, applications to data communications, basic technologies of the internet and the web, commercial use of internet technologies, e-business applications, and cases in online industries. Prerequisite: IS 220. Offered Spring.

IS 320 Cr.3

### **Enterprise Systems for Decision Making and Data Analytics**

This course provides an introduction to enterprise systems and their impact on organizations. An enterprise system application is utilized to illustrate the concepts, fundamentals and integration of enterprise-wide applications and processes. Enterprise system data analytics applications are applied to analyze business results and support business decision making. Prerequisite: IS 220. Offered Fall, Spring.

IS 330 Cr.3

### **Business Choices and Telecommunications Decision**

This course examines the business and organizational role of telecommunications. The course focuses on using telecommunications to support and achieve business strategies and does not address the theoretical foundations of telecommunications. Course topics include how businesses are being reshaped by advances in telecommunications; how businesses plan, deploy and manage telecommunications resources; and how businesses are utilizing and administering local area network (LAN) and wide area network (WAN) technology to achieve business objectives. Prerequisite: IS 310. Offered Occasionally.

IS 340 Cr.3

### **Information Systems Security and Data Assurance Management**

This course provides an overview of information systems security management and data assurance principles. Coverage includes privacy concerns and safeguards, ethical issues surrounding data and information, information risk analysis, information system vulnerabilities, security threats and countermeasures. Prerequisite: IS 220. Offered Fall.

IS 360 Cr.3

### **Management of Business Analytics**

The course addresses the remarkable impact that analytics is having on business. This course provides students with the fundamental concepts and tools needed to understand the emerging role of business analytics in organizations. The course examines issues that both information systems managers and non-information systems managers face in managing and performing business data analytics within an organization. Students apply business analytics approaches to support business decision making and problem-solving efforts and learn how to effectively use and interpret analytic models and results for business decisions. The course covers managerial statistical tools in descriptive analytics and predictive analytics. Prerequisite: IS 220; junior standing. Offered Fall, Spring.

IS 401 Cr.3

### **Management Information Systems: Analysis and Design**

This course covers the development process for computer-based management information systems. This course emphasizes information analysis and the logical design of management information systems. Prerequisite: IS 300. Offered Fall.

IS 405 Cr.3

### **Special Topics in Information Systems**

This course examines and studies current issues in information systems. Topics vary from semester to semester. Repeatable for credit with different topic - maximum six. Prerequisite: junior standing. Offered Occasionally.

IS 411 Cr.3

### **Management Information Systems: Project Management and Implementation**

This course emphasizes the use of project management techniques to support an information system implementation. In-depth exposure to key tools, techniques, practices, and knowledge areas of project management are applied to system implementation. Prerequisite: grade of "C" or better in ACC 221, ACC 222, BLAW 205, ECO 110, ECO 120, ENG 110 or ENG 112, MTH 160 or MTH 175 or MTH 207, and STAT 145 or STAT 245; 54 credits earned. Offered Spring.

IS 440 Cr.3

### **Business Data Visualization and Communication**

This course covers data visualization concepts, practices, and tools particularly for analyzing and presenting business data. Students will evaluate, design, and develop effective visualizations and dashboards using various development tools. Prerequisite: ECO 230, IS 300. Offered Spring.

IS 451 Cr.1-6

**CBA Management Information Systems Internship**

The internship program as conceived and implemented is an unusual program designed to provide an opportunity for students in the College of Business Administration to participate in an approved program with a cooperating business, governmental or civic organization for usually 15 weeks of their undergraduate work. All management information systems (MIS) internships must be approved and supervised by an IS faculty member. For additional information, see internship description under the College of Business Administration heading. Repeatable for credit - maximum six. Prerequisite: cumulative GPA of at least 2.50; ACC 221, ACC 222; BLAW 205; ECO 110, ECO 120, ECO 230; FIN 355; IS 220; MGT 308; MKT 309; admission to business. Pass/Fail grading. Offered Fall, Spring, Summer.

IS 499 Cr.1-3

**Independent Study**

In this course students engage in individual reading or research under the guidance of a staff member. This course is open to selected advance students who have excellent records in the department. Repeatable for credit - maximum six. Prerequisite: grade of "C" or better in ACC 221, ACC 222, BLAW 205, ECO 110, ECO 120, ENG 110 or ENG 112, MTH 160 or MTH 175 or MTH 207, and STAT 145 or STAT 245; 54 credits earned. Consent of instructor. Pass/Fail grading. Offered Fall, Spring, Summer.