

Information Systems Major - Bachelor of Science (BS)

Why major in information systems? Discover how to improve processes where people and technology come together.

Information systems (IS) is concerned with 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. 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.

In the IS program 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. Courses in information systems include a variety of in-demand topics and skill development including information technology, data analytics, business core knowledge, software applications, project management, and a systems perspective.

Students in the program need to possess strong mathematics and logical reasoning skills. High school students planning collegiate programs in business, including information systems, should take algebra/trigonometry or pre-calculus courses in high school.

With solid coursework in the computer science area before entering the professional portion of the program, students develop a technical foundation to support their upper-division curriculum.

As in all other business programs, IS majors will complete an extensive array of courses in liberal arts and science, including courses in communication, humanities, multicultural studies, and social sciences.

The vast majority of IS majors participate in an internship experience in their junior or senior year. The internships earn university credit that applies to the major program. Most are paid and many lead to employment following graduation.

Major requirements

(College of Business Administration)

College of Business Administration (CBA) core requirements

All students enrolled in any program within the college are required to complete the following:

- College of Business (CBA) core courses (<https://catalog.uwlax.edu/undergraduate/businessadministrationcba/#CBACore>)
- [CBA upper division prerequisite requirement](#) - Most professional, upper division courses (300/400 level) in the CBA require students to have the following to register into the course:

- A grade of "C" or better in ACC 221, ACC 222, BLAW 205, ECO 110, ECO 120, ENG 110/ENG 112, MTH 160/MTH 175/MTH 207, and STAT 145/STAT 245;
- 54 credits or higher earned (or in progress).

Curriculum

29 credits

Code	Title	Credits
Core		
CS 120	Software Design I	4
CS 220	Software Design II	4
CS 364	Introduction to Database Management Systems	3
IS 300	Data Management for Business Problem Solving and Decision Making ¹	3
IS 310	Information Systems in Networked Environments: Technical Foundations and Applications ¹	3
IS 320	Enterprise Systems for Decision Making and Data Analytics	3
IS 401	Management Information Systems: Analysis and Design	3
IS 411	Management Information Systems: Project Management and Implementation	3
Electives		
Select one from the following:		3
CS 224	Introduction to Programming Language	
CS 464	Advanced Database Management Systems	
IS 330	Business Choices and Telecommunications Decision	
IS 340	Information Systems Security and Data Assurance Management	
IS 360	Management of Business Analytics	
IS 405	Special Topics in Information Systems	
IS 440	Business Data Visualization and Communication	
IS 451	CBA Management Information Systems Internship	
IS 499	Independent Study	
MGT 395	Management Science	
Total Credits		29

¹ Requires completion of IS 220. IS 310 also requires the student be an information systems major/minor.

Degree requirements

All students must complete the general education, college core, major/minor, and university degree requirements in order to qualify for a degree. The easiest way to track all of these requirements is to refer to the Advisement Report (AR) found in the Student Information System (WINGS) Student Center. All enrolled students have access to the AR.

- General education (<http://catalog.uwlax.edu/undergraduate/generaleducation/>)
- College core (p. 2)
- Baccalaureate degree requirements (p. 2)

College of Business Administration core requirements

All students enrolled in any program within the college must complete the 16 business core courses listed below and all requirements for the major (see department listings). MGT 449 must be taken in the semester of graduation.

Code	Title	Credits
ACC 221	Accounting Principles I ¹	3
ACC 222	Accounting Principles II ¹	3
BLAW 205	The Legal and Ethical Environment of Business ¹	3
ECO 110	Microeconomics and Public Policy ¹	3
ECO 120	Global Macroeconomics ¹	3
ECO 230	Data Analysis for Business Applications	3
ENG 110	College Writing II ¹	3
or ENG 112	College Writing AP (Advanced Placement)	
FIN 355	Principles of Financial Management	3
IS 220	Information Systems for Business Management	3
MGT/MKT 301	Business Communication	3
MGT 308	Organizational Behavior	3
MGT 393	Production and Operations Management	3
MKT 309	Principles of Marketing	3
MTH 160	Mathematics for Business ¹	4-5
or MTH 175	Applied Calculus	
or MTH 207	Calculus I	
STAT 145	Elementary Statistics (or equivalent) ¹	4
or STAT 245	Probability and Statistics	
Capstone - taken in the semester of graduation		
MGT 449	CBA Capstone: Applied Business Strategy	3
Total Credits		50-51

¹ A grade of "C" or better required.

Upper division prerequisite requirement

Most professional, upper division courses (300/400 level) in the CBA require students to have the following to register into the course:

1. A grade of "C" or better in ACC 221, ACC 222, BLAW 205, ECO 110, ECO 120, ENG 110/ENG 112, MTH 160/MTH 175 /MTH 207, and STAT 145/STAT 245;
2. 54 credits or higher earned (or in progress).

Baccalaureate degree requirements

Candidates for the Bachelor of Arts or the Bachelor of Science degrees must accomplish the following:

1. Fulfill the general education requirements.
2. Complete at least one ethnic studies (diversity) course.
3. Complete the courses prescribed by the Undergraduate Curriculum Committee for the degree desired in the respective school or college.
4. Earn a minimum of 120 semester credits with at least a 2.00 cumulative GPA. ^{1,2}

5. At least 40 credits must be earned in 300/400 level courses. Transfer courses earned or transferred at the 300/400 level apply to this requirement.
6. Complete major and minor requirements with at least a 2.00 GPA ¹, ² in each major and minor (and concentration or emphasis, if selected).
7. A minimum of 30 semester credits in residence at UWL is required for graduation. (See undergraduate resident requirement (<http://catalog.uwlax.edu/undergraduate/academicpolicies/graduation/#undergraduate-residence-requirement>.)
8. Submit an application for graduation via the "Apply for Graduation" link in the WINGS Student Center as soon as the student has registered for his or her final semester or summer term in residence. December and winter intersession graduates should apply by May 1. May and summer graduates should apply by December 1.

¹ Grade point average requirements for some programs will be considerably higher than 2.00. Re-entering students may be required to earn credits in excess of the 120 needed for graduation in any curriculum in order to replace credits earned in courses in which the content has changed substantially in recent years. Each case will be judged on its own merit.

² The grade point average recorded at the time the degree is awarded will not be affected by future enrollment.

No degree will be awarded unless all requirements are fulfilled and recorded within 30 days after the official ending date of each term.

Sample degree plan

Below is a sample degree plan that can be used as a guide to identify courses required to fulfill the major and other requirements needed for degree completion. A student's actual degree plan may differ depending on the course of study selected (second major, minor, etc.). Also, this sample plan assumes readiness for each course and/or major plan, and some courses may not be offered every term. Review the course descriptions or the class timetable (<http://www.uwlax.edu/records/registration/>) for course offering information.

The sample degree plans represented in this catalog are intended for first-year students entering UWL in the fall term. Students should use the Advisement Report (AR) in WINGS (<https://wings.uwlax.edu>) and work closely with their faculty advisor(s) and college dean's office to ensure declaration and completion of all requirements in a timely manner.

General Education Program

The general education curriculum (Gen Ed) is the common educational experience for all undergraduates at UWL. Sample degree plans include Gen Ed placeholders to ensure completion of the general education requirements. Courses may be rearranged to fit the needs or recommendations of the student's program of study. Gen Ed courses may be taken during winter term (January between the semesters) and summer to reduce the course load during regular terms (fall and spring). Students should consult with their advisor and/or the college academic services director in their college/school for assistance with course and schedule planning. Refer to the general education requirements (<http://catalog.uwlax.edu/undergraduate/generaleducation/>) for more specific details.

At least 40 credits of the 120 credits required must be earned at the 300/400-level.

Note: New students and transfer students with less than 12 credits earned are required to take FYS 100 First-Year Seminar (3 cr.) during one of their first two semesters at UWL.

This sample degree plan does not establish a contractual agreement. It identifies the minimum requirements a student must successfully complete, to qualify for a degree, in a format intended to assist the student in planning their academic career. Actual degree plans may differ.

Year 1		
Fall	Credits Spring	Credits
ECO 110 or 120 (Gen Ed Global Studies/ Gen Ed Self & Society) ¹	3 ECO 110 or 120 (Gen Ed Global Studies/ Gen Ed Self & Society) ¹	3
ENG 110 or 112 (Gen Ed Literacy - Written)	3 CST 110 (Gen Ed Literacy - Oral)	3
MTH 160, 175, or 207 (Depending on math placement exam results) ¹	4 STAT 145 (Depending on math placement exam results)	4
FYS 100 (Gen Ed First-Year Seminar)	3 Gen Ed Minority Cultures	3
Gen Ed Arts	2 Gen Ed Arts	2
	15	15
Year 2		
Fall	Credits Spring	Credits
ACC 221 ¹	3 ACC 222 ¹	3
IS 220	3 BLAW 205 ¹	3
Gen Ed Health & Well-Being	3 University Elective	3
Gen Ed World History	3 Gen Ed Humanistic Studies	3
University Elective	3 Gen Ed Natural Lab Science	4
	15	16
Year 3		
Fall	Credits Spring	Credits
MGT 301 or MKT 301	3 MGT 393	3
MGT 308	3 IS 310	3
ECO 230	3 IS 300	3
CS 120	4 CS 220	4
University Elective	3	
	16	13
Year 4		
Fall	Credits Spring	Credits
IS 320	3 MGT 449	3
IS 401	3 IS 411	3
CS 364	3 IS Elective Course	3
MKT 309	3 University Elective (300/400 level)	3
FIN 355	3 University Elective	3
	15	15
Total Credits: 120		

¹ A grade of "C" or better is required for the CBA core requirements.