The School of Information Technology (IT) offers four degree programs: Computer Science, Cybersecurity, Information Systems, and Network and Telecommunications Management. All IT majors require substantial interpersonal written and verbal communication skills as well as technical computing skills. The curricula have a strong practical emphasis on the application of computing solutions to real world problems. Practical skills and applications are balanced with exposure to the theoretical knowledge base that underlies the field of computing.

All programs prepare a student for a computing career, but there are important differences in the context of the work to be performed, the types of problems to be solved, and the types of systems to be designed and built. Computer Science focuses on algorithm development and writing programs that others will use. Cybersecurity focuses on all aspects of information assurance, including protecting networks, servers, databases, and private information. Information Systems focuses on integrating hardware and software authored by others into a coherent system to fulfill a business purpose. Network and Telecommunications Management prepares students to build and optimize networks for best performance.

Starting positions for Computer Science and Information Systems include such job titles as programmer or programmer/analyst. Cybersecurity graduates will take jobs as security analysts, while Network and Telecommunications titles include network administrator and network technician. Department minors are intended to help majors in other departments focus on specific skills and electives which are relevant for their career needs. Minors are available in Information Systems and in Computer Science.

**Academic Requirements:** For any student who enrolls in a course in the School of Information Technology, a grade of C or better is required in all prerequisite courses. For majors, only courses in which the student has received a grade of C or better may be counted toward the hours required in the major, including supporting requirements.

A student cannot pursue a double major in any two programs in the School of Information Technology. Also, a student cannot pursue both a major and a minor in Information Technology.

**Admission Requirements:** A student may enter a major or minor in the School of Information Technology as a new freshman, a transfer student, or as a change of major at Illinois State University. Students should contact the Information Technology undergraduate advisor or University Admissions for minimum admission requirements.

**Transfer Students:** Proficiency with the Java programming language is expected in 200- and 300-level Information Technology courses and is usually obtained by completing IT 168 and one of IT 178, 179 or 275.

**Honors in Information Technology**

The School offers honors work in all programs to highly qualified juniors and seniors. Candidates must have a 3.30 overall GPA and a 3.50 GPA in Information Technology. Honors requirements involve honors course work and the preparation of a substantial research paper or the completion of a significant project prepared under the guidance of a faculty advisor. Further details about the University Honors program are available at Honors.IllinoisState.edu.

**Professional Practice**

Each degree program requires a practical experience that may be satisfied by a directed project or an internship. An internship experience is the usual way for students to satisfy this requirement. IT 191 (1 hour) is required and prepares students for fulfilling this requirement. It is recommended that IT 191 be taken no later than the sophomore year.

The six (6) hours of Professional Practice credit counted toward the major will be graded. Any additional Professional Practice credit will be earned on a CR/NC basis. A maximum of 16 hours of Professional Practice credit (IT 391, 398) may be applied toward graduation. Students may not register for IT 398 during the last semester of their studies.

**Minor in Cognitive Science**

The School of Information Technology participates in the Minor in Cognitive Science program. Several courses offered by the School contribute to the minor. For further information, please consult the School undergraduate advisor as well as the section entitled “Interdisciplinary Studies Programs” in this Undergraduate Catalog.

**Computer Science Programs**

**Degree Offered:** B.S.

**Major in Computer Science**

This degree is designed for students who wish to pursue a comprehensive study of computer science that blends theory, abstraction, and design in a variety of traditional and current areas. The Computer Science major prepares students to solve modern computing problems by providing a strong background in theory, design, hardware, and systems along with significant software development experience in multiple languages on multiple operating systems. It would also prepare students to pursue graduate studies in Computer Science. The Computer Science major is accredited by the Computing Accreditation Commission of ABET, at www.abet.org.

**General Computer Science Sequence**

The General Computer Science sequence is designed for students who wish to pursue a broad education in computer science. A minor is not required.

**Web Computing Sequence**

The Web Computing sequence is designed for students who wish to study computer science with special emphasis on Web, mobile, and cloud computing. A minor is not required.

**Preparation for Graduate Study:** The General Computer Science sequence of the Computer Science major should be selected by those students interested in traditional Computer Science graduate programs. Any student interested in graduate school should discuss options with faculty and an academic advisor during the junior year.
Minor in Computer Science
This minor provides a solid foundation for using the computer as a tool in any discipline and may be of particular interest to majors in mathematics or the natural sciences. It provides an opportunity for students to gain knowledge in a specialized area such as graphics, parallel processing, or artificial intelligence.

- 22 hours required: IT 168, 179, 225, 226, 261, 279
- 1 course from: IT 326, 327, 328, 340, 356, 384, 388

Cybersecurity Program
Degree Offered: B.S.

Major in Cybersecurity
The Cybersecurity Major is designed to give students the knowledge and tools necessary for protecting information and information systems. The major provides education for protecting the confidentiality, availability, and integrity of information using technology, people, and policy. A minor is not required. Any student interested in graduate school should discuss options with faculty and an academic advisor during their junior year.

Information Systems Programs
Degree Offered: B.S.

Major in Information Systems
The Information Systems (IS) Major is designed to prepare professionals in Information Systems including such areas as systems analysis and design. This degree focuses on the use of computer technology and information management methods to solve business problems. This requires an understanding of both the organizational context of the problem and the technologies, methodologies, and tools typically utilized. There are three sequences within this program: the Integration of Enterprise Systems Sequence, the Systems Development/Analyst Sequence, and the Web Application Development Sequence.

The Integration of Enterprise Systems Sequence is designed for students who wish to pursue both technical and practical skills in large-scale, multi-platform enterprise computing systems. The Systems Development/Analyst Sequence provides breadth and depth in analysis and design techniques preparing students to work in a variety of information technology environments, while the Web Application Development Sequence emphasizes the development of Web/Internet-based business information systems. The Information Systems program is accredited by the Computing Accreditation Commission of ABET, at www.abet.org.

Preparation for Graduate Study: The Information Systems major offers excellent preparation for a number of computer and management information systems master’s programs. Students interested in an MBA program may want to combine this major with a Business Administration minor. Any student interested in graduate school should discuss options with faculty and an academic advisor during their junior year.

Integration of Enterprise Systems Sequence
The Integration of Enterprise Systems Sequence is designed for students who are interested in the areas of software development, project management, and application integration using large enterprise computing systems. This sequence provides in-depth knowledge regarding the integration of business applications on a large enterprise computing system. A minor is not required.

Systems Development/Analyst Sequence
The Systems Development/Analyst Sequence is designed for the student who will seek a position as an Information Systems professional developing business-oriented information systems. This sequence provides in-depth knowledge of analysis and design techniques along with electives in emerging technologies. A minor is not required.

Web Application Development Sequence
The Web Application Development Sequence is designed to give students a background for developing information systems in a Web/Internet-based environment. This sequence provides in-depth knowledge of Web development techniques and supporting technologies, along with related emerging technologies. A minor is not required.

Minor in Information Systems
The Information Systems Minor is designed for people who will use computers as tools in their chosen profession or provide limited computer support for their work group.

- A minimum of 22 hours required
- Required courses: IT 168, 178, 254, 261, 262
- 1 course from: IT 250, 276, 341, 353, 367, 368, 378
- 3-4 hours of an IT 200 or 300-level course

Network and Telecommunications Management Program
Degree Offered: B.S.

Major in Network and Telecommunications Management
Network and Telecommunications Management is concerned with network technology, information systems, computer technology, business practices, and policy issues involved in data, image, video, and voice transmission. This program prepares undergraduate students to enter the industry in entry-level positions with adequate preparation to assume management positions once work experience is gained. Graduates will possess an in-depth technical understanding of computer networks and telecommunication systems as well as an appreciation of the economic and public policy issues that are important in the design and development of local and wide area networks, and national and multinational telecommunication systems. A minor is not required.

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses:
https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY
MAJOR IN COMPUTER SCIENCE

General Computer Science Sequence (B.S.)

General Education (39 credit hours)
Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

Communication and Composition (2 courses required)
_____ 3 COM 110 Communication as Critical Inquiry
_____ 3 ENG 101 or ENG 101A10 Composition as Critical Inquiry

Mathematics (1 course required)
_____ 4 MAT 145 Calculus I

Natural Science/Natural Science Alternatives (2 courses required)
Students must complete 1 course from 2 different sciences. Please see major requirements for science options

United States Traditions (1 course required)

Individuals & Civic Life (1 course required)

Fine Arts (1 course/3 credit hours required)***

Humanities (1 course required)***

Language in the Humanities (1 course required)***

Quantitative Reasoning (1 course required)
_____ 4 MAT 146 Calculus II

Science, Math, & Technology (1 course required)
Exempt for General Computer Science majors

Social Sciences (1 course required)***

Additional Graduation Requirements
_____ 120 minimum total credit hours
_____ 42 minimum senior college hours

AMALI requirement
***certain courses in General Education fulfill the AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses. See major requirements for course options.

Major (min. 83 credit hours)

_____ 4 IT 168 Structured Problem Solving Using the Computer (P: MAT 104)
_____ 3 IT 179 Introduction to Data Structures (P: C or better in IT 168)
_____ 1 IT 180 C++ Programming (P: C or better in IT 179)
_____ 1 IT 191 Introduction to IT Professional Practice (P: C or better in IT 168)
_____ 3 IT 214 Social, Legal, & Ethical Issues in Information Technology (P: ENG 101, COM 110)
_____ 3 IT 225 Hardware & Software Concepts (P: C or better in IT 178 or 179 or conc. reg.)
_____ 3 IT 261 Systems Development I (P: C or better in IT 170, 178, or 179; 277; C or better in IT 254 or 225 or conc. reg.)
_____ 3 IT 279 Algorithms & Data Structures (P: C or better in IT 180 or 226; MAT 160 or 260 or conc. reg. in MAT 260)
_____ 3 IT 326 Principles of Software Engineering (P: C or better in IT 179 & 261)
_____ 3 IT 327 Concepts of Programming Languages (P: C or better in IT 179)
_____ 3 IT 328 Introduction to the Theory of Computation (P: C or better in IT 279)
_____ 3 IT 378 Database Processing (P: C or better in IT 261)
_____ 3 IT 383 Principles of Operating Systems (P: C or better in IT 225; IT 180 or 226)
_____ 3 IT 386 Introduction to Networking & Parallel & Distributed Computing (P: C or better in IT 179 & 225)
_____ 6 IT 398 Professional Practice
_____ 3 COM 223 Small Group Processes
_____ 3 ENG 249 Technical & Professional Writing I (P: ENG 101)
_____ 4 MAT 145 Calculus I (P: C or better in MAT 144 or placement)
_____ 4 MAT 146 Calculus II (P: C or better in MAT 145)
_____ 4 MAT 260 Discrete Mathematics (P: C or better in MAT 146)

Take 9 credit hours additional General Computer Science electives from the following: IT 244, 276, 326, 330, 340, 345, 351, 353, 355, 356, 367, 382, 384, 385, 388 (6 of the 9 hours must be from: IT 326, 340, 355, 356, 367, 382, 384, 388)

Take 1 of the following courses:
_____ 4 MAT 350 Applied Probability Models (P: C or better in MAT 147)
_____ 3 MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)

Take 2 (8 credit hours) of the following lab science courses:
_____ 4 BSC 196 Biological Diversity
_____ 4 BSC 197 Molecular & Cellular Basis of Life
_____ 4 CHE 140 General Chemistry I (P: C or better in MAT 119, 120, 144, or 145 or conc. reg. in MAT 120, 144, or 145)
_____ 4 CHE 141 General Chemistry II (P: C or better in CHE 140)
_____ 4 PHY 110 Physics for Science & Engineering I (P: MAT 145 or conc. reg.)
_____ 4 PHY 111 Physics for Science & Engineering II (P: PHY 110; MAT 146 or conc. reg.)

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 additional hours from IT 244, 276, 330, 340, 345, 351, 353, 355, 356, 367, 382, 385, 388 (if not used to satisfy other requirements)

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses:
https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY
MAJOR IN COMPUTER SCIENCE

General Computer Science Sequence (B.S.)

Transfer Students

Illinois Articulation Initiative (min. 37 credit hours)
To be eligible for IAI, at least one transfer course must have been articulated to an IAI core requirement. Refer to the Undergraduate Catalog for a complete list of IAI courses and policies.

Communication and Composition (3 courses required)
A grade of C or better required in ENG 101 and 145 or equivalents

Mathematics (1 course required)
Please see major requirements for mathematics options

Physical & Life Sciences (2 courses/7-8 hours required)
Students must complete 1 life science and 1 physical science course; at least 1 course must have a lab.

Humanities & Fine Arts (3 courses required)
At least 1 humanities and 1 fine arts course required

Social & Behavioral Sciences (3 courses required)
2 different disciplines must be represented

Additional Graduation Requirements

/120 minimum total credit hours

/42 minimum senior college hours

AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses. See major requirements for course options.

Major (min. 83 credit hours)

4 IT 168 Structured Problem Solving Using the Computer (P: MAT 104)
3 IT 179 Introduction to Data Structures (P: C or better in IT 168)
1 IT 180 C++ Programming (P: C or better in IT 179)
1 IT 191 Introduction to IT Professional Practice (P: C or better in IT 168)
3 IT 214 Social, Legal, & Ethical Issues in Information Technology (P: ENG 101, COM 110)
3 IT 225 Hardware & Software Concepts (P: C or better in IT 178 or 179 or conc. reg.)
3 IT 261 Systems Development I (P: C or better in IT 170, 178, or 179; C or better in IT 254 or 225 or conc. reg.)
3 IT 279 Algorithms & Data Structures (P: C or better in IT 180 or 226; MAT 160 or 260 or conc. reg. in MAT 260)
3 IT 326 Principles of Software Engineering (P: C or better in IT 179 & 261)
3 IT 327 Concepts of Programming Languages (P: C or better in IT 179)
3 IT 328 Introduction to the Theory of Computation (P: C or better in IT 279)
3 IT 378 Database Processing (P: C or better in IT 261)
3 IT 383 Principles of Operating Systems (P: C or better in IT 225; IT 180 or 226)
3 IT 386 Introduction to Networking & Parallel & Distributed Computing (P: C or better in IT 179 & 225)
6 IT 398 Professional Practice
3 COM 223 Small Group Processes
3 ENG 294 Technical & Professional Writing I (P: ENG 101)
4 MAT 145 Calculus I (P: C or better in MAT 144 or placement)
4 MAT 146 Calculus II (P: C or better in MAT 145)
4 MAT 260 Discrete Mathematics (P: C or better in MAT 146)

Take 9 credit hours additional General Computer Science electives from the following: IT 244, 276, 326, 330, 340, 345, 351, 353, 355, 356, 367, 382, 384, 385, 388 (6 of the 9 hours must be from: IT 326, 340, 355, 356, 382, 384, 388)

Take 1 of the following courses:

4 MAT 350 Applied Probability Models (P: C or better in MAT 147)
3 MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)

Take 2 (8 credit hours) of the following lab science courses:

4 BSC 196 Biological Diversity
4 BSC 197 Molecular & Cellular Basis of Life
4 CHE 140 General Chemistry I (P: C or better in MAT 119, 120, 144, or 145 or conc. reg. in MAT 120, 144, or 145)
4 CHE 141 General Chemistry II (P: C or better in CHE 140)
4 PHY 110 Physics for Science & Engineering I (P: MAT 145 or conc. reg.)
4 PHY 111 Physics for Science & Engineering II (P: PHY 110; MAT 146 or conc. reg.)

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 additional hours from IT 244, 276, 330, 340, 345, 351, 353, 355, 356, 367, 382, 385, 388 (if not used to satisfy other requirements)

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses:
https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY

MAJOR IN COMPUTER SCIENCE

Web Computing Sequence (B.S.)

General Education (39 credit hours)
Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

Communication and Composition (2 courses required)
_____ 3 COM 110 Communication as Critical Inquiry
_____ 3 ENG 101 or ENG 101A10 Composition as Critical Inquiry

Mathematics (1 course required)
_____ 4 MAT 145 Calculus I

Natural Science/Natural Science Alternatives (2 courses required)
Students must complete 1 course from 2 different sciences. Please see major requirements for science options

United States Traditions (1 course required)

Individuals & Civic Life (1 course required)

Fine Arts (1 course/3 credit hours required)***

Humanities (1 course required)***

Language in the Humanities (1 course required)***

Quantitative Reasoning (1 course required)
_____ 4 MAT 146 Calculus II

Science, Math, & Technology (1 course required)
Exempt for Web Computing majors

Social Sciences (1 course required)***

Additional Graduation Requirements
_____ 120 minimum total credit hours
_____ 42 minimum senior college hours

AMALI requirement
***certain courses in General Education fulfill the AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.

Major (min. 83 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 IT 168</td>
<td>Structured Problem Solving Using the Computer</td>
<td>(P: MAT 104)</td>
</tr>
<tr>
<td>3 IT 179</td>
<td>Introduction to Data Structures</td>
<td>(P: C or better in IT 168)</td>
</tr>
<tr>
<td>1 IT 180</td>
<td>C++ Programming</td>
<td>(P: C or better in IT 179 or consent of the school advisor)</td>
</tr>
<tr>
<td>1 IT 191</td>
<td>Introduction to IT Professional Practice</td>
<td>(P: C or better in IT 168)</td>
</tr>
<tr>
<td>3 IT 214</td>
<td>Social, Legal, &amp; Ethical Issues in Information Technology</td>
<td>(P: ENG 101, COM 110)</td>
</tr>
<tr>
<td>3 IT 225</td>
<td>Hardware &amp; Software Concepts</td>
<td>(P: C or better in IT 178 or 179)</td>
</tr>
<tr>
<td>3 IT 261</td>
<td>Systems Development I</td>
<td>(P: C or better in IT 170, 178, 179; C or better in IT 254 or 225 or conc. reg.)</td>
</tr>
<tr>
<td>3 IT 279</td>
<td>Algorithms &amp; Data Structures</td>
<td>(P: C or better in IT 226; MAT 160 or 260 or conc. reg. in MAT 260)</td>
</tr>
<tr>
<td>3 IT 326</td>
<td>Principles of Software Engineering</td>
<td>(P: C or better in IT 179 and 261)</td>
</tr>
<tr>
<td>3 IT 327</td>
<td>Concepts of Programming Languages</td>
<td>(P: C or better in IT 179)</td>
</tr>
<tr>
<td>3 IT 328</td>
<td>Introduction to the Theory of Computation</td>
<td>(P: C or better in IT 279)</td>
</tr>
<tr>
<td>3 IT 353</td>
<td>Web Development Technologies</td>
<td>(P: C or better in IT 261)</td>
</tr>
<tr>
<td>3 IT 354</td>
<td>Advanced Web Application Development</td>
<td>(P: C or better in IT 353)</td>
</tr>
<tr>
<td>3 IT 358</td>
<td>Mobile &amp; Cloud Computing</td>
<td>(P: C or better in IT 353)</td>
</tr>
<tr>
<td>3 IT 378</td>
<td>Database Processing</td>
<td>(P: C or better in IT 261)</td>
</tr>
<tr>
<td>3 IT 383</td>
<td>Principles of Operating Systems</td>
<td>(P: C or better in IT 225, 226)</td>
</tr>
<tr>
<td>3 IT 386</td>
<td>Introduction to Networking and Parallel and Distributed Computing</td>
<td>(P: C or better in IT 179 and 225)</td>
</tr>
<tr>
<td>6 IT 398</td>
<td>Professional Practice</td>
<td></td>
</tr>
<tr>
<td>3 COM 223</td>
<td>Small Group Processes</td>
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</tr>
<tr>
<td>3 ENG 249</td>
<td>Technical &amp; Professional Writing I</td>
<td>(P: ENG 101)</td>
</tr>
<tr>
<td>4 MAT 145</td>
<td>Calculus I</td>
<td>(P: C or better in MAT 144 or conc. reg.)</td>
</tr>
<tr>
<td>4 MAT 146</td>
<td>Calculus II</td>
<td>(P: C or better in MAT 145)</td>
</tr>
<tr>
<td>4 MAT 260</td>
<td>Discrete Mathematics</td>
<td>(P: C or better in MAT 146)</td>
</tr>
</tbody>
</table>

Take 1 of the following courses:

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<tr>
<td>4 MAT 350</td>
<td>Applied Probability Models</td>
<td>(P: C or better in MAT 147)</td>
</tr>
<tr>
<td>3 MQM 100</td>
<td>Statistical Reasoning</td>
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</tbody>
</table>

Take 2 (8 credit hours) of the following lab science courses:

<table>
<thead>
<tr>
<th>Course</th>
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<th>Prerequisites</th>
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<tr>
<td>4 BSC 196</td>
<td>Biological Diversity</td>
<td></td>
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<tr>
<td>4 BSC 197</td>
<td>Molecular &amp; Cellular Basis of Life</td>
<td></td>
</tr>
<tr>
<td>4 CHE 140</td>
<td>General Chemistry I</td>
<td>(P: C or better in MAT 119, 120, 144, or 145 or conc. reg. in MAT 120, 144, or 145)</td>
</tr>
<tr>
<td>4 CHE 141</td>
<td>General Chemistry II</td>
<td>(P: C or better in CHE 140)</td>
</tr>
<tr>
<td>4 PHY 110</td>
<td>Physics for Science &amp; Engineering I</td>
<td>(P: MAT 145 or conc. reg.)</td>
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<tr>
<td>4 PHY 111</td>
<td>Physics for Science &amp; Engineering II</td>
<td>(P: PHY 110; MAT 146 or conc. reg.)</td>
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Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
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All Courses:
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INFORMATION TECHNOLOGY
MAJOR IN COMPUTER SCIENCE
Web Computing Sequence (B.S.)

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Communication and Composition (3 courses required)
A grade of C or better required in ENG 101 and 145 or equivalents
— 3 C2 900 COM 110 Communication as Critical Inquiry
— 3 C1 900 ENG 101 or ENG 101A10 Composition as Critical Inquiry
— 3 C1 901 ENG 145 Writing in the Academic Disciplines

Mathematics (1 course required)
Please see major requirements for mathematics options
— 4 M1 900-1 MAT 145 Calculus I or M1 900-2 MAT 146
— Calculus II or M1 902 MQM 100 Statistical Reasoning

Physical & Life Sciences (2 courses/7-8 hours required)
Students must complete 1 life science and 1 physical science course; at least 1 course must have a lab.
— 4 L1 910L BSC 196 Biological Diversity or
— BSC 197 Molecular & Cellular Basis of Life
— 4 P1 902L CHE 140 General Chemistry I or P2 900L PHY 110 Physics for Science & Engineering

Humanities & Fine Arts (3 courses required)
At least 1 humanities and 1 fine arts course required
— —

Social & Behavioral Sciences (3 courses required)
2 different disciplines must be represented
— —
— —
— —

Additional Graduation Requirements

/120 minimum total credit hours
/42 minimum senior college hours

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Major (min. 83 credit hours)

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<td>C++ Programming (P: C or better in IT 179 or consent of the school advisor)</td>
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<td>Introduction to IT Professional Practice (P: C or better in IT 168)</td>
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<td>Algorithms &amp; Data Structures (P: C or better in IT 226; MAT 160 or 260 or conc. reg. in MAT 260)</td>
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<td>Principles of Software Engineering (P: C or better in IT 179 and 261)</td>
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<td>3 IT 328</td>
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<td>Advanced Web Application Development (P: C or better in IT 353)</td>
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<td>Principles of Operating Systems (P: C or better in IT 225, 266)</td>
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<td>3 IT 386</td>
<td>Introduction to Networking and Parallel and Distributed Computing (P: C or better in IT 179 and 225)</td>
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<tr>
<td>6 IT 398</td>
<td>Professional Practice</td>
</tr>
<tr>
<td>3 COM 223</td>
<td>Small Group Processes</td>
</tr>
<tr>
<td>3 ENG 249</td>
<td>Technical &amp; Professional Writing I (P: ENG 101)</td>
</tr>
<tr>
<td>4 MAT 145</td>
<td>Calculus I (P: C or better in MAT 144 or placement)</td>
</tr>
<tr>
<td>4 MAT 146</td>
<td>Calculus II (P: C or better in MAT 145)</td>
</tr>
<tr>
<td>4 MAT 260</td>
<td>Discrete Mathematics (P: C or better in MAT 146)</td>
</tr>
</tbody>
</table>

Take 1 of the following courses:
— 4 MAT 350 Applied Probability Models (P: C or better in MAT 147) 
— 3 MQM 100 Statistical Reasoning

Take 2 (8 credit hours) of the following lab science courses:
— 4 BSC 196 Biological Diversity
— 4 BSC 197 Molecular & Cellular Basis of Life
— 4 CHE 140 General Chemistry I (P: C or better in MAT 119, 120, 144, or 145 or conc. reg. in MAT 120, 144, or 145)
— 4 CHE 141 General Chemistry II (P: C or better in CHE 140)
— 4 PHY 110 Physics for Science & Engineering I (P: MAT 145 or conc. reg.)
— 4 PHY 111 Physics for Science & Engineering II (P: PHY 110; MAT 146 or conc. reg.)

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 additional hours from IT 244, 276, 330, 340, 345, 351, 356, 367, 382, 385, 388 (if not used to satisfy other requirements)

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses:
https://coursefinder.illinoisstate.edu/directory/
### INFORMATION TECHNOLOGY
#### MAJOR IN CYBERSECURITY (B.S.)

**General Education (39 credit hours)**
Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

**Communication and Composition (2 courses required)**
- 3 COM 110 Communication as Critical Inquiry
- 3 ENG 101 or ENG 101A10 Composition as Critical Inquiry

**Mathematics (1 course required)**
- 4 MAT 120 Finite Mathematics or MAT 145 Calculus I

**Natural Science/Natural Science Alternatives (2 courses required)**
Students must complete 1 course from 2 different sciences.

**United States Traditions (1 course required)**

**Individuals & Civic Life (1 course required)**

**Fine Arts (1 course/3 credit hours required)***

**Humanities (1 course required)***

**Language in the Humanities (1 course required)***

**Quantitative Reasoning (1 course required)**
- 3 ECO 138 or MQM 100 or PSY 138

**Science, Math, & Technology (1 course required)**
Exempt for Cybersecurity majors

**Social Sciences (1 course required)***

### Additional Graduation Requirements
- 120 minimum total credit hours
- 42 minimum senior college hours

**AMALI requirement**
***certain courses in General Education fulfill the AMALI requirement. See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

**B.S. Science, Math, & Technology (1 course required)**
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.

---

### Major (min. 79 credit hours)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>IT 168</td>
<td>Structured Problem Solving Using the Computer (P: MAT 104)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>IT 191</td>
<td>Introduction to IT Professional Practice (P: C or better in IT 168)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 214</td>
<td>Social, Legal, &amp; Ethical Issues in Information Technology (P: ENG 101, COM 110)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 225/IT 254</td>
<td>Computer Organization (P: C or better in IT 178 or 179) or Hardware &amp; Software Concepts (P: C or better in IT 168)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 250</td>
<td>Fundamentals of Information Assurance &amp; Security (P: C or better in IT 178)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 261</td>
<td>Systems Development I (P: C or better in IT 170, 178 or 179; C or better in IT 254 or 225 or conc. reg.)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 262</td>
<td>Information Technology Project Management (P: IT 261 or conc. reg.)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 276</td>
<td>Data Communications (P: C or better in IT 168; C or better in IT 225 or 254 or conc. reg.)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 351</td>
<td>Practical Cryptography &amp; Trusted Systems (P: C or better in IT 250 or 226, 276)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 357</td>
<td>Tools &amp; Techniques in Information Assurance &amp; Security (P: C or better in IT 250, 276)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 359</td>
<td>Tools &amp; Techniques in Penetration Testing (P: C or better in IT 250, 276)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 360</td>
<td>Security Incident &amp; Event Management &amp; Forensics (P: C or better in IT 250, 276)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 377</td>
<td>Practical Telecommunications Networking (P: C or better in IT 276)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 378</td>
<td>Database Processing (P: C or better in IT 261)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>IT 398</td>
<td>Professional Practice</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IT 223</td>
<td>Small Group Processes</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ECO 101 or ECO 102</td>
<td>Principles of Microeconomics or Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ENG 249</td>
<td>Technical &amp; Professional Writing I (P: ENG 101)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>MAT 120/MAT 145</td>
<td>Finite Mathematics (P: C or better in MAT 119 or placement) or Calculus I (P: C or better in MAT 144 or placement)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>IT 160</td>
<td>Elementary Discrete Mathematics (P: C or better in MAT 120 or 145)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>MQM 220</td>
<td>Business Organization &amp; Management (P: ECO 101 or 103 or 105; 60+ earned hours)</td>
<td></td>
</tr>
</tbody>
</table>

#### Take 1 of the following courses:
- 3 IT 170 | Scripting Languages & Automation (P: C or better in IT 168) |
- 3 IT 178 | Computer Application Programming (P: C or better in IT 168 or 177) |
- 3 IT 179 | Introduction to Data Structures (P: C or better in IT 168) |

#### Take 2 (6 credit hours) of the following courses:
- 3 IT 330 | Introduction To Enterprise Computer Systems (P: C or better in IT 225 or 254) |
- 3 IT 353 | Web Development Technologies (P: C or better in IT 261) |
- 3 IT 355 | Secure Software Development (P: C or better in IT 250, 276) |
- 3 IT 369 | Topics In Cybersecurity |
- 3 IT 370 | Server Management (P: C or better in IT 377) |
- 3 IT 376 | Wireless & Mobile Network Security (P: C or better in IT 276) |
- 3 IT 381 | Network Design & Analysis (P: C or better in IT 373, 377) |

#### Take 1 of the following courses:
- 3 ECO 138 | Economic Reasoning Using Statistics (P: MAT 120, 130, or 145) |
- 3 MQM 100 | Statistical Reasoning (P: MAT 120, 121, 144, or 145) |
- 3 PSY 138 | Reasoning in Psychology Using Statistics (P: C or better in MAT 120, 121, 144, or 145) |

### Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 330, 353, 355, 363, 369, 370, 376, 381 (if not used to satisfy other requirements)

**Information Technology Courses:**
[https://coursefinder.illinoisstate.edu/directory/it/](https://coursefinder.illinoisstate.edu/directory/it/)

**All Courses:** [https://coursefinder.illinoisstate.edu/directory/](https://coursefinder.illinoisstate.edu/directory/)
ILLINOIS ARTICULATION INITIATIVE (min. 37 credit hours)

To be eligible for IAI, at least one transfer course must have been articulated to an IAI core requirement. Refer to the Undergraduate Catalog for a complete list of IAI courses and policies.

Communication and Composition (3 courses required)
A grade of C or better required in ENG 101 and 145 or equivalents
    3  C2 900  COM 110  Communication as Critical Inquiry
    3  C1 900  ENG 101 or ENG 101A10  Composition as Critical Inquiry
    3  C1 901  ENG 145  Writing in the Academic Disciplines

Mathematics (1 course required)
Please see major requirements for mathematics options
    4  M1 906  MAT 120  Finite Math or M1 900-I  MAT 145  Calculus I or
        M1 902  ECO 138/PSY 138/MQM 100  Statistics

Physical & Life Sciences (2 courses/7-8 hours required)
Students must complete 1 life science and 1 physical science course; at least
1 course must have a lab.

Humanities & Fine Arts (3 courses required)
At least 1 humanities and 1 fine arts course required

Social & Behavioral Sciences (3 courses required)
2 different disciplines must be represented
    3  S3 901  Macroeconomics OR S3 902  Microeconomics

Additional Graduation Requirements
72/120 minimum total credit hours
72/42 minimum senior college hours

AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder
website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder
website for a list of courses.
    4  MAT 160  Elementary Discrete Mathematics

Major (min. 79 credit hours)

        4  IT 168  Structured Problem Solving Using the Computer (P: MAT 104)
        1  IT 191  Introduction to IT Professional Practice (P: C or better in IT 168)
        3  IT 214  Social, Legal, & Ethical Issues in Information Technology (P: ENG
            101, COM 110)
        3  IT 225/IT 254  Computer Organization (P: C or better in IT 178 or 179)
            or Hardware & Software Concepts (P: C or better in IT 168)
        3  IT 250  Fundamentals of Information Assurance & Security (P: C or
            better in IT 178)
        3  IT 261  Systems Development I (P: C or better in IT 170, 178 or 179; C
            or better in IT 254 or 225 or conc. reg.)
        3  IT 262  Information Technology Project Management (P: IT 261 or
            conc. reg.)
        3  IT 276  Data Communications (P: C or better in IT 168; C or better in IT
            225 or 254 or conc. reg.)
        3  IT 351  Practical Cryptography & Trusted Systems (P: C or better in IT
            250 or 226, 276)
        3  IT 357  Tools & Techniques in Information Assurance & Security (P: C or
            better in IT 250, 276)
        3  IT 359  Tools & Techniques in Penetration Testing (P: C or better in IT
            250, 276)
        3  IT 360  Security Incident & Event Management & Forensics (P: C or
            better in IT 250, 276)
        3  IT 377  Practical Telecommunications Networking (P: C or better in IT
            276)
        3  IT 378  Database Processing (P: C or better in IT 261)
        6  IT 398  Professional Practice
        3  COM 223  Small Group Processes
        3  ECO 101 or 102  Principles of Microeconomics or Principles of
            Macroeconomics
        3  ENG 249  Technical & Professional Writing I (P: ENG 101)
        4  MAT 120/MAT 145  Finite Mathematics (P: C or better in MAT 119 or
            placement) or Calculus I (P: C or better in MAT 144 or placement)
        4  MAT 160  Elementary Discrete Mathematics (P: C or better in MAT 120
            or 145)
        3  MQM 220  Business Organization & Management (P: ECO 101 or 103
            or 105; 60+ earned hours)

Take 1 of the following courses:
    3  IT 170  Scripting Languages & Automation (P: C or better in IT 168)
    3  IT 178  Computer Application Programming (P: C or better in IT 168 or
            177)
    3  IT 179  Introduction to Data Structures (P: C or better in IT 168)

Take 2 (6 credit hours) of the following courses:
    3  IT 330  Introduction To Enterprise Computer Systems (P: C or better in
        IT 225 or 254)
    3  IT 353  Web Development Technologies (P: C or better in IT 261)
    3  IT 355  Secure Software Development (P: C or better in IT 250, 276)
    3  IT 369  Topics In Cybersecurity
    3  IT 370  Server Management (P: C or better in IT 377)
    3  IT 376  Wireless & Mobile Network Security (P: C or better in IT 276)
    3  IT 381  Network Design & Analysis (P: C or better in IT 373, 377)

Take 1 of the following courses:
    3  ECO 138  Economic Reasoning Using Statistics (P: MAT 120, 130, or 145)
    3  MQM 100  Statistical Reasoning (P: MAT 120, 121, 144, or 145)
    3  PSY 138  Reasoning in Psychology Using Statistics (P: C or better in MAT
        120, 121, 144, or 145)

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours
from IT 330, 353, 355, 363, 369, 370, 376, 381 (if not used to satisfy other
requirements)

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY MAJOR
INTEGRATION OF ENTERPRISE SYSTEMS
SEQUENCE (B.S.)

General Education (39 credit hours)
Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

Communication and Composition (2 courses required)
- 3 COM 110 Communication as Critical Inquiry
- 3 ENG 101 or ENG 101A10 Composition as Critical Inquiry

Mathematics (1 course required)
- 4 MAT 120 Finite Mathematics or MAT 145 Calculus I

Natural Science/Natural Science Alternatives (2 courses required)
Students must complete 1 course from 2 different sciences.

United States Traditions (1 course required)

Individuals & Civic Life (1 course required)

Fine Arts (1 course/3 credit hours required)***

Humanities (1 course required)***

Language in the Humanities (1 course required)***

Quantitative Reasoning (1 course required)
- 3 ECO 138 or MQM 100 or PSY 138

Science, Math, & Technology (1 course required)
Exempt for Integration of Enterprise Systems majors

Social Sciences (1 course required)***

Additional Graduation Requirements
- /120 minimum total credit hours
- /42 minimum senior college hours

AMALI requirement
***Certain courses in General Education fulfill the AMALI requirement. See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S. — SMT Requirement section of the catalog or the Course Finder website for a list of courses.
- 4 MAT 160 Elementary Discrete Mathematics

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/

Major (83 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 168 Structured Problem Solving Using the Computer (P: MAT 104)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IT 178 Computer Application Programming (P: C or better in IT 168)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 191 Introduction to IT Professional Practice (P: C or better in IT</td>
<td>1</td>
<td></td>
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<tr>
<td>168)</td>
<td></td>
<td></td>
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<tr>
<td>IT 214 Social, Legal, &amp; Ethical Issues in Information Technology (P:</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 101, COM 110)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 225/IT 254 Computer Organization (P: C or better in IT 178 or</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 179) or Hardware &amp; Software Concepts (P: C or better in IT 168)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 250 Fundamentals of Information Assurance and Security (P: C</td>
<td>3</td>
<td></td>
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<tr>
<td>or better in IT 170 or 179)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 261 Systems Development I (P: C or better in IT 170, 178, or</td>
<td>3</td>
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<tr>
<td>IT 179; C or better in IT 254 or 225 or conc. reg.)</td>
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</tr>
<tr>
<td>IT 262 Information Technology Project Management (P: IT 261 or</td>
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<tr>
<td>conc. reg.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 272 External Data Structures (P: C or better in IT 168)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IT 276 Data Communications (P: C or better in IT 168 and 225 or</td>
<td>3</td>
<td></td>
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<tr>
<td>254 or conc. reg.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 330 Introduction to Enterprise Computing Systems (P: C or better</td>
<td>3</td>
<td></td>
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<tr>
<td>in IT 225 or 254)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 372 External Data Structures (P: C or better in IT 254, 272)</td>
<td>3</td>
<td></td>
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<tr>
<td>IT 378 Database Processing (P: C or better in IT 261)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 392 Enterprise Systems Integration &amp; Application Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(P: C or better in IT 272 and 330)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT 398 Professional Practice (P: C or better in IT 191)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACC 131 Financial Accounting (P: 12+ earned hours)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COM 223 Small Group Processes</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 101 Principles of Microeconomics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 102 Principles of Macroeconomics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MAT 120/MAT 145 Finite Mathematics (P: C or better in MAT 119 or</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>placement) or Calculus I (P: C or better in MAT 144 or placement)</td>
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</tr>
<tr>
<td>MAT 160 Elementary Discrete Mathematics (P: C or better in MAT 120</td>
<td>3</td>
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<tr>
<td>or 145)</td>
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<td></td>
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<tr>
<td>MQM 220 Business Organization &amp; Management (P: ECO 101 or 103 or</td>
<td>3</td>
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<tr>
<td>105; 60+ earned hours)</td>
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</tr>
</tbody>
</table>

Take 1 additional Integration of Enterprise Systems elective:
(IT 244, 344, 345, 363, 367, 368) Please consult with your academic advisor.

Take 1 of the following courses:
- 3 ECO 138 Economic Reasoning Using Statistics (P: MAT 120, 130, or 145)
- 3 MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)
- 3 PSY 138 Reasoning in Psychology Using Statistics (P: C or better in MAT 120, 121, 144, or 145)

Take 1 of the following courses:
- 3 COM 227 Organizational & Professional Speaking
- 3 ENG 249 Technical & Professional Writing I (P: ENG 101)

Take 1 of the following business electives:
- 3 ACC 132 Managerial Accounting (P: ACC 131)
- 3 ECO 225 Labor Economics & Labor Problems (P: ECO 101 & 102, or 105)
- 3 ECO 239 Managerial Economics (P: ECO 101 or 105; C or better in MAT 121 or 145; MQM 100 or ECO/GE0/POL/PSY 138)
- 3 ECO 245 The International Economy (P: ECO 101 or 105)
- 3 Fil 240 Business Finance (P: 60+ earned hours; ACC 132, ECO 105, MQM 100 or ECO/GEO/POL/PSY 138)
- 3 MKT 230 Introduction to Marketing Management (P: ECO 101 & 103 or 105; 60+ earned hours)

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 244, 250, 344, 345, 363, 367, 368, (if not used to satisfy other requirements)
INFORMATION TECHNOLOGY MAJOR
INTEGRATION OF ENTERPRISE SYSTEMS SEQUENCE (B.S.), Transfer Students

Illinois Articulation Initiative (min. 37 credit hours)
To be eligible for IAI, at least one transfer course must have been articulated to an IAI core requirement. Refer to the Undergraduate Catalog for a complete list of IAI courses and policies.

Communication and Composition (3 courses required)
A grade of C or better required in ENG 101 and 145 or equivalents

___ 3  C2 900  COM 110  Communication as Critical Inquiry
___ 3  C1 900  ENG 101 or ENG 101A10  Composition as Critical Inquiry
___ 3  C1 901  ENG 145  Writing in the Academic Disciplines

Mathematics (1 course required)
Please see major requirements for mathematics options

___ 4  M1 906  MAT 120  Finite Math or M1 900-1  MAT 145  Calculus I or M1 902  ECO 138/PSY 138/MQM 100  Statistics

Physical & Life Sciences (2 courses/7-8 hours required)
Students must complete 1 life science and 1 physical science course; at least 1 course must have a lab.

___ ___ ______________________________________________
___ ___ ______________________________________________

Humanities & Fine Arts (3 courses required)
At least 1 humanities and 1 fine arts course required

___ ___ ______________________________________________
___ ___ ______________________________________________
___ ___ ______________________________________________

Social & Behavioral Sciences (3 courses required)
2 different disciplines must be represented

___ 3  S3 901  Macroeconomics
___ 3  S3 902  Microeconomics

___ ___ ______________________________________________

Additional Graduation Requirements

___/120 minimum total credit hours

___/42 minimum senior college hours

AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

___ ___ ______________________________________________

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.

___ 4  MAT 160  Elementary Discrete Mathematics

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/

Major (83 credit hours)

___ 4  IT 168  Structured Problem Solving Using the Computer (P: MAT 104)
___ 3  IT 178  Computer Application Programming (P: C or better in IT 168)
___ 1  IT 191  Introduction to IT Professional Practice (P: C or better in IT 168)
___ 3  IT 214  Social, Legal, & Ethical Issues in Information Technology (P: ENG 101, COM 110)
___ 3  IT 225/IT 254  Computer Organization (P: C or better in IT 178 or 179) or Hardware & Software Concepts (P: C or better in IT 168)
___ 3  IT 250  Fundamentals of Information Assurance and Security (P: C or better in IT 170 or 178 or 179)
___ 3  IT 261  Systems Development I (P: C or better in IT 170, 178, or 179; C or better in IT 254 or 225 or conc. reg.)
___ 3  IT 262  Information Technology Project Management (P: IT 261 or conc. reg.)
___ 4  IT 272  External Data Structures (P: C or better in IT 168)
___ 3  IT 276  Data Communications (P: C or better in IT 168 and 225 or 254 or conc. reg.)
___ 3  IT 330  Introduction to Enterprise Computing Systems (P: C or better in IT 225 or 254)
___ 3  IT 372  External Data Structures (P: C or better in IT 254, 272)
___ 3  IT 378  Database Processing (P: C or better in IT 261)
___ 3  IT 392  Enterprise Systems Integration & Application Development (P: C or better in IT 272 and 330)
___ 6  IT 398  Professional Practice (P: C or better in IT 191)
___ 3  ACC 131  Financial Accounting (P: 12+ earned hours)
___ 3  COM 223  Small Group Processes
___ 3  ECO 101  Principles of Microeconomics
___ 3  ECO 102  Principles of Macroeconomics
___ 4  MAT 120/MAT 145  Finite Mathematics (P: C or better in MAT 119 or placement) or Calculus I (P: C or better in MAT 144 or placement)
___ 4  MAT 160  Elementary Discrete Mathematics (P: C or better in MAT 120 or 145)
___ 3  MQM 220  Business Organization & Management (P: ECO 101 or 103 or 105; 60+ earned hours)

Take 1 additional Integration of Enterprise Systems elective:
(IT 244, 344, 345, 363, 367, 368) Please consult with your academic advisor.

Take 1 of the following courses:

___ 3  ECO 138  Economic Reasoning Using Statistics (P: MAT 120, 130, or 145)
___ 3  MQM 100  Statistical Reasoning (P: MAT 120, 121, 144, or 145)
___ 3  PSY 138  Reasoning in Psychology Using Statistics (P: C or better in MAT 120, 121, 144, or 145)

Take 1 of the following courses:

___ 3  COM 227  Organizational & Professional Speaking
___ 3  ENG 249  Technical & Professional Writing I (P: ENG 101)

Take 1 of the following business electives:

___ 3  ACC 132  Managerial Accounting (P: ACC 131)
___ 3  ECO 225  Labor Economics & Labor Problems (P: ECO 101 & 102, or 105)
___ 3  ECO 239  Managerial Economics (P: ECO 101 or 105; C or better in MAT 121 or 145; MQM 100 or ECO/GEO/POL/PSY 138)
___ 3  ECO 245  The International Economy (P: ECO 101 or 105)
___ 3  FIL 240  Business Finance (P: 60+ earned hours; ACC 132, ECO 105, MQM 100 or ECO/GEO/POL/PSY 138)
___ 3  MKT 230  Introduction to Marketing Management (P: ECO 101 & 102 or 103 or 105; 60+ earned hours)

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 244, 250, 344, 345, 363, 367, 368. (If not used to satisfy other requirements)
INFORMATION TECHNOLOGY MAJOR
SYSTEMS DEVELOPMENT/ANALYST SEQUENCE (B.S.)

General Education (39 credit hours)
Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

Communication and Composition (2 courses required)
  ___  3  COM 110 Communication as Critical Inquiry
  ___  3  ENG 101 or ENG 101A10 Composition as Critical Inquiry

Mathematics (1 course required)
  ___  4  MAT 120 Finite Mathematics or MAT 145 Calculus I

Natural Science/Natural Science Alternatives (2 courses required)
Students must complete 1 course from 2 different sciences.

United States Traditions (1 course required)
  ___  ___  ______________________________________________

Individuals & Civic Life (1 course required)
  ___  ___  ______________________________________________

Fine Arts (1 course/3 credit hours required)**
  ___  ___  ______________________________________________

Humanities (1 course required)**
  ___  ___  ______________________________________________

Language in the Humanities (1 course required)**
  ___  ___  ______________________________________________

Quantitative Reasoning (1 course required)
  ___  3  ECO 138 or MQM 100 or PSY 138

Science, Math, & Technology (1 course required)
Exempt for Systems Development/Analysis majors

Social Sciences (1 course required)**
  ___  ___  ______________________________________________

Additional Graduation Requirements

/120 minimum total credit hours

/42 minimum senior college hours

AMALI requirement
***certain courses in General Education fulfill the AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.
  ___  4  MAT 160 Elementary Discrete Mathematics

Major (84 credit hours)

Take 1 of the following courses:
  ___  3  ECO 138 Economic Reasoning Using Statistics (P: MAT 120, 130, or 145)
  ___  3  MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)
  ___  3  PSY 138 Reasoning in Psychology Using Statistics (P: C or better in MAT 120 or 145)

Take 1 of the following business electives:
  ___  3  ACC 132 Managerial Accounting (P: ACC 131)
  ___  3  ECO 225 Labor Economics & Labor Problems (P: ECO 101 & 102, or 105)
  ___  3  ECO 239 Managerial Economics (P: ECO 101 or 105; C or better in MAT 121 or 145; MQM 100 or ECO/GEOPOL/Psy 138)
  ___  3  ECO 245 The International Economy (P: ECO 101 or 105)
  ___  3  FIL 240 Business Finance (P: 60+ earned hours; ACC 132, ECO 105, MQM 100 or ECO/GEOPOL/Psy 138)
  ___  3  MKT 230 Introduction to Marketing Management (P: ECO 101 or 102 or 103 or 105; 60+ earned hours)

Take 2 (6 credit hours) additional Systems Development/Analyst electives: (IT 244, 330, 341, 344, 345, 353, 367, 368) Please consult with your academic advisor.

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 244, 250, 330, 341, 344, 345, 353, 367, 368 (if not used to satisfy other requirements)

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY MAJOR
SYSTEMS DEVELOPMENT/ANALYST SEQUENCE
(B.S.), Transfer Students

Illinois Articulation Initiative (min. 37 credit hours)
To be eligible for IAI, at least one transfer course must have been articulated to an IAI core requirement. Refer to the Undergraduate Catalog for a complete list of IAI courses and policies.

Communication and Composition (3 courses required)
A grade of C or better required in ENG 101 and 145 or equivalents

<table>
<thead>
<tr>
<th></th>
<th>Course Code</th>
<th>Department</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C2 900</td>
<td>COM</td>
<td>Communication as Critical Inquiry</td>
<td>ENG 101 or ENG 101A10</td>
</tr>
<tr>
<td></td>
<td>C1 900</td>
<td>ENG</td>
<td>Composition as Critical Inquiry</td>
<td>ENG 101 or ENG 101A10</td>
</tr>
<tr>
<td></td>
<td>C1 901</td>
<td>ENG</td>
<td>Writing in the Academic Disciplines</td>
<td>ENG 145</td>
</tr>
</tbody>
</table>

Mathematics (1 course required)
Please see major requirements for mathematics options

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<tbody>
<tr>
<td></td>
<td>M1 906</td>
<td>MAT</td>
<td>Finite Math</td>
<td>Requires 1 of M1 900-1 MAT 145 Calculus I or M1 902 ECO 138/PSY 138/MQM 100 Statistics</td>
</tr>
</tbody>
</table>

Physical & Life Sciences (2 courses/7-8 hours required)
Students must complete 1 life science and 1 physical science course; at least 1 course must have a lab.

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Humanities & Fine Arts (3 courses required)
At least 1 humanities and 1 fine arts course required

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</table>

Social & Behavioral Sciences (3 courses required)
2 different disciplines must be represented

<table>
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</table>

Additional Graduation Requirements

<table>
<thead>
<tr>
<th></th>
<th>Minimum total credit hours: 120</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Minimum senior college hours: 42</td>
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</tbody>
</table>

AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

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B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.

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Major (84 credit hours)

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</thead>
</table>

Take 2 (6 credit hours) additional Systems Development/Analyst electives:

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Take 1 of the following courses:

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<th>Prerequisites</th>
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Take 1 of the following business electives:

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<th>Title</th>
<th>Prerequisites</th>
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Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 244, 250, 330, 341, 344, 345, 353, 367, 368 (if not used to satisfy other requirements)

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY MAJOR
WEB APPLICATION DEVELOPMENT SEQUENCE
(B.S.)

General Education (39 credit hours)
Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

Communication and Composition (2 courses required)
3 COM 110 Communication as Critical Inquiry
3 ENG 101 or ENG 101A10 Composition as Critical Inquiry

Mathematics (1 course required)
4 MAT 120 Finite Mathematics or MAT 145 Calculus I

Natural Science/Natural Science Alternatives (2 courses required)
Students must complete 1 course from 2 different sciences.

United States Traditions (1 course required)

Individuals & Civic Life (1 course required)

Fine Arts (1 course/3 credit hours required)**

Humanities (1 course required)**

Language in the Humanities (1 course required)**

Quantitative Reasoning (1 course required)
3 ECO 138 or MQM 100 or PSY 138

Science, Math, & Technology (1 course required)
Exempt for Web Application Development majors

Social Sciences (1 course required)**

Additional Graduation Requirements
120 minimum total credit hours
42 minimum senior college hours

AMALI requirement
**Certain courses in General Education fulfill the AMALI requirement. See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.
4 MAT 160 Elementary Discrete Mathematics

Major (82 credit hours)

4 IT 168 Structured Problem Solving Using the Computer (P: MAT 104)
3 IT 178 Computer Application Programming (P: C or better in IT 168)
1 IT 191 Introduction to IT Professional Practice (P: C or better in IT 168)
3 IT 214 Social, Legal, & Ethical Issues in Information Technology (P: ENG 101, COM 110)
3 IT 250 Fundamentals of Information Assurance and Security (P: C or better in IT 170 or 178 or 179)
3 IT 254 Hardware & Software Concepts (P: C or better in IT 168)
3 IT 261 Systems Development I (P: C or better in IT 170, 178, or 179; C or better in IT 254 or 225 or conc. reg.)
3 IT 262 Information Technology Project Management (P: IT 261 or conc. reg.)
3 IT 276 Data Communications (P: C or better in IT 168 and 225 or 254 or conc. reg.)
3 IT 353 Web Development Technologies (P: C or better in IT 261)
3 IT 354 Advanced Web Application Development (P: C or better in IT 353)
3 IT 358 Mobile & Cloud Computing (P: C or better in IT 353)
3 IT 378 Database Processing (P: C or better in IT 251)
6 IT 398 Professional Practice
3 ACC 131 Financial Accounting (P: 12+ earned hours)
3 CDM 223 Small Group Processes
3 ECO 101 Principles of Microeconomics
3 ECO 102 Principles of Macroeconomics
4 MAT 120/MAT 145 Finite Mathematics (P: C or better in MAT 119 or placement) or Calculus I (P: C or better in MAT 144 or placement)
4 MAT 160 Elementary Discrete Mathematics (P: C or better in MAT 120 or 145)
3 MQM 220 Business Organization & Management (P: ECO 101 or 103 or 105; 60+ earned hours)

Take 2 (6 credit hours) additional Web Application Development electives:
(IT 244, 330, 341, 344, 345, 367, 368, 377) Please consult with your academic advisor.

Take 1 of the following courses:
3 ECO 138 Economic Reasoning Using Statistics (P: MAT 120, 130, or 145)
3 MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)
3 PSY 138 Reasoning in Psychology Using Statistics (P: C or better in MAT 120, 121, 144, or 145)

Take 1 of the following courses:
3 CDM 227 Organizational & Professional Speaking
3 ENG 249 Technical & Professional Writing I (P: ENG 101)

Take 1 of the following business electives:
3 ACC 132 Managerial Accounting (P: ACC 131)
3 ECO 225 Labor Economics & Labor Problems (P: ECO 101 & 102, or 105)
3 ECO 239 Managerial Economics (P: ECO 101 or 105; C or better in MAT 121 or 145; MQM 100 or ECO/GEO/POI/PSY 138)
3 ECO 245 The International Economy (P: ECO 101 or 105)
3 FIL 240 Business Finance (P: 60+ earned hours; ACC 132, ECO 105, MQM 100 or ECO/GEO/POI/PSY 138)
3 MKT 209 Introduction to Marketing Management (P: ECO 101 & 102 or 103 or 105; 60+ earned hours)

Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 244, 330, 341, 344, 345, 367, 368, 377 (if not used to satisfy other requirements)

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/
### INFORMATION TECHNOLOGY MAJOR

#### WEB APPLICATION DEVELOPMENT SEQUENCE (B.S.), Transfer Students

**Illinois Articulation Initiative (min. 37 credit hours)**
To be eligible for IAI, at least one transfer course must have been articulated to an IAI core requirement. Refer to the Undergraduate Catalog for a complete list of IAI courses and policies.

**Communication and Composition (3 courses required)**
A grade of C or better required in ENG 101 and 145 or equivalents
- 3 C2 900 COM 110 Communication as Critical Inquiry
- 3 C1 900 ENG 101 or ENG 101A10 Composition as Critical Inquiry
- 3 C1 901 ENG 145 Writing in the Academic Disciplines

**Mathematics (1 course required)**
Please see major requirements for mathematics options
- 4 M1 906 MAT 120 Finite Math or M1 900-1 MAT 145 Calculus I or M1 902 ECO 138/PSY 138/MQM 100 Statistics

**Physical & Life Sciences (2 courses/7-8 hours required)**
Students must complete 1 life science and 1 physical science course; at least 1 course must have a lab.

**Humanities & Fine Arts (3 courses required)**
At least 1 humanities and 1 fine arts course required

**Social & Behavioral Sciences (3 courses required)**
2 different disciplines must be represented
- 3 S3 901 Macroeconomics
- 3 S3 902 Microeconomics

**Additional Graduation Requirements**
- /120 minimum total credit hours
- /42 minimum senior college hours

**AMALI requirement**
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

**B.S. Science, Math, & Technology (1 course required)**
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.
- 4 MAT 160 Elementary Discrete Mathematics

#### Major (82 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 168 Structured Problem Solving Using the Computer (P: MAT 104)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IT 178 Computer Application Programming (P: C or better in IT 168)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 191 Introduction to IT Professional Practice (P: C or better in IT 168)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>IT 214 Social, Legal, &amp; Ethical Issues in Information Technology (P: ENG 101, COM 110)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 250 Fundamentals of Information Assurance and Security (P: C or better in IT 170 or 178 or 179)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 254 Hardware &amp; Software Concepts (P: C or better in IT 168)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 261 Systems Development I (P: C or better in IT 170, 178, or 179; C or better in IT 254 or 225 or conc. reg.)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IT 262 Information Technology Project Management (P: IT 261 or conc. reg.)</td>
<td>3</td>
<td></td>
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<td>IT 276 Data Communications (P: C or better in IT 168 and 225 or 254 or conc. reg.)</td>
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<td></td>
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<td>IT 353 Web Development Technologies (P: C or better in IT 261)</td>
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<td>IT 358 Mobile &amp; Cloud Computing (P: C or better in IT 353)</td>
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<td>ECO 102 Principles of Macroeconomics</td>
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<td></td>
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<tr>
<td>MAT 120/MAT 145 Finite Mathematics (P: C or better in MAT 119 or placement) or Calculus I (P: C or better in MAT 144 or placement)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MAT 160 Elementary Discrete Mathematics (P: C or better in MAT 120 or 145)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MQM 220 Business Organization &amp; Management (P: ECO 101 or 103 or 105; 60+ earned hours)</td>
<td>3</td>
<td></td>
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</table>

Take 2 (6 credit hours) additional Web Application Development electives:

(CT 244, 330, 341, 344, 345, 367, 368, 377) Please consult with your academic advisor.

Take 1 of the following courses:

- 3 ECO 138 Economic Reasoning Using Statistics (P: MAT 120, 130, or 145)
- 3 MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)
- 3 PSY 138 Reasoning in Psychology Using Statistics (P: C or better in MAT 120, 121, 144, or 145)

Take 1 of the following courses:

- 3 COM 227 Organizational & Professional Speaking
- 3 ENG 249 Technical & Professional Writing I (P: ENG 101)

Take 1 of the following business electives:

- 3 ACC 132 Managerial Accounting (P: ACC 131)
- 3 ECO 225 Labor Economics & Labor Problems (P: ECO 101 & 102, or 105)
- 3 ECO 239 Managerial Economics (P: ECO 101 or 105; C or better in MAT 121 or 145; MQM 100 or ECO/GE/GEO/POL/PSY 138)
- 3 ECO 245 The International Economy (P: ECO 101 or 105)
- 3 FIL 240 Business Finance (P: 60+ earned hours; ACC 132, ECO 105, MQM 100 or ECO/GE/POL/PSY 138)
- 3 MKT 230 Introduction to Marketing Management (P: ECO 101 & 102 or 103 or 105; 60+ earned hours)

**Allowable Substitutions for Required Courses:**
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391.
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 244, 330, 341, 344, 345, 367, 368, 377 (if not used to satisfy other requirements)

**Information Technology Courses:**
https://coursefinder.illinoisstate.edu/directory/it/

**All Courses:** https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY
MAJOR IN NETWORK AND
TELECOMMUNICATIONS MANAGEMENT (B.S.)

General Education (39 credit hours)
Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

Communication and Composition (2 courses required)
   3   COM 110 Communication as Critical Inquiry
   3   ENG 101 or ENG 101A10 Composition as Critical Inquiry

Mathematics (1 course required)
   4   MAT 120 Finite Mathematics or MAT 145 Calculus I

Natural Science/Natural Science Alternatives (2 courses required)
Students must complete 1 course from 2 different sciences.
   ___  ___  ______________________________________________

United States Traditions (1 course required)
   ___  ___  ______________________________________________

Individuals & Civic Life (1 course required)
   ___  ___  ______________________________________________

Fine Arts (1 course/3 credit hours required)***
   ___  ___  ______________________________________________

Humanities (1 course required)***
   ___  ___  ______________________________________________

Language in the Humanities (1 course required)***
   ___  ___  ______________________________________________

Quantitative Reasoning (1 course required)
   3   ECO 138 or MQM 100 or PSY 138

Science, Math, & Technology (1 course required)
Exempt for Network & Telecommunications Management majors

Social Sciences (1 course required)***
   ___  ___  ______________________________________________

Additional Graduation Requirements
   ___/120 minimum total credit hours
   ___/42 minimum senior college hours

AMALI requirement
***certain courses in General Education fulfill the AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.
   ___  ___  ______________________________________________

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.
   4   MAT 146 Calculus II or MAT 160 Elementary Discrete Mathematics

Major (min. 76 credit hours)

Take 1 of the following courses:
   3   IT 170 Scripting Languages & Automation (P: C or better in IT 168)
   3   IT 178 Computer Application Programming (P: C or better in IT 168)

Take 1 of the following courses:
   3   ECO 101 Principles of Microeconomics
   4   ECO 105 Principles of Economics

Take 2 (6 credit hours) of the following courses:
   3   IT 250 Fundamentals of Information Assurance & Security (P: C or better in IT 178, 276)
   3   IT 374 Topics in Telecommunications (P: varied)
   3   IT 376 Wireless & Mobile Network Security (P: C or better in IT 276)
   3   IT 378 Database Processing (P: C or better in IT 261)
   3   IT 380 Wireless Communication Systems (P: C or better in IT 276)

Take 1 of the following courses:
   3   ECO 138 Economic Reasoning Using Statistics (P: MAT 120, 130, or 145)
   3   MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)
   3   PSY 138 Reasoning in Psychology Using Statistics (P: C or better in MAT 120, 121, 144, or 145)

Take 1 of the following courses:
   3   COM 227 Organizational & Professional Speaking
   3   ENG 249 Technical & Professional Writing I (P: ENG 101)

Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 306
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Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/
INFORMATION TECHNOLOGY
MAJOR IN NETWORK AND TELECOMMUNICATIONS MANAGEMENT (B.S.)

Transfer Students

Illinois Articulation Initiative (min. 37 credit hours)
To be eligible for IAI, at least one transfer course must have been articulated to an IAI core requirement. Refer to the Undergraduate Catalog for a complete list of IAI courses and policies.

Communication and Composition (3 courses required)
A grade of C or better required in ENG 101 and 145 or equivalents

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<td>C1 901</td>
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Mathematics (1 course required)
Please see major requirements for mathematics options

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Physical & Life Sciences (2 courses/7-8 hours required)
Students must complete 1 life science and 1 physical science course; at least 1 course must have a lab.

Take 1 of the following courses:

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<td>IT 374</td>
<td>Topics in Telecommunications</td>
<td>C or better in IT 276</td>
</tr>
<tr>
<td>IT 378</td>
<td>Wireless &amp; Mobile Network Security</td>
<td>C or better in IT 276</td>
</tr>
<tr>
<td>IT 380</td>
<td>Database Processing</td>
<td>C or better in IT 261</td>
</tr>
</tbody>
</table>

Take 2 (6 credit hours) of the following courses:

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<tr>
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</thead>
<tbody>
<tr>
<td>IT 254</td>
<td>Network Design &amp; Analysis</td>
<td>C or better in IT 377</td>
</tr>
<tr>
<td>IT 250</td>
<td>Fundamentals of Information Assurance &amp; Security</td>
<td>C or better in IT 178, 276</td>
</tr>
<tr>
<td>IT 376</td>
<td>Wireless &amp; Mobile Network Security</td>
<td>C or better in IT 276</td>
</tr>
<tr>
<td>IT 378</td>
<td>Database Processing</td>
<td>C or better in IT 261</td>
</tr>
</tbody>
</table>

Humanities & Fine Arts (3 courses required)
At least 1 humanities and 1 fine arts course required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 131</td>
<td>Financial Accounting</td>
<td>12+ earned hours</td>
</tr>
<tr>
<td>COM 227</td>
<td>Organizational &amp; Professional Speaking</td>
<td></td>
</tr>
<tr>
<td>IT 170</td>
<td>Scripting Languages &amp; Automation</td>
<td>C or better in IT 168</td>
</tr>
<tr>
<td>IT 178</td>
<td>Computer Application Programming</td>
<td>C or better in IT 168</td>
</tr>
</tbody>
</table>

Social & Behavioral Sciences (3 courses required)
2 different disciplines must be represented

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>IT 178</td>
<td>Computer Application Programming</td>
<td>C or better in IT 168</td>
</tr>
<tr>
<td>IT 179</td>
<td>Scripting Languages &amp; Automation</td>
<td>C or better in IT 168</td>
</tr>
<tr>
<td>IT 276</td>
<td>Wireless &amp; Mobile Network Security</td>
<td>C or better in IT 276</td>
</tr>
</tbody>
</table>

Additional Graduation Requirements

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>Minimum total credit hours</td>
</tr>
<tr>
<td>42</td>
<td>Minimum senior college hours</td>
</tr>
</tbody>
</table>

AMALI requirement
See the AMALI Requirement section of the catalog or the Course Finder website for a list of courses.

B.S. Science, Math, & Technology (1 course required)
See the B.S.—SMT Requirement section of the catalog or the Course Finder website for a list of courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 146</td>
<td>Calculus II or MAT 160 Elementary Discrete Mathematics</td>
<td>C or better in MAT 145</td>
</tr>
<tr>
<td>MAT 120</td>
<td>Finite Mathematics</td>
<td>C or better in MAT 119 or placement</td>
</tr>
</tbody>
</table>

Major (min. 76 credit hours)

Take 1 of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 377</td>
<td>Advanced Computer Networks</td>
<td>C or better in IT 377</td>
</tr>
<tr>
<td>IT 381</td>
<td>Network Design &amp; Analysis</td>
<td>C or better in IT 377</td>
</tr>
<tr>
<td>IT 398</td>
<td>Professional Practice</td>
<td></td>
</tr>
<tr>
<td>IT 381</td>
<td>Network Design &amp; Analysis</td>
<td>C or better in IT 377</td>
</tr>
<tr>
<td>IT 398</td>
<td>Professional Practice</td>
<td></td>
</tr>
<tr>
<td>IT 250</td>
<td>Fundamentals of Information Assurance &amp; Security</td>
<td>C or better in IT 254</td>
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<td>Network Design &amp; Analysis</td>
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Take 2 (6 credit hours) of the following courses:

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<tr>
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<th>Prerequisites</th>
</tr>
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<tbody>
<tr>
<td>IT 374</td>
<td>Topics in Telecommunications</td>
<td>varied</td>
</tr>
<tr>
<td>IT 376</td>
<td>Wireless &amp; Mobile Network Security</td>
<td>C or better in IT 276</td>
</tr>
<tr>
<td>IT 380</td>
<td>Database Processing</td>
<td>C or better in IT 261</td>
</tr>
<tr>
<td>IT 381</td>
<td>Network Design &amp; Analysis</td>
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</tr>
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<td>Database Processing</td>
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<td>Database Processing</td>
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Allowable Substitutions for Required Courses:
Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391
Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 hours from IT 374, 376, 378, 380 (if not used to satisfy other requirements).

Information Technology Courses:
https://coursefinder.illinoisstate.edu/directory/it/

All Courses: https://coursefinder.illinoisstate.edu/directory/