

Information Technology

Information Technology (ITEC) is a baccalaureate degree major designed to prepare students for careers in a wide variety of work settings that rely on information technologies to accomplish organizational goals. ITEC is a great fit for students who enjoy using computing technology to provide solutions to issues facing individuals, organizations, and societies. ITEC is distinct from computer engineering, computer science, and management information systems because it focuses on meeting the needs of users within organizational and societal contexts through the selection, creation, application, integration and administration of computing technologies.

The ITEC curriculum is based on the latest version of the nationally recognized ACM/IEEE IT Computing Curricula for undergraduate information technology degree programs. The curriculum recognizes that graduates must have good computing skills as well as an understanding of the principles and fundamentals of IT, including programming, networking, human computer interaction, databases, web systems, and cybersecurity. Many courses require significant hands-on computer activities. Students also choose a number of elective courses to reflect their personal interests in IT professional careers.

Students with a primary major in Cybersecurity Technology (CTEC) pursuing a double major with Information Technology (ITEC) as a secondary major, must complete 12 credit hours of ITEC course work in addition to course work used to satisfy primary major requirements

An online delivery option for place-bound or working students to complete a Bachelor of Science degree or a minor in ITEC is available. The same curriculum requirements apply to both residential and online students.

Program Educational Objectives

The Information Technology program at Southern Illinois University Carbondale prepares students to:

1. Assume professional roles in IT-related positions or advance in graduate studies.
2. Evaluate and apply best practices in IT environments.
3. Collaborate and communicate effectively in diverse team environments.
4. Perform duties with integrity and integrate proper ethical considerations.

Student Outcomes

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Use systemic approaches to select, develop, apply, integrate, and administer secure computing technologies to accomplish user goals.

Bachelor of Science (B.S.) in Information Technology

Degree Requirements	Credit Hours
University Core Curriculum Requirements ¹	39
Require MATH 106 or MATH 108. Recommend PHIL 104 or PHIL 105, and ECON 113, PSYC 102 or SOC 108	

Degree Requirements	Credit Hours
Foundation Course Requirements - ITEC 209, ITEC 216, ITEC 224, ITEC 225, ITEC 235, ITEC 236, ITEC 265, ITEC 280 ²	24
Requirements for Major in Information Technology	42
Required Major Courses - ITEC 312, ITEC 314, ITEC 370, ITEC 380, ITEC 390, ITEC 404, ITEC 412, ITEC 419 or ITEC 495	24
Approved Major Electives (Note: 18 hours must be at the 300- or 400-level) ³	18
Additional Electives	15
Total	120

¹ Students may meet these requirements through an approved AA/AS degree from an accredited community college.

² Students may meet these requirements through an articulated approved AA/AS degree from an accredited community college.

³ Students may choose any combination of major electives or focus their interest in one of the following areas: cybersecurity, network and system administration, web and mobile app development, applied data analytics.

Information Technology Minor

The minor in Information Technology (ITEC) is offered to meet the demands of the 21st century workplace. The ITEC minor introduces students to the study of information technology principles and skills and is an excellent complement to any degree program, regardless of major.

The ITEC minor requires 18 credit hours that consists of two required and four elective courses. The courses required to complete this minor include ITEC 209 and ITEC 216. At least six credit hours must be at the 300-level or higher. ITEC 229, ITEC 265, and ITEC 280 do not count toward the minor. A maximum of 3 credit hours may be substituted with approved electives. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All courses for this minor must be completed with a grade of C or better.

Capstone Option for Transfer Students

The Capstone Option is available to qualified students entering the ITEC degree program. More information about the Capstone Option can be found within the University Core Curriculum tab of the Undergraduate Catalog. The ITEC degree program has signed Program Articulation Agreements with several community college computing-related degree programs in order to facilitate the transfer of community college students to SIU Carbondale. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Information Technology.

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