Computer Science

Program: B.S., Computer Information Technology

Program Description

The B.S. degree in Computer Information Technology (CIT) is designed for students who are interested in a professional career that involves solving the informational technology infrastructure needs of companies and organizations. An IT professional is able to understand computer systems and solve the computer-related problems of the people they serve. An IT professional assumes responsibility for selecting, installing and maintaining hardware and software products to meet organizational culture and needs. The Computer Information Technology degree consists of a set of core requirements plus a Domain Emphasis Package that is effectively a minor in another field of study. The program focuses on the technology and service aspects of the industry rather than information content. Graduates of the program will have an applied knowledge of such fields as web programming, system infrastructure, databases, networking, e-business, project management, data center management, security and information assurance.

Program Requirements

The B.S. in Computer Information Technology program requires a total of 120 units, including General Education requirements, major core courses and a 15-unit sequence of elective courses referred to below as the Domain Emphasis Package. To graduate, a student must complete a minimum of 18 residency units from the list of upper division required courses listed below in addition to all other institutional residency requirements.

Special Grade Requirements

No grade lower than a "C" will be accepted on transfer from another institution to satisfy the graduation requirements in Information Technology. Where specific grade requirements are not specified, no CSUN grade lower than a "C-" will be accepted for courses required in the B.S. CIT program.

1. Lower Division Required Courses (24 units)

CIT 101/L CIT Fundamentals (2/1)
CIT 160/L Internet Technologies (2/1)
CIT 210/L Deployment and Management of Operating Systems (3/1)
CIT 270/L Integrative Programming (3/1)
COMP 110/L Introduction to Algorithms and Programming with Lab (3/1)
COMP 122/L Computer Architecture and Assembly Language and Lab (1/1)
COMP 182/L Data Structures and Program Design and Lab (3/1)

2. Lower Division Electives (14-19 units)

a. Math Course (3-5 units)

Select one of the following courses:

MATH 103 Mathematical Methods for Business (3)
MATH 150A Calculus I (5)
MATH 255A Calculus for the Life Sciences I (3)

b. Statistics Course (3-4 units)

Select one of the following courses:

MATH 140 Introductory Statistics (4)
SOM 120 Basic Business Statistics (3)

c. Science Courses (8-10 units)

Select one of the following sequences:

BIOL 106/BIOL 106L Biological Principles I and Lab (3/1)

and BIOL 107/BIOL 107L Biological Principles II and Lab (3/1)

CHEM 101/CHEM 101L General Chemistry I and Lab (4/1)

and CHEM 102/CHEM 102L General Chemistry II and Lab (4/1)

GEOG 101/GEOG 102 The Physical Environment and Lab (3/1)

and GEOG 103/GEOG 105 Weather and Lab (3/1)

GEOL 101/GEOL 102 Geology of Planet Earth and Lab (3/1)

and GEOL 110/GEOL 112 Earth and Life Through Time and Lab (3/1)

PHYS 100A/PHYS 100AL General Physics I and Lab (3/1)

and ASTR 152/ASTR 154L Elementary Astronomy and Lab (3/1)

PHYS 220A/PHYS 220AL Mechanics and Lab (3/1)

and PHYS 220B/PHYS 220BL Electricity and Magnetism and Lab (3/1)

3. Upper Division Required Courses (33 units)

CIT 360/L CIT System Management and Lab (2/1)
CIT 384/L Web Development and Hosting and Lab (2/1)
CIT 425/L Information and Systems Security and Lab (2/1)
CIT 480/L CIT System Design and Implementation I (2/1)
CIT 481/L CIT System Design and Implementation II (2/1)
COMP 485 Human-Computer Interaction (3)
IS 312 Systems and Technologies for Managers (3)
IS 431 System Analysis and Design (3)
IS 435 Business Data Communications and Networking (3)
IS 441 Database Management Systems (3)
IS 451 Enterprise Systems and Project Management (3)

4. Domain Emphasis Package (15-18 units)

Computer Information Technology is pervasive and its use is found throughout nearly all areas of human endeavor. A major objective of the B.S. CIT program is to prepare graduates to work effectively with individuals from other disciplines and to apply information technology (IT) to these disciplines. To this end, students in the B.S. CIT program are required to engage in an in-depth study of some subject that uses computing in a substantive way and that emphasizes collaboration and communication with other individuals.

This requirement can be satisfied by completion of one of the following:

a. Completion of an appropriate minor at CSUN that does not include courses offered by the Department of Computer Science or the College of Business and Economics. The intent of the minor is to focus studies in an application domain in which the graduate plans to start a career. Students interested in focusing their studies on business are advised to explore the Information Systems degree options offered by the Department of Accounting and Information Systems. A minor must consist of at least 18 units, but some requirements in a minor might also be applied toward meeting General Education requirements.
b. Completion of a cohesive set of classes, called the Domain Emphasis Package, determined though consultation with the student's faculty advisor and requiring approval by the department chair prior to enrollment in any course contained in the package. This package should focus on a specific IT or application domain. Such a package shall consist of 15 units, with no more than 6 units of lower division classes chosen strategically to meet the prerequisites of the other classes also included in the package. The package cannot contain courses offered by the College of Business and Economics.

By the time COMP 110/L is completed, B.S. CIT majors must meet with a faculty advisor to determine the classes in a customized domain emphasis package or to select a minor to fulfill the Domain Emphasis requirement.

5. General Education (48 units)

Undergraduate students must complete 48 units of General Education as described in this Catalog.
18 units are satisfied by coursework in the major. Completion of the Computer Information Technology major satisfies A3 Critical Thinking. 6 units of Physical Science or Life Science may be used to satisfy sections B1-3. MATH 103 or MATH 150A or MATH 255A satisfies Basic Skills B4 Mathematics/Quantitative Reasoning; CIT 360/L satisfies B5 Scientific Inquiry and Quantitative Reasoning; and COMP 110/L satisfies E Lifelong Learning.

Total Units in the Major: 86-94

General Education Units: 30

Additional Units: 0-4

Total Units Required for the B.S. Degree: 120-124

Contact

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Student Learning Outcomes

Students graduating from the B.S. CIT program will be able to:

1. Analyze a complex computing problem and 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. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation and administration of computing-based systems.

Degree Road Maps

Computer Information Technology - 2019

Previous Years

Transfer Road Maps

Computer Information Technology - 2019

Previous Years