

COMPUTER TECHNOLOGY

Computer Technology Program Learning Outcomes (<https://catalog.csudh.edu/program-learning-outcomes/natural-behavioral-sciences/bachelor-arts-computer-technology-learning-outcomes/>)

College of Natural and Behavioral and Sciences

Department of Computer Science

Bachelor of Arts

Degree Roadmaps

General Track

Homeland Security Track

Professional Track

Minor

Certificate

Faculty

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<http://csc.csudh.edu>

Program Description

Computer Technology forms the technological infrastructure of modern commerce. It's the driving force of every industry and permeates everyday life. The ability to combine the power of computing with the management of multimedia information is arguable the key to obtaining ascendancy in any field.

Computer Technology is an ever-evolving, expanding field. The proposed Computer Technology Program will provide students with the background, knowledge and skills they'll need to adapt to the dynamic nature of the marketplace. Program faculty will consist of traditional academics as well as industry professionals in order to provide curricular content that is on the cutting edge of industry trends.

The BACT degree provides a high quality degree program in computer technology that will prepare students for lifelong learning as they pursue professional careers in computer technology and leadership roles in the society in which they serve. It provides our students with a strong foundational base, state-of-the art techniques, methodologies, and tools to specify, design and develop technology-based solutions to complex system problems. This program prepares our students to communicate well, both orally and in writing, on moral and ethical development, in knowledge of the liberal arts, and on commitment to services to others. CT provides opportunities for students to contribute to the body of knowledge that serves the profession, by engaging in activities which support their interests and are in agreement with the goals and objectives of the College, and the university.

Features

The University's location in the South Bay area of greater Los Angeles provides direct access to many major government contractors, manufacturers, and international centers of commerce and finance. This provides excellent opportunities for work-study and early job placement.

Our highly qualified full-time faculty are supplemented by talented and dedicated part-time faculty drawn from local firms and schools. Good teaching and easy on-campus access to professional quality computing systems enhances a degree program that provides both a solid core curriculum and a broad range of electives.

All courses are offered alternatively day and evening so that students may complete their programs by enrolling at either time exclusively.

Graduation with Honors

An undergraduate student may be a candidate for graduation with Honors in Computer Technology provided he or she meets the following criteria:

1. A minimum of 36 units in residence at CSU Dominguez Hills at least 24 of which taken in Computer Technology major;
2. A minimum GPA of 3.5 in all upper division courses in the Computer Technology major completed in residence at CSUDH;
3. Recommendation by Computer Technology faculty.

Students who achieve Honors in Computer Technology will have the information recorded on their transcripts and diplomas.

Academic Advisement

Faculty guidance in the development of career goals and program planning to achieve those goals is available to all majors.

Preparation

Students entering the computer technology program should have completed high school mathematics through trigonometry. Remediation is available but will delay the student's progress towards a Computer Technology Degree.

This is a program that places a premium on the student's initiative and effort.

Career Possibilities

Bachelor of Arts in Computer Technology is a comprehensive program that will consist of the following tracks: General Track, Homeland Security and Professional. This program is intended to provide students with the technology based skills set required immediately after degree completion to enter the workforce within the following areas related to computer technology: Manufacturing, Repair, trouble shooting, Lab technician, Public Service, Government Agencies, Consultants, Software Version Control, Domain Expert Technician, and other computer/software technology related fields. Feedback from members of our Industry Advisory Board indicate the need for professionals with the balance of practical and theoretical knowledge that extends beyond conventional information technology curricula.

Student Organizations

Contact departmental office for membership information, or visit the websites:

Association for Computing Machinery (ACM) ACM@csudh.edu

Institute of Electrical and Electronics Engineers (IEEE) IEEE@csudh.edu
 Cyber Security CyberSec@csudh.edu
 Computing Alliance of Hispanic-Serving Institutions (CAHSI)
 CAHSI@csudh.edu

Bachelor of Arts in Computer Technology

Total Course Requirements for the Bachelor's Degree

See the "Requirements for the Bachelor's Degree (<https://catalog.csudh.edu/general-information/baccalaureate-degrees-undergraduate-studies/>)" in the University Catalog for complete details on general degree requirements. A minimum of 40 units, including those required for the major, must be upper division.

Elective Requirements

Completion of elective courses (beyond the requirements listed below) to reach a total of a minimum of 120.

General Education Requirements (49 units)

See the "General Education (<https://catalog.csudh.edu/general-information/double-counting-general-education-courses/general-education/>)" requirements in the University Catalog or the Class Schedule for the most current information on General Education requirements and course offerings.

Graduation Writing Assessment Requirement

See the "Graduation Writing Assessment Requirement (<https://catalog.csudh.edu/general-information/graduate-writing-examination/>)" in the University Catalog.

Minor Requirements

Single field major, no minor required.

Major Requirements (62-68 units)

Students entering the Computer Technology program must complete the following.

1. Earn an overall grade point average of 2.0 or better in courses taken outside of the department.
2. Earn a grade of "C" or better in each course taken within the department.
3. Students must take capstone course CTC 492 Senior Project (3) at CSUDH.

The following courses, or their approved transfer equivalents, are required of all candidates for this degree.

BACT Program

A. Core Requirements (34 units)

1. Lower Division (19 units)

CSC 101 Intro.to Computer Education (3)
 CSC 111 Introduction to Computers and Basic Programming (3)
 CSC 116 Introduction to Computer Hardware and Tools (3)
 CSC 255 Dynamic Web Programming (3)
 MAT 131 Elementary Statistics and Probability (3)
 MAT 153 Pre-Calculus with Trigonometry (4)

2. Upper Division (15 units)

CSC 301 Computers And Society (3)
 CTC 310 Software Project Management (3)
 CTC 316 Operating Systems and Networks Support (3)
 CTC 452 Network Security and Hacking Prevention (3)

CTC 492 Senior Project (3)

BACT Program General Track (62 units)

A. Lower Division Requirements (37 units)

CSC 101 Intro.to Computer Education (3)
 CSC 111 Introduction to Computers and Basic Programming (3)
 CSC 116 Introduction to Computer Hardware and Tools (3)
 CSC 255 Dynamic Web Programming (3)
 CSC 115 Introduction to Programming Concepts (3)
 CSC 121 Introduction to Computer Science and Programming I (4)
 CTC/CSC Elec. Lower Division Elective (4)
 CTC/CSC Elec. Lower Division Elective (4)
 CTC 218 Digital Logic Design (3)
 MAT 131 Elementary Statistics and Probability (3)
 MAT 153 Pre-Calculus with Trigonometry (4)

B. Upper Division Requirements (25 units)

CSC 301 Computers And Society (3)
 CTC 310 Software Project Management (3)
 CTC 316 Operating Systems and Networks Support (3)
 CTC 452 Network Security and Hacking Prevention (3)
 CTC 492 Senior Project (3)
 CTC/CSC Elec. Upper Division Elective (4)
 CTC/CSC Elec. Upper Division Elective (3)
 CTC/CSC Elec. Upper Division Elective (3)

CSC 121 Introduction to Computer Science and Programming I (4): Major students may substitute this course for General Education Area A2. Please contact the University Advisement Center to request the course substitution.

BACT Program Homeland Security Track (65 units)

A. Lower Division Requirements (40 units)

CSC 101 Intro.to Computer Education (3)
 CSC 111 Introduction to Computers and Basic Programming (3)
 CSC 116 Introduction to Computer Hardware and Tools (3)
 CSC 255 Dynamic Web Programming (3)
 CSC 115 Introduction to Programming Concepts (3)
 CSC 121 Introduction to Computer Science and Programming I (4)
 CSC 123 Introduction to Computer Science and Programming II (4)
 CSC 221 Assembly Language and Introduction to Computer Organization (3)
 CTC 218 Digital Logic Design (3)
 CTC 228 Introduction to Operating Systems and Networks (4)
 MAT 131 Elementary Statistics and Probability (3)
 MAT 153 Pre-Calculus with Trigonometry (4)

B. Upper Division Requirements (25 units)

CSC 301 Computers And Society (3)
 CTC 310 Software Project Management (3)
 CTC 316 Operating Systems and Networks Support (3)
 CTC 328 Computer Forensics and Investigation (4)
 CTC 362 Communication Systems Security (3)
 CTC 428 Operating Systems Security (3)
 CTC 452 Network Security and Hacking Prevention (3)
 CTC 492 Senior Project (3)

CSC 121 Introduction to Computer Science and Programming I (4): Major students may substitute this course for General Education Area A2. Please contact the University Advisement Center to request the course substitution.

BACT Program Professional Track (68 units)**A. Core Requirements (34 units)****1. Lower Division (19 units)**

CSC 101 Intro.to Computer Education (3)
 CSC 111 Introduction to Computers and Basic Programming (3)
 CSC 116 Introduction to Computer Hardware and Tools (3)
 CSC 255 Dynamic Web Programming (3)
 MAT 131 Elementary Statistics and Probability (3)
 MAT 153 Pre-Calculus with Trigonometry (4)

2. Upper Division (15 units)

CSC 301 Computers And Society (3)
 CTC 310 Software Project Management (3)
 CTC 316 Operating Systems and Networks Support (3)
 CTC 452 Network Security and Hacking Prevention (3)
 CTC 492 Senior Project (3)

B. Professional Track Requirements (34 units)**1. Specific Domain (15-31 units)**

- a. Associate Degree
- or
- b. Minor in another program
- or
- c. Concentration courses- with the consultation of computer science department

2. Free Electives (3-19 units)**Minor in Computer Technology (21 units)****Requirements****A. Lower Division Requirements (9 units)**

CSC 111 Introduction to Computers and Basic Programming (3)
 CSC 116 Introduction to Computer Hardware and Tools (3)
 CSC 255 Dynamic Web Programming (3)

B. Upper Division Requirements (12 units)**1. Required Courses (6 units)**

CSC 301 Computers And Society (3)
 CTC 310 Software Project Management (3)

2. Select two courses from the following (6 units)

CTC 316 Operating Systems and Networks Support (3)
 CTC 328 Computer Forensics and Investigation (4)
 CTC 362 Communication Systems Security (3)
 CTC 428 Operating Systems Security (3)
 CTC 452 Network Security and Hacking Prevention (3)

Certificate in Computer Technology (15 units)**Requirements****1. Computer Basics (3 units)**

CSC 101 Intro.to Computer Education (3)

2. Programming (3 units)

Select one course:

CSC 111 Introduction to Computers and Basic Programming (3)
 CSC 115 Introduction to Programming Concepts (3)

3. Basic Hardware (3 units)

CSC 116 Introduction to Computer Hardware and Tools (3)

4. Web Design and Security (3 units)

CSC 255 Dynamic Web Programming (3)

5. Computer Ethics (3)

CSC 301 Computers And Society (3)