



COMPUTER SCIENCE

Do you enjoy working with computers? The rapid advances in computing and communication technology have contributed significantly to a recent revolution in the utilization of information technology. This revolution, which touches all aspects of our modern society including business, government, education, entertainment, medicine, and many other areas, adds to the importance of computer science. Are you interested in becoming part of this exciting and rapidly growing career field? If so, the study of Computer Science will be of interest to you.

THE COMPUTER SCIENCE PROFESSION

What do Computer Science Professionals do?

- Solve difficult problems
- Build new worlds
- Search for clues
- Take a different approach
- Apply technology in innovative ways
- Build the software people use in their everyday lives
- Affect people's lives
- Change the future
- Bring people together

How do they do it?

- By building tools for all kinds of users involved in global business, from video gamers to scientists to CEOs
- By using detective skills to analyze a situation, search for clues to problems, and test ideas for solutions
- By being a theorist in the information technology sciences and finding ways to expand how we use computers
- Through the creation and development of useful applications; there is software in virtually every appliance in the modern home!
- By programming the systems many people rely on throughout the day
- By using the power underlying computer technology, which Moore's Law states doubles every two years, to open up new areas of learning through human imagination
- Through programming simulations of different worlds, from NASA's Mars Rover simulations to Second Life® and beyond
- By bringing technology to a world in need. Technology can bring our world together one person at a time

Example Job Titles

- Lead Programmer
- Software Developer
- Information Scientist
- Webmaster/ Web Developer
- Chief Information Officer
- Research Analyst
- Software Engineer
- Applications Developer
- Systems Administrator
- Computer Consultant
- IT Security Administrator
- Internet Programmer
- Artificial Intelligence Specialist
- Video Game Programmer
- Computer Graphics Specialist
- Database Administrator
- Systems Validation Consultant
- Computer Communications Specialist

Resources

- Association for Computing Machinery | acm.org
- IEEE Computer Society | computer.org/portal/site/ieeecs/index.jsp
- ITAA (Information Technology Association of America) | itaa.org
- NAP (National Association of Programmers) | info@napusa.org napusa.org
- PMI (Project Management Institute) | pmi.org
- NIST (National Institute of Standards and Technology) | nist.gov
- The Open Group | opengroup.org
- X.Org Foundation | x.org/wiki

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

What courses do I need?

The College of Information Science & Technology requires completion of a minimum of 120 credit hours which include the following courses:

General Education Requirements

English	9 credit hours
Public Speaking	3 credit hours
College Algebra or test out	3 credit hours
Natural Science	7 credit hours
Humanities	9 credit hours
Social Sciences	9 credit hours
US and Global Diversity*	6 credit hours

Math Requirements - 16 hours

MATH 1950	Calculus I
MATH 1960	Calculus II
CSCI 2030	Math Foundations of Computer Science
MATH 2050	Applied Linear Algebra

Electives Courses – 7 hours

IS&T Requirements - 18 hours

CIST 1400	Intro to Computer Science I
CSCI1620	Intro to Computer Science II
CSCI 2240	Intro to C Programming
CIST 2100	Organizations, Applications & Technology**
CIST 2500	Intro to Applied Statistics for IS&T
CSCI 3110	IT Ethics***

Computer Science Requirements – 27 hours

CSCI 3320	Data Structures
CSCI 3550	Communication Networks
CSCI 3660	Theory of Computation
CSCI 3710	Intro to Digital Design
CSCI 4220	Programming Languages
CSCI 4350	Computer Architecture
CSCI 4500	Operating Systems
CSCI 4830	Intro to Software Engineering
CSCI 4970	Capstone Project
CSCI 4000	Assessment (MFT) 0 hours

Core Extension Courses - 21 hours

Includes 12 hours of upper division computer science specialization courses

* US and Global Diversity courses can also satisfy Humanities and Social Science requirements.

** CIST 2100 also applies toward a Social Sciences requirement.

*** CIST 3110 also applies toward a Humanities requirement.