

COMPUTER SCIENCE

PROGRAM OVERVIEW FOR EMPLOYERS

The goals of cooperative education for computer science students include the application of theory to real-world situations and the opportunity to work with others in a professional environment. Computer Science students show special interest and capabilities in areas requiring analytical abilities and problem solving skills. The requirements of the program prepare students for software development along with communication skills needed for team projects.

Degree(s) Awarded

Bachelor of Science (5 year)
Master of Science
Combined BS/MS Degree

Enrollment

Approximately 870 students enrolled in undergraduate computer science program.

Cooperative Education Component

Students are required to complete four co-op work assignments. Co-op students are able to work 3 or 6 months at a time.

Salary Information (Avg/Range)

Co-op:	\$17.12	\$8.00 - \$37.50
BS:	\$58,000	\$38,200 - \$85,000

Equipment & Facilities

Over 200 SUN workstations and servers. UNIX operating systems environment. PC lab, MAC lab, and specialized labs in AI, Database, Vision and Security, Pattern Recognition, and Virtual Theater.

Accreditation

The BS degree is nationally accredited by the Computing Accreditation Commission of ABET.

Student Skills & Capabilities

- The CS Department emphasizes the Object-Oriented paradigm, both in analysis and design (understanding the problem and crafting a suitable solution) as well as in implementation (writing code and documentation) and testing. Team and cooperative efforts are encouraged.
- Prior to starting the initial co-op work block, students have completed four quarters of Object-Oriented design and implementation using two different Object-Oriented programming (OOP) languages (currently, JAVA and C++). They have also completed a Professional Communications course and a Software Engineering Course.
- After completing their 2nd or 3rd co-op: Students are capable of assisting in feasibility studies, analysis and design. They have a strong programming background and have developed skills in abstract and formal reasoning and are able to adapt to new concepts in the computer field. Students have also gained adequate self assurance and knowledge to competently carry out administrative duties such as training, coordinating, scheduling, project monitoring and making presentations.

Computer Science

Course Sequence BS degree

First and Second Years:

Computer Science 1, 2, 3, 4
Project-Based Calculus I, II, III
University Physics I, II, III or
General & Analytical Chemistry I, II, III & Labs or
General Biology I, II, III & Labs
Software Engineering
Computer Organization
Discrete Mathematics I, II
Probability
Professional Communications
Writing and Arts of Expression
FYE/Wellness
Free Electives & Liberal Arts

Third, Fourth, Fifth Years:

Introduction to CS Theory
Operating Systems I
Data Communications and Networks I
Programming Language Concepts
Computer Science Related Electives
Computer Science Electives
Related Electives or Minor
Liberal Arts
Science Electives
Free Electives
Cooperative Education (4 quarters)

Selected Upper Division Electives:

Graphics
Computer Graphics 1
Computer Graphics 2
Computer Animation – Algorithms & Techniques

Computer Vision
Introduction to Computer Vision
Biologically Inspired Intelligent Systems
Advanced Computer Vision

Data Management
Database Concepts
Database System Implementation
Secure Database Systems
Introduction to Data Mining

Intelligent Systems
Artificial Intelligence
Artificial Intelligence for Interactive Env.
Neural Networks and Machine Learning
Knowledge Based Systems
Genetic Algorithms

Languages and Tools
XML – Architecture, Tools & Techniques
Paradigms and Programming Skills
Language Processors
Programming Language Theory
Compiler Construction
Language Based Security

Social and Professional Issues/Others
Privacy and Security
Honors Seminar
Independent Study
Seminars on Current Topics

Distributed Systems
Parallel Computing 1
Parallel Computing 2
Data Communications & Networks 2
Data Communications & Networks 3
Ad-Hoc Networks

Architecture and OS
Systems Programming 1
Systems Programming 2
Computer Architecture
Operating Systems II
Distributed Operating Systems 1
Distributed Operating Systems 2

Theory
Complexity & Computability
Cryptography
Analysis of Algorithms
Computability
Complexity
Cryptography 2
Theory of Computer Algorithms

Other opportunities include selected courses taken from: graduate Computer Science offerings, Software Eng, and Computer Eng.

Employers of Computer Science Co-op and Graduating Students:

BAE Systems, Computer Associates, Excellus Blue Cross Blue Shield, Fuji Film E-Systems, Google, Harris Corp, IBM, Microsoft, Moo Inc., National Security Agency, Ortho-Clinical Diagnostics, Paetec Communications, Paychex, RightNow Technologies, Thomson West, Veramark Technologies, Vicor Corp, Xerox

Contact Us:

We appreciate your interest in hiring RIT co-op, graduating students or alumni. We will make every effort to make your recruiting endeavor a success. Call our office and ask to speak with Kristine Stehler, the program coordinator who works with the Computer Science program. For your convenience, you can access information and services through our web site at <http://www.rit.edu/recruit>.

Kristine Stehler, Program Coordinator

Office of Cooperative Education and Career Services
RIT . Bausch & Lomb Center . 57 Lomb Memorial Drive . Rochester NY 14623-5603
585.475.5468; kwsoc@rit.edu