

COMPUTER ENGINEERING TECHNOLOGY

PROGRAM OVERVIEW FOR EMPLOYERS

Based on a foundation of physics and applied mathematics, the computer engineering technology program is designed to develop hardware and software skills necessary for the design and development of systems involving microprocessors, FPGA's, and ASIC's. Computer-aided design plays a significant role in the curriculum. Students learn to work in a design automation environment on computer workstations running state-of-the art design software. The skills developed both in system operation and design creativity enhance preparation for both co-op and permanent job opportunities. Electives are available in the upper division and may be taken from computer science or elective engineering technology courses.

Degree(s) Awarded

Bachelor of Science Degree (5 year)

Enrollment

Approximately 135 students enrolled

Cooperative Education Component

Students are required to complete 5 co-op work assignments.

Students are available for two 6-month and one 3-month assignments.

Salary Information (Avg/Range)

Co-op:	\$16.97	\$8.50 - \$25.00
BS:	\$59,750	\$39,000 - \$65,200

State-of-the-Art Facilities

Embedded Systems Design Laboratory

Tektronix TLA714 132 Channel Logic Analyzer, Agilent Infinium Oscilloscope, Tektronix Test Equipment, Desktop Computer with Dual Monitors, State-of-the-Art Development Tools

Telecommunications Systems Laboratory

Nortel OC-3 SONET Gear, TELLABS 1/1 Digital Cross Connect System, Nortel and Cisco Routers, Switches, and VoIP equipment, Lucent Frame Switches & DSLAM, TTC T-BERD Equipment, Redcom MSP & PBX Equipment, Cisco ATM Switches, ISDN & P-com 38 GHz Microwave

Circuits Studio Laboratory

Texttronix TDS 3012 Oscilloscope, HP 3000 Series Equipment, GW Instek Power Supply, Weller Solder Station, DC Motor Control Modules, Desktop Computer

Electronics Laboratory

Texttronix TDS 3012 Oscilloscope, HP 3000 Series Equipment, Desktop Computer, Agilent Spectrum Analyzer, HP 8904 Signal Synthesizer, Weller Soldering Station, Labview Software, GW Instek Power Supply

Electronic Design Automation Laboratory

VHDL Development, Digital Simulation Software, Analog Simulation Software, Desktop Computer, Networking, DigiDesign M-Box 2 Pro

Accreditation

Accredited by the Technology Accreditation Commission of ABET, Inc., <http://www.abet.org>.

Student Skills & Capabilities

- Students acquire knowledge in two disciplines learning how to design embedded systems and the software to run them.
- Skill areas include digital system design, computer hardware interfacing, machine language programming, high-level language programming, large-scale simulation/analysis.
- C++, C, UNIX
- Extensive laboratory-based coursework.

Accelerated dual degree option- Computer Engineering Tech/Computer Science

The program, in conjunction with the department of computer science in the B. Thomas Golisano College of Computing and Information Sciences, offers an accelerated dual degree option that combines the bachelor's degree in computer engineering technology and a master's degree in computer science in a cohesive, five-year curriculum.

Applications to this program are accepted from matriculated undergraduate computer engineering technology students who have completed all the courses in the first five quarters of the baccalaureate program and have maintained a cumulative grade point average of at least 3.4 out of 4.0. At least 55 quarter credit hours must have been earned at RIT.

Computer Engineering Technology

Course Sequence BS degree

First and Second Years:

Calculus A, B, C or
Circuit Theory I, II, III
Electronics I, II
Digital Fundamentals
College Physics I, II
Data Analysis
Microcomputers
Technical Programming I, II, III
Liberal Arts
Discovery-ECTET
Pathways

Third Through Fifth Years:

Concepts in Systems and Signals
College Physics III
Digital Systems Design
Arts of Expression
Data Analysis
Embedded Systems Design I, II, III
Differential Equations for Eng. Tech.
Networking Technologies
Electronics III
Electronic Design Automation
Career Orientation
Principles of Optics
Differential Equations for Engineering Technology
Concepts in Systems and Signals
Advanced Electronics
Free Electives (3)
Professional Concentration Electives (3)
Cooperative Education
Ethics, Economics and Planning for Engineers
Effective Technical Communication

Professional Concentrations:

Computer Science

Computer Science for Transfers
Programming Language Concepts
Operating Systems I

Systems Administration

OS Scripting
Systems Administration I
Network Services

IT Wireless Networks

Network Fundamentals
Concepts of Wireless Networking
Applications of Wireless Networks

Telecommunications

Telecommunications Fundamentals
Voice Communications Technology
Switching Technologies

Communication Systems

Electronics IV
Communication Systems I
Digital Signal Processing

Selected Employers of Computer Engineering Technology Co-op & Graduating Students:

Alstom Transport, Boeing Corp., CIA, Cisco Systems, Corning, Fisher Price, GE, Gorbels, Hamilton Sundstrand, Harris Corporation, IBM, Intel, ITT Water Systems, Lockheed Martin, McNeil Consumer Products, NASA, National Semiconductor, Paychex., Raytheon, RE², Redcom Labs, Robot, Savant Systems, Wegmans, Welch Allyn, Xerox

Functions: Embedded Systems design, computer programming, analog circuit design, system software projects, digital logic design, VLSI Design, computer interfacing, digital systems design, realtime systems, image processing, software engineering.

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 Lynne Perry, the program coordinator who works with the Computer Engineering Technology program. For your convenience, you can access information and services through our web site at <http://www.rit.edu/recruit>.

Lynne Perry, Program Coordinator

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