

COMPUTER ENGINEERING

ABOUT THE MINOR

The minor in Computer Engineering is open to all students in the university. The minor is designed for students who would like a coherent background in the theory and laboratory practice of computer engineering.

For additional information contact:

Ellen M. Zierk

Office: 404 Dana

Phone: 617-373-2165

e-mail: ezierk@ece.neu.edu

A minimum of 18 semester hours are required:

1. Core course:

CSU215 Algorithms and Data Structures for Engineering	4 SH
and CSU216 – Lab for CSU215	1 SH

2. Major core courses:

ECEU322 Digital Logic Design	4SH
ECEU323 Digital Design Lab	1 SH

ECEU324 Computer Organization/Architecture	4 SH
--	------

3. Technical electives:

4 semester hours of Computer Engineering technical electives.	4 SH
---	------

Computer Engineering Technical Electives:

ECEU326 Optimization Methods

ECEU520 Software Engineering I

ECEU522 Software Engineering II

ECEU524 VLSI Design & ECEU525 VLSI Design Lab

ECEU526 High-Speed Digital Design

ECEU528 CAD for Design and Test

ECEU530 Hardware Description Language and Synthesis

ECEU534 Microprocessor-Based Design & ECEU535 Microprocessor Design Lab

ECEU538 Real-Time Systems

ECEU622 Parallel and Distributed Processing

ECEU626 Intro to Image Proc & Pattern Recognition

ECEU628 Computer & Telecom Networks & ECEU629 Internetworking Design Lab

ECEU630 Robotics

ECEU694 Numerical Methods and Computer Applications

Notes:

- Minor is awarded to students completing the requirements and earning a minimum QPA of 2.0 in the minor coursework.
- Students outside COE and CS may have to take non-ECE pre-requisite courses to gain entry into specified courses.
- Students who complete the core course (1. above) as part of their major will be given semester hour credit towards the minor for this course.
- Students who complete the major core courses (2. above) as part of their major will not be given semester hour credit towards the minor. The course requirement will be satisfied but the semester hour credits will need to be taken as technical elective credits. For example: If ECEU322/323 is required by EE majors and ECEU324 is not, then a total of 9 SH of technical electives would be required in addition to ECEU324.
- Credit for technical elective courses (3. above) cannot be double counted. (i.e., if an elective course counts towards fulfillment of the student's major it will not be counted towards the minor).
- No credit will be given for technical elective courses that have substantial overlap with courses the student has taken as part of the major. (Computer science students should have technical electives pre-approved to avoid electives that have substantial overlap with CS courses taken.)
- Students must file a petition with the Coordinator of Undergraduate Services in Room 404 Dana to declare the minor prior to taking any coursework.
- Students should schedule a meeting with the Coordinator of Undergraduate Services, prior to graduation, to be cleared for the minor.
- Students who have taken courses during the quarter system should meet with Ms. Zierk to review the semester conversion.

Notes for computer science majors:

• CSU211 substitutes for CSU 215	4SH
• CSU380 & ECEU230 substitute for ECEU324	-----
• ECEU322/323	5SH
• 8 SH technical electives (pre-approved)	8SH
	<hr/>
	17SH

- CS students may not take ECEU326, ECEU520, ECEU522
- If a CS student elects to take any of the courses ECEU622, ECEU626, and ECEU694, then they may not also take similar courses offered by CS or MTH.