Minor in Computer Engineering

The minor in Computer Engineering is designed to allow students with quantitative and scientific aptitudes and interests to acquire a basic level of competence in a particular area of computer engineering. It can bring significant career benefits to majors in science or other engineering programs.

Admission and Constraints

Any degree candidate who has earned at least 54 credits, with a cumulative grade point average (GPA) of 2.000 and with at least a 2.500 GPA in the major, may request admission to a minor in Computer Engineering from the Chairperson of the department of Electrical and Computer Engineering. A total of at least 23.5 credits of Electrical and Computer Engineering (ECE) courses must be taken, following a plan of study approved by an advisor in the Department of Electrical and Computer Engineering and signed by the Chairperson of the Electrical and Computer Engineering department. At least half of the credits required for the minor must be taken at the University of Massachusetts Dartmouth and the GPA in the minor must be at least 2.000.

Each plan must include the following courses (11 or 12 credits):
   (1) ECE 160, ECE 201, ECE 257, and ECE 260; OR
   (2) CIS180, ECE 201, and ECE260.

In addition, one specialization must be completed. Typical specializations are:

**COMPUTER ARCHITECTURE (13 credits)**
Choose one of the following two courses:
   - ECE 161 Foundations of Computer Engineering II
   - CIS 181 Programming Paradigms
   - ECE 367 Operating Systems
   - ECE 456 Computer Architecture
   - ECE 468 Advanced Computer Architecture

**COMPUTER NETWORKS (13 credits)**
Choose one of the following two courses:
   - ECE 161 Foundations of Computer Engineering II
   - CIS 181 Programming Paradigms
   - ECE 367 Operating Systems
   - ECE 469 Computer Networks
Choose one of the following three courses:
   - ECE 350 Algorithms
   - ECE 470 Network Application Programming
   - ECE 489 Network Security

**DATABASE SYSTEMS (13 credits)**
Choose one of the following two courses:
   - ECE 161 Foundations of Computer Engineering II
   - CIS 181 Programming Paradigms
   - ECE 367 Operating Systems
   - ECE 486 Database Systems I
Choose one of the following two courses:
   - ECE 350 Algorithms
   - ECE 466 Database Programming

**DIGITAL CIRCUITS (12.5 credits)**
   - ECE 263 Embedded System Design
   - ECE 368 Digital Design
   - ECE 367 Operating Systems
   - ECE 461 Microprocessors I