



# UNDERGRADUATE EDUCATION

## Undergraduate Education Program

Fifteen years ago the ECE Department introduced a curriculum that attracted national acclaim for its unbridled flexibility. In contrast to traditional rigid engineering curricula that allow minimal elective choices late in the program, the required ECE "core" at Carnegie Mellon comprises only four courses. Our students can begin selecting among alternatives as early as the second semester of their sophomore year. While the elective choices must fulfill breadth, depth, design and coverage requirements, the freedom in the curriculum enables us to offer an undergraduate ECE program commensurate with the breadth and diversity of the discipline.

We have defined objectives for our curriculum in terms of a vision for what our graduates will be doing early in their careers. Defined along three axes, these objectives are:

- Problem solving ability based upon knowledge of the fundamentals; understanding of the breadth of areas in ECE; and a substantive command of some specific area(s).
- The ability to think creatively; define problems and formulate solutions holistically from a systems perspective; think strategically and anticipate change and innovation, and engage in lifelong learning.
- The ability to be resourceful and innovative; our graduates will work successfully in interdisciplinary teams; they will be leaders in their organizations and their profession.

## Degree Programs

The ECE Department awards the Bachelor of Science in Electrical and Computer Engineering (BSECE).

In addition, the Integrated Master's/Bachelor's (IMB) Program offers qualifying undergraduate students the opportunity to receive an M.S. Degree in ECE by taking an additional 96 units (the typical course being 12 units) of course work. The degrees may be awarded simultaneously or sequentially, depending on the progress and preference of the student. The primary purpose of the IMB Program is to provide students with superior breadth and depth of technical material, which will better prepare them for careers in industry or to continue on with graduate studies at the Ph.D. level.

## Contact Information

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