

# COMPUTER ENGINEERING

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Computer Engineers deal with the architecture, design, implementation, and verification of the hardware and software for computing systems that are increasingly being used in embedded or networked environments. The Computer Engineering plan offers a broad range of supporting course material to prepare graduates for entry into the profession. In the hardware area, courses cover digital logic and digital systems engineering, computer organization and system architecture, microprocessors, and integrated circuit engineering. Software courses include programming languages, data structures and algorithms, operating systems, real-time software design, databases, compilers, software requirements analysis, formal methods in software engineering, and techniques for human-computer interaction. Computer communication network courses include material on reliable and secure information transfer protocols, switching and routing through multipath networks, and wireless networking.

The Computer Engineering plan is "streamed". Through choice of elective courses in third and fourth year, students can either focus their studies in one or more areas of specialization ("streams"), or pursue a broader coverage of the subject field. Streams are detailed on the Departmental web pages.

*First Year courses in Computer Science (APSC 142 Introduction to Computer Programming for Engineers 2), Mathematics (APSC 171 Calculus I, APSC 172 Calculus II and APSC 174 Introduction To Linear Algebra), Engineering Practice (APSC 100 Engineering Practice 1) and Physics (APSC 112 Physics II) form the basis for further study in Computer Engineering. Good performance is advisable for students planning to enter this academic plan.*