COMPUTER SCIENCE AND ENGINEERING (COURSE 6-3)

Department of Electrical Engineering and Computer Science (http://catalog.mit.edu/schools/engineering/electrical-engineering-computer-science/#undergraduatestudytext)

Bachelor of Science in Computer Science and Engineering

General Institute Requirements (GIRs)
The General Institute Requirements include a Communication Requirement that is integrated into both the HASS Requirement and the requirements of each major; see details below.

Summary of Subject Requirements

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Humanities, Arts, and Social Sciences (HASS) Requirement [one subject can be satisfied by 6.805[J] in the Departmental Program]; at least two of these subjects must be designated as communication-intensive (CI-H) to fulfill the Communication Requirement.</td>
<td>8</td>
</tr>
<tr>
<td>Restricted Electives in Science and Technology (REST) Requirement [can be satisfied by 6.04 and 6.042[J] (if taken under joint number 18.062[J]) in the Departmental Program]</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Requirement (12 units) [satisfied by 6.01, 6.02, 6.03 or 6.08 in the Departmental Program]</td>
<td>1</td>
</tr>
<tr>
<td>Total GIR Subjects Required for SB Degree</td>
<td>17</td>
</tr>
</tbody>
</table>

Physical Education Requirement
Swimming requirement, plus four physical education courses for eight points.

Departmental Program
Choose at least two subjects in the major that are designated as communication-intensive (CI-M) to fulfill the Communication Requirement.

Departmental Requirements

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0001 Introduction to Computer Science Programming in Python</td>
<td>6</td>
</tr>
<tr>
<td><strong>Select one of the following:</strong></td>
<td><strong>9-12</strong></td>
</tr>
<tr>
<td>6.UAT Oral Communication (CI-M)</td>
<td></td>
</tr>
<tr>
<td>6.UAR Seminar in Undergraduate Advanced Research (12 units, CI-M)</td>
<td></td>
</tr>
<tr>
<td><strong>Select one of the following:</strong></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td>6.01 Introduction to EECS via Robotics</td>
<td></td>
</tr>
</tbody>
</table>

Computer Science Requirements

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.02 Introduction to EECS via Communication Networks</td>
<td>12</td>
</tr>
<tr>
<td>6.03 Introduction to EECS via Medical Technology</td>
<td>12</td>
</tr>
<tr>
<td>6.08 Introduction to EECS via Interconnected Embedded Systems</td>
<td>12</td>
</tr>
</tbody>
</table>

Elective Subjects

Select two Advanced Undergraduate Subjects 24-30
Select one subject from the departmental list of EECS subjects 12

Units in Major 162-171

Unrestricted Electives 48-66

Units in Major That Also Satisfy the GIRs (36-48)

Total Units Beyond the GIRs Required for SB Degree 180-183

The units for any subject that counts as one of the 17 GIR subjects cannot also be counted as units required beyond the GIRs.

1 Of the three required AUS and EECS subjects, at least one must be from the list of independent Inquiry Subjects.

2 See departmental website (http://www.eecs.mit.edu/academics-admissions/undergraduate-programs) for list of acceptable EECS subjects.

Advanced Undergraduate Subjects

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.025[J] Medical Device Design (CI-M)</td>
<td>12</td>
</tr>
<tr>
<td>6.027[J] Biomolecular Feedback Systems</td>
<td>12</td>
</tr>
<tr>
<td>6.035 Computer Language Engineering</td>
<td>12</td>
</tr>
<tr>
<td>6.047 Computational Biology: Genomes, Networks, Evolution</td>
<td>12</td>
</tr>
<tr>
<td>6.061 Introduction to Electric Power Systems</td>
<td>12</td>
</tr>
<tr>
<td>6.101 Introductory Analog Electronics Laboratory (CI-M)</td>
<td>12</td>
</tr>
<tr>
<td>6.111 Introductory Digital Systems Laboratory</td>
<td>12</td>
</tr>
</tbody>
</table>
6.115 Microcomputer Project Laboratory (CI-M) 12

0.1151 Microcomputer Project Laboratory - Independent Inquiry 15

6.131 Power Electronics Laboratory (CI-M) 12

6.1311 Power Electronics Laboratory - Independent Inquiry 15

6.170 Software Studio 15

6.172 Performance Engineering of Software Systems 18

6.175 Constructive Computer Architecture 12

6.207[J] Networks 12

6.301 Solid-State Circuits 12

6.302 Feedback System Design 12


6.580[J] Principles of Synthetic Biology 12

6.602 Fundamentals of Photonics 12

6.701 Introduction to Nanoelectronics 12


6.801 Machine Vision 12


6.803 The Human Intelligence Enterprise 12


6.806 Advanced Natural Language Processing 12

6.810 Engineering Interactive Technologies 12


6.814 Database Systems 12

6.815 Digital and Computational Photography 12

6.816 Multicore Programming 12

6.817[J] Principles of Autonomy and Decision Making 12

6.819 Advances in Computer Vision 12

6.837 Computer Graphics 12

6.905 Large-scale Symbolic Systems 12

6.129[J] Biological Circuit Engineering Laboratory (CI-M) 12

6.1311 Power Electronics Laboratory - Independent Inquiry (CI-M) 15


6.161 Modern Optics Project Laboratory (CI-M) 12

6.163 Strobe Project Laboratory (CI-M) 12

6.170 Software Studio 15

6.172 Performance Engineering of Software Systems 18

6.182 Psychoacoustics Project Laboratory (CI-M) 12


6.806 Advanced Natural Language Processing 12


6.809[J] Interactive Music Systems 12

6.810 Engineering Interactive Technologies 12

6.811[J] Principles and Practice of Assistive Technology 12

6.819 Advances in Computer Vision 12

6.864 Advanced Natural Language Processing 12

6.869 Advances in Computer Vision 12


6.9041 Ethics for Engineers - Independent Inquiry 12

6.905 Large-scale Symbolic Systems 12

6.945 Large-scale Symbolic Systems 12

6.UAR Seminar in Undergraduate Advanced Research 6

Independent Inquiry Subjects

6.035 Computer Language Engineering 12

6.047 Computational Biology: Genomes, Networks, Evolution 12

6.111 Introductory Digital Systems Laboratory 12

6.1151 Microcomputer Project Laboratory - Independent Inquiry (CI-M) 15