UCSC Baskin School of Engineering
Computer Engineering BS Curriculum Chart
2003-2004

Math
- MATH 19A Calculus
- MATH 19B Calculus
- MATH 23A MV Calculus
- MATH 23B MV Calculus
- AMS 27/L Engineering Math
- CMPE 16 or 16H Discrete Math
- CMPE 107 Stochastic
- CMPE 21 Linear Algebra
- MATH 21
- MATH 24 Differential Equations

Core Courses
- CMPS 12/L Intro to Programming
- CMPS 12B/M Data Structures
- CMPS 101 Abstract Data Types & Algorithms
- CMPE 12/L Computer Organizations
- CMPE 100/L Digital Logic
- CMPE 110 Computer Architecture
- CMPE 121/L Micro Systems
- CMPE 185 Tech Writing
- EE 70/L Electronics
- CMPE 80E Engineering Ethics

Science
- PHYS 5A/L or 6A/L Mechanics
- CHEM 1B/M or 4A/L General Chemistry
- EART 10/L Geo Principles
- CHEM 1B/M or 4A/L General Chemistry
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- EART 10/L Geo Principles
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Physics
- PHYS 5B/M or 6B/M Waves
- PHYS 5D or PHYS 1xx Heat
- PHYS 5A/L or 6A/L Mechanics
- CHEM 1B/M or 4A/L General Chemistry
- EART 10/L Geo Principles
- CHEM 1B/M or 4A/L General Chemistry
- EART 1xx (NOT 111)
- CHEM 1B/M or 4A/L General Chemistry
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Chemistry
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- EART 1xx (NOT 111)
- CHEM 1B/M or 4A/L General Chemistry
- EART 1xx (NOT 111)

Earth Science
- EART 10/L Geo Principles
- EART 1xx (NOT 111)

Biology
- CHEM 1B/M or 4A/L General Chemistry
- BIOL 20A OR BIOL 21A Cell & Molecular

Specialty
- CMPS 111
- CMPS 115
- CMPS 111
- Upper Division SoE Elective from Approved List
- Two of the following:
  - CMPS 104A - Compilers
  - CMPS 104B - Compilers
  - CMPE 113 - Parallel Programming
  - CMPS 116 - Software Design Project
  - CMPE 117/L - Embedded Software

Computer Systems
- CMPS 111
- Upper Division SoE Elective from Approved List
- One of the following:
  - CMPE 126/L Adv Logic
  - CMPE 125/L HDL Design

Networks
- CMPS 111
- Upper Division SoE Elective from Approved List
- One of the following:
  - CMPE 108 | CMPE 117/L
  - CMPE 118/L | CMPE 125/L
  - CMPE 151 | CMPE 154
  - CMPE 163/L | EE 151
  - Upper Division Elective (Faculty Advisor Approved)

Digital Hardware
- CMPE 173/L
- Upper Division SoE Elective from Approved List
- Choose one:
  - CMPE 108 | CMPE 117/L
  - CMPE 118/L | CMPE 125/L
  - CMPE 151 | CMPE 154
  - CMPE 163/L | EE 151

Computer Engineering Design Project I – CMPE 123A
Computer Engineering Design Project II – CMPE 123B or Senior Thesis – CMPE 195
Project portfolio (3 projects and narrative statement), exit survey, and interview

Last updated 1/6/06.
### Approved List of Upper Division Electives:

For the two School of Engineering electives, your choices are any two upper division School of Engineering courses, with these exceptions: You can take either AMS 131 or CMPE 107, but not both, and either CMPE 153 or EE 153, but not both, and at most one Independent Study with prior approval from the Department.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
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<tbody>
<tr>
<td>AMS 147 Computational Methods and Applic.</td>
<td>CMPE 177 Applied graph Theory/Algor.</td>
<td>CMPS 180 Database Systems</td>
<td>CMPS 181 Database SystemsII</td>
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<tr>
<td>AMS 162 Design and Anal of Comp Sim Expts</td>
<td>CMPS 102 Analysis of Algorithms</td>
<td>CMPS 183 Hypermedia and the Web</td>
<td>CMPS 190X Methods of Cryptography</td>
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<tr>
<td>CMPE 108 Data Compression</td>
<td>CMPS 109 Advanced Programming</td>
<td>EE 103 Signals and Systems</td>
<td>EE 127 &amp; 128 Interdis. System Design Proj I/II</td>
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<tr>
<td>CMPE 113 Parallel Programming</td>
<td>CMPS 112 Comparative Prog. Langs.</td>
<td>EE 130/L Optoelectronics &amp; Photonics</td>
<td>EE 135/L Electro. Fields and Waves</td>
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<td>CMPE 125/L Logic Design with Verilog</td>
<td>CMPS 115 Software Methodology</td>
<td>EE 136 Engr. Electromagnetics</td>
<td>EE 145/L Propeties of Materials</td>
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<td>CMPE 127 Comp.-Aided Synth. of VLSI</td>
<td>CMPS 122 Computer Security</td>
<td>EE 154 Feedback Control Systems</td>
<td>EE 171/L Analog Electronics</td>
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<td>CMPE 150 Intro. to Computer Networks</td>
<td>CMPS 129 Data Storage Systems</td>
<td>EE 178 Device Electronics</td>
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<td>CMPE 151 Network Administration</td>
<td>CMPS 130 Computational Models</td>
<td>ISM 206 Optimization Theory and Appl.</td>
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<td>CMPE 154 Data Communications</td>
<td>CMPS 140 Artificial Intelligence</td>
<td>CMPS 173/L High Speed Digital Design</td>
<td>CMPS 183/L Visualization &amp; Compt. Animation</td>
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<td>CMPE 156/L Network Programming</td>
<td>CMPS 160/L Computer Graphics</td>
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<td>CMPE 163/L Multimedia Processing &amp; Appl.</td>
<td>CMPS 161/L Visualization &amp; Compt. Animation</td>
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