UCSC Baskin School of Engineering
Computer Engineering BS Degree
Curriculum Chart
2004-2005

Core Courses
- CMPE 12/L: Computer Systems & Assembly Language
- CMPE 12B/M: Data Structures
- CMPS 101: Abstract Data Types & Algorithms
- CMPS 12A/L: Intro to Programming
- CMPS 147/L: Logic Design
- CMPE 110: Computer Architecture
- CMPE 121/L: Micro Systems
- CMPE 156/L: Network Programming

Math
- MATH 19A: Calculus
- MATH 19B: Calculus
- MATH 21: Linear Algebra
- MATH 24: Differential Equations
- AMS 27/L: Engineering Math
- MATH 21: Linear Algebra
- CMPE 16 or 16H: Discrete Math
- CMPE 107: Stochastic
- CMPS 12A/L: Intro to Programming
- CMPS 147/L: Logic Design
- CMPS 101: Abstract Data Types & Algorithms

EC 103 required for Multimedia and Networks Concentrations

Science
- PHYS 5A/L or 6A/L: Mechanics
- PHYS 5C/N or 6C/N: Electricity & Magnetism
- PHYS 5B/M or 6B/M: Waves
- PHYS 5D or PHYS 1xx: Heat
- CHEM 1B/M or 4A/L: General Chemistry
- CHEM 1C/N or 4B/M: General Chemistry
- CHEM 1B/M or 4A/L: General Chemistry
- CHEM 1B/M or 4A/L: General Chemistry
- CHEM 1B/M or 4A/L: General Chemistry

Concentrations
(choose one)

System Programming
- CMPS 111: OS
- CMPS 115: Software Methodology
- Upper Division Elective from Approved List

Multimedia
- CMPE 108: Data Compression
- CMPE 150: Networks
- CMPE 163/L: Multimedia Proc. & Application
- Upper Division Elective from Approved List

Computer Systems
- CMPS 111: OS
- CMPE 118: Intro to Mechatronics
- Upper Division Elective from Approved List
- CMPE 125/L: Logic w/ Verilog or CMPE 126/L: Advanced Logic

Networks
- CMPS 111: OS
- CMPE 125: Networks
- CMPE 156/L: Network Programming
- Upper Division Elective from Approved List

Digital Hardware
- EE 171/L: Analog Electronics or CMPE 172/L: Linear/Nonlinear Circuits
- CMPE 173/L: High Speed
- Upper Division Elective from Approved List

Choose one:
- CMPE 108
- CMPE 117/L
- CMPE 185: Tech Writing
- CMPE 125/L: Logic w/ Verilog
- CMPE 126/L: Adv Logic

Computer Engineering Design Project I:
CMPE 123A

Computer Engineering Design Project II:
CMPE 123B or CMPE 195: Senior Thesis

Project portfolio (3 projects and narrative statement), exit survey, and interview

Shaded boxes represent foundation courses

†EE 103 required for Multimedia and Networks Concentrations
UCSC BASKIN SCHOOL OF ENGINEERING  
COMPUTER ENGINEERING BS  
DEGREE CURRICULUM  
2004-2005

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Approved List of Upper Division Electives

- AMS 147 Computational Methods and Applic.
- AMS 162 Design and Anal. of Comp Sim Expernts
- CMPE 108 Data Compression
- CMPE 113 Parallel Programming
- CMPE 117/L Embedded Software
- CMPE 118/L Introduction to Mechatronics
- CMPE 125/L Logic Design with Verilog
- CMPE 126/L Adv. Logic Design
- CMPE 127 Comp.-Aided Synth. of VLSI
- CMPE 130/L Properties of Materials
- CMPE 152 Analysis & Design Comm. Protocols
- CMPE 154 Data Communications
- CMPE 156/L Network Programming
- CMPE 163/L Multimedia Processing & Appl.
- CMPE 172/L Linear/Nonlin. Circuits
- CMPE 173/L High Speed Digital Design
- CMPE 177 Applied graph Theory/Algor.
- CMPS 102 Analysis of Algorithms
- CMPS 104A Compiler Design I
- CMPS 109 Advanced Programming
- CMPS 111 Operating Systems
- CMPS 112 Comparative Prog. Langs.
- CMPS 115 Software Methodology
- CMPS 116 Software Design Project
- CMPS 122 Computer Security
- CMPS 128 Distributed Systems
- CMPS 129 Data Storage Systems
- CMPS 130 Computational Models
- CMPS 132 Computability and Compl
- CMPS 140 Artificial Intelligence
- CMPS 160/L Computer Graphics
- CMPS 161/L Visualization & Compt. Animation
- CMPS 180 Database Systems
- CMPS 181 Database Systems II
- CMPS 183 Hypermedia and the Web
- CMPS 190X Methods of Cryptography
- EE 127 & 128 Interdisc. System Design Project I/II
- EE 130/L Optoelectronics & Photonics
- EE 132 Electromagnetics
- EE 136 Engr. Electromagnetics
- EE 138/Electro. Fields and Waves
- EE 139/Electro. Fields and Waves
- EE 145/L Properties of Materials
- EE 151 Communications Systems
- EE 153 Signal Processing
- EE 154 Feedback Control Systems
- EE 171/L Analog Electronics
- EE 178 Device Electronics
- ISM 206 Optimization Theory and Appl.

Any 5-Credit CS, CE, or EE Graduate Course: CMPE 265A & CMPE 265B Special Topics in Image Processing

At most, one elective may be substituted by an upper-division individual or field study (CMPE, CMPS, EE 193 or 198).


STUDENT'S NAME:

STAFF ADVISOR:

Watch for CEFULs: CE Faculty-Undergraduate Lunches, regularly scheduled throughout the year, CE’s free lunch program.