# Computer Engineering & Computer Science

## COMPUTING SYSTEMS

### FIRST YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
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<tbody>
<tr>
<td>CSCI 102L</td>
<td>CSCI 103L</td>
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<tr>
<td>ENGR 102</td>
<td>CSCI 170</td>
</tr>
<tr>
<td>MATH 125</td>
<td>EE 109L</td>
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<tr>
<td>WRIT 150</td>
<td>MATH 126</td>
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<tr>
<td>GEN ED</td>
<td>OPTIONAL ELECTIVE</td>
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### SECOND YEAR

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<tr>
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<th>SPRING</th>
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<tbody>
<tr>
<td>CSCI 104L</td>
<td>CSCI 270</td>
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<tr>
<td>EE 250L</td>
<td>EE 354L</td>
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<tr>
<td>MATH 226</td>
<td>MATH 225</td>
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<tr>
<td>GEN ED</td>
<td>OPTIONAL ELECTIVE</td>
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### THIRD YEAR

<table>
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<tr>
<th>FALL</th>
<th>SPRING</th>
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<tbody>
<tr>
<td>CSCI 201L</td>
<td>CSCI 350</td>
</tr>
<tr>
<td>EE 457</td>
<td>TECHNICAL ELECTIVE</td>
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<tr>
<td>EE 364 or MATH 407</td>
<td>GEN ED</td>
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<tr>
<td>GEN ED</td>
<td>TECHNICAL ELECTIVE</td>
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<tr>
<td>WRIT 340</td>
<td>GEN ED</td>
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### FOURTH YEAR

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<tbody>
<tr>
<td>CSCI 353</td>
<td>CSCI 401, 404, or EE 459</td>
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<tr>
<td>EE 451, 454L, or 477L</td>
<td>EE 451, 454L, or 477L</td>
</tr>
<tr>
<td>TECHNICAL ELECTIVE</td>
<td>TECHNICAL ELECTIVE</td>
</tr>
<tr>
<td>GEN ED</td>
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</tbody>
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### ENGINEERING

- **CSCI 102L**: Fundamentals of Computation
- **CSCI 103L**: Introduction to Programming
- **CSCI 104L**: Data Struct. & Object-Oriented Design
- **CSCI 170**: Discrete Methods in Computer Science
- **CSCI 201L**: Principles of Software Development
- **CSCI 270**: Intro to Algorithms & Theory of Comp.
- **CSCI 350**: Introduction to Operating Systems
- **CSCI 353**: Introduction to Internetworking
- **CSCI 401**: Capstone: Design & Construction of Large Software Systems
- **CSCI 404**: Creating Your High-Tech Startup
- **EE 109L**: Introduction to Embedded Systems
- **EE 250L**: Distributed Systems for the Internet of Things
- **EE 354L**: Introduction to Digital Circuits
- **EE 451L**: Parallel & Distributed Computation
- **EE 454L**: Intro to Systems Using Microprocessors
- **EE 477L**: MOS VLSI Circuit Design
- **EE 457**: Computer Systems Organization
- **ENGR 102**: Engineering Freshman Academy
- **TECHNICAL ELECTIVES**: Specialized upper division courses you choose for your major/specialization.

### MATHEMATICS

- **MATH 125**: Calculus I
- **MATH 126**: Calculus II
- **MATH 226**: Calculus III
- **MATH 225**: Linear Algebra & Differential Equations

### STATISTICS & PROBABILITY

- **EE 364**: Intro to Probability & Statistics
- **MATH 407**: Probability Theory

### SCIENCE

- **PHYS 151L**: Mechanics & Thermodynamics
- **PHYS 152L**: Electricity & Magnetism

### GENERAL EDUCATION

As a USC Viterbi student your General Education (Gen Ed) curriculum will include courses in the Arts, Humanistic Inquiry and Social Analysis.

### ELECTIVES

Your optional electives are one way to build engineering+ into your curriculum by choosing classes of interest to you.

Courses with this symbol may be satisfied with certain AP, IB or A-Level exams. With each requirement you replace with prior credit, you increase your optional electives, creating more flexibility for you to pursue additional electives and increase your engineering+ education.

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This is a simplified version of a complex curriculum with options and choices made between advisor and student. Course choices can vary by semester and adjust to include relevant topics and materials. Although every attempt has been made to ensure accuracy, the program requirements listed in the USC Catalogue supersede any information which may be contained in this or any other publication of any school or department. The information found in this document is not intended for advising purposes. The University reserves the right to change its policies, rules, regulations, requirements and course offerings at any time.
## Computer Engineering & Computer Science

**EMBEDDED SYSTEMS**

### FIRST YEAR
- **Fall**
  - CSCI 102L: Fundamentals of Computation
  - ENGR 102
  - MATH 125
  - WRIT 150
  - GEN ED
- **Spring**
  - CSCI 103L: Introduction to Programming
  - CSCI 170
  - EE 109L
  - MATH 126
  - GEN ED

### SECOND YEAR
- **Fall**
  - CSCI 104L: Data Structures & Object-Oriented Design
  - EE 250L
  - MATH 226
  - PHYS 151L
  - OPTIONAL ELECTIVE
- **Spring**
  - CSCI 270
  - EE 354L
  - MATH 225
  - PHYS 152L
  - OPTIONAL ELECTIVE

### THIRD YEAR
- **Fall**
  - EE 202
  - MATH 226 or MATH 407
  - PHYS 151L
  - OPTIONAL ELECTIVE
  - OPTIONAL ELECTIVE
- **Spring**
  - EE 301
  - TECHNICAL ELECTIVE
  - PHYS 152L
  - TECHNICAL ELECTIVE
  - TECHNICAL ELECTIVE

### FOURTH YEAR
- **Fall**
  - EE 453
  - TECHNICAL ELECTIVE
  - EE 364
  - GEN ED
  - GEN ED
- **Spring**
  - CSCI 430
  - TECHNICAL ELECTIVE
  - EE 457
  - GEN ED
  - GEN ED
  - FREE ELECTIVE

### ENGINEERING
- CSCI 102L: Fundamentals of Computation
- CSCI 103L: Introduction to Programming
- CSCI 104L: Data Structures & Object-Oriented Design
- CSCI 170: Discrete Methods in Computer Science
- CSCI 270: Introduction to Algorithms & Theory of Computing
- CSCI 430: Introduction to Computer & Network Security
- EE 109L: Introduction to Embedded Systems
- EE 202: Linear Circuits
- EE 250L: Distributed Systems for the Internet of Things
- EE 301: Linear Systems
- EE 354L: Introduction to Digital Circuits
- EE 453: Computing Platforms & Paradigms
- EE 457: Computer Systems Organization
- EE 459Lx: Embedded Systems Design Laboratory
- ENGR 102: Engineering Freshman Academy

### MATHEMATICS
- MATH 125: Calculus I
- MATH 126: Calculus II
- MATH 226: Calculus III
- MATH 225: Linear Algebra & Differential Equations

### STATISTICS & PROBABILITY
- EE 364: Intro to Probability & Statistics
- or MATH 407: Probability Theory

### SCIENCE
- PHYS 151L: Mechanics & Thermodynamics
- PHYS 152L: Electricity & Magnetism

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**USC Viterbi**
School of Engineering