Course Tracks for **Computer Science (CSCI)**

The Computer Science (CSCI) program prepares students to work in the areas of software design, development, application, and maintenance. CSCI 102 is the introductory course for this program and the appropriate course for students with limited or no prior computer programming experience. Students who earn a 4 or 5 on the AP Computer Science A exam, or pass the CSCI 102 Challenge Exam, are able to begin in the next level of courses.

### Computer Science — Begin with CSCI 103

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>SECOND YEAR</th>
<th>THIRD YEAR</th>
<th>FOURTH YEAR</th>
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<tr>
<td><strong>FALL</strong></td>
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<tr>
<td>WRIT 150</td>
<td>GESM (GE B)#</td>
<td>EE 109L</td>
<td>CSCI 310 or 353 or 356 or 360</td>
</tr>
<tr>
<td>MATH 125 (GE F)*</td>
<td>CSCI 104</td>
<td>CSCI 270</td>
<td>MATH 299 or MATH 226 or MATH 125</td>
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<tr>
<td>CSCI 103L</td>
<td>CSCI 104L</td>
<td>MATH 299</td>
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<tr>
<td>CSCI 102</td>
<td>CSCI 104L</td>
<td>MATH 299 or MATH 225</td>
<td>TECHNICAL ELECTIVE II</td>
</tr>
<tr>
<td>CSCI 170</td>
<td>GE C</td>
<td>MATH 225</td>
<td>EE 364 MATH 225 or MATH 407</td>
</tr>
<tr>
<td>ENGR 102</td>
<td>OPTIONAL ELECTIVE</td>
<td>BASIC SCIENCE (GE D OR E)*</td>
<td>OPTIONAL ELECTIVE</td>
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### Computer Science — Begin with CSCI 102

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Computer Science (CSCI) Please see previous page.

**MATHEMATICS (16 UNITS)**
- MATH 125: Calculus I*
- MATH 126 or 129: Calculus II*
- MATH 226 or 229: Calculus III
- MATH 225: Linear Algebra & Diff. Equations or MATH 235: Linear Algebra & Applications

**STATISTICS AND PROBABILITY (4 UNITS)**
- EE 364: Intro to Probability & Statistics or MATH 407: Probability Theory

**SCIENCE COURSES (8 UNITS)**
- BASIC SCIENCE I*
- BASIC SCIENCE II*

**GENERAL EDUCATION (32 UNITS)**
- GE A: The Arts (1 Course)*
- GE B: Humanistic Inquiry (2 Courses)
- GE C: Social Analysis (2 Courses)
- GE D: Life Sciences (1 Course)*
- GE E: Physical Sciences (1 Course)*
- GE F: Quantitative Reasoning (1 Course)*
- GE G,H: Global Perspectives (2 Courses)*
- GESM: General Education Seminar (1 Course)

**WRITING (8 UNITS)**
- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing

**ENGINEERING (64 UNITS)**
- CSCI 102: Fundamentals of Computation
- CSCI 103L: Introduction to Programming
- CSCI 104L: Data Structures & Object Oriented Design
- CSCI 170: Discrete Methods in Comp. Science
- CSCI 201: Princ. of Software Development
- CSCI 270: Intro. to Algorithms & Theory of Computing
- CSCI 310: Intro. to Software Engineering
- CSCI 350: Introduction to Operating Systems
- CSCI 353: Introduction to Internetworking
- CSCI 354: Introduction to Computer Systems
- CSCI 360: Intro. to Artificial Intelligence
- CSCI 401: Capstone: Design and Construction of Large Software Systems or CSCI 404: Capstone: Creating Your High-Tech Startup
- EE 109: Introduction to Embedded Systems
- ENGR 102: Engineering Freshman Academy

**TECHNICAL ELECTIVES (12 UNITS)**

**OTHER COURSES (4 UNITS)**

**SPECIAL NOTES**
- Courses with the * symbol may be satisfied with AP, IB or A-Level exams. See page 18 for more information.

**GESM#:** GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan. GE D may be satisfied with the Basic Science requirement.

**GE:** Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by AP/IB. Additionally, your GESM course should be taken in categories A, B, C, or D only. Please see page 17 for more information and consult your advisor for detailed assistance.

**GRADE QUALIFIER:** A grade of a C (2.0) or better is required for each of the core courses (CSCI 102, 103, 170, 104 & 201). Courses with a grade of C- or below must be repeated; courses may only be retaken once with department approval.

**BASIC SCIENCE:** PHYS 151L and 152L; CHEM 105aL and CHEM 105bL; or BISC 120L and 220L

**TECHNICAL ELECTIVES:** See approved elective list on computer science webpage.

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Computer Science Games Please see next page.

**MATHEMATICS (12 UNITS)**
- MATH 125: Calculus I*
- MATH 126 or 129: Calculus II*
- MATH 226 or 229: Calculus III or MATH 235: Linear Algebra & Applications or EE 141L: Applied Linear Algebra for Engineering

**PHYSICS (4 UNITS)**
- PHYS 151L: Mechanics and Thermodynamics*

**GENERAL EDUCATION (32 UNITS)**
- GE A: The Arts (1 Course)*
- GE B: Humanistic Inquiry (2 Courses)
- GE C: Social Analysis (2 Courses)
- GE D: Life Sciences (1 Course)*
- GE E: Physical Sciences (1 Course)*
- GE F: Quantitative Reasoning (1 Course)*
- GE G,H: Global Perspectives (2 Courses)*
- GESM: General Education Seminar (1 Course)

**WRITING (8 UNITS)**
- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing

**COMPUTER SCIENCE (22 UNITS)**
- CSCI 102: Fundamentals of Computation
- CSCI 103L: Introduction to Programming
- CSCI 104L: Data Structures & Object Oriented Design
- CSCI 170: Discrete Methods in Comp. Science
- CSCI 201: Princ. of Software Development
- CSCI 270: Intro. to Algorithms & Theory of Computing

**CS CORE ELECTIVES (8 UNITS)**
Choose at least 8 units of elective:
- CSCI 350: Introduction to Operating Systems
- CSCI 353: Introduction to Internetworking
- CSCI 356: Introduction to Computer Systems
- CSCI 360: Intro. to Artificial Intelligence
- CSCI 420: Computer Graphics

**GAMES DEVELOPMENT (16 UNITS)**
- ITP 380: Video Game Programming
- CTIN 190: Intro to Interactive Entertainment
- CTIN 488: Game Design Workshop
- CTIN 489L: Intermediate Game Design Workshop

**GAMES CORE ELECTIVES (6 UNITS)**
Choose at least 6 units of elective from approved elective list: [https://www.cs.usc.edu/academic-programs/undergrad/computer-science-games/](https://www.cs.usc.edu/academic-programs/undergrad/computer-science-games/)

**GAMES CAPSTONE (6 UNITS)**
- CSCI 491AL: Final Game Project
- CSCI 491BL: Final Game Project

**ENGINEERING (2 UNITS)**
- ENGR 102: Engineering Freshman Academy

**SPECIAL NOTES**
- Courses with the * symbol may be satisfied with AP, IB or A-Level exams. See page 18 for more information.

**GESM#:** GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan. GE D may be satisfied with the Basic Science requirement.

**GE:** Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by AP/IB. Additionally, your GESM course should be taken in categories A, B, C, or D only. Please see page 17 for more information and consult your advisor for detailed assistance.

**GRADE QUALIFIER:** A grade of a C (2.0) or better is required for each of the core courses (CSCI 102, 103, 170, 104 & 201). Courses with a grade of C- or below must be repeated; courses may only be retaken once with department approval.

**FREE ELECTIVES (20 units):** CSGA students should consider additional CS/games courses or a complimentary minor.