

COURSE TRACKS FOR COMPUTER SCIENCE

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.

**Please review the prerequisites for upper-division CSCI courses on the next page.*

Computer Science — Begin with CSCI 103

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
WRIT 150 4	GESM (GE B)# 4	EE 109L CSCI 102 4	CSCI 310 or 353 or 356 or 360 4	GE A* 4	CSCI 310 or 353 or 356 or 360 4	WRIT 340 WRIT 150 4	TECHNICAL ELECTIVE IV 4
MATH 125 (GE F)* 4	MATH 129 or MATH 126* MATH 125 4	CSCI 270 CSCI 104L, CSCI 170 4	MATH 229 or MATH 226 MATH 129 or 126 4	MATH 225 or MATH 235 MATH 126 or 129 4	TECHNICAL ELECTIVE II 4	TECHNICAL ELECTIVE III 4	CSCI 350 CSCI 201, CSCI 356 4
CSCI 103L CSCI 102 4	CSCI 104 CSCI 103L, CSCI 170 4	CSCI 201L CSCI 104L 4	TECHNICAL ELECTIVE I 4	CSCI 310 or 353 or 356 or 360 4	EE 364 MATH 225 OR MATH 245 4	CSCI 310 or 353 or 356 or 360 4	CSCI 401 CSCI 270, CSCI 310 OR CSCI 404 CSCI 201, CSCI 270 4
CSCI 170 CSCI 102 4	GE C 4	GE C 4	LIFE SCIENCES (GE D) 4	PHYSICAL SCIENCES (GE E) 4	GE B 4	OPTIONAL ELECTIVE 6	ELECTIVE 6
ENGR 102 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2		

Computer Science — Begin with CSCI 102

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
WRIT 150 4	CSCI 103L CSCI 102 4	EE 109L CSCI 102 4	CSCI 270 CSCI 104L, CSCI 170 4	GE A* 4	CSCI 310 or 353 or 356 or 360 4	WRIT 340 WRIT 150 4	TECHNICAL ELECTIVE IV 4
MATH 125 (GE F)* 4	CSCI 170 CSCI 102 4	CSCI 104 CSCI 103L, CSCI 170 4	CSCI 201L CSCI 104L 4	TECHNICAL ELECTIVE I 4	CSCI 310 or 353 or 356 or 360 4	TECHNICAL ELECTIVE II 4	CSCI 350 CSCI 201, CSCI 356 4
CSCI 102 2	MATH 129 or MATH 126* MATH 125 4	MATH 229 or MATH 226 MATH 129 or 126 4	MATH 225 or MATH 235 MATH 126 or 129 4	CSCI 310 or 353 or 356 or 360 4	EE 364 MATH 225 OR MATH 245 4	CSCI 310 or 353 or 356 or 360 4	CSCI 401 CSCI 270, CSCI 310 OR CSCI 404 CSCI 201, CSCI 270 4
GE C 4	GESM (GE B)# 4	GE C 4	LIFE SCIENCES (GE D) 4	PHYSICAL SCIENCES (GE E) 4	GE B 4	OPTIONAL ELECTIVE 6	TECHNICAL ELECTIVE III 4
ENGR 102 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2		OPTIONAL ELECTIVE 2
OPTIONAL ELECTIVE 2							

Computer Science (CSCI) *Please see previous page.*

Mathematics (16 Units)

- MATH 125: Calculus I*
- MATH 126 or MATH 129: Calculus II*
- MATH 226 or MATH 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

Life Sciences (4 Units)

Take one of the following life science courses, each of which also satisfies the GE-D Life Sciences requirement.

- BISC 120 General Biology: Organismal Biology and Evolution*
- BISC 121 Advanced General Biology: Organismal Biology and Evolution
- BISC 220 General Biology: Cell Biology and Physiology

Physical Sciences (4 Units)

Take one of the following science courses, each of which also satisfies the GE-E Physical Sciences requirement.

- CHEM 105a General Chemistry*
- CHEM 115a Advanced General Chemistry
- PHYS 151 Fundamentals of Physics I: Mechanics and Thermodynamics*
- PHYS 161 Advanced Principles of Physics I

Engineering (52 Units) *(With Prerequisites)*

- CSCI 102L: Fundamentals of Computation
- CSCI 103L: Introduction to Programming (*CSCI 102*)
- CSCI 104L: Data Structures & Object Oriented Design (*CSCI 103 and CSCI 170*)
- CSCI 170: Discrete Methods in Comp. Science (*CSCI 102*)
- CSCI 201L: Princ. of Software Development (*CSCI 104*)
- CSCI 270: Intro. to Algorithms & Theory of Computing (*CSCI 104 and CSCI 170*)
- CSCI 310: Intro. to Software Engineering (*CSCI 201*)
- CSCI 350: Introduction to Operating Systems (*CSCI 201 and CSCI 356*)
- CSCI 353: Introduction to Internetworking (*CSCI 201*)
- CSCI 356: Introduction to Computer Systems (*CSCI 104*)
- CSCI 360: Introduction to Artificial Intelligence (*CSCI 104 and CSCI 170*)
- CSCI 401: Capstone: Design and Construction of Large Software Systems (*CSCI 270 and CSCI 310*)
- **OR** CSCI 404: Capstone: Creating Your High-Tech Startup (*CSCI 201, CSCI 270 and TAC 466*)
- EE 109: Introduction to Embedded Systems (*CSCI 102*)
- ENGR 102: Engineering Freshman Academy

General Education (20 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

Technical Electives (16 Units)

- Take at least FOUR 4-unit 300- or 400-level CSCI courses for a minimum of 16 units.

Free Elective (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:** 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. 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.
- **Technical Electives:** Required CSCI major courses cannot double count for technical elective credit.