

Computer Science BS Degree

For “Undecided Engineering” students who switch to CS following the freshman year,
start with CS 105, and do not take co-op

(Notes about how to map Engineering curriculum to CS curriculum indicated in *red italics*)

| FALL | | SPRING | | SUMMER | |
|---------------------------|--|---------------------------|--|------------------|--|
| TERM 1 | | TERM 2 | | | |
| MA 121 followed by MA 122 | Differential Calculus Integral Calculus | MA 123 followed by MA 124 | Series, Vectors, Functions, and Surfaces Calculus of Two Variables | | |
| E 101 | Engineering Experiences <i>(Together with Spring E 122 counts as one Free elective)</i> | MGT 103 | Intro to Entrepreneurship <i>(Extra course)</i> | | |
| E 121 + E 120 | Engineering Design I Engineering Graphics <i>(Together count as one Free elective)</i> | E 122 | Engineering Design II <i>(Together with Fall E 101 counts as one Free elective)</i> | | |
| E 115 | Intro. to Programming <i>(Does not count; extra course)</i> | | | CS 105 | Intro to Scientific Computing <i>(offered via WebCampus)</i> |
| CH 115 | Chemistry I <i>(Counts as Science I)</i> | PEP 111 | Mechanics <i>(Counts as Math/Science elective)</i> | | |
| CH 117 | Chemistry Lab <i>(Counts as Science Lab)</i> | Science | <i>(Counts as Science II only if CH 116 or CH 281 is taken; a different course will count as Math/Science elective)</i> | | |
| CAL 103/105 | Humanities | CAL 105/103 | Humanities | | |
| PE 200 | Phys. Ed. I | PE 200 | Phys. Ed. II | | |
| TERM 3 | | TERM 4 | | | |
| CS 115 | Intro to Computer Science | CS 284 | Data Structures | CS 385 or CS 590 | Algorithms <i>(CS 385 offered on campus; equivalent course CS 590 offered via WebCampus)</i> |
| CS 135 | Discrete Structures | CS 383 or CS 550 | Computer Organization & Programming | | |
| CS 146 | Intro. to Web Programming and Project Development | CS 347 | Software Development Process <i>(prereq waived)</i> | | |
| BT 353 | Project Management | MA 222 | Probability & Statistics | | |
| HUM | Humanities 200 level | | <i>(If CH 116 or CH 281 was taken in Term 2, this course should be a Math/Science elective. If a different science course was taken in</i> | | |

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|--------------------------|--|----------------------------------|---|--|--|
| | | | <i>Term 2, this course should be CH 116 or CH 281.)</i> | | |
| PE 200 | Phys. Ed. III | PE 200 | Phys. Ed. IV | | |
| TERM 5 | | TERM 6 | | | |
| CS 442 | Database Mgmt. Systems | CS 492 | Operating Systems | | |
| CS 443 | Database Practicum | CS 522 or CS 546 or CS 548 | Mobile Systems & App or Web Programming or Enterprise Software Architecture & Design | | |
| CS 334 | Automata & Computation | CS 496 | Principles of Programming Languages | | |
| MA 331 | Intermediate Statistics | | Software Development Elective | | |
| CS 392 | Systems Programming | HUM | Humanities | | |
| TERM 7 | | TERM 8 | | | |
| CS 423 | Senior Design I | CS 424 | Senior Design II | | |
| CS 306 | Intro to IT Security | | Technical elective | | |
| CS 511 | Concurrent Programming | | Technical elective | | |
| HSS 371 or HPL 455 | Computers & Society or Ethical Issues in Science and Technology | HUM | Humanities 300 level | | |
| HUM | Humanities | HUM | Humanities | | |
| CS 485 | Societal Impact of Information Technologies (1 credit) | | | | |