Computer Science Bachelor’s Degree Requirements

The B.A. is designed to allow students more flexibility in choosing electives outside of computer science. To receive a B.A., a student must complete the Math and Science, CS Core, and CS Electives portions of the curriculum totaling 60 or more credit hours, with an overall total of at least 120 credit hours.

The B.S. is designed for students who are interested in a more in-depth study of computer science in order to further prepare themselves for a professional career in the computing industry. To receive a B.S., a student must complete all four parts of the curriculum totaling 82 or more credit hours, with an overall total of at least 128 credit hours.

Math and Science (BA: 5 courses, 15 hours, BS: 7 courses, 22-23 hours)

- Introductory calculus: MATH 101–102
- Advanced calculus: MATH 211, 212, 221, or 222
- Probability: STAT 310, 312, or 331
- Linear Algebra: MATH 355, MATH 354, or CAAM 335
- Physics (B.S. only): PHYS 101–102, PHYS 111–112, or PHYS 125–126

CS Core (BA and BS: 10 courses, 44 hours)

- Introductory CS: COMP 140 or 160
- Algorithms: COMP 182
- Programming: COMP 215
- Hardware: ELEC 220
- Object-Oriented Programming: COMP 310
- Systems: COMP 321
- Parallel Programming: COMP 322
- Algorithms: COMP 382
- Programming Languages: COMP 411 or 412
- Operating Systems: COMP 421

CS Electives (BA and BS: 2 courses, 6-8 hours)

- Two additional upper-level (300-level or higher) COMP courses, each of 3 or more credits. Departmental approval is required to use a 600-level course as an elective.

Cap (BS: 4-5 courses, all at the 300-level or higher, 15 or more hours)

A coherent set of courses in some computer science specialization that includes a design component (one of COMP 402, 410, 413, or 460). This may include courses in any department. Departmental approval is required for all cap sequences.

Research and Independent Study Courses. An independent study course of at least 3 credit hours (COMP 390, COMP 490, COMP 491) mentored by a CS faculty member may be used as a CS Elective or in a Cap. At most one independent study course may be used to satisfy the CS major requirements.

Repeating Courses for Credit. Courses that are repeatable for credit may only be used once to satisfy the major requirements. However, depending on university rules, such repeated courses may count towards satisfying the university requirements.

Substitutions. MATH 111 and 112 may together replace MATH 101. For students with calculus backgrounds, but no corresponding credit, higher-level Math courses may replace the introductory Math courses. For a limited number of students, PHIL 305 may replace the Advanced Calculus course. Any substitutions require departmental approval.

Additional Information. Please also refer to the department’s academic advisors and to the advising information at http://compsci.rice.edu/undergrad/.

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