



Rice Hall
85 Engineers Way
Charlottesville, VA 22904
www.cs.virginia.edu
434.982.2200
cs-office@virginia.edu

Bachelor of Science in Computer Science (BSCS)

The computer science BS degree prepares students for careers that provide both personal and societal rewards. As creators of information technologies our graduates are reaching out to people and the world by supporting and enhancing communication, health care, entertainment, scientific inquiry, transportation, business, and almost any other endeavor you can imagine. Computing connects closely with a wide range of disciplines including, but not limited to, the visual arts, music, life sciences, the physical sciences, linguistics, engineering, mathematics, and the social sciences. The computer curriculum focuses on developing methods and tools for describing, implementing, and analyzing information processes and for managing complexity; including abstraction, specification, and recursion.

The Bachelor of Science in Computer Science degree offered by the Department of Computer Science is accredited by the Computing Accreditation Commission of ABET.

Requirements for the BSCS Major

Required Core CS AND APMA Courses

- CS 1110, 1111, 1112 or 1113: *Introduction to Computer Science (requirement waived with AP or IB credit, or by passing CS placement test)*
- CS 2110: *Software Development Methods*
- CS 2102: *Discrete Mathematics I*
- CS 2150: *Program & Data Representation*
- CS/ECE 2330: *Digital Logic*
- CS 2190: *CS Seminar I*
- CS 3102: *Theory of Computation*
- CS 3330: *Computer Architecture*
- CS 3240: *Advanced Software Development Techniques*
- CS 4102: *Analysis of Algorithms*
- CS 4414: *Operating Systems*
- Capstone course: CS 4971 or CS 4980
- APMA 3100: *Probability*
APMA 2130 or 3080 or 3120 or 3150 (select 2, but cannot take both 3120 & 3150).

Required SEAS Courses

- APMA 1110 & 2120
- CHEM 1610 & 1611
- ENGR 1620 & 1621
- PHYS 1425, 1429, 2415, & 2419

Computer Science Electives (5 required)

Any CS 3000 level or CS 4000 level courses not otherwise required. See the Undergraduate Handbook for a complete list and for restrictions. Among the choices:

- CS 3205 *HCI in Software Development*
- CS 4240 *Principles of Software Design*
- CS 4330 *Advanced Computer Architecture*
- CS 4444 *Parallel Computing*
- CS 4457 *Computer Networks*
- CS 4458 *Internet Engineering*
- CS 4610 *Programming Languages*
- CS 4620 *Compilers*
- CS 4630 *Defense Against the Dark Arts*
- CS 4710 *Artificial Intelligence*
- CS 4720 *Web and Mobile Systems*
- CS 4730 *Game Design*
- CS 4750 *Database Systems*
- CS 4753 *Electronic Commerce Technology*
- CS 4810 *Introduction to Computer Graphics*

Science Elective (1 required)

One course chosen from an approved list of Biology, Chemistry, Electrical Engineering, Materials Science, and Physics courses.

For a list of acceptable courses, please visit:
<http://www.seas.virginia.edu/advising/pdf/seas-undergraduate-handbook2016.pdf>

Science, Technology & Society (STS) (4 required)

STS 1500, 4500, & 4600, or one 2XXX/3XXX

Humanities & Social Sciences (HSS) Electives (5 required)

For a list of acceptable courses, please visit:
<http://www.seas.virginia.edu/advising/pdf/seas-undergraduate-handbook2016.pdf>

Unrestricted Electives (5 required)

For a list of acceptable courses, please visit:
<http://www.seas.virginia.edu/advising/pdf/seas-undergraduate-handbook2016.pdf>