

Computer Science Degree Program

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Bachelor of Science in Computer Science

Major code BS7260

Computer Science, located in Morton Hall on the East Green, is an academic unit within the School of Electrical Engineering and Computer Science through which you can earn a Bachelor of Science in Computer Science (B.S.C.S.). The College of Arts and Science awards B.A. and B.S. degrees in computer science; see the College of Arts and Sciences section for details.

Computer science involves the design, development, analysis, and maintenance of the computer software that controls complex computer systems and networks. Computer scientists work with all aspects of computer software, including graphics, multimedia, the World Wide Web, e-mail, compilers, software engineering, artificial intelligence, theory of computer algorithms, operating systems, database systems, and internet applications.

Computer scientists do more than write computer programs: They analyze the needs of software users, develop algorithms and interfaces to meet those needs, and work in small groups to design software components. They must be proficient at problem solving, mathematical reasoning, logical thinking, and interpersonal communication. The computer science program at Ohio University, because of its strong ties with mathematics and engineering, emphasizes both the mathematical and the practical components of computer science.

Computer science majors must complete 192 hours of coursework, for an average of 16 hours a quarter over four years of undergraduate study.

In addition to university General Education Requirements, computer science majors take 18 courses in computer science and electrical engineering, 5 courses in mathematics, one or two years of foreign language, and a year-long laboratory science sequence. Students work with several programming languages using both personal computers and UNIX workstations. Credit earned in approved internship or co-op programs may be applied toward graduation requirements.

Freshman

Fall

MATH 263A Calculus I 4
Laboratory science 2 5
Freshman composition 3 5
Language/EE 4 4

Winter

CS 240A Intro to Computer Sci. 5
MATH 263B Calculus 4
Laboratory science 2 5
Language/EE 4 4

Spring

CS 240B Intro to Computer Sci. 5
MATH 263C Calculus 4
Foreign language (113) 4
Laboratory science 2 5
Language/EE 4 4

Sophomore

Fall

CS 240C Intro to Computer Sci. 5
MATH 263D Calculus 4
Laboratory science 2 5
Language/EE 4 1-4

Winter

CS 300 Intro to Discrete Structures 5
MATH 410 Matrix Theory 4
ET 280 Engr. & Tech. Overview 4
Language/EE 4 1-4

Spring

CS 361 Data Structures 5
EE 222 Intro to Digital Circuits 3
Hum./soc. sci./nat. sci. 6 3-4
Language/EE 4 1-4

Junior

Fall

CS 404 Design & Anal. of Algs. 5
EE 371 Applied Prob. and Stats. 3
Hum./soc. sci./nat. sci. 6 6-8

Winter

CS 320 Org. of Prog. Languages 5
EE 367 Intro to Microprocessors 4
Junior English 3 5
Hum./soc. sci./nat. sci. 6 3-4

Spring

CS 406 Computation Theory 5
CS 456 Software Design and Dev. 5
EE 303 Intermediate Lab III 1
Hum./soc. sci./nat. sci. 6 3-4

Senior

Fall

CS 442 Op. Sys. and Comp. Arch. I 5
Technical elective 7 4-5
Hum./soc. sci./nat. sci. 6 6-8

Winter

Tier III 3 5
Technical elective 7 4-5
Hum./soc. sci./nat. sci. 6 6-8

Spring

Technical electives 7 8-10
Hum./soc. sci./nat. sci. 6 3-4

1. Students with insufficient mathematics background may need to take MATH 115 Precalculus before taking MATH 263A.
2. Computer science majors must complete a year-long laboratory science sequence plus one additional science course. Requirements are either PHYS 251, 252, and 253 or CHEM 151, 152, and 123 or 153. The additional science course must be a required course for science majors within the discipline offering the course. PHYS 251 has a prerequisite of MATH 263A, so you may need to wait until winter quarter to start the PHYS sequence.
3. The Tier I freshman composition requirement can be satisfied any quarter of the freshman year. The Tier I junior composition requirement can be satisfied in any quarter of the junior year; ENG 305J is preferred. The Tier III requirement can be satisfied in any quarter of the senior year.
4. Computer science majors must take either two years of foreign language (or have a high school equivalent) or one year of foreign language (or have a high school equivalent) and MATH 340, EE 313, and EE 304.
5. Students without experience in computer programming are encouraged to take CS 230 Computer Programming I before taking CS 240A.
6. Computer Science uses the same humanities, social sciences, and natural sciences requirements as the College of Arts and Sciences (see College of Arts and Sciences "College Requirements" section). Careful selection of courses under this requirement will also fulfill university Tier II requirements.
7. Computer science technical electives can be satisfied at any time. Four classes from at least three areas are required: Computational Sciences (MATH 444, 445, 446), Databases (CS 462, 463, 464), Systems (CS 444, 458), Artificial Intelligence (CS 480, 482, 483), computer architecture (CS 411, 412; EE 467), and Algorithms and Data Structures (CS 410; PHIL 420, 420).

Computer Science Minor

Minor code OR0701

You can earn a minor in computer science by completing each of the following courses with a grade of C (2.0) or better:

CS 240A Intro to Computer Science 5
CS 240B Intro to Computer Science 5
CS 240C Intro to Computer Science 5
CS 300 Intro to Discrete Structures 5
CS 320 Org. of Prog. Languages 5
CS 361 Data Structures 5
EE 222 Intro to Digital Circuits 3
EE 367 Intro to Microprocessors 4

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