COMPUTER SCIENCE MAJOR, B.A.

The bachelor of arts degree with a major in computer science will prepare students for a career in either a traditional computing field or a field in which computing is a significant enabling technology. The B.A. degree is the preferred degree for those who wish more flexibility in their program of study.

Admission to the Major

The demand for concentrating in a computer science program has grown significantly at UNC–Chapel Hill over the past decade. In order to maintain the quality of educational experiences that Carolina students studying computer science deserve, we must restrict the number of students majoring in computer science relative to our faculty size’s ability to sustain the programs.

Those wishing to concentrate in computer science must be admitted to a major program (B.A. or B.S.). Students are eligible to apply in the spring semester after completing or while currently enrolled in COMP 210. Students who are admitted to the program continue through the introductory course sequence with COMP 301 and COMP 211 and will have access to upper-division electives to complete their degree programs. Please see the department’s website (https://cs.unc.edu/undergraduate/cs-admissions/) for the most up-to-date information about the admission to the major process.

Student Learning Outcomes

Upon completion of the computer science program (B.A.), students should be able to:

- Understand major concepts, theoretical perspectives, empirical findings, and historical trends in the core of computer science
- Gain employment in highly competitive industries and companies and be successful in those positions
- Use critical and creative thinking skills in their approach to analyzing and solving computational problems
- Apply their knowledge in the completion of a significant real-world experience

Requirements

In addition to the program requirements, students must

- earn a minimum final cumulative GPA of 2.000
- complete a minimum of 45 academic credit hours earned from UNC–Chapel Hill courses
- take at least half of their major core requirements (courses and credit hours) at UNC–Chapel Hill
- earn a minimum cumulative GPA of 2.000 in the major core requirements. Some programs may require higher standards for major or specific courses.

For more information, please consult the degree requirements section of the catalog (https://catalog.unc.edu/undergraduate/degree-requirements/).
The following is a suggested four-year plan of study for B.A. majors.

**Total Hours** 40

**Notes on the Suggested Plan of Study**

A first formal course in computer programming (such as COMP 110) is a prerequisite for COMP 210. Students with no programming experience should begin their program of study with COMP 110. Students who are unsure if their background preparation enables them to begin their program of study with COMP 110 should begin their program of study with COMP 110.

**Sample Plan of Study**

Sample plans can be used as a guide to identify the courses required to complete the major and other requirements needed for degree completion within the expected eight semesters. The actual degree plan may differ depending on the course of study selected (second major, minor, etc.). Students should meet with their academic advisor to create a degree plan that is specific and unique to their interests. The sample plan represents the courses that are appropriate for this requirement and may only be counted with the approval of the director of undergraduate studies. The plan includes a recommended sequence of courses for students who are unsure if their background preparation enables them to begin their program of study with COMP 110. Students who are unsure if their background preparation enables them to begin their program of study with COMP 110 should begin their program of study with COMP 110.

The following is a suggested four-year plan of study for B.A. majors.
students with COMP 210 are encouraged to consult a departmental
advisor. Placement exams for COMP 110 and COMP 210 may be
available, please consult the department’s website.

Students are required to apply for the major in the Spring semester after
taking COMP 210. The plan of study reflects applying at the end of the
first year and presumes acceptance into the program. Students who
take COMP 210 in their sophomore year would apply at the end of their
sophomore year. In this case, COMP 211, COMP 301, and all subsequent
upper division electives would move to the junior and senior years; and
electives and general education courses would come forward.

This plan of study further assumes that students will place out of Global
Language 1. If this is not the case, then the student should start with
Global Language 1 (and have one fewer free elective in the senior year).

Special Opportunities in Computer
Science
Honors in Computer Science
Students are eligible for graduation with honors if they complete the
following requirements:

- A cumulative grade point average of 3.3 or better
- A grade point average of 3.3 or better from among the set of COMP,
  MATH, PHYS, and STOR courses taken to fulfill the graduation
  requirements for the major
- Graduation with honors requires the completion of two semesters
  of research (COMP 691H and COMP 692H). As part of COMP 692H,
  students must submit a written honors thesis and complete an
  oral public presentation of the thesis. Graduation with highest
  honors in computer science is possible for those students whose
  honors project and thesis are judged by a faculty committee to be
  particularly distinguished.

Students interested in pursuing honors in computer science are
encouraged to contact the director of undergraduate studies.

High-Impact Experiences
Courses arranged in advance with a supervising faculty member offer a
number of high-impact experiences. These courses include:

- COMP 227, earning credit for serving as an undergraduate learning
  assistant;
- COMP 293, earning credit for appropriate work experience;
- COMP 495, conducting mentored research with a faculty member;
- and study abroad while earning credit that counts toward the major
  (see below).

Assistantships and Internships
In addition to their classroom experiences, undergraduates may enhance
their learning experience as research assistants or learning assistants.
Students also can participate in nationally recognized research programs
or use the department’s facilities to pursue self-directed research with a
faculty member.

Work-study students can gain valuable work experience as assistants on
the department’s computer services staff or on development or research
activities with faculty. The department also encourages students to
pursue internship experiences. Carolina’s proximity to Research Triangle
Park means that computer science majors have many internship and
postgraduation opportunities available in their own backyard.

Study Abroad
Study abroad opportunities with priority for computer science students
are offered through a number of international institutions including
the National University of Singapore (NUS) School of Computing,
Lancaster University, Trinity University—Dublin, University of New South
Wales, and Seoul National University. Study abroad at NUS is eligible
for the Phillips Ambassadors Scholarship. Please see the Phillips
Ambassadors website (http://phillips.unc.edu/) for more information.
Availability of these programs may vary and additional programs may be
available. Application for study abroad is through the University’s Study
Abroad Office.

Study abroad satisfies the experiential education General Education
requirement of the undergraduate curriculum. Up to two computer
science courses taken at these institutions may be counted toward the
major as computer science electives beyond the introductory sequence.
Specific course equivalencies for some programs are posted on the
department’s website (https://cs.unc.edu/). Students interested in taking
a course not listed should contact the director of undergraduate studies
before registering for courses at the school.

Undergraduate Awards
The department awards two yearly prizes to computer science majors.
In conjunction with SAS Institute, the department annually presents the
Charles H. Dunham Scholarship. The Dunham scholarship includes a
scholarship and a summer internship at SAS and is awarded in the fall
semester to a student in their junior year. The department also annually
presents the Stephen F. Weiss Award for Outstanding Achievement in
Computer Science, which includes a cash prize. The Weiss award is
presented to a student in the spring of their senior year.

Department Programs
Majors
- Computer Science Major, B.A. (p. 1)
- Computer Science Major, B.S. (https://catalog.unc.edu/
  undergraduate/programs-study/computer-science-major-bs/)

Minor
- Computer Science Minor (https://catalog.unc.edu/undergraduate/
  programs-study/computer-science-minor/)

Graduate Programs
- M.S. in Computer Science (https://catalog.unc.edu/graduate/
  schools-departments/computer-science/)
- Ph.D. in Computer Science (https://catalog.unc.edu/graduate/
  schools-departments/computer-science/)

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