Why should I major in Computer Science at Seton Hall?

The Department of Mathematics and Computer Science, located in the College of Arts and Sciences, offers small classes in computer science taught by dedicated Ph.D. faculty. Courses are selected in consultation with a department adviser considering a student’s background and objectives. As a computer science major, you will be in demand (99 percent job placement), gain acceptance into graduate programs, participate in a Cooperative Education Program, develop logical reasoning and problem-solving skills and integrate classroom theory with hands-on experience in state-of-the-art computer laboratories.

The department has a proven track record in supporting successful student research and offers weekly research talks during its seminar and colloquium. Students can apply for funding as research assistants or participate in our active Mathematics and Computer Science Club.

The Curriculum:

The computer science major is a rigorous, conceptual and comprehensive program that will prepare you for a wide variety of career options in industry, government and education. The program combines an overview of computer science and the mathematical skills needed for a firm understanding of concepts. It exposes students to a variety of operating systems, programming languages, editors and applications, and includes a strong variety of theoretical and applied courses.

The program is designed for students with at least three years of high school mathematics, including pre-calculus or trigonometry. Entry into the program requires a minimum mathematics SAT score of 550 or a minimum SAT total score of 1000 with 520 in mathematics.

What Does It Take to Graduate?

The program is designed for highly motivated students. After taking foundational courses in computer science and mathematics the student completes at least 21 credits of upper-level computer science courses in consultation with an adviser. Highly successful students can graduate with departmental honors upon presentation of an Honors Thesis in Computer Science.

Career Opportunities:

Internship and career opportunities for those with a bachelor’s degree in computer science include research opportunities in a variety of scientific and pharmaceutical industries, computer and software industry, computer engineering, sales and marketing, engineering, operations research, modeling, health services and more.

A bachelor’s degree in computer science is an excellent foundation for graduate school. Opportunities for continued studies include computer science, computer engineering, bioinformatics, computational biology, computational sciences, engineering and more.

How Do I Apply for Admission?

Complete your application to Seton Hall University and include the $55 non-refundable application fee ($40 if applying online). Freshman applicants must submit official high school transcripts and any college or university transcripts where credit was attempted, plus the results of the SAT I or ACT assessments. Transfer students must submit transcripts from each college or university where credit was attempted. Those with fewer than 24 earned credits must complete the freshman requirements. Applications are available at admissions.shu.edu.

Can I Get Financial Aid?

Almost 90 percent of the students who entered Seton Hall last year received some form of financial aid, and 75 percent of these students received money directly from the University. The four types of financial aid include scholarships, grants and discounts, loans, and part-time jobs on campus. For further information, visit admissions.shu.edu/FinancialAid.htm or call (973) 761-9332.
Computer Science Requirements

Core Curriculum Requirements*

A. English Language (6 credits)
B. Communication (3 credits)
C. Mathematics (3 credits and prerequisites) — MATH 1501
D. Natural Sciences (6 credits) and Behavioral Sciences (6 credits)
E. Western Civilization (6 credits), Foreign Language (6 credits), and American Civilization/African, Asian and
   Latino Civilizations/Foreign Literature/Advanced Language (6 credits)
F. Ethical Questions (3 credits)
G. Philosophy and Religious Studies (9 credits)

* Please see Undergraduate Catalogue

Computer Science Major — A minimum of
55 hours, including:

**Freshmen Year:**
- CSAS 1111-1112* Introduction to Computer Science I-II
- MATH 1501-1511* Honors Calculus I-II
- MATH 1611 Introductory Discrete Mathematics

* Students passing the AP Calculus or Computer Science exams with a 4 or 5 receive credit for MATH 1501 or CSAS 1111, respectively.

**Sophomore Year:**
- CSAS 2121-2122 Computer Systems I-II
- MATH 2611 Foundations of Higher Mathematics
- MATH 2813 Linear Algebra

**Junior-Senior Year:**
- CSAS 3111 Operating Systems and Computer Architecture
- CSAS 3112 Data Structures and Algorithm Analysis
- CSAS 3113 Organization of Programming Languages

Four additional upper-level computer science courses.
Choose from the following courses:

- CSAS 3211 Networks and Networking
- CSAS 3212 Computer Graphics Programming
- CSAS 4111 Introduction to Artificial Intelligence
- CSAS 4112 Design and Analysis of Algorithms
- CSAS 4113 Automata Computability and Formal Languages
- CSAS 4114 Theory of Programming Languages
- CSAS 4115 Theory of Relational Databases
- CSAS 4116 Software Engineering and Object-Oriented Development

Note: A minor in mathematics to complement a major in computer science is recommended.

Computer Science Minor — A minimum of
30 hours, including:

- CSAS 1111-1112 Introduction to Computer Science I-II
- CSAS 2121-2122 Computer Systems I-II
- MATH 1501-1511 Honors Calculus I-II
- MATH 1611 Introductory Discrete Mathematics

At least one upper-division computer science course.

Degree Requirements: 130 total credit hours

Students can minor or double major in any of the College of Arts and Sciences disciplines.

For more information, call an admissions counselor at 1-800-THE-HALL, send an e-mail to thehall@shu.edu or visit admissions.shu.edu.

To talk to a faculty adviser, contact Joan Guetti, Ph.D., chair of the Department of Mathematics and Computer Science, at guettijo@shu.edu or (973) 761-9466. Web site: www.math.shu.edu

Seton Hall University is a major Catholic university. In a diverse and collaborative environment it focuses on academic and ethical development. Seton Hall students are prepared to be leaders in their professional and community lives in a global society and are challenged by outstanding faculty, an evolving technologically advanced setting and values-centered curricula.

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