Computer Science

Computer Science students learn the theory of computation (what computers can compute), algorithms for efficient computation (what to tell a computer to compute), programming languages (how to tell a computer what to compute), artificial intelligence (how your computer can do things your brain does), computational biology (how DNA-based biological systems are like programs), computer systems (e.g., how computers work together in networks like the Internet), and human computer interaction. Computational thinking is intrinsic to many advances in engineering, the sciences, medicine and the arts. Computational thinking involves solving problems, designing systems, and understanding human behavior, by drawing on the concepts fundamental to computer science.

QUICK FACTS:
- 32 faculty members
- 132 undergraduate students
- 27 average students per course

HOW STUDENTS REPORT THAT THEY LEARN

5 CHALLENGES in the NEXT 5 YEARS
1. Understanding minds by building them
2. Connecting the other 3 billion people
3. Fungible computing
4. Virtual actors that react like real people
5. Trustworthy computing

PLANS of GRADUATING SENIORS ’08–’12
(reported at time of graduation)

STUDENTS SAY
I love programming and computer science because it’s like a puzzle that’s just the right difficulty. It’s a challenge, and when you get something new to work, it feels great.
—Scott Neaves, ’14

RECENT ALUMNUS
[Short blurbs about what recent graduates of this department’s BS program are doing.]

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UPPER-LEVEL COURSES
EECS 395/495 Introduction to Computational Photography
EECS 345 Distributed Systems
EECS 371 Knowledge Representation and Reasoning
EECS 395/495 Price of Anarchy

RESEARCH AREAS
- Distributed systems and networking
- Interactive entertainment
- Operating systems and virtualization
- Artificial intelligence
- Computational vision
- Computer architecture

WANT TO LEARN MORE?
Take: EECS 101 or 111
Join: HackNorthwestern, Women in Computing, Computer Systems Reading Group
Ask: mentors@eecs.northwestern.edu
Explore the Department website

CONTACT INFO
If you have questions, please contact:
mentors@eecs.northwestern.edu

FACULTY PROFILE
Prof. Fabián E Bustamante
Associate Professor of Electrical Engineering and Computer Science
- Teaches EECS 343 Operating Systems; EECS 345 Distributed Systems; EECS 395/495 Distributed Systems in Challenging Environments
- Leads the Aqua Lab at Northwestern. Research interests in the Aqua Lab span several areas of experimental systems with a focus on distributed computing, computer networks and operating systems. Research targets primarily large-scale and globally-distributed services, implemented at the application layer and following a cooperative, self-organizing model where hosts contribute resources to support a commonly needed service.
- Released various products used in industry, including TrailBlaze Chicago — an app to crowdsources the planning and status report of bike paths. This app came in 2nd in the Apps 4 Metro Chicago Grand Challenge, and 4th in the Apps 4 Metro Chicago Challenge, Transportation Round (and 1st among the not-for-profit).

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