Stanford University
Computer Science Department
Undergrad Program

Data gleaned from http://www.cs.stanford.edu
Faculty

50 tenured/tenure-track faculty total.

10 junior faculty.

7 non-tenure-track lecturers.

3 Turing award winners:
  McCarthy (1971)
  Knuth (1974)
  Feigenbaum (1994)
Research Areas

- Algorithms
- Artificial Intelligence
- BioComputation
- Database & Information Systems
- Distributed Systems/Ubiquitous Computing
- Geometric Computation
- Graphics
- Hardware/Architecture
- Human Computer Interaction
- Internet Systems & Infrastructure
- Knowledge Representation & Reasoning
- Machine Learning
- Math Theory of Computation
- Natural Language & Speech
- Networks
- Probabilistic Methods & Game Theoretic Methods
- Programming Languages & Compilers
- Robotics, Vision & Physical Modeling
- Scientific Computing
- Security and Privacy
- Software/Operating Systems
- Systems Reliability/Dependability
Students

164 PhD students.

203 Master's students.

93 undergraduate majors (??).
### Undergraduate Curriculum

- Math (4 to 7 courses)
- Science (3 courses)
- Technology in Society (1 course)
- Engineering Fundamentals (3 courses)
- Programming (2 courses)
- Theory (2 courses)
- Systems (3 courses)
- Applications (2 courses)
- Senior project, 2 to 3 more electives.
Math, Science, Engineering

Calculus (2 courses or AP credit)
Probability
Discrete Math (CS 103A and 103B, or 103X)
2 math electives

Mechanics
Electricity and Magnetism
1 science elective

Introductory electronics
1 engineering elective

Discrete math taught by lecturers (not tenure-track).
Programming

CS 106A and 106B, or 106X:
  basic OO programming in Java, C++.  
basic data structures.

CS 107: C, C++, Concurrency, LISP.

CS 108:
  advanced OO, GUI, team programming, 
in Java.

All taught by lecturers.
Theory

CS 154: standard formal language theory.

(CS 154N covers NP-completeness.)

CS 161: Algorithms:
basics of analysis
sorting, search structures
dynamic programming
amortized analysis
graph algorithms, network flow
Systems, Applications

EE108b: computer architecture
2 courses from OS, Compilers, PL, Networks

CS121 or 221: Artificial Intelligence
1 from Graphics, Robotics, Vision, HCI, or Databases
Highlight: Video Game Competition

Part of CS248, Introduction to Graphics.

Judged by industry experts.

1st prize is trip to Siggraph.

Last year's winners:

*Lego Blaster: Champions of Plastic*

*Revenge of the Bunnies*
Required Courses

# Math
* Calculus (2 courses)
* Theory of probability
* Discrete Structures
* Two electives

# Science
* Mechanics
* Electricity and Magnetism
* One elective

# Technology in Society

# Engineering Fundamentals
* Introductory Electronics
* Programming Abstractions
* One elective

# Programming
* Programming Paradigms
* Object-Oriented Systems Design

# Theory
* Automata and Complexity Theory
* Design and Analysis of Algorithms

# Systems
* Computer Organization
* Two of OS, Compilers, PL, Networks

# Applications
* Introduction to AI
* One of Databases, HCI, Graphics, Robotics, Vision

# Senior project
# 2 or 3 electives