“Because robotics is such a young field, it offers a lot of opportunities for undergraduate research. Students don’t have to gain a lot of prior knowledge in order to make significant contributions to the field.”

Ross Sowell, Professor of Computer Science, on his robotics research course

Our courses prepare students for a wide range of possible careers in computing fields. But computer science courses also provide rigorous analytical skills, problem-solving challenges, and technical tools that benefit students no matter what their major or career field.

Our small department and classes allow us to provide individual support to students and to tailor topics, projects, and internships to our students’ interests. We were early adopters of the Internet for classroom learning, and continue to be quick to adapt to new teaching methods and technologies.

We also encourage our majors to pursue individual projects, internships, or extended research. We offer many opportunities for our students to engage in the discipline outside the classroom, including Student Symposium research presentations, International Collegiate Programming competitions, travel to professional meetings, visits to local industries, and summer research.

At all course levels, we seek to develop important skills that go beyond the ability to develop code. We ask our students to read from recent periodicals and journals. Many classes require student presentations, both formal and informal; many also require student-written work in the form of papers, not just programs. Cooperative work, including group projects, plays a significant role in our curriculum.

BENEFITS OF ONE COURSE AT A TIME
Department members enjoy the flexibility of Cornell’s One Course At A Time schedule in designing course strategies. A typical computer science course includes a lecture/discussion component, a closed lab component, and an open lab component. Our closed labs are similar in structure to physics or chemistry labs. The instructor sets up the exercise, provides tutorial assistance, and circulates among students to troubleshoot problems as they arise. In open labs we invite more creative exploration, and students work on their own schedules.

Beyond the classroom, many students take advantage of the block plan’s flexibility to complete internships or individual projects. These experiences draw enthusiastic reviews from the students who complete them and faculty who supervise them, and they are arranged based on student initiative.

CURRICULUM HIGHLIGHTS
For majors, the department has broad offerings, with a general focus on software design. Professors introduce students to programming using the Java language. Students in upper-level courses also solve problems using JavaScript, Python, Ruby, and other programming languages.

Computer Science majors complete at least four 300-level courses, which include a range of Advanced Topics in Computer Science options that vary from year to year. These topics courses allow students and faculty to explore aspects of computer science in which they have special interest. Recent topics courses have included Robotics, Computer Networks, Bioinformatics, and Programming Languages.
bodies from data gathered through MRI. Constructing 3D images of organs in human bodies is transmitted to the remote operator. Device, or by altering the sensory data that meet the privacy expectations people have for their interactions with remotely-operated devices. This goal can be achieved by either limiting the movements of the device, or by altering the sensory data that is transmitted to the remote operator.

**3D ANATOMICAL IMAGING**

Professor Sowell also recently worked with a student on the development of methods for constructing 3D images of organs in human bodies from data gathered through MRI scans. The student presented the results of this research at the MIDGRAPH meeting in Chicago.

**OFF-CAMPUS SUMMER RESEARCH**

Cornell students have recently completed research projects at the following locations:

- National Institute of Standards & Technology, Gaithersburg, Maryland
- Dartmouth College, Hanover, New Hampshire
- Washington State University, Pullman, Washington
- Space Telescope Science Institute, Baltimore, Maryland
- Montclair University, Montclair, New Jersey
- University of North Carolina-Charlotte, Charlotte, North Carolina
- University of Wisconsin-Oshkosh, Oshkosh, Wisconsin

**INTERNSHIPS/FELLOWSHIPS**

Many students complete summer internships, and Cornell's One Course curriculum provides the flexibility to complete internships for a block or more during the academic year as well. Some recent examples:

- Rockwell Collins, Cedar Rapids, Iowa
- First Trust Bank and Trust, Chicago
- Meredith Corporation, Des Moines, Iowa
- MyiOffice Corporation, Mount Vernon, Iowa
- Trapeze Group, Cedar Rapids, Iowa
- Allen Interactions, Minneapolis

**AFTE R COR NE LL**

**GRADUATE SCHOOLS ATTENDED**

- Ph.D., chemistry, Northwestern University, Evanston, Illinois (Class of 2013)
- M.S., computer science, University of California, Berkeley (Class of 2013)
- M.S., computational and mathematical engineering, Stanford University, Stanford, California (Class of 2012)
- Ph.D., data visualization, University of Utah, Salt Lake City, Utah (Class of 2012)
- Ph.D., computer science, University of Colorado, Boulder, Colorado (Class of 2012)
- Ph.D., electrical engineering, University of Minnesota, Minneapolis (Class of 2012)
- M.S., computer science, University of Wisconsin, Madison, Wisconsin (Class of 2011)

**ALUMNI CAREERS**

- Software engineer, Cazena, Boston, Massachusetts (Class of 2013)
- Lead Sprint developer, Gorilla Group, LLC, Chicago (Class of 2012)
- Software engineer, Facebook, Menlo Park, California (Class of 2011)
- Associate product manager, Google, Inc., Mountain View, California (Class of 2009)
- Computer specialist, Sandhills Publishing, Lincoln, Nebraska (Class of 2008)
- IT analyst, John Deere, Milan, Illinois (Class of 2008)
- Software engineer, Rockwell Collins, Cedar Rapids, Iowa (Class of 2008)
- Software engineer, Ackmann & Dickinson, Minneapolis (Class of 2007)
- Software engineer, Intermec Technologies, Cedar Rapids (Class of 2007)
- Director of digital research and development, Meredith Corporation, Des Moines, Iowa (Class of 2006)
- Owner, Interactive Development, Windsor, Wisconsin (Class of 2001)
- Founder and CEO, Modest, Inc.; and former chief technology officer of Obama for America, Chicago (Class of 2001)
- Citrix senior administrator, Ibermática, Rochester, N.Y. (Class of 2000)
- President, Lake Design, Inc., Norman, Oklahoma (Class of 1998)
- President, Releva MD, North Charleston, South Carolina (Class of 1996)
- Owner and president, Honey Buzz Group, Marion, Iowa (Class of 1992)
- Managing director of SE Asia, APL Logistics, Singapore (Class of 1986)