

# Computer and Information Sciences

HARTWICK COLLEGE  
Know the Facts.



## The Hartwick Difference

Hartwick's small size gives the Department of Computer and Information Sciences the flexibility to offer up-to-the-minute, innovative courses of study to its majors. These exciting opportunities enhance the solid programming foundation, which provides students with a strong, relevant background in a rapidly changing field. Hartwick's CISC Department aims to prepare students for challenging careers in the technological world of the future. Graduates become problem solvers, prepared to thrive in a constantly shifting technological landscape.

## Three-Year Program

Ready to move faster? Get the full Hartwick computer science or information science experience in three-quarters the time at three-quarters the cost. Learn more at [www.hartwick.edu/threeyeardegree](http://www.hartwick.edu/threeyeardegree).

## Major Components

The **computer science major** emphasizes the technical dimensions of the field. It's for students who want to work on the cutting edge in developing the software necessary to run the computers of tomorrow. Students develop proficiency in programming and problem solving by learning several commonly used programming languages, and they develop a broad and deep understanding of operating systems, computer architecture, programming languages, computer networks, and advanced programming techniques. Electives are chosen from topical subjects such as computer graphics, parallel processing, artificial intelligence, neural networks, microprocessors, computer security, and optimization techniques.

The **information science major** is geared toward students who want to use computers effectively in the modern business world. It is designed to produce skilled and creative individuals to manage the information, computer systems, and people needed by businesses in the 21st century. Information science majors learn how to analyze and solve the complex data processing problems of modern organizations. In advanced courses in systems analysis and design, students use advanced software engineering techniques. Elective courses are chosen from a diverse list, including small-business systems, computer networks, programming languages, artificial intelligence, Web design, and data structures. Courses in information science emphasize projects where students learn by working in groups on real-life projects.

[www.hartwick.edu/catalog](http://www.hartwick.edu/catalog)

## Course Highlights

For the full online course catalog and requirements, visit [www.hartwick.edu/catalog](http://www.hartwick.edu/catalog).

Each major program culminates with a required senior project involving independent study in a selected area related to the focus of the individual student's interests and future career plans. Courses in the humanities and social and behavioral sciences complement study in both major programs. Graduates of Hartwick's Computer and Information Sciences Department are not just highly skilled computer professionals, they also are creative problem solvers who work well with others, are effective communicators, and are skilled leaders who understand the ethical and societal dimensions of the computer field.



SMALL CLASSES



PERSONAL ATTENTION



STUDY ABROAD



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# Find your place.

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[www.hartwick.edu/cisc](http://www.hartwick.edu/cisc)

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For more information, contact  
the Office of Admissions  
at 607-431-4150 or  
888-HARTWICK (888-427-8942).

For specific inquiries, contact  
Susan Carbone, Department Chair,  
at 607-431-4852 or  
[carbones@hartwick.edu](mailto:carbones@hartwick.edu).

## Beyond the Classroom

While many Hartwick students have a notebook computer when they arrive on campus, computer and information sciences students have access to far more sophisticated equipment. The department has more powerful servers located in the Computer and Information Sciences Resource Center (known to generations of CISC students as the Clubhouse). The computers, which were designed and built by Professor Lichtman's PC Systems class, consist of several Quad-Core 64-bit machines, as well as several Quad-Core 64-bit AMD servers. Many of these machines are loaded with lots of RAM, large hard drives, and equally fast graphics cards for advanced development projects.

The software running on these computers is equally impressive. It ranges from the latest Microsoft Windows operating system release (Windows 7) to Windows XP, Windows 2008 Server, Red Hat Enterprise Linux Advanced server, and Fedora Linux. If you show up on the right day, you may even find Lego NXT-G robots running around. With all the hardware and software available to computer and information sciences students on campus, the program really emphasizes hands-on, cooperative learning. The department also encourages students to undertake internships to gain additional experience in the application of classroom knowledge to the real world. Recent internships have taken place at Microsoft, IBM, General Electric, GTE Laboratories, Runners World Online, Genuity, Zogby Scholars Program, Cornell University, BAE Systems, and Datatel.

## Putting Computer and Information Sciences to Work

Hartwick computer and information sciences majors have a wide range of career choices. Some go directly into the computing industry, working in systems analysis, applications programming, systems development, sales, and management. Others apply their skills to financial and business applications. Our alumni are employed by such companies as Apple, IBM, Oracle, Symantec, Yahoo!, LinkedIn, Lenovo, and Cisco. About half of our students pursue graduate degrees at institutions including Columbia University, Rensselaer Polytechnic Institute, MIT, Carnegie Mellon University, Notre Dame, and University of Michigan.

## Faculty

**Susan Carbone**, Associate Professor; M.A., Nova Southeastern University. Areas of focus: systems analysis and design, visual programming, Web development, database, Alice programming

**Robert Gann**, Professor; M.S., Rensselaer Polytechnic Institute; M.A., Ph.D., Cornell University. Areas of focus: operating systems, large-scale computing, distributed computation, Web development, Apple iPhone applications

**Howard Lichtman**, Associate Professor; M.A., Nova Southeastern University. Areas of focus: PC hardware, computer networks, operating systems, server environments, network security