

CIS [COMPUTER INFORMATION SYSTEMS]

Ideal preparation for information technology careers

The demand for professionals with knowledge and skills in computer technology continues to grow. Elon's majors in Computer Information Systems (CIS) are designed to give students the knowledge they need to step into any computing environment and thrive. Whether your career path takes you to a Fortune 500 company, government service or graduate school, Elon's Computer Information Systems majors will help you prepare for the future in the information technology field.

FOUNDATIONAL CURRICULUM

The Computer Information Systems curriculum focuses on the foundations of computing rather than specific technologies or software applications. This enables students to adapt to the rapid changes they will face in the computer field. Graduates of Elon's CIS program are well suited for jobs in any business where computing and information management are critical to operations.

The CIS program offers students a choice of two majors or a minor. The bachelor of science is designed for students who seek to blend their technical capabilities with skills specific to Business Administration. The students pursuing a bachelor of arts may choose to combine their CIS courses with skills specific to other disciplines. Elon also offers bachelor of science and bachelor of arts degrees in Computer Science, and minors in Multimedia Authoring and Geographical Information Systems.

OUTSTANDING FACILITIES AND EQUIPMENT

The Computing Sciences department is proud to offer students the latest in computer hardware and software to enhance their learning. And because Computer Science classes at Elon are small — averaging 15 students per class — hands-on learning begins on the first day. The

“The Computer Information Systems program at Elon merges the classroom material with a fun, interactive learning environment. Student interaction and teamwork is always encouraged, so you will never just be listening to a lecture in class. The main concern focuses on how to solve a problem, not just what the answer is.”

SARAH GOTTFRIED '08

department prides itself on having a balanced teaching approach between theory and hands-on application. Most classes are taught in small computer labs to allow students to immediately apply computing principles to practical applications.

Computer labs are easily available to students and located throughout campus. To ensure students use the latest in hardware and software, Elon replaces one-third of its

computers each year with the latest computer models. This ensures that every computer used by a student is less than three years old. Moreover, the software on each computer is updated twice annually with the latest releases from vendors. All of the computers are connected to the campus network and can access department servers and Elon servers. The Computing Sciences department also has two dedicated labs available only to its majors. One lab has 12 MacPro desktops with dual monitors, dual operating systems of Apple Leopard and Microsoft Vista, and is available 24 hours a day for students to work on assignments, projects and research. The other lab is a specialized network lab with 16 computers for building prototype networks. Both labs are in close proximity to faculty offices to facilitate collaboration and learning.

The department has a server room to house a grid computing cluster of eight machines and four multiprocessor server machines. Each machine in the cluster has dual processors and more than a gigabyte of memory. The servers consist of a Linux server, an Oracle 11 server for database and enterprise application development, and two Web application servers that run both IIS and Apache for Web development classes.

Current software programs include:

- Microsoft Visual Studio 2008 Professional: Visual Basic 2008, Visual C# 2008 and Visual C++ 2008
- Java interactive development environments: Eclipse, NetBuilder and Rational Application Developer
- Programming scripting languages: Perl, Python, PHP and Tcl

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- Database software: Oracle, SQL Server, MySQL and Derby.
- Statistical packages: Matlab, Mathematica and SPSS
- Programming languages: Java, C++, C, Prolog and Scheme
- Case tools: Visible Analyst, Rational Rose and Visio.
- Web browsers: IE, Firefox, Safari and Opera.
- Other standard software tools: Cold Fusion, Dreamweaver, Flash, Photoshop, SharePoint, InDesign, Microsoft Office Professional, CVS, Subversion, Tomcat, Cygwin and WebSphere.

TARGETED COURSEWORK

The guidelines for Elon's CIS curriculum are based on accreditation guidelines established by ABET. This organization is the recognized accreditor for college and university programs in computing, engineering and technology. Students balance the study of computing principles and technology with a focus on responsibly managing information systems for businesses and organizations.

For example, in the Web Development course, students learn how to develop complex, interactive Web sites using the industry standard tools and best practices such as JavaScript, PHP and MySQL. In the Database Management and Analysis course, students focus on designing, implementing and using database systems with object-oriented and relational models.

The Networks Design and Security course covers concepts and technologies associated with building enterprise networks. Students study local and wide-area network design alternatives, voice transmission and security planning.

ACTIVE FACULTY SCHOLARS

Students regularly cite close collaboration with talented, dedicated faculty as one of their most meaningful experiences at Elon.

As a CIS major, you will work closely with faculty mentors such as **Lynn Heinrichs**, an expert on computer networking; **Megan Conklin**, an experienced Web-based systems and data mining professional who received the 2008 College of Arts and Sciences Excellence in Scholarship award; **Duke Hutching**, an expert in human computer interaction; and **Alexander Yap**, an expert in e-business and e-commerce models.

“The CIS major is a prime choice for anyone interested in working with computers and technology. Classes are fun and full of hands-on, cooperative and experiential learning experiences. The faculty couldn't be better with their knowledge of modern technology, resourcefulness, helpfulness and accessibility in and out of the classroom.”

MAGGIE PRESLEY '08

Faculty members are active scholars conducting research with students related to Internet communities, disaster recovery planning, network broadcasting and data mining.

LEARNING OUTSIDE THE CLASSROOM

CIS majors are encouraged to participate in the many opportunities for hands-on learning at Elon, including study abroad, internships and research. Seventy-three percent of recent graduates have spent an academic term abroad while at Elon, making the university first in the nation among master's level institutions

for the percentage of students who study abroad. Eighty percent of Elon students participate in internships and more than fifteen percent of students conduct research each year.

ATTRACTIVE CAREER OPTIONS

Careers in the computing and information technology fields have been in demand for decades, and the trend shows no signs of slowing. The United States Bureau of Labor Statistics projects computer information systems to be one of the fastest-growing occupations over the next decade, and it is expected to grow 37 percent from 2006 to 2016. With a degree in Computer Information Systems from Elon, you will be prepared for graduate study or to work in a wide range of lucrative positions, including:

- Systems Analyst
- Application Programmer
- Database Developer
- Database Administrator
- Program Manager
- Network Administrator
- Web Developer
- Computer Support
- System Administrator

For more information on Elon's Computer Information Systems and Computer Science majors, go to www.elon.edu/compsci.

FOR MORE INFORMATION PLEASE CONTACT:

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