



## COMPUTER SCIENCE

### Just the Facts

#### Number of Students

1,600 undergraduate / 350 graduate

#### Number of Faculty

85 full-time, 100% doctorate

#### Undergraduate Degrees

Bachelor of Science in Computer Science

Bachelor of Science in Engineering

(Civil, Computer, Electrical, Industrial,  
Materials and Mechanical)

#### Minors

Computer Science, Electrical Engineering, Industrial  
Engineering, Materials Engineering, Mechanical  
Engineering, Structural Engineering

#### Graduate Degrees

Master of Science in Engineering

Master of Science in Computer Science

Master of Science in Engineering

Master of Urban Planning

Doctor of Philosophy in Engineering

Doctor of Philosophy in Medical Informatics

Graduate Certificate Programs

### Academic Advising

Many students find that determining schedules, registering for courses, and making important academic decisions can be daunting. This is why the College of Engineering & Applied Science (CEAS) offers personal, individualized advising to all students. Academic advisors are available to support students throughout their entire stay at CEAS, acting as a liaison to other university departments and working collaboratively with faculty advisors.

For more information about the College of Engineering & Applied Science at the University of Wisconsin-Milwaukee, please contact us.

### Cooperative Education/Internships

The Career Services Office within CEAS provides a link between education and the real world.

Because we know that relevant work experience in combination with good academics is crucial in gaining employment, we are dedicated to helping all CEAS students secure work experience before graduating. The Cooperative Education and Internship programs offer students an opportunity to gain professional employment prior to graduation. Students are able to apply the skills they are learning under the supervision and guidance of a professional engineer or computer scientist. The Career Services Office also offers a variety of services in addition to co-op/internships and job placement, including resume reviews, interview coaching, information on market trends, and how to negotiate salaries.

### Undergraduate Research

To enhance the undergraduate experience, all undergraduates have the opportunity to participate in world-class research under the supervision of faculty members.

### Study Abroad

CEAS collaborates with the Overseas Programs and Partnerships Office to offer unique study abroad experiences. In one such experience, CEAS students have the opportunity to study renewable energies in Germany during the winter interim session. The program includes lectures by Kassel University professors, site visits to factories and companies; and visits to a wind park and a biogas power plant. Through field trips and hands-on projects, engineering students are offered an incredible, international learning experience.

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## COMPUTER SCIENCE

You may be surprised by how many aspects of your life are touched by **computer science**. Concerned with the design and construction of computer hardware and software, computer scientists are on the cutting edge of technology. Biologists are using computer science to discover secrets of life encoded in DNA. Without computer science you wouldn't be able to download music off the internet. Cell phones, traffic signals, and all modern-day special effects in movies are made possible through computer science. It's also contributing to your health...doctors use computer science to see precise images inside the body, to store medical records, and to increase the overall quality of medical care.

### Sample Course Plan

#### Semester 1

Calculus I  
Introductory Computer Programming  
General Education Requirement  
General Education Requirement  
Elective

#### Semester 2

Calculus II  
Intermediate Computer Programming  
Digital Logic  
Professional Seminar  
Computer Organization & Assembly  
Language

#### Semester 3

Applied Math Elective  
Data Structures Programming  
Discrete Information Structures  
Introduction to Software Engineering  
General Education Requirement

#### Semester 4

Applied Math Elective  
General Education Requirement  
Programming Language Concepts  
Computer Architecture  
Elective

#### Semester 5

Natural Science  
Theory of Computation  
Data Structures & Algorithms  
Computer Networks

#### Semester 6

Natural Science  
Operating Systems  
Technical Elective  
Technical Elective  
System Programming

#### Semester 7

Database Systems  
Computer Science Capstone  
Natural Science  
Technical Elective

#### Semester 8

General Education Requirement  
Technical Elective  
Technical Elective  
Elective

**This is only a sample course plan** and will vary for each student. Plans can be influenced by many factors including: the need for pre-requisite coursework, inclusion of related work experience through co-op and/or internship, and appropriate pace for individual students. Each student will develop personal course plans with their advisor.

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