



Jones Hall

Computer Science and Information Systems

The field of computer science and information systems is an exciting and rapidly changing area that includes programming, database applications, web development, formal computer science, multimedia and networking. Our graduates have found employment as web developers, programmers, network administrators and geographic information systems developers. Reflective of the diverse and fluid nature of this field, our department offers degrees in three distinct areas of study, described below.

Employment Opportunities

The associate-degree program offered by Youngstown State University will prepare you for an entry-level position as a computer programmer, web developer or network support specialist. This work includes everything from writing code for program modules to “debugging” programs and designing web site applications.

The bachelor’s degree program will prepare you to function in industry as a programmer or as a systems analyst, web manager, network administrator or database analyst.

When you combine computer science with a background in other areas, such as mathematics, physical sciences and engineering, your career growth potential is almost limitless.

Degree Options

The Department of Computer Science and Information Systems at Youngstown State University offers coursework toward a major in five degrees: the Associate in Applied Science (A.A.S.) or the Bachelor of Science in Applied Science (B.S.A.S.) in computer information systems, the Bachelor of Science (B.S.) in computer science, and the Associate in Applied Science (A.A.S.) or the Bachelor of Science in Applied Science (B.S.A.S.) in information technology.

The computer information systems program offers you the flexibility of earning either a two-year A.A.S. degree or a

four-year B.S.A.S. degree through the “two-plus-two” program. After completing the associate degree, you might look for employment in industry or pursue the B.S.A.S. through an additional two years of study.

The computer science program offers the four-year B.S. degree. The program stresses the ability to analyze problems and develop their solutions. Computer science majors must minor in mathematics and take either a second minor or a series of technical electives.

If you are considering high school teaching, you will want to work towards a B.S. in Education degree.

The department recently co-developed an Individualized Curriculum Program in web communications, in collaboration with the Department of English. More information on this program may be found at the CSIS web site, <http://www.cis.ySU.edu>.

Faculty

The Department of Computer Science and Information Systems is staffed by dedicated teaching professionals, approximately half of whom hold the doctoral degree. The faculty are well qualified to help students at every level of their University study. Areas of faculty interest include algorithms, communications, database systems, graphics, operating systems, parallel architectures, programming languages and user interfaces.

YSU maintains a faculty-student ratio of 1:19, among the lowest of state-affiliated universities in Ohio.

Facilities

The Department of Computer Science and Information Systems is located in Meshel Hall, which houses classrooms, computer laboratories, offices and the University Computer Center.

Special facilities available at YSU include a mainframe computer and access to supercomputing facilities. Meshel Hall computing labs include over 120 networked personal computers. The department has a network of UNIX-based machines, a high-end multimedia lab, a robotics lab, two networking labs and two UNIX servers for faculty and students. Students with their own internet access may connect to most of the computer systems.

Outside the Classroom

Student organizations, offering a wide range of professional and social activities, include student chapters of the ACM (Association for Computing Machinery), ASM (Association of System Managers) and Upsilon Pi Epsilon (computer honorary society).

Curriculum Overview

For the major in computer science:

Required courses

- Programming and Problem-Solving
- Data Structures and Objects
- Advanced Object-oriented Programming
- Computer Organization
- Intro to Discrete Structures
- Operating Systems

- Computer Architecture
- Data Structures and Algorithms
- Computer Projects

For the Associate Degree program in computer information systems:

Required courses

- Survey of Computer Science and Information Systems
- Programming and Problem-Solving
- Data Structures and Objects
- Development of Databases
- Networking Concepts and Administration
- Business Programming Project

For the Bachelor's Degree program in computer information systems:

Required courses

- Survey of Computer Science and Information Systems
- Programming and Problem-Solving
- Data Structures and Objects
- Development of Databases
- Networking Concepts and Administration
- Business Programming Project
- Business System Analysis and Design

For more information about this program, go to

<http://www.cis.ysu.edu/>



To obtain the Undergraduate Admissions and Financial Aid Application and/or a copy of the current Undergraduate Bulletin, please contact the Office of Admissions at:

Telephone: (877) 468-6978 330-941-2000 TDD: 330-941-1564 Fax: 330-941-3674 E-mail: enroll@ysu.edu

The Office of Admissions is open Monday and Thursday, 8:00 a.m. to 6:00 p.m., and Tuesday, Wednesday, and Friday, 8 a.m. to 5 p.m. The Office is also open every other Saturday from 9 a.m. to noon, except on holiday weekends and during term breaks