



# COMPUTER SCIENCE

Medical devices that churn out lifesaving data. Routing algorithms that minimize package delivery times. Hollywood movies with nail-biting special effects. Credit these latest technologies – and more – to the genius of computer scientists. In fact, computer scientists create the underlying theories behind almost every new technology that everyone is talking about – from robotics, to virtual reality to animated graphics.

OHIO  
**NORTHERN**  
UNIVERSITY



## CREATING THE FUTURE

At the T.J. Smull College of Engineering, you'll gain a solid foundation in the field of computer science, learning about software design, programming languages and databases. If you are interested in a particular area – like mobile computing, cybersecurity, or computer networks – you can choose from a variety of upper-level courses in these areas.

Our academic program is rigorous. Expect to work hard and be challenged. However, we offer a supportive and collaborative environment. Your professors and fellow students in the college will become your friends and family. You have the opportunity to connect with ONU alumni and they will help you succeed and open doors for you.

Your computer science education will blend coursework with hands-on, real-world learning experiences. You'll work on teams to solve problems for actual clients as early as your first year. You'll apply the knowledge you learn in class, but more importantly, you'll have the opportunity to hone skills in leadership, teamwork, creativity and entrepreneurship. These skills will help you find a job and land that promotion.

Upon graduation, you'll be ready for whatever the future holds, whether it's fending off attacks from computer hackers, developing modeling and simulation software, or even launching your own company!



## OPPORTUNITY ABOUNDS

### COMPETING TO WIN

Strong experiential learning opportunities abound in competitions such as the Association of Computing Machinery (ACM) Programming Contest, which challenges teams of students to solve specific computing problems and submit these solutions as programs written in C, C++ or Java. In addition, computer science students may participate in other design competitions like our annual gridiron matchups as part of an intercollegiate robotic football tournament or the Institute of Electrical and Electronics Engineers (IEEE) Micromouse competition. In case you're wondering, the Polar Bears always compete to win at these challenging contests.

### STAND FOR INTEGRITY

Co-founded at ONU, the Pledge of the Computing Professional is a national organization that signifies a commitment to scholarship, leadership and ethics. At ONU, you'll join this elite group of computer scientists who follow a path of integrity and purpose. The college inducts many of its computer science majors into the Pledge during their senior year. You'll receive a special binary-encoded lapel pin and a certificate featuring the Pledge as a reminder of your obligation to serve your profession.



# WHERE COULD YOU END UP?

- Game design developer
- Computer security consultant
- Software developer
- Systems analyst
- Mobile application developer
- Information security analyst
- Data scientist
- Network architect
- Database administrator
- Web developer
- Software engineer

Companies that have recently hired our computer science students include Battelle, Boeing, General Electric, Amazon, Honda, Microsoft and Samsung.

## OUTCOMES AND COURSES

### SOLID OUTCOMES

- Our computer science program is accredited by the Computing Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).
- Over the last five years, 96 percent of our computer science majors found full-time positions or enrolled in graduate school within six months of graduation.
- We boast a 100 percent placement rate for students in co-op employment opportunities, which begin in the second semester of the junior year and continue for one year. Our computer science students co-op at Microsoft, RoviSys, Raytheon, Honda and other well-known companies.

### COURSES

You'll need 128 credit hours to earn your Bachelor of Science (BS) in computer science. We encourage you to use your elective hours to pursue a minor of your choice or a concentration in robotics that will align with your interests and passions.

Here are some courses you'll take as a computer science major:

- Foundations of Design
- Introductory Programming
- Calculus
- Digital Logic
- Data Structures and Algorithms
- Software Engineering
- Computer Security
- Web Development
- Computer Architecture
- Mobile App Development
- Theory of Computation
- Databases
- User Interface Design
- Programming Languages
- Networks and Data Communications



**KENNETH EATON**  
BS '20 Computer Science

"One of the best things about my ONU experience was the small campus gave me the ability to dive right into anything and become heavily involved. From building personal relationships with professors to taking on officer roles in organizations, opportunities were readily available."

## THINK SUCCESS

Kenneth Eaton started his college career as an electrical engineering major, but soon became fascinated by neural networks. "I decided to switch my major to computer science because I liked the way it presents problems as logic puzzles." At ONU, he dove into his studies and became involved in Habitat for Humanity, Club Frisbee, Ada Friends and the Honors Program. He particularly enjoyed mentoring elementary school students through Ada Friends. "It was a really eye-opening experience and I'm so grateful to ONU for giving me the chance to participate." He also engaged in an independent study so that he could further explore the topic of neural networks. Today, he's an assistant research scientist at Assured Information based in New York where he researches and develops novel applications of machine learning to gain useful insights from data. "ONU prepared me for success because my professionals challenged me to improve in the classroom, grow personally, and to explore my interests," he said. "College is about the experience more than the piece of paper at the end."



## OHIO NORTHERN UNIVERSITY

Office of Admissions | Ada, OH 45810 | 419-772-2260 | [onu.edu](http://onu.edu)  
Ohio Northern University does not discriminate on the basis of race, religion, national or ethnic origin, gender, sexual orientation, age or disability.  
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