Information Technology

Department Information

- **Department Web Site:**
  www.ndsu.edu/cs/ (http://www.ndsu.edu/cs/)
- **Credential Offered:**
  B.S.
- **Official Program Curriculum:**
  catalog.ndsu.edu/undergraduate/program-curriculum/information-technology/ (http://catalog.ndsu.edu/undergraduate/program-curriculum/information-technology/)

Information Technology is rapidly becoming the basis of most aspects of society. Working with practical systems while understanding underlying principles enables confident problem solving in this fast-changing environment. Systems, both cloud and physical systems, and applications together shape the information technology landscape.

THE PROGRAM

The Information Technology program bridges the technical and the theoretical side of computing. It is designed to provide the technical understanding that enables graduates to succeed in a world of rapidly advancing technology. At the same time, it includes the foundational knowledge that grounds applications in principles that remain important over time. System and application technologies are both considered.

CAREER OPPORTUNITIES

Technologists are needed in most businesses. The breadth and practical relevance of the information technology program makes graduates of this program particularly flexible in their choice of career path. The move to cloud technology has softened the historical division between system and applications experts and increased the need for those who have expertise in both areas. Graduates of the Information Technology program are in an excellent position to help advance technological innovation.

HIGH SCHOOL PREPARATION

The program does not explicitly require specific high school preparation. Taking IT, programming, networking or security content can be helpful but is not required. Likewise, it is useful, but not required, to take algebra and trigonometry in high school.

THE FACILITIES

The NDSU computer science department has a 40-seat Linux lab, extensive cloud resources, a cluster of remotely assessable Linux workstations, a number of virtual machines, and Hadoop and Spark analytic systems. Research labs support Windows, Macs, and Linux computers along with various peripheral equipment such as a cyber range, drones, and 3D printers. The department and the University have assumed a leadership role in computer networking through the acquisition and implementation of high-bandwidth network switches. The University also has entered into a six-state consortium for extremely high-level networking in the Upper Midwest. The high-performance Center for Computationally Assisted Science and Technology (CCAST) is available for distributed research projects. We are also a charter member of Internet2 and have connectivity to the national vBNS research network. The department maintains numerous web servers for class assignments and other information, which are accessed by thousands of users each day.