Our computer science degree gives you the skills you need to keep pace in an ever-changing industry. If you're interested in high-tech, business or research, our introductory and advanced courses in a variety of core and specialty areas prepare you for a technology-rich future. And we offer courses for non-majors that support interdisciplinary career studies. You also have the option of making computer science your minor.

**Degree Offerings**

Our curriculum for the major and the minor represents an effective balance between theory and practice. Most courses involve substantial programming or design assignments.

**Three emphases offered within the major:**

- **Emphasis I, Software Development:** Concentrates on Computer Science classes, with only minimal math requirements and no business course requirements.
- **Emphasis II, Enterprise Software:** Requires three courses chosen from accountancy, finance, management and marketing.
- **Emphasis III, Computational Software:** Combines the study of computer science with a set of advanced courses in applied mathematics and statistics.

**Mobile Device Programming**

We have partnered with Lextech Global Services to offer a series of courses that teaches skills in one of the hottest new areas of computer programming. The five-course program—with one course devoted to each of the three smartphones (iOS, Android and Microsoft) and two comprehensive courses that cut across all devices—is offered as an undergraduate certificate.

**Engaged Learning**

**Internships:** Traditional internships most often occur in the summer, but if circumstances permit, may be taken in fall and spring semesters.

Our invitation-only Research and Development Internship is designed to provide year-round internship employment, and you'll be working in an NIU office during the spring and fall semesters.

**Science, Engineering, Technology Floor:** This residence hall provides you with social as well as academic interaction.

**The Student Chapter of the Association for Computing Machinery (ACM):** ACM hosts a series of events including “meet-the-firm” opportunities, visits to industrial computing facilities and speakers from national high-tech companies. The chapter also offers tutoring and hosts résumé writing clinics and programs that focus on internship and interviewing opportunities.

The department also holds one or more campus colloquiums featuring nationally recognized researchers each semester to keep you up to date with the latest advancements in computer science.

“I've been at International for five years now as an IMS/DB2 system programmer and I love it. I can’t tell you how much my mainframe experience at NIU has helped me in my career. We actually have four system programmers on my team that are NIU alumni!”

– Michael Pry, May 2003 graduate

**Navistar International**
Degree Requirements

We offer a program leading to the B.S. degree in computer science. You must choose an emphasis in software development, enterprise software or computational software. Computer Science is a limited admission program which means you will begin as a pre-computer science major and must fulfill additional requirements. For more information about the process, you can visit go.niu.edu/CSCImajor.

**Emphasis 1:**
**Software Development**
**Total Credit Hours (54-63)**

**Requirements in Department (45-48)**
- CSCI 240: Computer Programming in C++ 4
- CSCI 241: Intermediate Programming 4
- CSCI 330: UNIX and Network Programming 4
- CSCI 340: Data Structures and Algorithm Analysis 4
- CSCI 360: Computer Programming in Assembler Language 4
- CSCI 463: Computer Architecture and Systems Organization 4
- CSCI 466: Databases 4
- CSCI 467: Introduction to Software Engineering 4
- CSCI 480: Principles of Operating Systems 4
- One additional computer science course numbered above CSCI 300. Credits: 3-4

**Requirements outside Department (9-15)**
- MATH 206: Introductory Discrete Mathematics 3
- or MATH 229: Calculus I 4
- and MATH 230: Calculus II 4
- STAT 301: Elementary Statistics 4
- or STAT 350: Introduction to Probability and Statistics 4

**Two of the following (6)**
- FINA 320: Principles of Finance 3
- MGMT 320: Foundations of Business and Entrepreneurship 3
- MGMT 327: Creativity, Innovation, and Entrepreneurship 3
- MGMT 333: Principles of Management 3
- MKTG 310: Principles of Marketing 3

**Total Credit Hours (54-63)**

**Emphasis 2:**
**Enterprise Software**
**Total Credit Hours (64-75)**

**Requirements in Department (46-48)**
- CSCI 240: Computer Programming in C++ 4
- CSCI 241: Intermediate Programming 4
- CSCI 330: UNIX and Network Programming 4
- CSCI 340: Data Structures and Algorithm Analysis 4
- CSCI 360: Computer Programming in Assembler Language 4
- CSCI 463: Computer Architecture and Systems Organization 4
- CSCI 466: Databases 4
- CSCI 467: Introduction to Software Engineering 4
- CSCI 480: Principles of Operating Systems 4
- One additional computer science course numbered above CSCI 300. Credits: 3-4

**Requirements outside Department (9-15)**
- MATH 206: Introductory Discrete Mathematics 3
- or MATH 229: Calculus I 4
- and MATH 230: Calculus II 4
- MATH 231: Calculus III 4
- STAT 301: Elementary Statistics 4
- or STAT 350: Introduction to Probability and Statistics 4

**Two of the following (6)**
- FINA 320: Principles of Finance 3
- MGMT 320: Foundations of Business and Entrepreneurship 3
- MGMT 327: Creativity, Innovation, and Entrepreneurship 3
- MGMT 333: Principles of Management 3
- MKTG 310: Principles of Marketing 3

**Total Credit Hours (64-75)**

**Emphasis 3:**
**Computational Software**
**Total Credit Hours (77-80)**

**Requirements in Department (45-47)**
- CSCI 240: Computer Programming in C++ 4
- CSCI 241: Intermediate Programming 4
- CSCI 330: UNIX and Network Programming 4
- CSCI 340: Data Structures and Algorithm Analysis 4
- CSCI 360: Computer Programming in Assembler Language 4
- CSCI 462: Foundations of Computer Science 4
- CSCI 463: Computer Architecture and Systems Organization 4
- CSCI 466: Databases 4
- CSCI 467: Introduction to Software Engineering 4
- CSCI 480: Principles of Operating Systems 4
- One additional computer science course numbered above CSCI 300. Credits: 3-4

**Requirements outside Department (9-15)**
- MATH 206: Introductory Discrete Mathematics 3
- or MATH 229: Calculus I 4
- and MATH 230: Calculus II 4
- MATH 231: Calculus III 4
- MATH 240: Linear Algebra and Applications 4
- PHYS 253: Fundamentals of Physics I: Mechanics 4
- STAT 301: Elementary Statistics 4
- or STAT 350: Introduction to Probability and Statistics 4

**Two of the following (6)**
- MATH 435: Numerical Analysis Credits: 3
- MATH 434: Numerical Linear Algebra 3
- STAT 301: Elementary Statistics 4
- STAT 350: Introduction to Probability and Statistics 4

**Total Credit Hours (77-80)**

*Available for general education credit.
**Fulfills requirements for a minor in math.

What can I do with this degree?**

With your degree in computer science, you can find employment in business, high-tech industries across the United States, and research organizations. Examples of career paths include:

- Business Analyst
- Business Application Developer
- Business Intelligence Specialist
- Chief Information Officer
- Data Scientist
- Database Analyst
- IT Auditor
- IT Consultant
- Product Developer
- Project Manager
- Security Analyst
- Security Engineer
- Software Developer/Programmer
- Software Engineer
- Systems Analyst
- Systems Integration Consultant
- Technical Sales Manager
- Web Developer

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