Potential Careers

NMU's Computer Science Program prepares students for employment in the following careers:

- Application Developer
- Computer Science Professor
- Database Analyst
- Engineering
- Game Programmer
- IT Consultant
- Market Research Analyst
- Programmer Analyst
- Senior Java Developer
- Senior Web Developer
- Sharepoint Developer
- Software Engineer
- Systems Operator
- Technical Institutes

For Career Planning and Opportunities:
Academic & Career Advisement Center
3302.1 C.B. Hedgcock
906-227-2971  www.nmu.edu/acac

Mathematics and Computer Science Department
2200 Jamrich Hall
906-227-2020  www.nmu.edu/math

For Job Search, Resume and Career Information:
Career Services
3302.3 C.B. Hedgcock
906-227-2800  www.nmu.edu/careers

For Information about NMU Student Organizations Associated with this Major Contact:
Center for Student Enrichment
1206 University Center
906-227-2439  www.nmu.edu/cse

Association for Computing Machinery
http://csc.nmu.edu  (acm@nmu.edu)

Facebook: NMU Computer Science
NMU ACM

NMU Robotics Club
Facebook: NMU Robotics  (jhorn@nmu.edu)

Internet Resource Links:
www.careers.org
www.careerresource.net

For Career Information with National Organizations:

www.afcom.com  Assoc. for Comp. Operations Mgmt
www.acm.org  Association for Computing Machinery
www.ieee.org  Professional Association for
              Advancement of Technology
www.isoc.com  The Internet Society

Current as of Fall 2015
Provided by:

The Academic & Career Advisement Center
Computer Science

Computer Science is the study of computers and their applications, with the goal of discovering what is possible for humans to achieve through computation. While it may seem to the general public that computers are disappearing, as desktops and laptops are replaced by smart phones and tablets, and our applications and data retreat into “the cloud,” what is really happening of course is that we are embedding more powerful, smarter computers and apps deeper into our lives than ever before. It is our job as computer scientists to envision what comes next, and to then implement it. A degree in Computer Science can allow you to work in a large computing firm (like Microsoft, Oracle, or Intel), in a pioneering startup, or as an independent app entrepreneur. You can choose to work designing the next generation of smart devices themselves, or you can use your new expertise to innovate computational applications in any field of interest to you.

The Computer Science major will train you in computer programming (including graphics programming and Internet programming), computer theory, and even some computer hardware design. Many of our graduates go on to get advanced degrees in Computer Science and many use their degree to open the door to a fascinating career. Our majors have the opportunity to compete in regional programming contests, to attend undergraduate research conferences, to participate in our student-oriented computing clubs, and even to work on original research projects!

Skills and Competencies

Your education at NMU will be well-utilized when you enter the job market or continue your education in graduate school. Communication skills are absolutely necessary in any career field today, so be sure to take advantage of the opportunities to develop strong speaking and writing skills. Moreover, your research skills, critical thinking, problem-solving ability, and general analysis skills will be sharpened through your mathematics and computer science courses, and also through various elective courses.

Course Work

This degree includes the following courses as part of the program requirements, and specific major requirements along with liberal studies and graduation requirements.

Core

CS 120 Computer Science I (4 cr.)
CS 122 Computer Science II (4 cr.)
CS 201 Programming in C++ (3 cr.)
CS 222 Data Structures (4 cr.)
CS 228 Network Programming (3 cr.)
CS 322 Principles of Programming Languages (4 cr.)
CS 326 Object-Oriented Design (3 cr.)
CS 330 Microcomputer Architecture (4 cr.)
CS 422 Algorithms Design and Analysis (3 cr.)
CS 426 Operating Systems (3 cr.)
CS 480 Senior Project in Computer Science (4 cr.)

Other Required Courses

MA 161 Calculus I (4 cr.)
MA 163 Calculus II (4 cr.)
MA 211 Intro to Matrix Theory and Linear Algebra (3 cr.)
MA 240 Discrete Mathematics (4 cr.)
MA courses 265 or higher except MA271, MA331, MA484 and MA courses with middle digit “5” (3-4 cr.)

Computer Information Systems, Computer Science and Mathematics Electives (12 cr.)

Choose from the following:

CIS 464 Database Management Systems (4 cr.)
CS courses numbered 300 or higher, excluding those with middle digit “5” (1-8 cr.)
MA courses numbered 265 or higher except MA271, MA331, MA484 and mathematics courses with middle digit “5” (1-8 cr.)

Detailed course descriptions can be found at www.nmu.edu/bulletin.

Career Development

You should begin the resume-building process as soon as you can. The Academic and Career Advisement Center can assist you with career planning, while Career Services will help you fine tune your resume and look for jobs related to your field. In the meantime, the more hands-on experience you have, the better the chances are that you will find a job. Becoming involved in a professional related internship is a way to develop your professional skills and gain experience. Your academic course work is important as well, so be sure to maintain a high grade point average.

Additional Considerations

It is important to make "contacts" if you are interested in securing governmental employment.

Some of these positions may require special certification. A minor or second major in business may be helpful, as would obtaining an internship.

Remember to take any necessary exams early; it can take six weeks for results to be sent to the schools to which you applied.

Job Outlook

Starting salaries are contingent upon geographic location and the individual applicant’s work experience and initiative and can range anywhere from $49,000 to $101,000. Computer science is projected to be one of the fastest growing occupations over the next decade increasing 14 to 20 percent. Strong employment growth combined with a limited supply of qualified workers will result in excellent employment prospects for this occupation and a high demand for its skills.