Mobile and Web App Development

If the thought of working with computers excites you, then you may wish to consider enrolling in the Mobile & Web App Development major at NMU. Computers are increasingly dominating every aspect of life (e-mail, video games, online research, medical technology, musical composition, income tax preparation, just to name a few) and, even in less attractive economic times, there is a solid demand for computer professionals.
The Mobile & Web App Development major emphasizes strong programming skills (including graphics programming and Internet programming), and the lack of a rigid mathematics or theory component frees the student to pursue a minor (or even a second major) in a seemingly unrelated field of interest.
The Mobile & Web App Development major will help prepare you for a career as a programmer, a systems administrator, a support technician, or in any other career where knowing your way around the Internet (beyond web surfing) and around a computer would be a strong asset (like music or statistics or really just about any career you could name!) Our majors have the opportunity to compete in regional programming contests, to attend undergraduate re-search conferences, to participate in our student-oriented computing clubs, and even (for our most prepared and dedicated students) to work on original research projects.

Skills and Competencies

As in most other fields, strong interpersonal communication and organizational skills are a must for any professional. Other valuable skills and competencies specific to the computing professions include: knowledge of programming language concepts, the ability to design systems, being flexible to new technological advances, working with teams as well as independently, managing technical teams and projects, and summarizing complex technical issues for non-technical decision makers.

Course Work

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

Network Computing 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 326 Object-Oriented Design (3 cr.)
CS 480 Senior Project in Computer Science (4 cr.)

Mobile and Web App Development Core

CS 228 Network Programming (3 cr.)
CS 344 iOS/iPhone Programming (4 cr.)
CS 345 Android Programming (4 cr.)
CS 365   Web Programming (4 cr.)
CS 465 Advanced Web Programming (3 cr.)

Computer Science, Mathematics, Computer Information Systems and Art & Design Electives (8 cr.)
Choose from the following:

CS300+ and MA265+
AD 234 Electronic Imaging: Web Design (4 cr.)
AD 334 Electronic Imaging: 3D (4 cr.)
AD 434 Electronic Imaging: Seminar (4 cr.)
CIS 336 Network Operating Systems (4 cr.)
CIS 351 User Interface Design (4 cr.)
CIS 355 Web Applications Programming (4 cr.)
CIS 464 Database Management Systems (4 cr.)

Other Required Courses
MA109   Intro to Probability and Statistics (4 cr.)

Minor (16 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 you prepare for employment. 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

Some career options will require a level of education beyond the bachelor's degree.

Internship experience and organizational affiliations are beneficial to persons interested in pursuing any number of professional careers related to Mobile & Web App Development .

Job Outlook

Starting salaries are contingent upon geographic location and individual work experience, and can range from $55,000 to $96,000. Employment is expected to increase 21 percent or more in the next decade. Job prospects should be best for those with a college degree or related experience.

Potential Careers

NMU's Mobile and Web App Development Program prepares students for employment in the following careers:

- Computer Consultant
- Computer Facilities Manager
- Data Communications Consultant
- Network Designer
- Network and System Administrator
- Network Programmer
- Senior Linux Administrator
- Server Engineer
- Systems Programmer
- Technical Support Analyst

Additional Resources and Information

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.bls.gov

For Career Information with National Organizations:
www.cra.org -Computing Research Association
www.acm.org -The Association for Computing Machinery

NORTHERN MICHIGAN UNIVERSITY
MARQUETTE, MICHIGAN
The Academic & Career Advisement Center
2021

What to do with a major in...

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