Potential Careers

NMU’s Engineering Design Program prepares students for employment in the following careers:

Occupations:
- CAD Design Engineer
- Design Engineer
- Design Verification Engineer
- Hardware Design
- Mechanical Design Engineer
- Naval Architect
- Power Supply Design Engineer
- Project Architect
- Structure and Payload Design
- Technical Architect
- Tool Design Engineer

Additional Resources and Info

For Career Planning and Opportunities:
Academic & Career Advisement Center
3302.1 C.B. Hedgcock
906-227-2971
103 Jacobetti Complex
906-227-2283
www.nmu.edu/acac

Department of Engineering Technologies
101 Jacobetti Complex
906-227-2141
www.nmu.edu/technology

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

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

For Career Information with National Organizations:
- www.nspe.org National Society of Engineers
- www.wfeo.org World Federations of Engineering Organizations

Current as of Fall 2015
Provided by:
The Academic & Career Advisement Center
Engineering Design

Engineering Design teaches students to use several types of CAD programs and other computer based programs to design and create mechanical part devices.

Engineering Design is a process whereby clients contact a design company to work on a device or part of a device and create it to specifications. Usually this entails the design company consulting with the company in need of the part. Once you fully understand what you are being asked to make, its time to start doing sketches and diagrams, either by hand or computer. Usually, the design company will make a mock-up model of what the finished product would look like out a material such as wood, clay or plastic. If both sides are pleased with the process, then the creation continues to fruition. Increasingly the design firms and the company needing a product are working together the entire step of the way to make sure that the result is up to specifications.

Engineering Design contracts are usually sought by various industries such as automotive, toy, transportation vehicles, appliances, medical equipment, furniture, tools, housewares and construction.

Skills and Competencies

Creativity and technical knowledge are key to thriving in the Engineering Design workplace. Many aspects of this profession, especially technology will be rapidly changing. You will need to keep up on the latest literature and techniques within your field.

As in most other fields, strong interpersonal communication and organizational skills are a must for any professional.

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
DD 100 Technical Drafting with Introduction to CAD (4 cr.)
DD 103 Geometric Dimensioning and Tolerancing (2 cr.)
DD 105 Schematic/Diagram Drafting (2 cr.)
DD 202 Product Development and Design (4 cr.)
DD 203 Industrial Drawing and Design (4 cr.)
MF 233 Numerical Control (4 cr.)

Other required courses
ET 110 Introduction to Electricity (4 cr.)
IT 010 Exit Seminar (0 cr.)
IT 180 Introduction to Fluid Power (3 cr.)
IT 214 Industrial Observation (1 cr.)
MET 211 Mechanics-Statics (4 cr.)
MET 213 Materials Science I (3 cr.)
MF 134 Manufacturing Process (4 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

Engineering Design is an Associate of Applied Sciences requiring 64 credits to complete. This translates to about four semesters of 16 credits per semester. These credits could be used towards a four year bachelor's degree from the Engineering Technology Department, meaning you can get a degree in Engineering Design and come back for a further degree. Students with Engineering Design degrees often progress to either a Mechanical Engineering Technology or Industrial Technologies degree.

Job Outlook

Engineering Design is expected to grow at a 7% average rate for the coming years. Average earnings range above $50,000. Competition maybe keen for jobs and those with more experience and advanced degrees look to do quite well.