Potential Careers

NMU’s Industrial Maintenance Technology Program prepares students for employment in the following careers:

Occupations
- Blast Furnace Maintenance
- Chemical Plants
- Electric Plants
- Fabricated Metal Plants
- Food Processing Plants
- Meat Processing Plant
- Metal Processing Plants
- Mining Operations
- Plastics Material Synthetics Plant
- Textile Mills

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 Technology and Occupational Sciences
101 Jacobetti Complex
906-227-2190
www.nmu.edu/tos

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.ntma.org The National Tooling and Machining Association
www.pmpa.org Precision Machined Products Association

Current as of Fall 2015
Provided by:

The Academic & Career Advisement Center
Northern Michigan University offers a one-year Certificate program and an Associate in Applied Science degree which requires 63 credits or approximately four semesters. This degree will ladder into the industrial technology baccalaureate degree program meaning you can apply the 63 credits toward a 124 credit baccalaureate degree. Having an associate degree may help you find a better job while going back to get the second degree.

Industrial Maintenance Technology is expected to grow at an average rate in the coming years, expanding at a 19% pace depending on what career you choose. The median income ranges from $18.42 to $21.75 per hour depending on specifics such as location.

Students considering a career in the industrial maintenance field have a knowledge of mathematics, as it is crucial. Workers have to measure angles, material thickness, and small distances with tools such as squares, calipers, and micrometers; High school courses in mechanical drawing, mathematics, blueprint reading, physics, and electronics are useful. Electronic and computer skills are helpful as machinery becomes more sophisticated. Good physical health and agility are necessary.

Course Work

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

Core
IM 105 Applied Technical Mathematics (4 cr.)
IM 110 Industrial Measurement and Fabrication (3 cr.)
IM 115 Basic Electricity for Industrial Technicians (2 cr.)
IM 214 Alignment, Power Transmission and Conveyors (4 cr.)
IM 215 Adv. Mechanical Power Transmission Systems (3 cr.)
IM 220 Pumps, Piping and Valves (4 cr.)
IT 180 Introduction to Fluid Power (3 cr.)
IT 215 General Industrial Safety (2 cr.)
MF 134 Manufacturing Process (4 cr.)
WD 140 Introduction to Welding (4 cr.)
WD 147 Construction Rigging and Equipment Installation (2 cr.)
WD 243 Advanced Arc Welding (3 cr.)
WD 244 Welding Inspection and Assessment (1 cr.)

Other required courses
HP 200 Physical Well Being (1 cr.)
EN 111 College Composition I (4 cr.)
EN 211 College Composition II (4 cr.)

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

Career Development

You should begin the résumé-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 résumé 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 field-related internship is a way to develop your professional network, enhance your skills and proficiencies, and gain experience. Your academic course work is important as well, so be sure to maintain a high grade point average.

Additional Considerations

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Job Outlook

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Skills and Competencies

When production workers encounter problems with the machines they operate, they call industrial machinery installation, repair, and maintenance workers (also called millwrights). Their work is important not only because a defective machine will delay production, but also because a machine that is not properly repaired and maintained may damage the final product or injure the operator. Much of the work begins when machinery arrives at the job site. New equipment must be unloaded, inspected, moved into position, and installed. To lift and move light machinery, industrial maintenance workers use rigging and hoisting devices, such as pulleys and cables. In other cases, they require the assistance of hydraulic lift-truck or crane operators to position the machinery. In order to perform these duties, industrial maintenance workers must know the load-bearing properties of ropes, cables, hoists, and cranes.

Industrial maintenance workers need to know how to read blueprints and work with building materials, such as concrete, wood, and steel in case new equipment requires a new foundation. Other duties include assembling machinery, which requires workers to fit bearings, align gears and wheels, attach motors, and connect belts according to the manufacturer’s instructions. Industrial maintenance workers use hand- and power-tools, such as cutting torches, welding machines, and soldering guns.

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