

MichiganTech

SCHOOL OF TECHNOLOGY ACADEMIC PROGRAM INFORMATION

Bachelor of Science in Industrial Technology

Industrial Technology graduates are hands-on problem solvers. They fill a critical need in business and industry as supervisors and managers who possess a combination of technical and managerial backgrounds. The ability of Tech graduates to contribute on the job from day one increases their value while providing them professionally rewarding careers with significant potential for advancement.

Undergraduate enrollment: New Program

Faculty: 6

Average class size: 16

Average lab size: 12

Courses with labs: 70%

Credit hours required: 125

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Student/professional organizations:

- Epsilon Pi Tau – the International Honorary Society for professions in technology
- National Association of Industrial Technology – NAIT
- Society of Manufacturing Engineers – SME

Accreditation agency: Pending

Why get a degree in Industrial Technology?

The BS degree in Industrial Technology at MTU is ideal for the student with an existing technical associate degree or a significant amount of transfer credit. Depending on the specific prior courses taken, up to 95 hours of previous credit could apply toward the degree. This highly flexible program prepares graduates for technical management positions in industry by building upon prior technical course work. Through a balance of technical theory, hands-on application, and solid management courses, students are prepared to solve industrial problems. Students may also consider Michigan Tech's signature Enterprise Program which gives teams of students the opportunity to participate in real-world settings to solve engineering, design, and communication problems in partnership with industry sponsors. The program is unmatched in the preparation of students for the challenges that await them after their college careers.

What will I learn?

Through the advising process, students can choose a technical concentration with a Computing, Materials & Process focus allowing for more emphasis on programming skills necessary in industrial robotic applications, or an Electronics, Materials & Process focus with a comprehensive understanding of the programmable logic controller (PLC), which is the piece of equipment required in most industrial processes for controlling machinery. Students can also customize their technical concentration to specialize in a new or emerging technical area not available through other programs in the University. Possible areas of emphasis include such exciting fields as nanotechnology, alternative energy, and sustainability, to name a few.

In addition to the technical concentration that can be completed at either Michigan Tech or a community college, course work includes the following:

- Oral and Written Technical Communication
- Ethics
- Physics (lab based)
- Production Planning & Control
- Industrial Safety Management
- Quality Management
- Design of Experiments
- Facilities Planning and Plant Layout
- Project Management
- Lean Manufacturing
- Product Design and Development
- Organizational Behavior
- Economic Decision Analysis
- Parametric Modeling

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Industrial Technology

What is Industrial Technology?

Industrial Technology is a field of study designed to prepare technical and/or management oriented professionals for employment in business, industry, education, and government. Industrial Technology is primarily involved with the management, operation, and maintenance of complex technological systems while Engineering and Engineering Technology are primarily involved with the design and installation of these systems. Industrial production managers plan, direct, and coordinate the production activities required to produce millions of goods every year in the United States. They make sure that production proceeds smoothly and stays within budget. Depending on the size of the manufacturing plant, industrial production managers may oversee the entire plant or just one area.

One of the main responsibilities of the industrial production manager is to oversee the production process, reducing costs wherever possible, and making sure products are produced on time and are of good quality. They do this by analyzing the plant's personnel and capital resources to select the best way of meeting the production goals. Industrial production managers may determine which machines will be used, whether new machines need to be purchased, whether overtime or extra shifts are necessary, and what the sequence of production will be. They monitor the production run to make sure that it stays on schedule and correct any problems that may arise.

Who will I work for?

Industry seeks industrial technologists for their ability to creatively integrate technology and human resources to solve problems. Obtaining a Bachelor's degree in Industrial Technology is often the key to promotion and professional advancement. Graduates find themselves managing technology and providing leadership for personnel involved in the creation and utilization of technology.

The typical placement rate of Industrial Technology graduates is very high, often between 90% and 100% for high quality programs. The Industrial Technology degree provides the flexibility to pursue careers such as: production team leader, industrial engineer, cost engineer, human resource manager, manufacturing engineer, operations manager, product manager, plant manager, or quality assurance engineer.

How much will I make?

Median annual earnings for industrial production managers were \$73,000 in May 2004. The middle 50 percent earned between \$55,700 and \$94,850. The lowest 10 percent earned less than \$43,660, and the highest 10 percent earned more than \$123,010. According to the Bureau of Labor Statistics, median annual earnings in the manufacturing industries employing the largest numbers of industrial production managers in May 2004 were:

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| • Management of companies and enterprises | \$90,140 |
| • Motor vehicle parts manufacturing | \$76,490 |
| • Printing and related support activities | \$69,210 |
| • Plastics product manufacturing | \$66,880 |

What preparation do I need in high school?

In preparation for a degree in technology, the high school student should take at least three years of math and as much science, English and communications as possible. In addition, practical, hands-on courses and at least one year of hands-on computer experience is strongly recommended.

Average ACT: Composite 25.1; English 23.7; Math 26.2

Average high school GPA: 3.50

*"I am sure that a Technology Graduate is the most versatile product being developed. We are the total package."
Quote - Cornelius "C.C." Lamberth, Jr., Owner, CoMor Corporation of Greensboro, North Carolina.*