

# INDUSTRIAL TECHNOLOGY (B.S.)

Evening study available.

## Bachelor of Science Program

Program Code: BS-SP

Major Code: TEC

## Engineering Technology Department

Technology Building 126

(716) 878-6017

[engineeringtechnology.buffalostate.edu](https://engineeringtechnology.buffalostate.edu) ([https://](https://engineeringtechnology.buffalostate.edu/)

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Accreditation: Association of Technology Management and Applied Engineering (ATMAE.org (<https://www.ATMAE.org>))

The industrial technology program, through its two concentrations, provides students with the opportunity to develop a specialty within a broader framework of technical operations knowledge. By selecting the manufacturing concentration, the student specializes in direct manufacturing support of a technical or managerial nature. Knowledge of management principles, physical sciences, technology of industry, and liberal arts is employed to optimize manufacturing processes, materials, and personnel. The quality concentration allows the student to develop the ability to assist the product or service organization in obtaining the maximum level of quality performance in a lean environment. This concentration requires a professional internship that places the student in a specialty position in a local organization as a culminating activity.

Program graduates have filled positions as industrial engineers, manufacturing engineers, quality-assurance specialists, directors of technology, production/lean operations managers, corporate trainers, cost estimators, purchasing managers, first line supervisors, supply chain managers, distribution supervisors, safety engineers, drafting specialists, technical writers, web masters, and technical sales and marketing specialists.

## Admission Requirements

This program accepts freshmen, sophomores, and transfer students.

## Program Requirements

Code	Title	Credit Hours
	General Education 23 Requirements ( <a href="http://ecatalog.buffalostate.edu/undergraduate/collegewide-degree-requirements-baccalaureate-degrees/#IF_Courses">http://ecatalog.buffalostate.edu/undergraduate/collegewide-degree-requirements-baccalaureate-degrees/#IF_Courses</a> )	
	33 credit hours	33

## Technology/Core Courses (24 credit hours)

TEC 101	TECHNICAL DRAWING	3
TEC 201	MATERIALS PROCESSING	3
TEC 311	MATERIALS SCIENCE AND TESTING	3
TEC 312	MATERIALS MANAGEMENT	3
TEC 313	STATISTICAL QUALITY CONTROL	3
TEC 314	ELECTROMECHANICS	3
TEC 402	ERGONOMICS	3
TEC 403	SYSTEMS ANALYSIS	3

## Concentration Requirements (18 credit hours)

Select a concentration from the following:	18
Manufacturing Concentration (p. 1)	
Quality Concentration (p. 1)	

## Required in Other Fields for Accreditation (12 credit hours)

Core Math		3
Core Chemistry		3
MAT 124	FUNCTIONS AND MODELING II	3
PHY 107	GENERAL PHYSICS I	4

## All College Electives

27-33 credit hours	27-33
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**Total Credit Hours 120**

## Manufacturing Concentration

Code	Title	Credit Hours
TEC 400/ BUS 320	MARKETING	3
TEC 302	CAD/CAM (COMPUTER AIDED DRAFTING/COMPUTER AIDED MANUFACTURING)	3
TEC 351	ENERGY SYSTEMS	3
TEC 404	INDUSTRIAL SYSTEMS APPLICATIONS	3
TEC 405	MANUFACTURING TECHNOLOGY	3
TEC 465	SAFETY MANAGEMENT	3

## Quality Concentration

Code	Title	Credit Hours
MAT 311	INTRODUCTORY PROBABILITY AND STATISTICS	3
SPC 307	GROUP COMMUNICATON	3

TEC 200	TOTAL QUALITY MANAGEMENT	3
TEC 321	MEASUREMENT SYSTEMS	3
TEC 323	QUALITY IMPROVEMENT THROUGH DESIGN OF EXPERIMENTS	3
TEC 488	QUALITY INTERNSHIP	3

Students will be able to:

1. Demonstrate competence in written and/or oral communication.
2. Demonstrate knowledge of how to apply technological methods to the solution of manufacturing and service-related problems.
3. Demonstrate application of knowledge in mathematics (precalculus), and/or inorganic chemistry (lab-based), and/or physics.
4. Demonstrate knowledge of how to apply principles of industrial technology management (e.g.: supervision; production planning; quality control; safety) to the solution of technology-based problems.
5. Demonstrate knowledge of science, testing, and processing of materials.
6. Demonstrate knowledge and application of technical drawing and production principles.
7. Demonstrate preparation for a career in Industrial Technology or graduate study.

#### **Quality Option**

Students will be able to:

1. Demonstrate competence in written and/or oral communication.
2. Demonstrate knowledge of how to apply technological methods to the solution of manufacturing and service-related problems.
3. Demonstrate application of knowledge in mathematics (precalculus), and/or inorganic chemistry (lab-based), and/or physics.
4. Demonstrate knowledge of how to apply principles of industrial technology management (e.g.: supervision; production planning; quality control; safety) to the solution of technology-based problems.
5. Demonstrate knowledge of science, testing, and processing of materials.
6. Demonstrate knowledge and application of technical drawing and production principles.
7. Demonstrate preparation for a career in Industrial Technology or graduate study.