

# INDUSTRIAL TECHNOLOGY (B.S.TECH.)

The Industrial Technology Bachelor of Science degree program<sup>1</sup> is designed to provide students with the opportunity to develop in-depth knowledge and hands-on experience in basic and advanced industrial processes, procedures, planning, and management.

To graduate in this program, all students are required to take the Certified Technology Manager (CTM) exam. Passing the CTM exam is not a requirement; students only need to show proof that they have taken the exam.

Required coursework includes the university requirements (regulation J-3 (<https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/>)) and the following:

Code	Title	Hours
ENGL 317	Technical Writing II	3
PSYC 101	Introduction to Psychology	3
ECON 202	Principles of Microeconomics	3
MATH 160 or MATH 170	Survey of Calculus Calculus I	4
PHYS 111	General Physics I	3
PHYS 111L	General Physics I Lab	1
PHYS 112	General Physics II	3
PHYS 112L	General Physics II Lab	1
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
STAT 251 or STAT 301	Statistical Methods Probability and Statistics	3
MHR 311	Introduction to Management	3
ENGR 105	Engineering Graphics	2
INDT 310	Introduction to Industrial Technology	3
INDT 332	Introduction to Analog and Digital Electronics	3
INDT 333	Industrial Electronics and Control Systems	3
INDT 350	Introduction to Materials Science	3
INDT 353	Manufacturing Systems	3
INDT 362	Behavior Based Safety	3
INDT 415	Impact of Technology on Society	3
INDT 434	Power Generation and Distribution	3
INDT 435	Network Administration	3
INDT 442	Systems Integration	3
INDT 443	Government Contract Law	3
INDT 444	Quality Assurance Organization and Management	3
INDT 446	Labor Law	3
INDT 448	Project and Program Management	3
INDT 450	Comprehensive Exam Preparation	1
INDT 453	Computer Integrated and Robotics Manufacturing Technology	3
INDT 462	Industrial Safety	3
INDT 484	Industrial Technology Capstone I	3
INDT 485	Industrial Technology Capstone II	3

Select Technical and Free Electives (not limited to the following):<sup>2</sup> 12

INDT 457	Lean to Green Sustainable Technology
INDT 464	Human Performance Fundamentals
INDT 466	Human Performance Field Investigation
INDT 470	Homeland Security
INDT 472	National Incident Management Systems

**Total Hours** 100

1

This degree is currently only available at the Idaho Falls and Coeur d'Alene Centers.

2

Elective credit can also be obtained through Technical Competency. Up to 24 credits can be obtained in this manner. Consult with your advisor for information on this process.

## Courses to total 124 credits for this degree

Fall Term 1		Hours
ENGL 101	Writing and Rhetoric I	3
MATH 143	College Algebra	3
PSYC 101	Introduction to Psychology	3
PHYS 111	General Physics I	3
PHYS 111L	General Physics I Lab	1
Oral Communication Course		3

**Hours** 16

Spring Term 1		Hours
ECON 202	Principles of Microeconomics	3
ENGL 102	Writing and Rhetoric II	3
MATH 160 or MATH 170	Survey of Calculus or Calculus I	4
PHYS 112	General Physics II	3
PHYS 112L	General Physics II Lab	1
STAT 251 or STAT 301	Statistical Methods or Probability and Statistics	3

**Hours** 17

Fall Term 2		Hours
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
ENGR 105	Engineering Graphics	2
INDT 310	Introduction to Industrial Technology	3
INDT 332	Introduction to Analog and Digital Electronics	3
Humanistic and Artistic Ways of Knowing Course		3

**Hours** 15

Spring Term 2		Hours
INDT 333	Industrial Electronics and Control Systems	3
INDT 415	Impact of Technology on Society	3
INDT 462	Industrial Safety	3
Humanistic and Artistic Ways of Knowing Course		3
American Diversity Course		3

**Hours** 15

Fall Term 3		Hours
ENGL 317	Technical Writing II	3
INDT 350	Introduction to Materials Science	3
INDT 362	Behavior Based Safety	3
INDT 434	Power Generation and Distribution	3
INDT 435	Network Administration	3

**Hours** 15

Spring Term 3		Hours
INDT 353	Manufacturing Systems	3
INDT 442	Systems Integration	3
INDT 444	Quality Assurance Organization and Management	3

MHR 311	Introduction to Management	3
International Course		3
<b>Hours</b>		<b>15</b>
<b>Fall Term 4</b>		
INDT 443	Government Contract Law	3
INDT 448	Project and Program Management	3
INDT 484	Industrial Technology Capstone I	3
Technical, Major Elective Course		3
Technical, Major Elective Course		4
<b>Hours</b>		<b>16</b>
<b>Spring Term 4</b>		
INDT 446	Labor Law	3
INDT 450	Comprehensive Exam Preparation	1
INDT 453	Computer Integrated and Robotics Manufacturing Technology	3
INDT 485	Industrial Technology Capstone II	3
Technical, Major Elective Course		3
Technical, Major Elective Course		3
<b>Hours</b>		<b>16</b>
<b>Total Hours</b>		<b>125</b>

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

1. Graduates are prepared to design, implement, and improve processes and systems in the manufacturing, research, and development, service or government sectors. The students will be able to:
  - a. Apply theories and principles from mathematics, physical science, and computer applications and information technology to solve practical technology problems;
  - b. Apply quality, safety, and industrial technology skills in a professional work environment within real-world constraints;
  - c. Demonstrate proficiency in the use of robotics and manufacturing equipment to solve practical technology and engineering problems;
  - d. Apply the principles of cognitive systems and human performance to perform task analyses and evaluate human-computer/machine interfaces;
  - e. Interpret, describe, and implement information contained in typical project specifications.
2. Our graduates are prepared to succeed in managerial and leadership positions. The students will be able to:
  - a. Demonstrate project management skills by applying time value of money, select and implement cost-effective solutions and understand cost-accounting and effective scheduling principles;
  - b. Develop, motivate, direct, and assist teams in applying critical thinking concepts to solve technology and engineering problems;
  - c. Identify customer project goals, financial needs, timeline constraints, and other customer service based efforts.
3. Our graduates are prepared to communicate with team members, work in teams, customers, and suppliers in the global environment. The students will be able to:
  - a. Demonstrate good written and oral communication skills and use current multimedia tools to convey information;
  - b. Draw conclusions from and explain information synthesized from several sources;
  - c. Manage dispute resolution to mutually beneficial accord.
4. Our graduates are prepared to engage in today's evolving market place. The students will be able to:
  - a. Analyze contemporary issues for pertinence and potential impacts;
  - b. Describe and evaluate professional and ethical responsibilities;
  - c. Demonstrate the ability to adapt emerging technologies;
  - d. Recognize and evaluate the impact of engineering decisions in a global and societal context;
  - e. Put into practice the concepts of service learning.