



## Technology Management

Bachelor of Science



**Program Description:** The Technology Management program at Indiana State University is a degree completion transfer program which articulates with regionally accredited associate of science or associate of applied science degree programs in technology related areas. The entire program may be completed via distance education. Flexibility is built into the major such that a student may complete a minor in a relevant area or complete deficiencies all within the required 124 hours needed for graduation. All CCAF courses completed in technology related degree programs will transfer to ISU and count toward graduation.

**Program Objectives:** The Technology Management Bachelor of Science program prepares technical managers by combining both management and technical content from courses completed for both the AAS and BS degrees.

### Degree Program Requirements

Degree Requirement	Required Semester Credits	CCAF Transfer Credits	Courses to take at Institution
<b>Core/Area of Focus</b>			
		22 CCAF technical hours	
<a href="#">HLTH 212</a> or <a href="#">HLTH 318</a> : Introduction to Industrial Health and Safety OR Industrial Accident Prevention I	3		HLTH 212 or 318
<a href="#">MET 405</a> : Economic Analysis for Engineering and Technology	3		MET 405
<a href="#">TMGT 351</a> : Professional Internship	3		TMGT 351
<a href="#">TMGT 429</a> : Workplace Law for the Technical Manager	3		TMGT 429
<a href="#">TMGT 471</a> : Production Planning and Control I	3		TMGT 471
<a href="#">TMGT 473</a> : Quality Control of Industrial Products I	3		TMGT 473
<a href="#">TMGT 491</a> or <a href="#">TMGT 497</a> : Creativity and Ideation Techniques and Practice OR Problem Solving Techniques: A Team Approach	3		TMGT 491 or 497
<a href="#">TMGT 492</a> : Industrial Supervision	3		TMGT 492

<a href="#">TMGT 478</a> or <a href="#">ECT 437</a> : Industrial Organization and Functions OR Industrial Computer Systems Management	3		TMGT 478 or ECT 437
Minor or concentration in the College of Technology and/or approved 300/400 level electives and/or deficiencies from an AAS degree	21		Minor, concentration or approved electives or deficiencies
<b>Total</b>	<b>48</b>		
<b>Arts and Sciences</b>			
ENG 101: Freshman Writing I	3	Completed with approved AAS degree	
ENG 105 or 107: Freshman Writing II OR Rhetoric and Writing	3	Completed with approved AAS degree	
<a href="#">ENG 305T</a> or <a href="#">ENG 305</a> or <a href="#">ENG 405</a> or <a href="#">BEIT 336</a> : Technical Writing OR Advanced Expository Writing OR Writing for Science and Industry OR Business Report Writing, respectively	3		One of ENG 305T, ENG 305, ENG 405 or BEIT 336
COMM 101: Introduction to Speech Communication	3	Completed with approved AAS degree	
Information Technology	3	Completed with approved AAS degree	
Quantitative Technology	3	Completed with approved AAS degree	
Foreign Language	6	Waived with approved AAS degree	
PE 101/L: Fitness for Life and Laboratory		Completed with approved	
<b>Any deficiencies in the required Arts and Sciences general education courses will be met in the 21 hours indicated in the major courses under Core/Area of Focus.</b>			To be determined
Science and Mathematical Studies: Foundation	4	Each student's record will be examined individually to	
Science and Mathematical Studies: Elective	3		

Social and Behavioral Studies: Foundation	3	determine any required additional electives or general education courses. These courses should be taken at the junior/senior level to meet the requirement of 50 hours at the junior/senior level. Any additional electives/deficiencies required will be counted in the required 21 hours noted above in the Core/Area of Focus to ensure that a student may complete the Technology Management degree at Indiana State University within the 124 hours needed for graduation, and no more.	
Social and Behavioral Studies: Elective	3		
Literary and Philosophical Studies: Literature and Life	3		
Literary and Philosophical Studies: Elective	3		
Historical Studies	3		
Multicultural Studies: US Diversity	3		
Multicultural Studies: International Cultures Diversity	3		
Capstone	3		
Total	31		To be determined
<b>Electives</b>			
Additional electives to complete 124 hours required for graduation	19		Additional electives to complete 124 hours required to graduation
<b>Total Credits Required Bachelor of Science Degree</b>	<b>124</b>	<b>64</b>	<b>60</b>

Note: This document should reflect a “generic” plan and provide students with a snapshot of the degree program requirements. A more descriptive/individualized plan should be submitted as part of the degree contract.

**Course Descriptions:**

**HLTH 212 - Introduction to Industrial Health and Safety** – 3 hours. A study of the changing role of the industrial health and safety manager in the occupational environment.

**HLTH 318 – Industrial Accident Prevention I** – 3 hours. The study of accident prevention with regard to: machine guarding, the use of power tools, plant layout, appraising sources of hazards, and personal protective equipment. Prerequisites: 212, 313 or concurrent.

**MET 405 Economic Analysis for Engineering and Technology** – 3 hours. This course is designed to provide students with the principles of investment economic analysis, decision-making among alternatives, and replacement analysis. Inflation, depreciation, cost concepts, bond, and income tax considerations are included. Prerequisite: Mathematics 115.

**TMGT 351 - Professional Internship** —3 hours. Coordinated work experience in industry,

which will result in a comprehensive written report of the experience. Repeatable for three hours.

**TMGT 429 – Workplace Law for the Technical Manager** 3 hours. Analysis of laws and regulations that have the greatest influence on management of front-line industrial employees. Research and synthesis of legislation, landmark and recent litigation, case studies, trends and industrial projects are used to prepare technical managers to meet the letter and spirit of the law while meeting management goals.

**TMGT 471 - Production Planning and Control I**—3 hours. Principles of planning, scheduling, routing, and developing procedures of production control.

**TMGT 473 - Quality Control of Industrial Products I**—3 hours. Basic principles and practices of quality control in industry.

**TMGT 491 - Creativity and Ideation Techniques and Practice**—3 hours. Conscious and deliberate experimentation toward more productive thinking and idea generation, culminating in applications of techniques learned.

**TMGT 497 - Problem Solving Techniques: A Team Approach**—3 hours. Investigation of and practice using several problem solving techniques as practiced in industrial organizations. Techniques include consensus, brainstorming, Syntectics, Problem Solving conference, Force Field Analysis, and Kepner-Tregoe among others.

**TMGT 492 - Industrial Supervision**—3 hours. The role of supervision functions in industry with emphasis upon principles and practices of human behavior and human relations within the industrial environment. Prerequisite: student must have a minimum junior standing or have prior approval of instructor.

**TMGT 478 - Industrial Organization and Functions**—3 hours. The development and organization of industry and study of the major production related functions.

**ECT 437 - Industrial Computer Systems Management**—3 hours. Evaluation of control computers in an industrial environment; the direct and indirect cost trade-off of implementing a hardwired vs. a programmed controller. The effect of management decisions on industrial computer applications. Economics of open and closed systems, software vs. hardware, in-house vs. contract maintenance, and multi-vendor vs. single vendor systems. Prerequisite: senior standing or consent of instructor.

**ENG 305T – Technical Writing** – 3 hours. Writing in conventions, formats, and styles applicable to internal, world-of-work settings. Recommended for majors in science, technology, and related areas. Satisfies 305 requirement. Prerequisites: 105 or 107 or 108 or 130, and the successful completion of 48 semester hours of course work.

**ENG 305 – Advanced Expository Writing** – 3 hours. Writing reports, proposals, reviews, and papers in styles appropriate to various professional and academic activities, with emphasis on discovering arguments and arranging materials. Topics vary. This course or a substitute approved by the Department of English is required of all students. Prerequisites: 105 or 107 or 108 or 130, and the successful completion of 48 semester hours of course work.

**ENG 405 – Writing for Science and Industry** – 3 hours. Theory and practice in researching, writing, and editing reports, manuals, articles, and other external communications common to scientific and professional occupations. Emphasizes effective style, structure, tone and visual format. Recommended for students in scientific, technical, and related areas. Satisfies English

305 requirement. May be taken instead of or in addition to English 305T. Prerequisites: 105 or 107 or 108 or 130 and the successful completion of 62 semester hours of course work.

**BEIT 336 – Business Report Writing** – 3 hours. Emphasizes analyzing business situations and preparing written reports including informational reports, problem-solving reports, and formal analytical reports. Prerequisites: English 105, 107, or 108, and the successful completion of 48 semester hours of course work.