

South Bend School of Engineering Technology	Name:
Major: Industrial Engineering Technology (IET)	PUID:

UNIVERSITY IET-BS Suggested Arrangement of Courses

Accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org

For Catalog Terms beginning in fall 2019 (202010) Major Code: TIET Program Code: PITLI-BS

Fall 1st Year CR GR Sem Fulfilled by Spring 1st Year Fulfilled by ENGT 18000 Engineering Technology TLI 11200 Foundations of Org 3 3 **Foundations** Leadership♦ ENGT 18100 Engineering Technology PHYS 22000 General Physics* - PHYS-P 5 1 221 or 20100 (IUSB) **Applications** Mathematics Selective* 3 Oral Communication Selective* 3 TECH 12000 Design Thinking in Tech.* Materials & Processes Selective 3 3 5 **Technical Graphics Selective** 2-3 Behavioral/Social Science Selective* Written Communication Selective* 3 **Total Credit Hours** 15-16 **Total Credit Hours** 17

Fall 2 nd Year	CR	GR	Sem	Fulfilled by	Spring 2 nd Year	CR	GR	Sem	Fulfilled by
TLI 21300 Project Management	3				TLI 31600 Statistical Quality Control (P: MA 15800 or higher)	3			
TLI 21400 Intro Supply Chain MGMT Tech	3				Lab Science Selective*	5			
Computer Programming Selective	3				History of Science & Tech Selective	3			
Humanities Selective*	3				ECON 210 Principles of Economics or ECON-E 103 Micro or ECON-E 104 Macro (IUSB)	3			
ECET 22400 Electronic Systems	3				Free Elective	2			
Total Credit Hours	15				Total Credit Hours	16			

Fall 3 rd Year	CR	GR	Sem	Fulfilled by	Spring 3 rd Year	CR	GR	Sem	Fulfilled by
TLI 31300 Tech Innovation: Biometrics	3				STAT 30100 Elementary Statistical Methods	3			
TLI 33400 Economic Analysis for Tech Systems (P: MA 15800 or higher)	3				TLI 33520 Human Factor for Tech Systems	3			
TLI 33620 Total Production Maintenance (P: Physics & TLI 31600 or STAT 30100)	3				TLI 43530 Operations Plan & MGMT (P: MA 15800 or higher)	3			
MET 24500 Manufacturing Systems (P: MET 14300 or 14400 & CGT 11000)	3				TLI 43630 Design of Experiments (P: TLI 31600 or STAT 30100)	3			
Advanced Oral Communication Selective	3				Manufacturing Automation Selective	3			
Total Credit Hours	15				Total Credit Hours	15			

Fall 4 th Year	CR	GR	Sem	Fulfilled by	Spring 4 th Year	CR	GR	Sem	Fulfilled by
TLI 48390 IET Capstone I: Problem Identification & Analysis	3				TLI 48395 IET Capstone II: Facility Design (P: TLI 48390)	3			
Advanced Written Communication Selective	3				TLI 43540 Facilities Planning and Material Handling (P: MET 14300 or 14400 & TLI 43530)	3			
TLI 43640 Lean Six Sigma (P: TLI 31600)	3				Technical Elective	3			
Technical Elective	3				Technical Elective	3			
Free Elective	3				Free Elective	3			
					Professional Requirement	0			
				·	Global/Intercultural Requirement	0			
Total Credit Hours	15				Total Credit Hours	15			

Refer to the 2019 IET supplemental instruction sheet for optional courses to complete selectives and prerequisites.

The student is ultimately responsible for knowing and completing all degree requirements. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

^{*}Fulfills University Core

[•] Course is considered critical. A Critical Course is one that a student must be able to pass to persist and succeed in a particular major.

¹⁾ A 2.0 Graduation GPA required for Bachelor of Science degree.

^{3) 32} credits of upper division courses (30000 level or higher) must be taken at the Purdue University location conferring the degree.

⁴⁾ Courses at Purdue University may only be attempted a maximum of three (3) times, including W, WF, I, IF and all graded attempts.).

2019 IET Supplemental Information – Purdue Polytechnic South Bend All Prerequisites must be met

BOLD indicates courses offered at the South Bend location.

*Indicates approved IUSB course for South Bend location.

Materials & Processes Selective (3 credits)

MET 14300 Materials and Processes I MET 14400 Materials and Processes II

Mathematics Selective (3 credits)

MA 15800 Precalculus-Functions and Trigonometry

MA 16200 Plane Analytic Geometry and Calculus II

MA 16500 Analytic Geometry and Calculus I

MA 16100 Plane Analytic Geometry and Calculus I MA 16600 Analytic Geometry and Calculus II

Computer Programming Selective (3 credits)

CNIT 10500 Introduction to C Programming CS 15900 C Programming

CNIT 15501 Introduction to Software Development Concepts CS 17700 Programming with Multimedia Objects

CNIT 17500 Visual Programming CS 18000 Problem Solving and Object-Oriented Programming

CS 15800 C Programming MET 16400 Computing in Engineering Technology

Technical Graphics Selective (2-3 credits)

CGT 11000 Technical Graphics Communication IT 10500 Industrial Technology Introduction to Design

CGT 16300 Graphical Communication and Spatial Analysis

Manufacturing Automation Selective (3 credits)

MET 28400 Introduction to Industrial Controls MFET 34400 Automated Manufacturing Processes

MFET 30000 Applications of Automation in Manufacturing

Humanities Selective (3 credits)

See approved Humanities list at: http://www.purdue.edu/provost/initiatives/curriculum/course.html

Students attending the South Bend location can go to the following link to review how IU courses transfer to Purdue University to meet University Core Course Requirements:

http://www.purdue.edu/provost/initiatives/curriculum/documents/Retro%20and%20Transfer%20Credit%20Course%20list%205-27-14.pd

*FINA-F 100 Fundamentals of Studio Drawing

*HIST-H 105 American History I

*HIST-H 106 American History II

*HIST-H 113 History of Western Civilization 1

*HIST-H 114 History of Western Civilization 2

*MUS-M 17400 Music for the Listener

*PHIL-P 110 Introduction to Philosophy

*PHIL-P 140 Introduction to Ethics

Behavioral/Social Science Foundational Selective: see http://www.purdue.edu/provost/initiatives/curriculum/course.html

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 $\underline{http://www.purdue.edu/provost/initiatives/curriculum/documents/Retro%20and\%20Transfer\%20Credit\%20Course\%20list\%205-27-14.pdf$

*ECON-E 103 Introduction to Microeconomics

*PSY-P 103 Introduction to Psychology

*ECON-E 104 Introduction to Macroeconomics

*SOC-S 161 Principles of Sociology

*POLS-Y 103 Introduction to American Politics

*SOC-S 163 Social Problems

*POLS-Y 109 Introduction to International Relations

Written Communication Selective (minimum 3 credits)

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First-Year Composition

SCLA 10100 Transformative Texts, Critical Thinking & Comm I: Antiquity

to Modernity

*ENG-W 131 Reading, Writing & Inquiry

Oral Communication Selective (3 credits)

COM 11400 Fundamentals of Speech Communication/*SPCH-S 121 Public Speaking SCLA 10200 Transformative Texts, Critical Thinking & Comm II: Modern World

Science Selective

Must be a lab from the approved UCC Science list: http://www.purdue.edu/provost/initiatives/curriculum/course.html

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*BIOL-L 100 Humans & the Biological World
*CHEM-C 101 & 121 Elementary Chemistry & Lab

*PHYS-P 201 General Physics I OR *PHYS-P 221 Physics I *PHYS-P 202 General Physics 2 OR *PHYS-P 222 Physics

History of Science and Technology Selective (3 credits)

HIST 30305 Kitchens Cooking & Food Mod Amer HIST 30605 Technology and War in U.S. History

HIST 31405 Science, Technology, Engineering and Mathematics

(STEM) and Gender

HIST 31505 American Beauty

HIST 33000 History of the Brit Empire & Commonwealth, 1783 to 1960

HIST 33400 Science & Technology in Western Civilization II

HIST 38001 History of United States Agriculture

TLI 29900 Technology & Culture Through History

HIST 38400 History of Aviation

HIST 38700 History of the Space Age

POL 42900 Contemporary Political Problems

Techncial Elective (9 credits)

Any Purdue Polytechnic Institute or Engineering (ENGR or EPCS) course not already required on the Plan of Study.

ENTR 20000 Introduction to Entrepreneurship and Innovation

ENGT 31000 Marketing and Management for New Ventures

ENTER 31500 Business Planning for Social Entrepreneurship

Advanced Communication Selective (3 credits)

ENGL 30400 Advanced Composition

ENGL 30600 Intro to Professional Writing

ENGL 41900 Multimedia Writing

ENGL 42000 Business Writing

ENGL 42100 Technical Writing

ENGL 42400 Writing for High Tech Industries

*SPCH-S 223 Business & Professional Speaking

*SPCH-S 380 Nonverbal Communication

*SPCH-S 427 Cross-Cultural Communication

*SPCH-S 450 Gender & Communication

Advanced Oral Communication Selective (3 credits)

COM 31400 Advanced Presentational Speaking

COM 31500 Speech Communication of Technical Information

COM 31800 Principles of Persuasion

COM 32000 Small Group Communication or *SPCH-S 22900

COM 32400 Intro to Organizational Communication COM 32500 Interviewing Principles and Practice

COM 41500 Discussion of Technical Problems

COM 43500 Communication & Emerging Technologies

Free Elective (8 credits)

Any non-remedial course.

Global/Intercultural Requirement - ALL students must complete (0 credits)

	Polytechnic Minimum Global Requirements
STEP 1:	Complete the Pre-test Intercultural Development Inventory Assessments (1st year)
STEP 2:	Complete one (1) of the following global experiences:*
	 Participate in a Purdue University international capstone, collaborative project, or
	 Participate in an international internship (international location), or
	 Participate in a full semester abroad program, or
	 Complete 3 credit hours from the Polytechnic list of recommended Global/Cultural courses.
STEP 3	Complete the Post-test Intercultural Development Inventory Assessments (4 th year)
	NOTE FOR TRANSFER/CODO STUDENTS: Transfer and CODO students with less than 75 credit hours remaining to complete their Polytechnic Plan of Study are exempt from Steps 1 (taking the IDI Pre-test).
	*Global experiences must take place during the time of enrollment in Polytechnic to complete Step 2. Experiences that have taken place prior to a student's initial enrollment will not serve to complete Step 2.
	Intercultural competencies gained on experiences prior to Polytechnic enrollment will be captured as baseline data on a student's IDI.

Purdue University (West Lafayette) courses that meet the Global/Intercultural requirement

Any foreign language 200 or higher (201, 202, 301, 302,

401, 402)

AAS 27100 Intro to African American Studies
AAS 37300 Variable Title: History of Injustice
AGR 20100 Communication Across Cultures
ANSC 381 Leadership for a Diverse workplace
ANTH 203 Biological Bases of Human Social Behavior

ANTH 20500 Human cultural Diversity ANTH 21000 Technology and Culture ANTH 21200 Culture, Food and Health ANTH 23000 Gender Across Cultures ANTH 34000 Global Perspectives on Health

ANTH 341 Culture and Personality ANTH 379 Native American Cultures

ARAB 28000 Arabic culture

ASAM 240Intro to Asian American Studies

AT 23300 Ethics and Aviation

CNIT 320 Policy, Regulation, and Globalization in

information Technology

COM 224 Communicating in the Global Workplace

COM 30300 Intercultural Communication COM 32000 Small Group Communication COM 373 Self-Presentation & Social Image COM 412 Theories of Human interaction

COM 423 Leadership, Communication & Organizations

ECET 29000 International Experience ECET 38001 Global Professional Issues in ET EDPS 30000 Student Leadership Development

EDPS 30100 Peer Counselling Training

EDPS 31500 Collaborative Leadership: Listening EDPS 31600 Collab Leadership: Cross-cultural Settings EDPS 31700 Collaborative Leadership: Mentoring

ENGL 41400 Literature & Culture

HDFS 280 Diversity in Individual and Family Life HDFS 33200 Stress & Coping in Contemporary Families HEBR 38500 The Holocaust in Modern Hebrew Literature

HIST 19500 Historical Research & Film!

HIST 30000 Eve of Destruction: Global Crises and World

Organization in the 20th Century HIST 33805 History of Human Rights

HIST 35000 Science and Society in the 20th-Century World

HIST 36600 Hispanic Heritage of the USA HIST 37700 History & Culture of Native America HIST 46900 Black Civil Rights Movement

HIST 47900 American Representations of Middle East & N. Africa HTM 37000 Sustainable Tourism and Responsible Travel

HTM 37200 Global Tourism Geography MSL 20100 Individual Leadership Studies OLS 35000 Creativity In Business & Industry

PHIL 11400 Global Moral Issues PHIL 43500 Philosophy of Mind

POL 22000 Women, Politics & Public Policy

POL 23500 Rich and Poor Nations

POL 326 Black Political Participation in America

POL 32700 Global Green Politics
POL 36000 Women and the Law
POL 41300 The Human Basis of Politics
POL 42300 International Environmental Policy

POL 42900 Variable Title: It's a Complex World (Cross

listed with IE49000, ME29700)
POL 43300 International Organization
PSY 12000 Elementary Psychology
PSY 25100 Health Psychology
PSY 32200 Research Design
SOC 10000 Intro to Sociology

SOC 31000 Racial and Ethnic Diversity

SOC 33900 Intro to Sociology of Developing Nations TECH 330 Technology and the Global Society TLI 11200 Foundations of Tech Leadership TLI 31400 Leading Innovation in Organizations

WGSS 28200 Intro to LGBT Studies WGSS 38000 Gender and Multiculturalism

WGSS 38300 Women and Work

Polytechnic Statewide- South Bend (IUSB) Approved Courses

South Bend- Offered through IUSB ANTH-E Indians of Indiana

ANTH-E 105 Culture & Society

ANTH-E 300 Culture Areas & Ethnic Groups
ANTH-E 310 Introduction to Cultures of Africa

ANTH-E 321 Peoples of Mexico

ANTH-E 335 Ancient Civilization of Mesoamerica ANTH-E 397 Peoples & Cultures of the Middle East

EALC-J 101 Elementary Japanese I

GEOG-110 Introduction to Human Geography

GEOG-G 120 Regions of the World GEOG-G 201 World Regional Geography

HIST-A 371 History of Indiana I HIST-A 372 History of Indiana II HIST-A 301 Colonial America

HIST-A 373 American History Through Film HIST-A 355 African American History I

HIST-B 300 Issues in Western European History HIST-B 378 History of Germany Since 1648 II

HIST-C 386 Greek History from the Minoans to Alexander HIST-D 310 Russian Revolution and Soviet Regime

HIST-F 300 Issues in Latin American History HIST-A 352 History of Latinos in the United States

HIST-G 358 Early Modern Japan

HIST-H 101 The World in the Twentieth Century I

HIST-H 201 History of Russia I HIST-H 202 History of Russia II

HIST-H 207 Modern East Asian Civilization

HIST-H 211 Latin American Culture and Civilization 1 HIST-H 212 Latin American Culture and Civilization 2

HIST-W 300 Issues in World History

LSTU-L 330 Global Comparisons: Labor Relations – Examples from Three

Continents

LSTU-L 331 Global Problems: Local Solutions LSTU-L 385 Class, Race Gender, and Work PHIL-P 102 Critical Thinking and Applied Ethics

PHIL-P 105 Critical Thinking
PHIL-P 140 Introduction to Ethics

POLS-Y 107 Introduction to Comparative Politics POLS-Y 109 Introduction to International Relations POLS-Y 343 The Politics of International Development PSY-P 103 Introduction to Psychology PSY-P 327 The Psychology of Motivation PSY-P 391 Psychology of Gender and Ethnicity REL-R 152 Jews, Christians, Muslims REL-R 153 Religions of Asia SOC-S 163 Social Problems

REL-R 257 Introduction to Islam

REL-R 354 Buddhism
SOC-S 161 Principles of Sociology
SOC-S 335 Race and Ethnic Relations
SPAN-S 101 Elementary Spanish I
SPCH-B 399 Human Behavior and Social Institutions
SPCH-S 324 Persuasive Speaking
SPCH-S 427 Cross Cultural Communication

<u>Professional Requirement – All students must complete (0 credits)</u>

The SOET Professional Experience requirement is intended to document those experiences which help expose SOET students to the expectations of their profession prior to graduation. This may occur through industrial experience, technical or administrative involvement with community service, military service, et cetera. Approval has been granted for the following experiences. Additional experiences may also satisfy this graduation requirement. Requests for approval should be submitted to the SOET Curriculum Subcommittee Chair for consideration, allowing at least four academic weeks for review and response.

Potential Professional Experiences

Approval Process	Experience
Automatic	Any TECH Professional Practice course (co-op, intern, etc.)
Automatic	MET 29900 Internship for Credit
Automatic	EPICS courses, minimum of 2
Advisor	Any approved internship (assuming student and/or employer provide
	documentation)
Advisor	Military service (ROTC, reservist, active duty, veteran)
Faculty	Supervised undergraduate research experiences or laboratory assistantships
	(e.g., employed in the AEL as lab technician)
Faculty	Independent study – by petition to ensure the project meets the spirit of the
	requirement
Faculty	Professional society/club activities (e.g., led the Solar Racing team) - by petition
Faculty	Any approved employment or industry project.

Approval Key:

- Automatic student participation in this professional experience is already documented through existing means.
- Advisor advisor reviews student's experience to determine if it meets the spirit of the Professional Experience requirement.
- Faculty designated committee reviews student's experience to determine if it meets the spirit of the Professional Experience requirement.