

Fall 1 st Year	CR	GR	Fulfilled by	Spring 1 st Year	CR	GR	Fulfilled by
Materials and Processes Selective	3			MA 16010 Applied Calculus I *♦ (Prereq: ALEKS score of 75)	3		
Freshman Composition Selective*+	3			Freshman Speech Selective*+	3		
CNIT 10500 Introduction to C Programming	3			MET 11100 Applied Statics (Prereqs: ENGT 18000)	3		
ENGT 18000 ENG Tech Foundations♦	3			Behavioral/Social Science Selective*	3		
ENGT 18100 ENG Tech Applications♦	1			Physics Selective*	5		
TECH 12000 Design Thinking in Tech.*	3						
TOTAL CREDIT HOURS	16			TOTAL CREDIT HOURS	17		

Fall 2 nd Year	CR	GR	Fulfilled by	Spring 2 nd Year	CR	GR	Fulfilled by
ECET 22400 Electronic Systems (Prereq: MA 16010) ♦	3			MET 10200 Production Specifications (Prereqs: CGT Selective and ENGT 18000)	3		
MA 16020 Applied Calculus II (Prereq: MA 16010 with a grade of C- or better)	3			MET 28400 Intro to Industrial Controls (Prereq: ECET 22400)	3		
MET 11300 Mechanics Applications (Prereq: MET 11100)	1			MET 23000 Fluid Power (Prereqs: (MET 11100 or PHYS 22000) and MA 16010)	3		
Humanities Foundation Selective*	3			Science Selective*	3-5		
Computer Graphics Selective ♦	2-3			MFET 24800 Introduction to Robotics (Prereq: CNIT 10500)	3		
Elective	3						
TOTAL CREDIT HOURS	16			TOTAL CREDIT HOURS	15-17		

Fall 3 rd Year	CR	GR	Fulfilled by	Spring 3 rd Year	CR	GR	Fulfilled by
ECET 33700 Analog Signal Processing (Prereq: ECET 22400 + MA 16020)	3			MFET 37400 Mfg Integration I (Prereq: MET 28400)	3		
MFET 34400 Automated Mfg Processes (Prereq: MET 24500)	3			ECET 38001 Global Professional Issues in ET	3		
MFET 34800 Advanced Industrial Robotics (Prereq: MET 28400)	3			CHM 11100 General Chemistry - CHEM-C 101 & CHEM-C 121 (IUSB)	3-5		
ECET 32700 Instrument & DAQ Design (Prereqs: ECET 22400, MA 16010, PHYS Sel.)	3			Manufacturing Selective	3		
MET 24500 Manufacturing Systems (Prereqs: (MET 14300 or MET 14400) and Computer graphics selective) ♦	3			Statistics or Quality Selective	3		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Fall 4 th Year	CR	GR	Fulfilled by	Spring 4 th Year	CR	GR	Fulfilled by
Capstone I Selective	3			Capstone Selective II	3		
TLI 33400 Monetary Analysis for Industrial Decisions or IET 45000 Monetary Analysis For Industrial Decisions	3			Technical Elective	3		
Technical Writing Selective+	3			Humanities/Social Science Elective	3		
Mechatronics/Controls Selective	3			Manufacturing/Controls Selective	3		
Communications Selective+	3			Elective	1		
				Intercultural Selective	0		
				Professional Requirement	0		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	13		

*Fulfills University core.

+Denotes Cornerstone Certificate option.

♦ Indicates 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 are required for the Bachelor of Science degree.
2. Students must earn a "D-" or better in all courses.
3. Courses at Purdue University may only be attempted a maximum of three (3) times, including W, WF, I, IF and all graded attempts.
4. 32 credit hours of 300-level or higher courses must be completed at Purdue University.
5. Complete a Professional Requirement. ☐ Complete an Intercultural Requirement. ☐

The student is ultimately responsible for knowing and completing all degree requirements.

The myPurduePlan powered by DegreeWorks is knowledge source for specific requirements and completion.

***** Updated 04/14/2019

South Bend 2019-2020 Robotics Engineering Technology Supplemental Information
All prerequisites must be met

BOLD indicates course offered at the South Bend location.

***Indicates approved IUSB course for South Bend location.**

FRESHMAN COMPOSITION SELECTIVE+

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First-Year Composition

***ENG-W 131 Reading, Writing & Inquiry**

SCLA 10100 Transformative Texts, Critical Thinking & Communication I: Antiquity to Modernity

FRESHMAN SPEECH SELECTIVE+

COM 11400 Fundamentals Of Speech Communication

***SPCH-S 121 Public Speaking**

SCLA 10200 Transformative Texts, Critical Thinking And Communication II: Modern World

COMMUNICATION SELECTIVE+

COM 31500 Speech Communication Of Technical Information

COM 32000 Small Group Communication

COM 41500 Discussion Of Technical Problems

EDPS 31500 Collaborative Leadership: Interpersonal Skills

TECHNICAL WRITING SELECTIVE+

ENGL 42100 Technical Writing

ENGL 42400 Writing For High Technology Industries

COMPUTER GRAPHICS SELECTIVE

CGT 11000 Technical Graphics Communications

CGT 16300 Graphical Communications and Spatial Analysis

IT 10500 Intro to Engineering Design

TECHNICAL SELECTIVE

Any 30000 or higher ECET course which is not currently required on the plan of study.

CGT 11301 Product Data Management

CGT 20301 Model-Based Definition

CGT 21301 Simulation And Visualization Applications

CGT 30301 Digital Manufacturing

CGT 31301 The Business of Managing Digital Product Data

CGT 32600 Graphics Standards For Product Definition

CGT 42300 Product Data Management

CGT 42600 Industry Applications Of Simulation And Visualization\

ECET 27900 Embedded Digital Systems

FNR 30110 Sustainable Forest Products Manufacturing

IT 33000 Industrial Sales And Sales Management

IT 34500 Automatic Identification And Data Capture

IT 35100 Advanced Industrial Safety And Health Management

IT 38100 Total Productive Maintenance

IT 43400 Global Transportation And Logistics Management

IT 44200 Production Planning

IT 48300 Facility Design For Lean Manufacturing

MET 30200 CAD In The Enterprise

MET 33400 Advanced Fluid Power

MET 34600 Advanced Materials In Manufacturing

MET 38200 Controls And Instrumentation For Automation

MET 43200 Hydraulic Motion Control Systems

MET 43600 Pneumatic Motion Control Systems

MFET 28800 Smart Manufacturing Operational And Information Networks

MGMT 45500 Legal Background For Business I

OLS 28400 Leadership Principles

TLI 31300 Tech Integration:Bar Codes to Biometrics

TLI 33620 Total Productive Maintenance

TLI 44275 Global Transportation And Logistics Management

STATISTICS OR QUALITY SELECTIVE

IT 34200 Introduction To Statistical Quality

STAT 30100 Elementary Statistical Methods

TLI 31600 Statistical Quality Control

PHYSICS SELECTIVE

PHYS 21800 General Physics

PHYS 22000 General Physics

PHYS 17200 Modern Mechanics

***PHYS-P 221 Physics I or 201 General Physics I**

SCIENCE SELECTIVE

BIOL 11000 Fundamentals of Biology I
BIOL 20300 Human Anatomy and Physiology
CHM 11200 General Chemistry II
CHM 11600 General Chemistry
PHYS 21900 General Physics II

PHYS 22100 General Physics
PHYS 24100 Electricity and Optics
***BIOL-L 100 Humans & the Biological World**
***PHYS-P 222 Physics 2 or 202 General Physics 2**

MECHATRONICS SELECTIVE

MET 43200 Hydraulic Motion Control Systems
MET 43600 Pneumatic Motion Control Systems
MET 48200 Mechatronics
MET 58100 Design for Mechatronics

MFET 29200 Projects in Automation, Robotics And Mechatronics
MFET 34800 Advanced Industrial Robotics
MFET 39200 Advanced Projects In Automation, Robotics, And Mechatronics

CONTROLS SELECTIVE

ECET 27400 Wireless Communications

ECET 35901 Computer Based Data Acquisition Applications
ECET 49900 Electrical Engineering Technology: Applied Comp Vision Sensing & Auto
MET 33400 Advanced Fluid Power
MET 38200 Controls And Instrumentation For Automation
MET 43200 Hydraulic Motion Control Systems

MET 43600 Pneumatic Motion Control Systems
MET 48200 Mechatronics
MFET 29200 Projects in Automation, Robotics, and Mechatronics
MFET 39200 Advanced Projects in Automation, Robotics, and Mechatronics

TLI 31300 Tech Integration: Bar Codes to Biometrics

MANUFACTURING SELECTIVE

AT 27200 Introduction To Composite Technology
AT 30802 Aircraft Materials Processes
AT 47200 Advanced Composite Technology
CGT 20301 Model-Based Definition
CGT 21301 Simulation And Visualization Applications
CGT 30301 Digital Manufacturing
CGT 31301 The Business of Managing Digital Product Data
CGT 32600 Graphics Standards For Product Definition
CGT 42300 Product Data Management
CGT 42600 Industry Applications Of Simulation And Visualization
ECET 27000 Electronics Prototype Development And Construction
ECET 49900 Electrical Engineering Technology: Applied Comp Vision Sensing & Auto
IT 38100 Total Productive Maintenance

IT 43400 Global Transportation And Logistics Management
IT 44200 Production Planning
IT 48300 Facility Design For Lean Manufacturing
MET 30200 CAD In The Enterprise
MET 34900 (Stringed Instrument Design and Manufacture
MET 45100 Manufacturing Quality Systems
MFET 29200 Projects in Automation, Robotics, and Mechatronics
MFET 39200 Advanced Projects in Automation, Robotics, and Mechatronics
MFET 49900 Manufacturing Engineering Technology Independent Project: Technology, Innovation and Culture in Bavaria (Study Abroad)
TLI 33620 Total Productive Maintenance
TLI 44275 Global Transportation And Logistics Management

HUMANITIES FOUNDATIONAL SELECTIVE: (6 credits) see <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 Core Course Requirements:

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

***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>

Students attending the South Bend location can go to the following link to review how IU courses transfer to Purdue University to meet Core Course Requirements: <http://www.purdue.edu/provost/initiatives/curriculum/documents/Retro%20and%20Transfer%20Credit%20Course%20list%205-27-14.pdf>

***ECON-E 103 Introduction to Microeconomics**
***ECON-E 104 Introduction to Macroeconomics**
***POLS-Y 103 Introduction to American Politics**

***PSY-P 103 Introduction to Psychology**
***SOC-S 161 Principles of Sociology**
***SOC-S 163 Social Problems**

***POLS-Y 109 Introduction to International Relations**

HUMANITIES/Social Science ELECTIVE:

Any 20000 or higher course in Psychology, Sociology, English Literature, History, Economics Political Science, Philosophy, Religion, Anthropology, a foreign language.

CAPSTONE SELECTIVES I

ECET 43000 Electrical And Electronic Product And Program Management

ECET 43100 International Capstone Project Planning And Design

ENGT 40500 Entrepreneurial Capstone I

MET 40100 Capstone Projects I

MFET 48000 Project Planning for Integration

CAPSTONE SELECTIVES II

ECET 46000 Project Design And Development

ECET 46100 International Capstone Project Execution

ENGT 40600 Entrepreneurial Capstone II

MET 40200 Capstone Projects II

MFET 48100 Integration Of Manufacturing Systems

ELECTIVE: Any non-remedial course

INTERCULTURAL REQUIREMENT - ALL students must complete

Polytechnic Minimum Global Requirements	
STEP 1:	_____ Complete the Pre-test Intercultural Development Inventory Assessments (1 st year)
STEP 2:	_____ Complete one (1) of the following global experiences: <ul style="list-style-type: none"> • 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)
	<p>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).</p> <p>*Global experiences must take place during the time of enrollment in Polytechnic to complete Step 2. Experiences 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.</p>

Purdue University (West Lafayette) courses that meet the global requirement

AAS 27100 Intro to African American Studies
AAS 37300 Variable Title: History of Injustice
AGR 20100 Communication Across Cultures
ANSC 38100 Leadership for a Diverse workplace
ANTH 20300 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 34100 Culture and Personality
ANTH 37900 Native American Cultures

ARAB 28000 Arabic culture
ASAM 24000 Intro to Asian American Studies
AT 23300 Ethics and Aviation
CNIT 32000 Policy, Regulation, and Globalization in information Technology
COM 22400 Communicating in the Global Workplace
COM 30300 Intercultural Communication
COM 32000 Small Group Communication
COM 37300 Self-Presentation & Social Image
COM 41200 Theories of Human interaction
COM 42300 Leadership, Communication & Organizations
ECET 29000 International Experience

ECET 38001 Global Professional Issues in ET

EDPS 23500 Learning and Motivation
 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 28000 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 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
 Any foreign language 200 or higher (201, 202, 301, 302, 401, 402)

PHIL 43500 Philosophy of Mind
 POL 22200 Women, Politics & Public Policy
 POL 23500 Rich and Poor Nations
 POL 32600 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 Contemporary Political Problems: It's a Complex World
 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 33000 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

PROFESSIONAL REQUIREMENT – ALL students must complete

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.

Table I: Approved Professional Experiences

Approval by:	Experience:
Automatic	Any TECH Professional Practice course (co-op, intern, etc.)
Automatic	MET 29900 Internship for Credit
Automatic	EPICS courses, minimum of two
Advisor	Any approved internship (assuming student and/or employer provide documentation)
Advisor	Military service (ROTC completion, reservist, active duty, veteran)
Faculty	Supervised undergraduate research experiences (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.