

Fall 1 <sup>st</sup> Year	CR	GR	Sem	Fulfilled by	Spring 1 <sup>st</sup> Year	CR	GR	Sem	Fulfilled by
<b>MA 16010</b> Applied Calculus I* (P: ALEKS score of 75)	3				<b>ECET 22400</b> Electronics Systems (P: MA 15300 or higher math course)	3			
<b>ENGT 18000</b> ENG Tech Foundations	3				<b>MA 16020</b> Applied Calculus II (P: MA 16010 with a grade of C- or better)	3			
<b>ENGT 18100</b> ENG Tech Applications	1				<b>MET 11100</b> Applied Statics (P: ENGT 18000)	3			
<b>CNIT 10500</b> Intro to C Programming	3				<b>TECH 12000</b> Design Thinking in Tech.*	3			
<b>Materials and Processes Selective</b>	3				Freshman Speech Selective*	3			
Freshman Composition Selective*	3								
<b>TOTAL CREDIT HOURS</b>	<b>16</b>				<b>TOTAL CREDIT HOURS</b>	<b>15</b>			

Fall 2 <sup>nd</sup> Year	CR	GR	Sem	Fulfilled by	Spring 2 <sup>nd</sup> Year	CR	GR	Sem	Fulfilled by
CHM 11100 ( <b>CHEM-C101/C121</b> *IU) General Chemistry*	3				<b>MET 10200</b> Production Specifications (P: CGT Selective and ENGT 18000)	3			
<b>ECET 17900</b> Intro to Digital Systems	3				<b>MET 24500</b> Manufacturing Systems (P: (MET 14300 or MET 14400) and CGT Sel)	3			
<b>MET 28400</b> Intro to Industrial Controls (P: ECET 22400)	3				<b>ECET 27900</b> Embedded Digital Systems (P: EET 17900)	3			
<b>MET 11300</b> Mechanics Applications (P: MET 11100)	1				Physics Selective* (PHYS 22000)	4			
Computer Graphics Selective ( <b>CGT 11000</b> or <b>16300</b> )	2				Behavioral/Social Science Foundation Elective*	3			
Humanities Foundation Selective*	3								
<b>TOTAL CREDIT HOURS</b>	<b>15</b>				<b>TOTAL CREDIT HOURS</b>	<b>16</b>			

Fall 3 <sup>rd</sup> Year	CR	GR	Sem	Fulfilled by	Spring 3 <sup>rd</sup> Year	CR	GR	Sem	Fulfilled by
<b>MET 23000</b> Fluid Power (P: (MET 11100 or PHYS 22000) and MA 16010)	3				<b>ECET 38001</b> Global Professional Issues in Engineering Technology	3			
<b>MFET 34400</b> Automated Mfg Processes (P: MET 24500)	3				<b>ECET 33700</b> Analog Signal Processing (P: ECET 22400 + MA 16020)	3			
<b>ECET 32700</b> Instrument & DAQ Design (P: ECET 22400, MA 16010, PHYS Sel.)	3				<b>MFET 37400</b> Mfg Integration I (P: MET 28400)	3			
Science Selective*	3				Statistics or Quality Selective	3			
<b>ENGL 42100</b> Technical Writing (P: ENG- W131)	3				Manufacturing Selective	3			
<b>TOTAL CREDIT HOURS</b>	<b>15</b>				<b>TOTAL CREDIT HOURS</b>	<b>15</b>			

Fall 4 <sup>th</sup> Year	CR	GR	Sem	Fulfilled by	Spring 4 <sup>th</sup> Year	CR	GR	Sem	Fulfilled by
<b>TLI 33400</b> Economic Analysis for Technology Systems	3				<b>MET 38200</b> Controls/Instr Automation (P: MET 28400)	3			
Mechatronics Selective (Recommend MET 48200)	3				Capstone Selective II (P: Capstone I)	3			
Communications Selective	3				Humanities/Social Science Elective	3			
Capstone Selective I	3				Free Elective	4			
Controls Selective (Recommend MET 43600 or ECET 27400)	3								
<b>TOTAL CREDIT HOURS</b>	<b>15</b>				<b>TOTAL CREDIT HOURS</b>	<b>13</b>			

\*Fulfills University core.

- 120 semester credits and a 2.0 Graduation GPA are required for the Bachelor of Science degree.
- Students must earn a "D-" or better in all courses.
- Courses at Purdue University may only be attempted a maximum of three (3) times, including W, WF, I, IF and all graded attempts.
- 32 credit hours of 300-level or higher courses must be completed at the Purdue University location conferring the degree.
- Complete the Global / Intercultural Requirement (ungraded) ☐ Complete the Professional Requirement (ungraded) ☐.

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**The student is ultimately responsible for knowing and completing all degree requirements.  
myPurduePlan is knowledge source for specific requirements and completion.**

\*\*\*\*\* Updated 4/13/2019

**NEW ALBANY 2019-2020 MFET PROGRAM SUPPLEMENTAL INFORMATION**  
**Mechatronics Engineering Technology Major (MHET)**  
**All prerequisites must be met.**

**Bold indicates courses offered at New Albany Campus.**

**\*Indicates IU Southeast course for New Albany Campus only (See Student Affairs Administrator for availability.)**

**FRESHMAN COMPOSITION**

ENGL 10600 First-Year Composition

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

**FRESHMAN SPEECH SELECTIVE**

COM 11400 Fundamentals of Speech Communication

SCLA 10200 Transformative Texts, Critical Thinking and Community II: Modern World

**MATERIALS and PROCESSES SELECTIVE**

MET 14300 Materials and Processes I

MET 14400 Materials and Processes II

**COMPUTER GRAPHICS SELECTIVE**

CGT 11000 Technical Graphics Communications

IT 10500 Intro to Engineering Design

CGT 16300 Graphical Communication and Spatial Analysis

**COMMUNICATIONS SELECTIVE**

COM 31500 Speech Communication of Technical Info

COM 41500 Discussion of Technical Problems

COM 32000 Small Group Communication (OLS 38800)

EDPS 31500 Collaborative Leadership: Interpersonal Skills

**TECHNICAL WRITING SELECTIVE**

ENGL 42100 Technical Writing

ENGL 42400 Writing for High Technology Industries

**STATISTICS OR QUALITY SELECTIVE**

STAT 30100 Elementary Statistical Methods

TLI 31600 Statistical Quality Control

IT 34200 Introduction to Statistical Quality

**\*MATH-K300 Statistics for Health Professionals**

**PHYSICS SELECTIVE**

PHYS 22000 General Physics

PHYS 17200 Modern Mechanics

**SCIENCE SELECTIVE**

BIOL 11000 Fundamentals of Biology I (**\*BIOL-L100**)

CHM 11600 General Chemistry

BIOL 20300 Human Anatomy and Physiology (**\*ANAT-A215**)

PHYS 22100 General Physics

CHM 11200 General Chemistry II (**\*CHEM-C102**)

PHYS 24100 Electricity and Optics

**MECHATRONICS SELECTIVE**

MET 43200 Hydraulic Motion Control Systems

MFET 34800 Industrial Robotics and Motion Control

MET 43600 Pneumatic Motion Control Systems

MFET 39200 Advanced Projects in Automation, Robotics, and Mechatronics

**MET 48200 Mechatronics**

MET 58100 Design for Mechatronics

**CONTROLS SELECTIVE**

**ECET 27400 Wireless Communication**

**MET 43600 Pneumatic Motion Control Systems**

ECET 35901 Computer Based Data Acquisition Applications

MET 48200 Mechatronics

ECET 49900 Electrical Engineering Technology

MFET 29200 Projects in Automation, Robotics, and Mechatronics

MET 33400 Advanced Fluid Power

MFET 39200 Advanced Projects in Automation, Robotics, and Mechatronics

MET 43200 Hydraulic Motion Control Systems

**MANUFACTURING SELECTIVE**

AT 27200 Introduction To Composite Technology

CGT 32600 Graphics Standards For Product Definition

AT 30802 Aircraft Materials Processes

CGT 42300 Product Data Management

AT 47200 Advanced Composite Technology

CGT 42600 Industry Applications Of Simulation And Visualization

**ECET 27400 Wireless Communication**

ECET 49900 Appl Comp Vision Sensing &amp; Automation

**IT 44200 Production Planning (TLI 43530)****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 34900 Stringed Instrument Design and Manufacture

MET 43200 Hydraulic Motion Control Systems

MET 43600 Pneumatic Motion Control Systems

**MET 45100 Manufacturing Quality Systems**

MFET 24800 Introduction to Robotics

MFET 29200 Projects in Automation, Robotics, and Mechatronics

MFET 34800 Industrial Robotics and Motion Control

MFET 39200 Advanced Projects In Automation, Robotics, and Mechatronics

MFET 49900 Manufacturing Engineering Technology Ind Project

MGMT 45500 Legal Background For Business I (\*BUS-L201)

**OLS 28400 Leadership Principles****TLI 33620 Total Productive Maintenance****TLI 44275 Global Transportation And Logistics Management****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

**BEHAVIORAL/SOCIAL SCIENCE FOUNDATION SELECTIVE:** see <http://www.purdue.edu/provost/initiatives/curriculum/course.html>**\*POLS-Y103, PSY-P101, SOC-S163****HUMANITIES FOUNDATION SELECTIVE:** see <http://www.purdue.edu/provost/initiatives/curriculum/course.html>**\*ENG-L104, FINA-F100, FINA-H100, HIST-H105, HIST-H106, MUS-M174, EALC-J101****HUMANITIES/SOCIAL SCIENCE ELECTIVE:** any 2xxxx course or higher in PSY, SOC, HIS, ECON, POL, PHIL, REL, ANTH, a foreign language**FREE ELECTIVE:** Any non-remedial course**Intercultural Requirement**

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 (4th year)

NOTE FOR TRANSFER/CODO STUDENTS: Transfer and CODO students with less than 75 credit hours remaining to completed their Polytechnic Plan of Study are exempt from Step 1 (taking the IDI Pre-test).

\*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.

AAS 27100 Introduction To African American Studies 3.00

AAS 37300 Issues In African American Studies 3.00

AGR 20100 Communicating Across Culture 3.00

ANSC 38100 Leadership For A Diverse Workplace 3.00

ANTH 20300 Biological Bases Of Human Social Behavior 3.00

ANTH 20500 Human Cultural Diversity 3.00

ANTH 21000 Technology And Culture 3.00

ANTH 21200 Culture, Food And Health 3.00

ANTH 23000 Gender Across Cultures 3.00

ANTH 34000 Global Perspectives On Health 3.00

ANTH 34100 Culture And Personality 3.00

ANTH 37900 Native American Cultures 3.00

ARAB 28000 Arabic Culture 3.00

ASAM 24000 Introduction To Asian American Studies 3.00

AT 23300 Ethics And Aviation 3.00

CNIT 32000 Policy, Regulation, And Globalization in Info Technology 3.00

COM 22400 Communicating In The Global Workplace 3.00

COM 30300 Intercultural Communication 3.00

COM 32000 Small Group Communication 3.00

COM 37300 Self-Presentation And Social Image 3.00

COM 41200 Theories Of Human Interaction 3.00

COM 42300 Leadership, Communication And Organizations 3.00

ECET 29000 International Experience 1.00 to 3.00

ECET 38001 Global Professional Issues In Engineering Technology 3.00

EDPS 23500 Learning And Motivation 3.00

EDPS 30000 Student Leadership Development 1.00 to 3.00

EDPS 30100 Peer Counseling Training 1.00 to 3.00

EDPS 31500 Collaborative Leadership: Interpersonal Skills 3.00

EDPS 31600 Collaborative Leadership: Cross-Cultural Settings 3.00

EDPS 31700 Collaborative Leadership: Mentoring 3.00

ENGL 41400 Studies In Literature And Culture 3.00

HDFS 33200 Stress And Coping In Contemporary Families 3.00

HEBR 38500 The Holocaust In Modern Hebrew Literature 3.00  
 HIST 19500 The Historian's Craft: Historical Research And Film 3.00  
 HIST 30000 Eve Of Destruction: Global Crises In 20<sup>th</sup> Century 3.00  
 HIST 33805 History Of Human Rights 3.00  
 HIST 35000 Science And Society In The Twentieth Century World 3.00  
 HIST 36600 Hispanic Heritage Of The United States 3.00  
 HIST 37700 History And Culture Of Native America 3.00  
 HIST 46900 Black Civil Rights Movement 3.00  
 HIST 47900 American Rep Of The Middle East & North Africa 3.00  
 HTM 37000 Sustainable Tourism And Responsible Travel 3.00  
 HTM 37200 Global Tourism Geography 3.00  
 MSL 20100 Individual Leadership Studies 2.00 or 3.00  
 OLS 35000 Creativity In Business And Industry 3.00  
 PHIL 11400 Global Moral Issues 3.00  
 PHIL 43500 Philosophy Of Mind 3.00  
 POL 22200 Women, Politics, And Public Policy 3.00  
 POL 23500 International Relations Among Rich And Poor Nations 3.00  
 POL 32600 Black Political Participation In America 3.00  
 POL 32700 Global Green Politics 3.00

POL 36000 Women And The Law 3.00  
 POL 41300 The Human Basis Of Politics 3.00  
 POL 42300 International Environmental Policy 3.00  
 [After] POL 42900 - It's A Complex World  
 POL 43300 International Organization 3.00  
 PSY 12000 Elementary Psychology 3.00  
 PSY 25100 Health Psychology 3.00  
 PSY 32200 Neuroscience Of Motivated Behavior 3.00  
 SOC 10000 Introductory Sociology 3.00  
 SOC 31000 Racial And Ethnic Diversity 3.00  
 SOC 33900 Introduction To The Sociology Of Developing Nations 3.00  
**TECH 33000** Technology And The Global Society 3.00  
**TLI 11200** Foundations Of Organizational Leadership 3.00  
**TLI 31400** Leading Innovation In Organizations 3.00  
 WGSS 28200 Introduction To LGBT Studies 3.00  
 WGSS 38000 Gender And Multiculturalism 3.00  
 WGSS 38300 Women And Work 3.00  
 [After] Any foreign language 20000 level or higher (20100, 20200, 30100, 30200)

**Completing the Professional Experience Requirement:** All students must complete an acceptable professional experience. 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, or by other possible means. Approval is automatic for certain experiences, while additional experiences may also satisfy this graduation requirement with advisor or faculty approval (see below). Requests for faculty approval must be submitted to the SOET Curriculum Subcommittee Chair for consideration, allowing at least four academic weeks for review and response.

Table 1: Approved Professional Experiences

Approval Process	Experience
Automatic	Any TECH Professional Practice course (co-op, intern, etc.)
Automatic	MET 29900 Internship for Credit
Automatic	Industry-sponsored Senior Capstone
Automatic	EPICS courses, minimum of two
Automatic	Lab Assistant (satisfactory completion of a minimum of one lab division for one term; e.g., ECET 29900 or MET 39200)
Advisor	Any approved internship (assuming student and/or employer provide documentation)
Advisor	Military service (ROTC, reservist, active duty, veteran)
Faculty	Other 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

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