

**Departmental/Program Major Courses (120 credits)**

**Required Major Courses (62 credits)**

- \_\_\_\_\_ (3) MET 10200 – Production Specifications
- \_\_\_\_\_ (3) MET 11100 – Applied Statics
- \_\_\_\_\_ (1) MET 11300 -- Mechanics Applications
- \_\_\_\_\_ (3) Materials and Processes Selective
- \_\_\_\_\_ (3) MET 23000 -- Fluid Power
- \_\_\_\_\_ (3) MET 24500 – Manufacturing Systems
- \_\_\_\_\_ (3) MET 28400 – Introduction to Industrial Controls
- \_\_\_\_\_ (3) MET 38200 – Controls and Instrumentation for Automation
- \_\_\_\_\_ (3) MFET 34400 – Automated Manufacturing Processes
- \_\_\_\_\_ (3) MFET 37400 – Manufacturing Integration
- \_\_\_\_\_ (3) Manufacturing Selective
- \_\_\_\_\_ (3) CNIT 10500 – Introduction to C Programming
- \_\_\_\_\_ (3) ENGT 18000—Engineering Technology Foundations
- \_\_\_\_\_ (1) ENGT 18100—Engineering Technology Applications

MHET courses- (24 credits included in required major courses total)

- \_\_\_\_\_ (3) Mechatronics Selective
- \_\_\_\_\_ (3) Controls Selective
- \_\_\_\_\_ (3) ECET 17900—Introduction to Digital Systems
- \_\_\_\_\_ (3) ECET 27900 – Embedded Digital Systems
- \_\_\_\_\_ (3) ECET 32700 – Instrumentation and DAQ Design
- \_\_\_\_\_ (3) ECET 33700 – Analog Signal Processing
- \_\_\_\_\_ (3) ECET 43000 – Electronics Product and Program Management
- \_\_\_\_\_ (3) ECET 46000 – Project Design and Development

**Other Departmental/Program Course Requirements (54 credits)**

- \_\_\_\_\_ (3) Freshman Speech Selective (choose from COM 11400, SCLA 10200) *(satisfies Oral Communication for core)*
- \_\_\_\_\_ (3) Communications Selective (Choose from COM 31500, COM 32000, COM 41500, EDPS 31500)
- \_\_\_\_\_ (3) Technical Writing Selective (choose from ENGL 42100, ENGL 42400)
- \_\_\_\_\_ (3) IET 45100 or TLI 33400 – Engineering Economics
- \_\_\_\_\_ (3) MA 16010 - Applied Calculus I *(satisfies Quantitative Reasoning for core)*
- \_\_\_\_\_ (3) MA 16020 - Applied Calculus II
- \_\_\_\_\_ (3) ECET 22400 – Electronic Systems
- \_\_\_\_\_ (3) ECET 38001 --- Global/Professional Issues
- \_\_\_\_\_ (3) CHM 11100 – General Chemistry
- \_\_\_\_\_ (4) PHYS Selective (choose from PHYS 21800, PHYS 22000, PHYS 17200) *(satisfies Science for core)*
- \_\_\_\_\_ (3) TECH 12000 - Design Thinking in Technology *(satisfies Information Literacy and Science, Technology & Society for core)*
- \_\_\_\_\_ (3) Science Selective
- \_\_\_\_\_ (3) Freshman Composition Selective (choose from ENGL 10600 or 10800) *(satisfies Written Communication for core)*
- \_\_\_\_\_ (3) Human Cultures: Humanities Foundation Selective *(satisfies Human Cultures Humanities for core)*
- \_\_\_\_\_ (3) Human Cultures: Behavior/Social Sciences Foundation Selective *(satisfies Human Cultures: Behavioral Sciences for core)*
- \_\_\_\_\_ (3) Humanities/Social Science Elective
- \_\_\_\_\_ (2) Computer Graphics Selective (choose from CGT 11000, CGT 16300, or IT 10500)
- \_\_\_\_\_ (3) Statistics/Quality Selective (choose between STAT 30100 or IT 34200)
- \_\_\_\_\_ (0) Professional Requirement
- \_\_\_\_\_ (0) Intercultural Requirement

**Free Electives (4 credits)**

- \_\_\_\_\_ (4) Free Electives

**University Core Requirements**

Human Cultures: Behavioral/Social Sciences	<input type="checkbox"/>	_____	Science	<input type="checkbox"/>	_____
Human Cultures: Humanities	<input type="checkbox"/>	_____	Science	<input type="checkbox"/>	_____
Information Literacy	<input type="checkbox"/>	_____	Science, Technology & Society	<input type="checkbox"/>	_____
Oral Communication	<input type="checkbox"/>	_____	Written Communication	<input type="checkbox"/>	_____
Quantitative Reasoning	<input type="checkbox"/>	_____			

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

myPurduePlan is the knowledge source for specific requirements and completion.

Updated 4/20/2018

Fall 1 <sup>st</sup> Year	CR	GR	Fulfilled by	Spring 1 <sup>st</sup> Year	CR	GR	Fulfilled by
Materials and Processes Selective	3			Freshman Composition Selective*	3		
MA 16010 Applied Calculus I (Prereq: ALEKS score of 75)	3			MA 16020 Applied Calculus II (Prereq: MA 16010 with a grade of C-or better)	3		
TECH 12000 - Design Thinking in Technology	3			MET 11100 Applied Statics (Prereqs: ENGT 18000)	3		
ENGT 18000 ENG Tech Foundations	3			Humanities Foundation Selective*	3		
ENGT 18100 ENG Tech Applications	1			ECET 17900 Intro to Digital Systems	3		
CNIT 10500 Intro to C Programming	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	Fulfilled by	Spring 2 <sup>nd</sup> Year	CR	GR	Fulfilled by
ECET 22400 Electronic Systems (Prereq: MA 16010)	3			MET 10200 Production Specifications (Prereqs: CGT Selective and ENGT 18000)	3		
COM 11400 Fund of Speech Communication*	3			ECET 27900 Embedded Digital Systems (Prereq: EET 17900)	3		
MET 11300 Mechanics Applications (Prereq: MET 11100)	1			MET 28400 Intro to Industrial Controls (Prereq: ECET 22400)	3		
MET 24500 Manufacturing Systems (Prereqs: (MET 14300 or MET 14400) and Computer graphics selective)	3			Behavioral/Social Science Foundation Elective*	3		
Computer Graphics Selective	2			Physics Selective*	4		
CHM 11100 General Chemistry*	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	Fulfilled by	Spring 3 <sup>rd</sup> 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 Engineering Technology	3		
ENGL 42100 Technical Writing (Prereq: ENGL 10600)	3			ECET 32700 Instrument & DAQ Design (Prereqs: ECET 22400, MA 16010, PHYS Sel.)	3		
Statistics or Quality Selective	3			MET 23000 Fluid Power (Prereqs: (MET 11100 or PHYS 22000) and MA 16010)	3		
Science Selective*	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	Fulfilled by	Spring 4 <sup>th</sup> Year	CR	GR	Fulfilled by
ECET 43000 Electrical and Electronic Product and Program Management	3			ECET 46000 Project Design and Development (Prereq: ECET 43000)	3		
COM 32000 Small Group Communication	3			MET 38200 Controls/Instr for Automation (Prereq: MET 28400)	3		
Humanities/Social Science Elective	3			Controls Selective	3		
Mechatronics Selective	3			Free Elective	3		
TLI 33400 Monetary Analysis for Industrial Decisions	3			Free Elective	1		
<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 Purdue University.
- Complete a Professional Requirement.  Complete an Intercultural Requirement.

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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 4/20/2018

2018-2019 MECHATRONICS ENGINEERING TECHNOLOGY SUPPLEMENTAL INFORMATION

All prerequisites must be met.

**Bold indicates courses offered at the Kokomo Campus.  
See Student Services Coordinator for course availability.**

**FRESHMAN COMPOSITION SELECTIVE+**

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First-Year Composition

**ENG-W131**

**FRESHMAN SPEECH SELECTIVE+**

COM 11400 Fundamentals Of Speech Communication

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

**SPCH-S121**

**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

**SPCH-S223**

**SPCH-S229**

**TECHNICAL WRITING SELECTIVE+**

ENGL 42100 Technical Writing

ENGL 42400 Writing For High Technology Industries

**ENG-W321**

**COMPUTER GRAPHICS SELECTIVE**

**CGT 11000 Technical Graphics Communications**

CGT 16300 Graphical Communication and Spatial Analysis

IT 10500 Intro to Engineering Design

**TECHNICAL ELECTIVE**

All Polytechnic Institute courses at the 3xxx level or above that are not required for the major plus FNR 30100, MGMT 45500, and OLS 28400.

**STATISTICS OR QUALITY SELECTIVE**

**STAT 30100 Elementary Statistical Methods**

IT 34200 Introduction To Statistical Quality

**TLI 31600 Statistical Quality Control**

**PHYSICS SELECTIVE**

**PHYS 21800 General Physics**

PHYS 22000 General Physics

PHYS 17200 Modern Mechanics

**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

**PHYS-P202 or PHYS-P222**

**CHEM-C102**

**BIOL-L100**

**MECHATRONICS SELECTIVE**

MET 43200 Hydraulic Motion Control Systems

MET 43600 Pneumatic Motion Control Systems

MET 48200 Mechatronics

MET 58100 Design for Mechatronics

MFET 34800 Industrial Robotics and Motion Control

**CONTROLS SELECTIVE**

**ECET 27400 Wireless Communications**

ECET 35901 Computer Based Data Acquisition Applications

ECET 49900 Appl Comp Vision Sensng & Auto

**MET 33400 Advanced Fluid Power**

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

**MANUFACTURING SELECTIVE**

AT 27200 Introduction To Composite Technology  
 AT 30802 Aircraft Materials Processes  
 AT 47200 Advanced Composite Technology  
 CGT 32600 Graphics Standards For Product Definition  
 CGT 42300 Product Data Management  
 CGT 42600 Industry Applications Of Simulation And Visualization

**ECET 27400 Wireless Communication**

ECET 49900 Appl Comp Vision Sensing & Automation  
 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 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 (Technology, Innovation and Culture in Bavaria (Study Abroad)  
 MGMT 45500 Legal Background For Business I  
**OLS 28400 Leadership Principles**  
 TLI 33620 Total Productive Maintenance  
 TLI 44275 Global Transportation And Logistics Management

**HUMANITIES FOUNDATION SELECTIVE:** see <http://www.purdue.edu/provost/initiatives/curriculum/course.html>

**ENG-L204, HIST-H105, HIIST-H106, HIST-H113, HIST-H114, PHIL-P100, PHIL-P140, FINA-A101, FINA-A102, MUS-M174, SPAN S100-400, FREN-F100-400, GER-G100-400**

**BEHAVIORAL/SOCIAL SCIENCE FOUNDATION SELECTIVE:** see <http://www.purdue.edu/provost/initiatives/curriculum/course.html>

**ANTH-A104, ECON-E201, ECON-E202, POLS-Y103, PSY-P103, SOC-S100**

**HUMANITIES/SOCIAL SCIENCE ELECTIVE:** any 2xxxx course or higher in PSY, SOC, HIS, ECON, POL, ENGL Lit, PHIL, REL, ANTH, a foreign language, AD 22600, AD 22700, AD 25100, AD 25500, AD 30701, AD 31100, AD 31200, MUS 25000, MUS 35500, MUS 37400, MUS 37600, MUS 37800, MUS 38100, MUS 38200

**FREE ELECTIVE:** Any non-remedial course

+ denotes optional course for Cornerstone Certificate.

**Professional Requirement**

The SOET Professional Experience requirement is intended to document those experiences which help expose SOET students to the expectations of their professional 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 1: Approved Professional Experiences**

Approval by	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

## Globalization Requirement

- Complete the Pre and Post-test Intercultural Development Inventory Assessments (1st year and Last year)
- Earn three credit hours in a global culture course:

AAS 27100	Intro to African American Studies	HIST 36600	Hispanic Heritage of the USA
AAS 37300	Variable Title: History of Injustice	HIST 37700	History & Culture of Native America
AGR 20100	Communication Across Cultures	HIST 46900	Black Civil Rights Movement
ANSC 38100	Leadership for a Diverse workplace	HIST 47900	American Representations of Middle East &
ANTH 20300	Biological Bases of Human Social Behavior	North Africa	
ANTH 20500	Human cultural Diversity	HIST 49900	History of Sexual Regulation in the United States
ANTH 21000	Technology and Culture	HTM 37000	Sustainable Tourism and Responsible Travel
ANTH 21200	Culture, Food and Health	HTM 37200:	Global Tourism Geography
ANTH 23000	Gender Across Cultures	MSL 20100	Individual Leadership Studies
ANTH 34000	Global Perspectives on Health	OLS 35000	Creativity In Business & Industry
ANTH 34100	Culture and Personality	PHIL 11400	Global Moral Issues
ANTH 37900	Native American Cultures	PHIL 43500	Philosophy of Mind
ARAB 28000	Arabic culture	POL 22200	Women, Politics & Public Policy
ASAM 24000	Intro to Asian American Studies	POL 23500	Rich and Poor Nations
AT 23300	Ethics and Aviation	POL 32600	Black Political Participation in America
COM 22400	Communicating in the Global Workplace	POL 32700	Global Green Politics
COM 30300	Intercultural Communication	POL 36000	Women and the Law
COM 32000	Small Group Communication	POL 41300	The Human Basis of Politics
COM 37300	Self-Presentation & Social Image	POL 42300	International Environmental Policy
COM 38000	Sociolinguistic Study of African American English	POL 42900	Variable Title: It's a Complex World (Cross listed
COM 38000	Sociolinguistic Study of African American English	with IE49000, ME29700)	
COM 41200	Theories of Human interaction	POL 43300	International Organization
COM 42300	Leadership, Communication & Organizations	PSY 25000	Psychology of Adjustment
ECET 29000	International Experience	PSY 25100	Health Psychology
<b>ECET 38001</b>	<b>Global Professional Issues in ET</b>	PSY 28500	Consumer Behavior
EDPS 23500	Learning and Motivation	PSY 32200	Research Design
EDPS 30000	Student Leadership Development	SOC 10000	Intro to Sociology
EDPS 30100	Peer Counselling Training	SOC 31000	Racial and Ethnic Diversity
EDPS 31500	Collaborative Leadership: Listening	SOC 33900	Introduction to Sociology of Developing Nations
EDPS 31600	Collaborative Leadership: Cross-cultural Settings	<b>TECH 33000</b>	<b>Technology and the Global Society</b>
EDPS 31700	Collaborative Leadership: Mentoring	WGSS 28200	Intro to LGBT Studies
ENGL 41400	Literature & Culture	WGSS 38000	Gender and Multiculturalism
HDFS 23300	Stress and Human Health	WGSS 38300	Women and Work
HDFS 28000	Diversity in Individual and Family Life	<b>Any foreign language 200 or higher (201, 202, 301, 302, 401, 402)</b>	
HDFS 33200	Stress & Coping in Contemporary Families	<b>PSY-P103</b>	<b>General Psychology</b>
HEBR 38500	The Holocaust in Modern Hebrew Literature	<b>SOC-S100</b>	<b>Introduction to Sociology</b>
HIST 19500	Historical Research & Film!	<b>SPCH-S229</b>	<b>Discussion and Group Methods</b>
HIST 30000	Eve of Destruction: Global Crises and World	<b>SPCH-S223</b>	<b>Business and Professional Communication</b>
Organization in the 20th Century		<b>CNIT 32000</b>	<b>Policy, Regulation, and Globalization in</b>
HIST 33805	History of Human Rights	<b>information Technology</b>	
HIST 35000	Science and Society in the 20th-Century World	<b>TLI 11200</b>	<b>Foundations of Tech. Leadership</b>