

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 *(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"/>	_____			

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

myPurduePlan is the knowledge source for specific requirements and completion.

Updated 3/24/2018

Fall 1 st Year	CR	GR	Fulfilled by	Spring 1 st Year	CR	GR	Fulfilled by
Materials and Processes Selective	3			TECH 12000 - Design Thinking in Technology	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		
CNIT 10500 Intro to C Programming	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 22400 Electronic Systems (Prereq: MA 16010)	3		
Freshman Composition Selective*	3						
TOTAL CREDIT HOURS	16			TOTAL CREDIT HOURS	15		

Fall 2 nd Year	CR	GR	Fulfilled by	Spring 2 nd Year	CR	GR	Fulfilled by
ECET 17900 Intro to Digital Systems	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 24500 Manufacturing Systems (Prereqs: (MET 14300 or MET 14400) and Computer graphics selective)	3		
MET 28400 Intro to Industrial Controls (Prereq: ECET 22400)	3			Behavioral/Social Science Foundation Elective*	3		
Computer Graphics Selective	2			Physics Selective*	4		
CHM 11100 General Chemistry*	3						
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	16		

Fall 3 rd Year	CR	GR	Fulfilled by	Spring 3 rd Year	CR	GR	Fulfilled by
MET 23000 Fluid Power (Prereqs: (MET 11100 or PHYS 22000) and MA 16010)	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 33700 Analog Signal Processing (Prereq: ECET 22400 + MA 16020)	3		
ECET 32700 Instrument & DAQ Design (Prereqs: ECET 22400, MA 16010, PHYS Sel.)	3			Manufacturing Selective	3		
Science 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
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		
Controls Selective	3			Humanities/Social Science Elective	3		
Mechatronics Selective	3			Free Elective	3		
TLI 33400 Monetary Analysis for Industrial Decisions	3			Free Elective	1		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	13		

*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.

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

2018-2019 MECHATRONICS ENGINEERING TECHNOLOGY SUPPLEMENTAL INFORMATION

All prerequisites must be met.

FRESHMAN COMPOSITION SELECTIVE+

ENGL 10600 First-Year Composition

ENGL 10100 English Composition I

ENGL 10800 Accelerated First-Year Composition

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

FRESHMAN SPEECH SELECTIVE+

COM 11400 Fundamentals Of Speech Communication

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 Communication and Spatial Analysis

IT 10500 Intro to Engineering Design

Materials and Processes Selective

MET 14300 Materials and Processes I

MET 14400 Materials and Processes II

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

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

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>

HIST 15100 American History to 1877 **HIST 15200 US from 1877** **MUS 25000 Music Appreciation**
PHIL 11000 Intro to Philosophy **PHIL 11100 Ethics**

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

SOC 10000 Intro to Sociology **PSY 12000 Elementary Psychology** **ECON 21000 Principles of Economics**

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