

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			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			Freshman Speech Selective*	3		
ENGT 18100 ENG Tech Applications	1			ECET 22400 Electronic Systems (Prereq: MA 15800 or MA 16010)	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	Fulfilled by	Spring 2 <sup>nd</sup> Year	CR	GR	Fulfilled by
ECET 17900 Intro to Digital Systems (Prereqs: ENGT 18000 & 18100 or ECET 22400) and (CNIT 10500)	3			MET 10200 Production Specifications (Prereqs: CGT Selective and ENGT 18000)	3		
Humanities Foundation Selective*	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						
<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
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		
Technical Writing Selective (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		
<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
Capstone Selective I	3			Capstone Selective II (Prereq: Capstone Selective I)	3		
Communication Selective	3			MET 38200 Controls/Instr for Automation (Prereq: MET 28400 and MA 16010)	3		
Controls Selective	3			Humanities/Social Science Elective	3		
Mechatronics Selective	3			Free Elective	3		
TLI 33400 Economic Analysis for Tech. Systems Prereqs: MA 15800 or 16010)	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.

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

# Anderson Mechatronics Engineering Technology Supplemental Information

## Freshman Composition Selective

### **ENGL 10600 First-Year Composition**

ENGL 10800 Accelerated 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 Communication 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**

CGT 16300 Graphical Communication and Spatial Analysis

IT 10500 Industrial Technology Introduction to Design

## Communications Selective

COM 31500 Speech Communication of Technical Information

**COM 32000 Small Group Communication**

COM 41500 Discussion of Technical Problems

EDPS 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**

**IT 34200 Introduction to Statistical Quality**

**TLI 31600 Statistical Quality Control**

## Physics Selective

PHYS 17200 Modern Mechanics

**PHYS 22000 General Physics**

## 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 Workshop In Mechanical Engineering Technology

MFET 29200 Projects In Automation, Robotics And Mechatronics

MFET 34800 Advanced Industrial Robotics

MFET 39200 Advanced Projects In Automation, Robotics, And Mechatronics

## Controls Selective

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

ECET 27400 Wireless Communications 3.00

ECET 35901 Computer Based Data Acquisition Applications

ECET 49900 Electrical Engineering Technology-Applied Comp Vision Sensing & Auto

### **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 Communications  
ECET 49900 Electrical Engineering Technology  
(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 Control  
MFET 24800 Introduction To Robotics  
MFET 29200 Projects In Automation, Robotics And Mechatronics  
MFET 34800 Advanced Industrial Robotics  
MFET 39200 Advanced Projects In Automation, Robotics, And Mechatronics  
MFET 49900 Manufacturing Engineering Technology Independent Project  
- 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**

### **Capstone Selective 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 Selective II**

### **ECET 46000 Project Design and Development**

ECET 46100 International Capstone Project Execution

ENGT 40600 Entrepreneurial Capstone II

### **MET 40200 Capstone Project II**

### **MFET 48100 Integration of Manufacturing Systems**

### **Behavioral/Social Science Foundational Selective**

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

### **SOC 10000 Intro to Sociology**

### **PSY 12000 Elementary Psychology**

### **ECON 21000 Principles of Economics**

### **Humanities Foundational Selective**

Must be a Humanities course from the approved UCC list: <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**

### **Humanities/Social Science Selective**

Any 20000 level course or higher in PSY, SOC, HIST, ECON, POL, PHIL, REL, ANTH, English Literature, or a Foreign Language

### **AD 22600 History Of Art To 1400**

AD 22700 History Of Art Since 1400

AD 25100 History Of Photography I

AD 25500 Art Appreciation

AD 30701 History Of Contemporary Photography

AD 31100 Ancient Greek Art

AD 31200 Ancient Roman Art

### **MUS 25000 Music Appreciation**

MUS 37400 Contemporary Music

MUS 37600 World Music

MUS 37800 Jazz History

MUS 38100 Music History I: Antiquity To Mozart

MUS 38200 Music History II: Beethoven To The Present

### **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 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 Information 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 28000 Diversity In Individual And Family Life 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 And World Organization In The 20<sup>th</sup> Century 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 Representations Of The Middle East And 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  
 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  
 Any foreign language 20000 level or higher (20100, 20200, 20100, 30200)

**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

<b><u>Approval by</u></b>	<b><u>Experience</u></b>
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 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.