

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

**Required Major Courses (56 credits)**

- \_\_\_\_\_ (3) MET 10200 – Production Specifications
- \_\_\_\_\_ (3) MET 11100 – Applied Statics
- \_\_\_\_\_ (3) MET 14300 – Materials and Processes I
- \_\_\_\_\_ (3) MET 14400 – Materials and Processes II (MET Gateway Course)
- \_\_\_\_\_ (4) MET 21100 – Applied Strength of Materials
- \_\_\_\_\_ (3) MET 21300 - Dynamics
- \_\_\_\_\_ (3) MET 22000 - Heat/Power
- \_\_\_\_\_ (3) MET 23000 -- Fluid Power
- \_\_\_\_\_ (3) MET 24500 – Manufacturing Systems
- \_\_\_\_\_ (3) MET 28400 – Introduction to Industrial Controls
- \_\_\_\_\_ (3) MET 31300 – Fluid Mechanics
- \_\_\_\_\_ (3) MET 32000 – Thermodynamics
- \_\_\_\_\_ (3) MET 34600 - (Advanced Materials in Manufacturing
- \_\_\_\_\_ (3) ENGT 18000—Engineering Technology Foundations
- \_\_\_\_\_ (1) ENGT 18100—Engineering Technology Applications

**MET Selectives – (15 credits, included in required major credit total)**

- \_\_\_\_\_ (3) MET Elective or approved Focus Area elective
- \_\_\_\_\_ (3) Mechanics Selective
- \_\_\_\_\_ (3) MET Capstone Selective I
- \_\_\_\_\_ (3) MET Capstone Selective II
- \_\_\_\_\_ (3) Technical Selective or approved Focus Area Selective

**Other Departmental/Program Course Requirements (64 credits)**

- \_\_\_\_\_ (3) COM 11400 - Fundamentals of Speech Communication (*satisfies Oral Communication for core*)
- \_\_\_\_\_ (3) COM 32000 - Small Group Discussion
- \_\_\_\_\_ (3) ENGL 42100 – Technical Writing
- \_\_\_\_\_ (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 – Electronics Systems
- \_\_\_\_\_ (3) CHM 11100 – General Chemistry
- \_\_\_\_\_ (4) PHYS 22000 - General Physics (*satisfies Science for core*)
- \_\_\_\_\_ (4) PHYS 22100 - General Physics II (*satisfies Science for core*)
- \_\_\_\_\_ (3) STAT 30100 – Statistical Methods
- \_\_\_\_\_ (3) TECH 12000 - Design Thinking in Technology (*satisfies Information Literacy and Science, Technology & Society for core*)
- \_\_\_\_\_ (3) Freshman Composition Selective (choose from ENGL 10600 or ENGL 10800) (*satisfies Written Communication for core*)
- \_\_\_\_\_ (3) Economics/Finance Selective (choose from ECON 21000, ECON 25100, ECON 25200, CSR 34200, ENTR 20000 and 31000)
- \_\_\_\_\_ (3) General Education Human Cultures: Humanities Selective (*satisfies Human Cultures Humanities for core*)
- \_\_\_\_\_ (3) General Education Human Cultures: Behavior/Social Sciences *satisfies Human Cultures: Behavioral Sciences for core*)
- \_\_\_\_\_ (2) Computer Graphics Technology Selective (choose from CGT 11000, CGT 16300, IT 10500)
- \_\_\_\_\_ (3) Programming Selective (choose from CNIT 10500, CNIT 15501, CNIT 17500, CS 15800 or CS 15900, MET 16400)
- \_\_\_\_\_ (3) Global/Professional Selective
- \_\_\_\_\_ (3) Technical/Management (TECH/MGMT) Selective
- \_\_\_\_\_ (0) Professional Requirement
- \_\_\_\_\_ (0) Intercultural Requirement

**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 3/31/2017



School of Engineering Technology

Name: \_\_\_\_\_

Major: Mechanical Engineering Technology (MET)

MET-BS Suggested Arrangement of Courses

Catalog Term: \_\_\_\_\_ PUID: \_\_\_\_\_

For Catalog Terms beginning in Fall 2017

Major Code: METC Program Code: PIMET-BS

Accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>

Fall 1 <sup>st</sup> Year	CR	GR	Fulfilled by	Spring 1 <sup>st</sup> Year	CR	GR	Fulfilled by
MA 16010 Applied Calculus I (Prereq: ALEKS score 75)	3			MA 16020 Applied Calculus II (Pre-req: MA 16010 with grade of C- or higher)	3		
TECH 12000 Design Thinking in Tech.*	3			MET 11100 Applied Statics (Prereqs: ENGT 18000)	3		
MET 14300 Materials and Processes I	3			MET 14400 Materials and Processes II	3		
Computer Graphics Technology Selective (CGT 11000, CGT 16300, or IT 10500)	2			MET 10200 Production Specifications (Pre-reqs: CGT selective and ENGT 18000)	3		
ENGT 18000 ENG Tech Foundations	3			Freshman Composition Selective. <b>(ENG-W131)</b>	3		
ENGT 18100 ENG Tech Applications	1						
<b>TOTAL CREDIT HOURS</b>	<b>15</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
MET 21300 Dynamics (Pre-reqs: MA 16020 and MET 11100)	3			MET 22000 Heat Power (Pre-reqs: PHYS 22000, MA 16010 and ENGT 18000)	3		
Programming Selective	3			MET 23000 Fluid Power (Pre-reqs: MET 11100 and MA 16010)	3		
MET 21100 Strength of Materials (Pre-reqs: MET 11100 and MA 16010)	4			COM 11400 Fundamental of Speech Communication* <b>(SPCH-S121)</b>	3		
PHYS 22000 General Physics I <b>(PHYS-P201 or PHYS-P221)</b>	4-5			Economics/Finance Selective	3		
				PHYS 22100 General Physics II* (Prereq: PHYS 22000) <b>(PHYS-P202 or PHYS-P222)</b>	4-5		
<b>TOTAL CREDIT HOURS</b>	<b>14</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
CHM 11100 General Chemistry <b>(CHEM-C101 &amp; 121)</b>	3			MET 28400 Intro to Industrial Controls (Pre-req: ECET 22400)	3		
ECET 22400 Electronics Systems (Pre-req: MA 16010)	3			MET 34600 Advanced Materials in Mfg) (Pre-reqs: MET 21100, MET 24500 and CHM 11100)	3		
MET 24500 Manufacturing Systems (Pre-reqs: (MET 14300 or MET 14400) and CGT Selective))	3			ENGL 42100 Technical Writing (Pre-req: ENGL 10600) <b>(ENG-W321)</b>	3		
MET 31300 Fluid Mechanics (Pre-reqs: MA 16020, MET 22000 and MET 23000)	3			Mechanics Selective	3		
STAT 30100 Elementary Stat Methods	3			Global/Professional 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
MET 32000 Thermodynamics (Pre-reqs: MA 16010 and MET 22000)	3			MET Capstone Selective II (Pre-reqs: Capstone Selective I)	3		
MET Capstone Selective I	3			MET Elective or approved Focus Area elective	3		
TLI 33400 engineering economics	3			COM 32000 Small Group Discussion <b>(SPCH-S223 or 229)</b>	3		
Technical/Management Selective	3			Behavioral Social Science Selective	3		
Humanities Selective	3			Technical Selective or approved Focus Area elective	3		
<b>TOTAL CREDIT HOURS</b>	<b>15</b>			<b>TOTAL CREDIT HOURS</b>	<b>15</b>		

Refer to the 2017 MET supplemental instruction form for optional courses to complete selectives and pre-requisites.

- 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 unless otherwise noted.
- 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 location conferring the degree.
- 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 3/31/2017

## 2017-2018 MET SUPPLEMENTAL INFORMATION

All prerequisites must be met.

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

### CGT SELECTIVE

**CGT 11000 Technical Graphics Communications**

IT 10500 Intro to Engineering Design

CGT 16300 Graphical Communication and Spatial Analysis

### FRESHMAN COMPOSITION

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First-Year Composition

**ENG-W131**

### ECONOMICS/FINANCE SELECTIVE

CSR 3420 Personal Finance

ECON 2100 Principles of Economics

ECON 25100 Microeconomics

ECON 25200 Macroeconomics

ENTR 20000 Introduction To Entrepreneurship And Innovation

**ECON-E201**

**ECON-E202**

**BUS-F260**

### TECHNICAL SELECTIVE

A 300-400 level ENGR, ECET, MFET, CS or elective IET course.

A CHM, MA, PHYS or STAT course beyond what is required.

Any MET elective course

ANSC 23000 Physiology Of Domestic Animals

AT 27200 Introduction To Composite Technology

AT 27800 Nondestructive Testing For Aircraft

AT 47800 Advanced Nondestructive Testing

BCHM 22100 Analytical Biochemistry

BCM 23000 Mechanical And Electrical Systems

BCM 31500 Mechanical Construction Estimating

BCM 38000 Concrete Construction

BIOL 20300 Human Anatomy And Physiology

BIOL 22100 Introduction To Microbiology

**CGT 22600 Introduction To Constraint-Based Modeling**

CHM 11200 General Chemistry

CHM 11600 General Chemistry

CHM 22300 Principles of Biochemistry

CHM 48100 Environmental Chemistry

CE 35000 Introduction To Environmental And Ecological Engineering

CE 35500 Engineering Environmental Sustainability

FNR 41800 Properties Of Wood Related To Manufacturing

FNR 42500 Secondary Wood Products Manufacturing

FS 22200 Safety of Foods

HSCI 31200 Radiation Science Fundamentals

IE 47700 Work Methods and Measurement

IE 57700 Human Factors In Engineering

IT 33000 Industrial Sales And Sales Management

**IT 34500 Automatic Identification And Data Capture (TLI 31300)**

IT 35100 Advanced Industrial Safety And Health Management (TLI 33520)

IT 43400 Global Transportation And Logistics Management

MA 26100 Multivariate Calculus

**CHEM-C102 & C122**

### MANAGEMENT SELECTIVE

AFT 35100 AF Leadership Studies I

AFT 36100 AF Leadership Studies II

ECET 38001 Global Professional Issues in ET

EDPS 31500 Leadership: Listening

EDPS 31600 Leadership: Cross-Cultural

EDPS 31700 Leadership: Mentoring

ENTR 31000 Marketing Management for New Ventures

MGMT 20000 Accounting Principles

MGMT 20010 Business Accounting

MGMT 45500 Legal Background for Business

MSL 20200 Leadership & Teamwork

MSL 30100 Leadership & Problem Solving

MSL 40100 Leadership & Management

NS 21400 Fundamentals of Leadership

NS 41300 Naval Leadership Management & Ethics

**OLS 25200 Human Relations in Organizations**

**OLS 27400 Applied Leadership**

**OLS 28400 Leadership Principles**

**OLS 36400 Tech & the Organization**

**OLS 38600 Leadership for Org Change & Innov**

PSY 27200 Intro to Industrial-Organizational Psych

**TLI 11200 Foundations of Organizational Leadership**

**TLI 15200 Business Principles for Organizational Leadership**

**TLI 21300 Project Management**

**TLI 25300 Principles of Technology Strategy**

**TLI 25400 Leading Change in Technology Organizations**

**Approved Study Abroad Course**

**BUS-A201**

## **MECHANICS SELECTIVE**

MET 31100 Experimental Strength of Materials (Fall only)  
MET 31400 Applications of Machine Elements  
MET 31500 Applied Kinematics and Dynamics

## **PROGRAMMING SELECTIVE**

**CNIT 10500 Introduction to C Programming**  
**CNIT 15500 Introduction to Object-Oriented Programming**  
CNIT 17500 Visual Programming

## **MET ELECTIVE (6 credit hours)**

MET 30200 CAD in the Enterprise (Spring Only)  
MET 31100 Experimental Strength of Materials (Fall only)  
MET 31700 Machine Diagnostics (Spring Only)  
**MET 33400 Advanced Fluid Power (Spring Only)**  
MET 34900 Stringed Instrument Design and Manufacture  
MET 38200 Controls and Instrumentation for Automation (Spring Only)  
MET 40000 Mechanical Design  
MET 40100 Capstone Projects I (Fall only)  
MET 40200 Capstone ProjectsII (Spring Only)  
MET 41100 Introduction to the Finite Element Method (Spring Only)

## **MET CAPSTONE SELECTIVES I & II**

### **ECET 43000 Electrical And Electronic Product And Program Management**

ECET 43100 International Capstone Project Planning And Design

### **ECET 46000 Project Design And Development**

ECET 46100 International Capstone Project Execution  
ENGT 40500 Entrepreneurial Capstone I  
ENGT 40600 Entrepreneurial Capstone II

### **MET 33400 Advanced Fluid Power**

## **GLOBAL/PROFESSIONAL SELECTIVE**

ANTH 20500 Human Cultural Diversity  
ANTH 34100 Culture & Personality  
ARAB 28000 Arabic Culture  
CHNS 28000 Selected Topics on China  
CHNS 28500 Chinese Calligraphy  
COM 22400 Communicating in the Global Workplace  
COM 30300 Intercultural Communication  
**ECET 38001 Global Professional Issues In ET**  
EDPS 31600 Leadership: Cross-Cultural  
FLL 23500 East Asian Literature in Translation  
FLL 23900 Contemporary Foreign Women Writers in Translation  
FNR 48800 Global Environmental issues  
FR 33000 French Cinema  
GER 23000 German Folklore & Fairy Tales  
GER 23000 German Literature in Translation  
GER 330 German Cinema  
HIST 30000 Eve of Destruction  
HIST 33300 Science & Technology in Western Civilization I  
HIST 33400 Science & Technology in Western Civilization II  
HIST 35000 Science & Technology in Twentieth Century World

MET 31601 Mechanics of Machine Design  
MET 31700 Machine Diagnostics

CS 15800 C Programming  
CS 15900 Programming Applications for Engineers

MET 42100 Air Conditioning and Refrigeration (Fall only)  
MET 42200 Power Plants And Energy Conversion  
MET 42600 Internal Combustion Engines (Fall only)  
MET 43200 Hydraulic Motion Control Systems (Spring Only)  
MET 43600 Pneumatic Motion Control Systems (Fall only)  
MET 44301 Joining Processes  
MET 45100 Manufacturing Quality Control (Fall only)  
MET 48200 Mechatronics  
MET 48600 Fundamentals of Motorsports  
MET 490 Green Manufacturing and Sustainability

MET 40000 Mechanical Design  
MET 40100 Capstone Projects I  
MET 40200 Capstone Projects II  
MET 42100 Air Conditioning And Refrigeration  
MET 42200 Power Plants And Energy Conversion  
MET 43200 Hydraulic Motion Control Systems  
MET 43600 Pneumatic Motion Control Systems

HIST 36000 Gender in Middle East History  
JPNS 28000 Introduction to Modern Japanese Civilization  
MGMT 45500 Legal Background for Business  
MSL 30200 Leadership & Ethics  
MUS 37800 World Music  
NS 41300 Naval Leadership Management & Ethics

### **OLS 45600 Tech & the Global Society**

PHIL 114ENG Global Moral Issues for Engineers  
PHIL 20600 Philosophy of Religion  
PHIL 29000 Environmental Ethics  
PHIL 33000 Religions of the East  
PHIL 33100 Religions of the West  
POL 23100 Introductions to United States Foreign Policy  
PSY 33500 Stereotyping & Prejudice  
PTGS 33000 Brazilian, Portuguese & African Cinema  
SOC 31000 Racial & Ethnic Diversity  
SPAN 23500 Spanish American Literature in Translation  
SPAN 33000 Spanish & Latin American Cinema

### **TECH 33000 Tech and the Global Society**

**Approved Study Abroad Course**

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

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

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

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

### 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

### Intercultural Requirement

All students must complete the School of Engineering Technology (Polytechnic) Growth Plan for Global Awareness and Intercultural Competency at the Developmental Level (see below). Students who are interested in further developing their Global Awareness and Intercultural Competency are encouraged to complete the requirement at the Emerging Level or the Proficient Level (see advisor for more information).

Polytechnic Growth Plans for Global Awareness & Intercultural Competency

Intercultural Growth Plan #1	Developmental Level Competency
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Assessment	<p>__ Complete the Pre- and Post-Intercultural Development Inventory Assessments (1st year and 4th year)</p> <p>__ Complete the pre- and post- BEVI (1st and 4th years)</p>
	<p>__ Complete one of the following Intercultural Knowledge and Effectiveness components below: (This list will be reviewed and updated each year)</p> <ul style="list-style-type: none"> <li>· Crosswalk Commons (residential living Experience for a minimum of one semester)</li> <li>· Serve as a BGRI Program leader</li> <li>· PUPIL (Purdue University Passport to Intercultural Learning) (Obtain at least two badges)</li> <li>· Participate in two (2) Boiler Out Program Activities</li> <li>· Participate in Host-a-Boiler</li> </ul>
	<p>Complete one of the following:</p> <ul style="list-style-type: none"> <li>· An international project or collaborative project, or</li> <li>· An international internship, or</li> <li>· A Faculty-led Study Abroad program, or</li> <li>· Three credit hours of courses** from the Polytechnic list of approved of recommended Global/Intercultural courses. <i>**Must be in a category other than Increasing Self-awareness</i></li> </ul>