

Bold denotes only Columbus location course offering

Major Code: METC Program Code: PIMET-BS

*Satisfies University Core

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

Fall 1 st Year	CR	GR	Fulfilled by	Spring 1 st Year	CR	GR	Fulfilled by
TECH 12000 Design Thinking in Tech.*	3			MA 16010 Applied Calculus I* (Prereq: ALEKS score 75)	3		
Freshman Speech Selective*	3			MET 11100 Applied Statics (Prereqs: ENGT 18000)	3		
MET 14300 Materials and Processes I	3			MET 14400 Materials and Processes II	3		
ENGT 18000 ENG Tech Foundations	3			MET 10200 Production Specifications (Pre-reqs: CGT selective and ENGT 18000)	3		
ENGT 18100 ENG Tech Applications	1			Freshman Composition Selective*	3		
Computer Graphics Technology Selective (CGT 11000, CGT 16300, or IT 10500)	2						
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Fall 2 nd Year	CR	GR	Fulfilled by	Spring 2 nd Year	CR	GR	Fulfilled by
ECET 22400 Electronics Systems (Pre-req: MA 16010)	3			MET 21300 Dynamics (Pre-reqs: MA 16020 and MET 11100)	3		
MA 16020 Applied Calculus II (Pre-req: MA 16010 with grade of C- or higher)	3			Humanities Selective*	3		
MET 21100 Strength of Materials (Pre-reqs: MET 11100 and MA 16010)	4			MET 22000 Heat Power (Pre-reqs: PHYS 22000, MA 16010 and ENGT 18000)	3		
PHYS 22000 General Physics I	4			MET 28400 Intro to Industrial Controls (Pre-req: ECET 22400)	3		
				PHYS 22100 General Physics II*	4		
TOTAL CREDIT HOURS	14			TOTAL CREDIT HOURS	16		

Fall 3 rd Year	CR	GR	Fulfilled by	Spring 3 rd Year	CR	GR	Fulfilled by
CHM 11100 General Chemistry* CHEM C-101 or CHEM C-105	3			Economics/Finance Selective	3		
Mechanics Selective	3			Programming Selective	3		
MET 32000 Thermodynamics (Pre-reqs: MA 16010 and MET 22000)	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			MET 23000 Fluid Power (Pre-reqs: MET 11100 and MA 16010)	3		
STAT 30100 Elementary Stat Methods	3			Global/Professional 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
TLI 33400 Economic Analysis for Tech Sys	3			MET Capstone Selective II (Pre-reqs: Capstone Selective I)	3		
MET Capstone Selective I	3			MET Elective or approved Focus Area elective	3		
MET 31300 Fluid Mechanics (Pre-reqs: MA 16020, MET 22000 and MET 23000)	3			Technical Selective or approved Focus Area elective	3		
Technical/Management Selective	3			Behavioral Social Science Selective*	3		
Technical Writing Selective +	3			Communications Selective +	3		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Refer to the 2019 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 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.**

Columbus FALL 2019
2019-2020 MET SUPPLEMENTAL INFORMATION

All prerequisites must be met.

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*Indicates IUPUC course offering for Columbus location only.

See Student Affairs Administrator for course availability.

CGT SELECTIVE

CGT 11000 Technical Graphics Communications

CGT 16300 Graphical Communication and Spatial Analysis

IT 10500 Intro to Engineering Design (PLTW)

FRESHMAN COMPOSITION

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First-Year Composition

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

ENGL 10100 English Composition I

***ENG W131 Reading, Writing, & Inquiry I**

FRESHMAN SPEECH SELECTIVE

COM 11400 Fundamentals of Speech Communication

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

ECONOMICS/FINANCE SELECTIVE

CSR 3420 Personal Finance

ECON 21000 Principles of Economics

ECON 25100 Microeconomics

ECON 25200 Macroeconomics

ENTR 20000 Introduction To Entrepreneurship And Innovation

***ECON E201 Intro to Microeconomics**

***ECON E202 Intro to Macroeconomics**

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

***COMM C223 Business & Professional Communication**

***COMM C325 Interviewing Principles & Practices**

***COMM C380 Organizational Communication**

TECHNICAL WRITING SELECTIVE

ENGL 42100 Technical Writing

ENGL 42400 Writing For High Technology Industries

***ENG W231 Professional Writing Skills**

TECHNICAL SELECTIVE

A 300-400 level ENGR, ECET, MFET, CS or elective IET course. (except MFET 30000)

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 48100 Environmental Chemistry

CE 35000 Introduction To Environmental And Ecological Engineering

CE 35500 Engineering Environmental Sustainability

FS 22200 Safety of Foods

HSCI 31200 Radiation Science Fundamentals

IE 57700 Human Factors In Engineering

IT 33000 Industrial Sales and Sales Management (TLI 34300)

IT 34500 Automatic Identification And Data Capture (TLI 31300)

IT 35100 Advanced Industrial Safety and Health Management

IT 43400 Global Transportation & Logistics Mgmt (TLI 44275)

MA 26100 Multivariate Calculus

MFET 24800 Introduction to Robotics

NS 35000 Naval Ship Systems

TLI 31300 Tech Innovation & Integration

TLI 34300 Technical and Service Selling

TLI 44275 Global Transportation & Logistics Management

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
***BUS A201 Intro to Financial Accounting**
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

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 15501 Introduction to Software Development Concepts
CNIT 17500 Visual Programming
CS 15800 C 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 Projects II (Spring Only)
MET 41100 Introduction to Finite Element Method

MET CAPSTONE SELECTIVES I & II

ECET 43000 Electrical & Electronic Product & Program Mgmt
ECET 43100 International Capstone Project Planning & 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
MET 40000 Mechanical Design
MET 40100 Capstone Projects I

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

MET 31601 Mechanics of Machine Design
MET 31700 Machine Diagnostics
MET 41100 Introduction to the Finite Element Method

CS 15900 Programming Applications for Engineers
CS 17700 Programming With Multimedia Objects
CS 18000 Problem Solving And Object-Oriented Programming
MET 16400 Computing In Engineering Technology

MET 42100 Air Conditioning and Refrigeration (Fall only)
MET 42200 Power Plants And Energy Conversion
MET 42600 Internal Combustion Engines
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
MET 48200 Mechatronics
MET 48600 Fundamentals of Motorsports
MET 49000 Green Manufacturing and Sustainability

MET 40200 Capstone Projects II
MET 42100 Air Conditioning And Refrigeration
MET 42200 Power Plants And Energy Conversion
MET 42600 Internal Combustion Engines
MET 43200 Hydraulic Motion Control Systems
MET 43600 Pneumatic Motion Control Systems
MFET 48000 Project Planning For Integration
MFET 48100 Integration Of Manufacturing Systems

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
- FNR 48800 Global Environmental issues
- FR 33000 French Cinema
- GER 23000 German Folklore & Fairy Tales
- GER 23000 German Literature in Translation
- GER 28000 Beer Brewing in the German Culture
- GER 33000 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
- HIST 36000 Gender in Middle East History
- JPNS 28000 Introduction to Modern Japanese Civilization

- LC 23500 East Asian Literature in Translation
- LC 23900 Contemporary Foreign Women Writers in Translation
- 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 (TLI 35600)**
- PHIL 114ENG Global Moral Issues for Engineers
- PHIL 20600 Philosophy of Religion
- PHIL 29000 Environmental Ethics
- PHIL 23000 Religions of the East
- PHIL 23100 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**
- TLI 35600 Global Technology Leadership (OLS 45600)**
- Approved Study Abroad Course**

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

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

Professional Requirement

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, 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

	<i>Polytechnic minimum global requirement</i>
Step 1:	____ Complete the Pre-test Intercultural Development Inventory Assessments (1 st year)
Step 2	____ Complete one (1) of the following global experiences: <ul style="list-style-type: none">○ Participate in a Purdue University international capstone, collaborative project, or○ Participate in an international internship (international location), or○ Participate in Faculty-led Study Abroad program, 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 (4 th year)
	<p>NOTE FOR TRANSFER/CODO STUDENTS: Transfer and CODO students with less than 75 credit hours remaining to complete their Polytechnic Plan of Study are exempt from Step 1 (taking the IDI Pre-test).</p> <p>* Global experiences must take place during the time of enrollment in the Polytechnic to complete Step 2. Experiences that have 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.</p>

Visit purdue.edu/Columbus > Graduation Requirements for Polytechnic list of recommended Global/Cultural courses.