

School of Engineering Technology-New Albany Major: Mechanical Engineering Technology (MET) **MET-BS Suggested Arrangement of Courses** 

For Catalog Terms beginning in Fall 2020

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 1st Year	CR	GR	Fulfilled by
MET 14300 Materials and Processes I	3			MET 14400 Materials and Processes II	3		
TECH 12000 Design Thinking in Tech.*	3			MET 11100 Applied Statics (P: ENGT 18000)	3		
ENGT 18000 Eng Tech Foundations (P: ALEKS 60, SAT 570, ACT 24, or MA 15300)	3			MA 16020 Applied Calculus II (P:MA 16010 with grade of C- or higher)	3		
ENGT 18100 Eng Tech Applications (Pre or concurrent with ENGT 18000)	3			Freshman Composition Selective*	3		
MA 16010 Applied Calculus I (P: ALEKS score 75)	1			MET 10200 Production Design and Specifications (P: CGT selective & ENGT 18000)	3		
Computer Graphics Technology Selective (CGT 11000, CGT 16300, or ENGT 10500)	2			,			
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Fall 2 <sup>nd</sup> Year	CR	GR	Fulfilled by	Spring 2 <sup>nd</sup> Year	CR	GR	Fulfilled by
ECET 22400 Electronics Systems	3			MET 21300 Dynamics	3		
(P: MA 16010)				(P: MA 16010 and MET 11100)			
Programming Selective	3			MET 23000 Fluid Power	3		
				[P: MET 11100 or PHYS 22000 and MA 16010]			
MET 21100 Applied Strength of Materials (P: MET 11100 and MA 16010)	4			Freshman Speech Selective*	3		
PHYS 22000 General Physics I	4			MET 28400 Intro to Industrial Controls (P: ECET 22400)	3		
			PHYS 22100 General Physics* (P: PHYS 22000)	4			
TOTAL CREDIT HOURS	14			TOTAL CREDIT HOURS	16		

Fall 3 <sup>rd</sup> Year	CR	GR	Fulfilled by	Spring 3 <sup>rd</sup> Year	CR	GR	Fulfilled by
MET 22000 Heat And Power (P: PHYS 22000, MA 16010 and ENGT 18000)	3			MET 32000 Applied Thermodynamics (P: MA 16010 and MET 22000)	3		
MET 24500 Manufacturing Systems (P: MET 14300 or MET 14400 and CGT Selective)	3			MET 34600 Advanced Materials in Mfg (P: MET 21100, MET 24500 and CHM 11100)	3		
Mechanics Selective*	3			MET Elective or approved Focus Area elective	3		
CHM 11100 General Chemistry	3			Economics/Finance Selective*	3		
STAT 30100 Elementary Stat Methods	3			Technical Writing Selective*	3		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Fall 4 <sup>th</sup> Year	CR	GR	Fulfilled by	Spring 4 <sup>th</sup> Year	CR	GR	Fulfilled by
MET Capstone Selective I (P:MET 102, MET 230, MET 284 and MET 346)	3			MET Capstone Selective II (P: Capstone Selective I)	3		
MET 31300 Applied Fluid Mechanics (P:MA 16020, MET 22000 and MET 23000)	3			Humanities Selective*	3		
IET 33400 Economic Analysis For Technology Systems	3			Technical Selective or approved Focus Area elective	3		
Technical/Management Selective	3			Behavioral Social Science Selective*	3		
Global/Professional Selective	3			Communications Selective +	3		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Refer to the 2020 MET supplemental Instruction form for optional courses to complete selectives and pre-requisites.

- 1. 120 semester credits and a 2.0 Graduation GPA are required for the Bachelor of Science degree.
- 2. Students must earn a "D-" or better in all courses unless otherwise noted.
- 3. 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. 4.

5	. Complete a Professional Requirement	Complete an Intercultural Requirement.
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# Polytechnic New Albany 2020-2021 MET SUPPLEMENTAL INFORMATION

All prerequisites must be met.

Bold indicates courses offered at the New Albany campus

See Student Affairs Administrator for course availability

**CGT SELECTIVE** 

CGT 11000 Technical Graphics Communications ENGT 10500 Intro to Engineering Design

**CGT 16300 Graphical Communication and Spatial Analysis** 

FRESHMAN COMPOSITION

ENGL 10600 First-Year Composition SCLA 10100 Transformative Text, Critical Thinking and

ENGL 10800 Accelerated First-Year Composition Communication I: Antiquity to Modernity

HONR 19903 Interdisciplinary Approaches in Writing

FRESHMAN SPEECH SELECTIVE

COM 11400 Fundamentals of Speech Communication SCLA 10200 Transformative Texts, Critical Thinking and

Communication II: Modern World

**ECONOMICS/FINANCE SELECTIVE** 

AGEC 21700 Economics ECON 25100 Microeconomics

CSR 34200 Personal Finance ECON 25200 Macroeconomics

ECON 21000 Principles of Economics ENTR 20000 Introduction to Entrepreneurship and Innovation

**COMMUNICATIONS SELECTIVE** 

COM 31500 Speech Communication of Technical Information COM 41500 Discussion of Technical Problems

COM 32000 Small Group Communication EDPS 31500 Collaborative Leadership: Interpersonal Skills

TECHNICAL WRITING SELECTIVE

ENGL 42100 Technical Writing ENGL 42400 Writing For High Technology Industries

PROGRAMMING SELECTIVE

CNIT 10500 Introduction to C Programming

CS 15900 Programming Applications for Engineers

CNIT 15500 Introduction to Object-Oriented Programming

CS 17700 Programming with Multimedia Objects

CNIT 15501 Introduction to Software Development Concepts CS 18000 Problem Solving and Object-Oriented Programming

CNIT 17500 Visual Programming MET 16400 Computing In Engineering Technology

**TECHNICAL SELECTIVE** 

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

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

Any MET elective course

Purdue 3+-session co-op with completed seminar courses

ANSC 23000 Physiology of Domestic Animals CGT 30301 Digital Manufacturing

AT 27200 Introduction to Composite Technology CE 35000 Introduction to Environmental and Ecological Engineering

AT 27800 Nondestructive Testing For Aircraft

AT 47800 Advanced Nondestructive Testing

BCHM 22100 Analytical Biochemistry

CE 35500 Engineering Environmental Sustainability

HSCI 31200 Radiation Science Fundamentals

IE 57700 Human Factors In Engineering

BCM 23000 Mechanical and Electrical Systems MFET 28800 Smart Manufacturing Operational and Info Networks

BCM 31500 Mechanical Construction Estimating NS 35000 Naval Ship Systems

BCM 38000 Concrete Construction IET 31300 Tech Innovation And Integration: Bar Codes to

BIOL 20300 Human Anatomy And Physiology Biometrics

BIOL 22100 Introduction to Microbiology IET 33620 Total Productive Maintenance

CGT 11301 Product Data Management

**MECHANICS SELECTIVE** 

MET 31100 Experimental Strength of Materials MET 31601 Mechanics of Machine Design

MET 31400 Applications of Machine Elements MET 31700 Machine Diagnostics

MET 31500 Applied Mechanism Kinematics and Dynamics MET 41100 Introduction to the Finite Element Method

#### MANAGEMENT SELECTIVE

AFT 35100 AF Leadership Studies I AFT 36100 AF Leadership Studies II

#### **ECET 38001 Global Professional Issues in ET**

EDPS 31500 Collaborative Leadership: Interpersonal Skills EDPS 31600 Collaborative Leadership: Cross-Cultural Settings

EDPS 31000 Collaborative Leadership: Cross-Cultural Settings
EDPS 31700 Collaborative Leadership: Mentoring
ENTR 31000 Marketing Management for New Ventures
ENTR 31500 Business Planning for Social Entrepreneurship
IET 41400 Financial Analysis for Technology Systems
MFET 35800 Smart Manufacturing and the Global Economy

MGMT 20000 Introductory Accounting MGMT 20100 Management Accounting I MGMT 21200 Business Accounting

MGMT 45500 Legal Background for Business MSL 20200 Leadership & Teamwork

#### **MET ELECTIVE**

5-session co-op with completed seminar courses

MET 30200 CAD in the Enterprise

MET 31100 Experimental Strength of Materials

MET 31400 Applications of Machine Elements MET 31500 Applied Kinematics and Dynamics MET 31601 Mechanics of Machine Design

MET 31700 Machine Diagnostics MET 33400 Advanced Fluid Power

MET 34900 Stringed Instrument Design and Manufacture

MET 38200 Controls and Instrumentation for Automation

MET 40000 Mechanical Design

MET 41100 Introduction to the Finite Element Method

#### MET CAPSTONE SELECTIVES I & II

ENGT 40500 Entrepreneurial Capstone I ENGT 40600 Entrepreneurial Capstone II ENGT 48000 Engineering Technology Capstone I ENGT 48100 Engineering Technology Senior Capstone II

MET 33400 Advanced Fluid Power MET 40000 Mechanical Design

### **GLOBAL/PROFESSIONAL SELECTIVE**

AFT 47100 National Security, Leadership, Commissioning Prep AFT 48100 National Security Affairs & Prep for Active Duty

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 MSL 30100 Leadership & Problem Solving MSL 40100 Leadership & Management NS 21400 Fundamentals of Leadership

NS 41300 Naval Leadership Management & Ethics

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** 

Approved Study Abroad Course

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** 

MET 44301 Joining Processes

**MET 45100 Manufacturing Quality Control** 

MET 48200 Mechatronics

MET 48600 Fundamentals of Motorsports

MET 49000 Green Manufacturing and Sustainability

MET 49900 Mechanical Engineering Technology Independent Study

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

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 MFET 35800 Smart Manufacturing and the Global Economy

MGMT 45500 Legal Background for Business

MSL 30200 Leadership & Ethics

MUS 37600 World Music

NS 41300 Naval Leadership Management & Ethics

PHIL 11400 Global Moral Issues for Engineers
PHIL 20600 Philosophy of Religion
PHIL 29000 Environmental Ethics
POL 23100 Introductions to United States Foreign Policy
POL 23500 International Relations among Rich and Poor Nations
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 SELECTIVE and BEHAVIORAL/SOCIAL SCIENCE SELECTIVE**: see

http://www.purdue.edu/provost/initiatives/curriculum/course.html