

Departmental/Program Major Courses (120 credits)

Required Major Courses (59 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 (61 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 – Economic Analysis of Technical Systems
- _____ (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 – (*CHEM-C 101 & 121) General Chemistry
- _____ (4) PHYS 22000 - (*PHYS-P 201 OR 221) General Physics (*satisfies Science for core*)
- _____ (4) PHYS 22100 - (*PHYS-P 202 OR 222) General Physics II (*satisfies Science for core*)
- _____ (3) STAT 30100 – (*Math-K 310) Statistical Methods
- _____ (3) TECH 12000 - Design Thinking in Technology (*satisfies Information Literacy and Science, Technology & Society for core*)
- _____ (3) **Freshman** Composition Selective ENGL 10600 or ENGL 10800 (**ENG-W 131*) (*satisfies Written Communication for core*)
- _____ (3) Economics/Finance Selective (choose from ECON 21000, ECON 25100, ECON 25200, CSR 34200, or ENTR 20000) (*ECON-E 103 or ECON-E 104)
- _____ (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, or IT 10500)
- _____ (3) Programming Selective (choose from CNIT 10500, **CNIT 15500**, CNIT 17500, CS 15800 or CS 15900)
- _____ (3) Global/Professional Selective
- _____ (3) Technical/Management (TECH/MGMT) Selective
- _____ (0) **Global / Intercultural Requirements**
- _____ (0) **Professional 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"/>	_____			

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

*****Updated 4/25/2017



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

Fall 1 st Year	CR	GR	Sem	Fulfilled by	Spring 1 st Year	CR	GR	Sem	Fulfilled by
CGT Selective - CGT 11000	3				MA 16010 Applied Calculus I (Prereq: ALEKS score 75)	3			
Freshman Composition Selective – ENG-W 131 (IUSB)	3				MET 11100 Applied Statics (Prereqs: ENGT 18000)	3			
MET 14400 Materials and Processes II	3				MET 14300 Materials and Processes I	3			
ENGT 18000 Engineering Technology Foundations	3				MET 10200 Production Specifications (Prereqs: CGT selective and ENGT 18000)	3			
ENGT 18100 Engineering Tech Apps	1				PHYS 22000 General Physics I	5			
TECH 12000 Design Thinking in Tech.*	3				PHYS-P 221 or 201 (IUSB)				
TOTAL CREDIT HOURS	16				TOTAL CREDIT HOURS	17			

Fall 2 nd Year	CR	GR	Sem	Fulfilled by	Spring 2 nd Year	CR	GR	Sem	Fulfilled by
ECET 22400 Electronics Systems (Prereq: MA 16010)	3				MET 23000 Fluid Power (Prereqs: MET 11100 and MA 16010)	3			
MA 16020 Applied Calculus II (Prereq: MA 16010 with grade of C- or higher)	3				Programming Selective	3			
MET 21100 Strength of Materials (Prereqs: MET 11100 and MA 16010)	4				COM 11400 Fundamental of Speech Communication* - SPCH-S 121 (IUSB)	3			
MET 21300 Dynamics (Prereqs: MA 16020 and MET 11100)	3				MET 28400 Intro to Industrial Controls (Prereq: ECET 22400)	3			
MET 24500 Manufacturing Systems (Prereqs: (MET 14300 or 14400) and CGT Sel)	3				PHYS 22100 General Physics II* (Prereq: PHYS 2200) – PHYS-P 222 or 202 (IUSB))	5			
TOTAL CREDIT HOURS	16				TOTAL CREDIT HOURS	17			

Fall 3 rd Year	CR	GR	Sem	Fulfilled by	Spring 3 rd Year	CR	GR	Sem	Fulfilled by
CHM 111 General Chemistry – CHEM-C 101 & CHEM-C 121 (IUSB)	5				MET 32000 Thermodynamics (Prereqs: MA 16010 and MET 22000)	3			
MET 22000 Heat Power (Prereqs: PHYS 22000, MA 16010 & ENGT 18000)	3				MET 34600 Advanced Materials in Mfg) (Prereqs: MET 21100, MET 24500 and CHM 11100)	3			
Humanities Selective	3				Economics/Finance Selective	3			
ENGL 42100 Technical Writing (Prereq: ENGL 10600 or ENG-W 131)	3				STAT 30100 – MATH-K 310 Statistical Tech	3			
Technical/Management Selective	3				Global/Professional Selective	3			
TOTAL CREDIT HOURS	17				TOTAL CREDIT HOURS	15			

Fall 4 th Year	CR	GR	Sem	Fulfilled by	Spring 4 th Year	CR	GR	Sem	Fulfilled by
IET 45100 or TLI 33400 Economic Analysis of Technical Systems (Prereq: MA 16010)	3				MET Capstone Selective II (Prereq: Capstone Selective I)	3			
MET Capstone Selective I	3				MET Elective or approved Focus Area elective	3			
MET 31300 Fluid Mechanics (Prereqs: MA 16020, MET 22000 and MET 23000)	3				Technical Selective or approved Focus Area elective	3			
Mechanics Selective	3				Behavioral Social Science Selective	3			
COM 32000 Small Group Discussion	3				Global / Intercultural Requirement	0			
					Professional Requirement	0			
TOTAL CREDIT HOURS	15				TOTAL CREDIT HOURS	15			

Refer to the 2017 MET supplemental Instruction sheet for optional courses to complete selectives and prerequisites.

- 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 the Global / Intercultural Requirement (ungraded).
- Complete the Professional Requirement (ungraded).

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

***** Updated 4/25/2017

2017 MET SUPPLEMENTAL INFORMATION
All prerequisites must be met

BOLD indicates courses offered at the South Bend location.

***Indicates approved IUSB course for South Bend location.**

CGT SELECTIVE

CGT 11000 Technical Graphics Communications

CGT 16300 Graphical Communication and Spatial Analysis

IT 10500 Intro to Engineering Design

PROGRAMMING SELECTIVE

CNIT 10500 Introduction to C Programming or *CSCI-C 101 Computer Programming I

CNIT 15500 Intro to Object-Oriented Programming

CNIT 17500 Visual Programming

CS 15800 C Programming

CS 15900 Programming Applications for Engineers

FRESHMAN COMPOSITION

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First-Year Composition

***ENG-W 131 Reading, Writing & Inquiry**

ECONOMICS/FINANCE SELECTIVE

CSR 3420 Personal Finance

ECON 2100 Principles of Economics

ECON 25100 Microeconomics

***ECON-E 103 Intro Microeconomics**

***ECON-E 104 Intro to Macroeconomics**

ECON 25200 Macroeconomics

ENTR courses 20000 and 31000

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 Intro to Composite Technology

AT 27800 Nondestructive Testing

AT 47800 Advanced Nondestructive Testing

BCHM 22100 Analytical Biochemistry

BCM 23000 Mechanical/Electrical Systems

BCM 31500 Mechanical Construction Estimating

BCM 38000 Concrete Construction

BIOL 20300 Human Anatomy and Physiology

BIOL 22100 Introduction to Microbiology

CGT 22600 Intro to Constraint Based Modeling

CHM 11200/CHM 11600 General Chemistry II

CHM 22300 Principles of Biochemistry

CHM 48100 Environmental Chemistry

CE 35000 Environmental Engineering

CE 35500 Engineering Environmental Sustainability

ENTM 21800 Introduction to Forensic Sciences

FNR 30100 Wood Products/Wood Processes

FNR 31100 Wood Structure, Identification and Properties

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

IT 35100 Adv Industrial Safety & Health Management

IT 43400 Global Transportation and Logistics Management

MA 26100 Multivariate Calculus

TECH/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

TECH 32000 Technology & the Organization

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

MECHANICS SELECTIVE Prerequisites are in parenthesis

MET 31100 Experimental Strength of Materials (MET 21100, MET 21300, & MA 16020)

MET 31400 Applications of Machine Elements (MET 21100 & MET 21300)

MET 31500 Applied Kinematics and Dynamics (CGT 11000 & MET 21300)

MET 31601 Mechanics of Machine Design (MET 21100)

MET 31700 Machine Diagnostics (MET 21300, Physics 2 & MA 16020)

MET ELECTIVE (6 credit hours) Prerequisites are in parenthesis

MET 30200 CAD in the Enterprise (MET 10200 & MET 24500)

MET 31100 Experimental Strength of Materials (MET 21100, MET 21300, & MA 16020)

MET 31700 Machine Diagnostics (Physics 2 & MA 16020)

MET 33400 Advanced Fluid Power (MET 23000 or MET 33000)

MET 34900 Stringed Instrument Design and Manufacture (MET 21100, MET 21300, MET 24500, & MA 16020)

MET 38200 Controls and Instrumentation for Automation (MA 16010, & MET 28400)

MET 40000 Mechanical Design (MET 10200, MET 23000, MET 28400, and MET 34600)

MET 40100 Capstone Projects I (MET 10200, MET 23000, MET 28400, and MET 34600)

MET 40200 Capstone Projects II (MET 40100 or ECET 43000)

MET 42200 Power Plants & Energy Conversion (MET 31300 and MET 32000)

MET 41100 Introduction to the Finite Element Method (MET 21100, MET 21300, & Physics 2)

MET 42100 Air Conditioning and Refrigeration (MET 32000 or MET 30000)

MET 42200 Power Plants & Energy Conversion (MET 31300 and MET 32000)

MET 42600 Internal Combustion Engines (MET 32000 or MET 30000)

MET 43200 Hydraulic Motion Control Systems (MET 23000 or MET 33000)

MET 43600 Pneumatic Motion Control Systems (MET 23000 or MET 33000)

MET 44301 Joining Processes (MET 10200, MET 21400, & MET 34600)

MET 45100 Manufacturing Quality Control (STAT 30100)

MET 48200 Mechatronics (MET 10200, MET 21400, and MET 28400)

MET 48600 Fundamentals of Motorsports (MET 31300, & MET 32000)

MET CAPSTONE I & II SELECTIVES (6 credit hours) Prerequisites are in parenthesis

ECET 43000 Product/Project Management (ECET 38001 and 9-12 cr. hrs. of coursework in a technical focus area)

ECET 43100 International Capstone Plan

ECET 46000 Project Design and Development (ECET 43000)

ECET 46100 International Capstone Execution (ECET 43100)

ENGT 40500 Entrepreneurial Capstone I

ENGT 40600 Entrepreneurial Capstone II (ENGT 40500)

MET 33400 Advanced Fluid Power (MET 23000 or MET 33000)

MET 40000 Mechanical Design (MET 10200, MET 23000, MET 28400, and MET 34600)

MET 40100 Capstone Projects I (MET 10200, MET 23000, MET 28400, and MET 34600)

MET 40200 Capstone Projects II (MET 40100 or ECET 43000)

MET 42100 Air Conditional and Refrigeration (MET 32000 or MET 30000)

MET 42200 Power Plants & Energy Conversion (MET 31300 and MET 32000)

MET 43200 Hydraulic Motion Control Systems (MET 23000 or MET 33000)

MET 43600 Pneumatic Motion Control Systems (MET 23000 or MET 33000)

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 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

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 11400 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>

Students attending the South Bend location can go to the following link to review how IU courses transfer to Purdue University to meet Core Course Requirements:

<http://www.purdue.edu/provost/initiatives/curriculum/documents/Retro%20and%20Transfer%20Credit%20Course%20list%205-27-14.pdf>

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|---|---|
| *FINA-F 100 Fundamentals of Studio Drawing | *HIST-H 114 History of Western Civilization 2 |
| *HIST-H 105 American History I | *MUS-M 17400 Music for the Listener |
| *HIST-H 106 American History II | *PHIL-P 110 Introduction to Philosophy |
| *HIST-H 113 History of Western Civilization 1 | *PHIL-P 140 Introduction to Ethics |

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

Students attending the South Bend location can go to the following link to review how IU courses transfer to Purdue University to meet Core Course Requirements: <http://www.purdue.edu/provost/initiatives/curriculum/documents/Retro%20and%20Transfer%20Credit%20Course%20list%205-27-14.pdf>

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|---|---------------------------------------|
| *ECON-E 103 Introduction to Microeconomics | *PSY-P 103 Introduction to Psychology |
| *ECON-E 104 Introduction to Macroeconomics | *SOC-S 161 Principles of Sociology |
| *POLS-Y 103 Introduction to American Politics | *SOC-S 163 Social Problems |
| *POLS-Y 109 Introduction to International Relations | |

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

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