

Departmental/Program Major Courses (120 credits)

Required Major Courses (44 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)
- _____ (1) MET 16200 – Computational Analysis Tools
- _____ (4) MET 21100 – Applied Strength of Materials
- _____ (3) MET 21300 Dynamics
- _____ (3) MET 21400 – Machine Elements
- _____ (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)

MET Selectives – (12 credits)

- _____ (6) MET Elective or approved Focus Area elective (*See Page 3*)
- _____ (3) MET Capstone Selective (*See Page 3*)
- _____ (3) Technical Selective or approved Focus Area Selective (*See Page 3*)

Other Departmental/Program Course Requirements (64 credits)

- _____ (3) COM 11400 (*COMM R110) - Fundamentals of Speech Communication (*satisfies Oral Communication for core*)
- _____ (3) COM 32000 - Small Group Discussion or (*COMM C223)
- _____ (3) ENGL 42100 – Technical Writing or (*ENG W231)
- _____ (3) IET 45100 or TLI 33400 (*IT 45000) – Engineering Economics
- _____ (3) MA 15800 – Precalculus – Functions and Trigonometry
- _____ (3) MA 16010 - Applied Calculus I (*satisfies Quantitative Reasoning for core*)
- _____ (3) MA 16021 - Applied Calculus II and Differential Equations
- _____ (3) ECET 22400 – Electronic Systems
- _____ (3) CHM 11100 (*CHEM C101 & C121) – General Chemistry
- _____ (4) PHYS 22000 (*PHYS 218) - General Physics (*satisfies Science for core*)
- _____ (4) PHYS 22100 (*PHYS 219) - 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) English Composition Selective ENGL 10600 or ENGL 10800 (*ENG W131) (*satisfies Written Communication for core*)
- _____ (3) Economics/Finance Selective choose ECON 21000, ECON 25100, ECON 25200, CSR 34200, or MGMT 45500 (*ECON E201)
- _____ (3) General Education Human Cultures: Humanities Selective (*satisfies Human Cultures Humanities for core*) (*See Page 3*)
- _____ (3) General Education Human Cultures: Behavior/Social Sciences (*satisfies Human Cultures: Behavioral Sciences for core*) (*See Page 3*)
- _____ (2) CGT Selective choose CGT 11000 or CGT 16300 (*CGT 11000)
- _____ (3) Programming Selective (choose from CNIT 10500, CNIT 17500, CS 15800 or CS 15900) (*MET 29900)
- _____ (3) Global/Professional Selective: (*TECH 330)
- _____ (3) TECH/MGMT Selective: (*BUS A201) or MGMT 200

* Denotes Columbus Campus Course Offering

University Core Requirements

Human Cultures: Behavioral/Social Sciences	.....	Science	.....
Human Cultures: Humanities	.....	Science	.....
Information Literacy	.....	Science, Technology & Society	.....
Oral Communication	.....	Written Communication	.....
Quantitative Reasoning	.....	

The student is ultimately responsible for knowing and completing all degree requirements.

myPurduePlan is the knowledge source for specific requirements and completion.

Fall 1 st Year	CR	GR	Sem	Fulfilled by	Spring 1 st Year	CR	GR	Sem	Fulfilled by
CGT Selective (CGT 11000 or CGT 16300)	3				MA 16010 Applied Calculus I (Prereq: MA 15800 with C- or better)	3			
MET 14300 Materials and Processes I	3				MET 11100 Applied Statics (Prereqs: MA 15800 and MET 16200)	3			
MET 16200 Computational Anly Tools	1				MET 14400 Materials and Processes II	3			
MA 15800 Precalculus	3				Humanities Selective	3			
TECH 12000 Design Thinking in Tech.*	3				COM 11400 Fundamental of Speech Communication* COMM R110 (IUPUC)	3			
English Comp Selective ENG W131 (IUPUC)	3								
TOTAL CREDIT HOURS	16				TOTAL CREDIT HOURS	15			

Fall 2 nd Year	CR	GR	Sem	Fulfilled by	Spring 2 nd Year	CR	GR	Sem	Fulfilled by
MET 21100 Strength of Materials (Pre-reqs: MET 11100 and MA 16010)	4				MET 22000 Heat Power (Pre-reqs: PHYS 220, MA 16010 and MET 162)	3			
MET 21300 Dynamics (Pre-reqs: MA 16020 and MET 11100)	3				MET 23000 Fluid Power (Pre-reqs: MET 11100 and MA 16010)	3			
MA 16021 Applied Calculus/Diff Eqns. (Pre-req: MA 16010 with grade of C- or higher)	3				ECET 22400 Electronic Systems (Pre-req: MA 153 or MA 221)	3			
PHYS 22000 General Physics I PHYS 218 (IUPUC)	4				PHYS 22100 General Physics II (Prereq: PHYS 21200) PHYS 219 (IUPUC) (Prereq: PHYS 218)	4			
					MET 28400 Intro to Industrial Controls (Pre-req: ECET 22400)	3			
TOTAL CREDIT HOURS	14				TOTAL CREDIT HOURS	16			

Fall 3 rd Year	CR	GR	Sem	Fulfilled by	Spring 3 rd Year	CR	GR	Sem	Fulfilled by
MET 21400 Machine Elements (Pre-reqs: MET 21100 and MET 21300)	3				MET 10200 Production Specifications (Pre-reqs: (CGT 110 or CGT 163)	3			
MET 32000 Thermodynamics (Pre-reqs: MA 16010 and MET 22000)	3				Economics/Finance Selective ECON E201 (IUPUC)	3			
Programming Selective MET 299 Mat Lab	3				MET 34600 Advanced Materials in Mfg (Pre-reqs: MET 211, MET 245 and CHM 11100)	3			
CHM 111 General Chemistry CHEM C101 & C121 (IUPUC)	5				Global/Professional Selective TECH 33000	3			
MET 245 Manufacturing Systems (Pre-reqs: (MET 14300 or MET 14400)	3				STAT 30100	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
MET 31300 Fluid Mechanics (Pre-reqs: MA 16021, MET 220 and MET 230)	3				MET Capstone Selective	3			
MET Elective or approved Focus Area elective	3				MET Elective or approved Focus Area elective	3			
ENGL 42100 Technical Writing (ICN) or ENGL W231 (IUPUC)	3				Technical Selective or approved Focus Area elective	3			
TECH/MGMT Selective BUS A201 (IUPUC) or MGMT 200(ICN)	3				Behavioral Social Science Selective	3			
IET 45100 Monetary Analysis IT 450 Production Cost Analysis	3				COM 32000 (ICN) Small Group Discussion (Pre-req: COM 11400) or COMM C223 (IUPUC)	3			
TOTAL CREDIT HOURS	15				TOTAL CREDIT HOURS	15			

Refer to _____ for options for 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.
- 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 University location conferring the degree.

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

***** Updated 11/11/2014

MET SUPPLEMENTAL INFORMATION

All prerequisites must be met.

Bold indicates courses offered at Columbus Campus.

*** Indicates IUPUC course for Columbus Campus only.**

See Student Services Coordinator for course availability.

CGT SELECTIVE

CGT 11000 Technical Graphics Communications

CGT 16300 Graphical Communication and Spatial Analysis

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.

***CHEM C105 & C125**

***CHEM C341, C342, C343, C344**

***MATH 165, 166, 171, 221, 222, 266**

***PHYS 251**

Any MET elective course

ANSC 230 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 226 Intro to Constraint Based Modeling

CHM 11200/CHM 11600 General Chemistry II (***CHEM C106 & C126**)

CHM 22300 Principles of Biochemistry

CHM 48100 Environmental Chemistry

CE 35000 Environmental Engineering

CE 35500 Engineering Environmental Sustainability

CNIT 10500 C Language Programming

ENTM 21800 Introduction to Forensic Sciences

FNR 30100 Wood Products/Wood Processes

FNR 31100 Wood Structure, Identification and Properties

FNR 41800 Properties fo 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 10400 Industrial Organization

IT 33000 Industrial Sales and Sales Management

IT 34500 Automatic Identification and Data Capture

IT 35100 Occupational Safety and Health

IT 43400 Global Transportation and Logistics Management

MA 26100 Multivariate Calculus

MET ELECTIVE

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 41100 Introduction to the Finite Element Method

MET 42100 Air Conditioning and Refrigeration (Fall only)

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 48600 Fundamentals of Motorsports

MET 42400 Green Manufacturing and Sustainability

MET 49000 Multidisciplinary Capstone I

MET 49000 Multidisciplinary Capstone II

MET CAPSTONE SELECTIVE

MET 33400 Advanced Fluid Power (Spring Only)

MET 40000 Mechanical Design

MET 41100 Introduction to the Finite Element

Method

MET 42100 Air Conditional and Refrigeration (Fall only)

MET 43200 Hydraulic Motion Control Systems (Spring only)

MET 42600 Internal Combustion Engines

MET 43600 Pneumatic Motion Control Systems (Fall only)

MET 49000 Multidisciplinary Capstone I

MET 49000 Multidisciplinary Capstone II

FRESHMAN COMPOSITION

ENGL 10600 (*ENG W131)

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

Students of Columbus location see the following link to review how IU courses transfer to Purdue Core:

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

- *HER H100, H102
- *ENG L204
- *HIST H105, H106, H113, H114
- *PHIL P110, PHIL P120,

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

Students of Columbus location see the following link to review how IU courses transfer to Purdue Core:

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

- *COMM C180
- *ECON E201, E202
- *ENG G205
- *POLS Y103
- *PSY B104 + B105
- *SOC R100, R121

ECONOMICS/FINANCE SELECTIVE

CSR 3420 Personal Finance

ECON 2100 (*ECON E201) Principles of
Economics

ECON 25100 Microeconomics

ECON 25200 Macroeconomics

MGMT 45500 Legal Background for Business I