

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)
- _____ (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)

- _____ (3) ¹MET Elective or Approved Focus Area elective
- _____ (3) ²Mechanics Selective
- _____ (3) ³MET Capstone Selective I
- _____ (3) ³MET Capstone Selective II
- _____ (3) ⁴Technical Selective or approved Focus Area Selective

Other Departmental/Program Course Requirements (61 credits)

- _____ (3) COM 11400 – Fundamentals of Speech Communication (***SPCH-S 121**) (*satisfies Oral Communication for core*)
- _____ (3) COM 32000 – Small Group Discussion
- _____ (3) ENGL 42100 – Technical Writing
- _____ (3) IET 45100 or **TLI 33400 (or IT 45000)** – Engineering Economics
- _____ (3) MA 16010 – Applied Calculus I (*satisfies Quantitative Reasoning for core*)
- _____ (3) MA 16020 – Applied Calculus II
- _____ (3) ECET 22400 – Electronic Systems
- _____ (3) CHM 11100 – General Chemistry (***CHEM-C 105 3 cr. + CHEM-C 125 2 cr.**)
- _____ (4) PHYS 22000 – General Physics I (***PHYS-P 201, 5 cr**) (*satisfies Science for core*)
- _____ (4) PHYS 22100 – General Physics II (***PHYS-P 202, 5 cr**) (*satisfies Science for core*)
- _____ (3) STAT 30100 – Statistical Methods (***MATH-K 300**)
- _____ (3) TECH 12000 – Design Thinking in Technology (*satisfies Information Literacy and Science, Technology & Society for core*)
- _____ (3) ⁵Freshman Composition Selective (choose from ENGL 10600 or ENGL 10800 (***ENG-W 131**) (*satisfies Written Communication for core*))
- _____ (3) ⁶Economics/Finance Selective (choose from [ECON 21000, 25100, or 25200], CSR 34200, or MGMT 45500) (***ECON-E 103 or *ECON-E 104**)
- _____ (3) ⁷General Education Human Cultures: Humanities Selective (*satisfies Human Cultures Humanities for core*)
- _____ (3) ⁸General Education Human Cultures: Behavior/Social Sciences (*satisfies Human Cultures: Behavioral Sciences for core*)
- _____ (2) ⁹Computer Graphics Technology Selective (choose from CGT 11000, **CGT 16300**, or IT 10500)
- _____ (3) ¹⁰Programming Selective (choose from **CNIT 10500, CNIT 15501, CNIT 17500**, CS 15800, CS 15900, or MET 16400)
- _____ (3) ¹¹Global/Professional Selective
- _____ (3) ¹²TECH/MGMT Selective
- _____ (0) Beyond the Classroom Requirement

*** Denotes Richmond Location Course Offering**

University Core Requirements

Human Cultures: Behavioral/Social Sciences
Human Cultures: Humanities
Information Literacy
Oral Communication
Quantitative Reasoning

TECH 12000
COM 11400 (***SPCH-S 121**)
MA 16010

Science
Science
Science, Technology & Society
Written Communication

PHYS 22000 (***PHYS-P 201**)
PHYS 22100 (***PHYS-P 202**)
TECH 12000
ENGL 10600 or 10800 (***ENG-W 131**)

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
ENGT 18000 ENG Tech Foundations	3				MA 16010 Applied Calculus I* (Pre-req: ALEKS score 75)	3			
ENGT 18100 ENG Tech Applications	1								
MET 14400 Materials and Processes II	3				MET 14300 Materials and Processes I	3			
TECH 12000 Design Thinking in Tech.*	3				MET 11100 Applied Statics (Pre-req: ENGT 18000)	3			
CGT 16300 Graphical Comm. & Spatial Anlys [⁹ Computer Graphics Tech Selective]	2				MET 10200 Production Specifications (Pre-reqs: CGT Selective and ENGT 18000)	3			
COM 11400 Fundmntls of Speech Comm* *SPCH-S 121 (IUE)	3				*ENG-W 131 (IUE) [⁵ Freshman Composition Selective*]	3			
TOTAL CREDIT HOURS	15				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 21300 Dynamics (Pre-reqs: MA 16020 and MET 11100)	3			
ECET 22400 Electronic Systems (Pre-req: MA 16010)	3				MET 28400 Intro to Industrial Controls (Pre-req: ECET 22400)	3			
PHYS 22000 General Physics I *PHYS-P 201 (IUE, 5 cr)	4				PHYS 22100 General Physics II *PHYS-P 202 (IUE, 5 cr) [Pre-req: PHYS 21200 / *PHYS-P 201 (IUE)]	4			
MA 16020 Applied Calculus II (Pre-req: MA 16010 w/grade of C- or higher)	3				MET 22000 Heat Power [Pre-reqs: PHYS 22000/ *PHYS-P 201 (IUE), MA 16010 and ENGT 18000]	3			
					MET 23000 Fluid Power (Pre-reqs: MET 11100 and MA 16010)	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
[¹² TECH/MGMT Selective]	3				[² Mechanics Selective]	3			
MET 245 Manufacturing Systems (Pre-reqs: MET 14300 or MET 14400, and CGT Selective)	3				MET 32000 Thermodynamics (Pre-reqs: MA 16010 and MET 22000)	3			
CHM 11100 General Chemistry *CHEM-C105 + *CHEM-C 125 (IUE, 5 cr)	3				MET 34600 Advanced Materials in Mfg [Pre-reqs: MET 21100, MET 24500 and CHM 11100/ *CHEM-C 105 + C 125 (IUE)]	3			
CNIT 17500 Visual Programming [¹⁰ Programming Selective]	3				TECH 33000 Technology and the Global Society [¹¹ Global/Professional Selective]	3			
[⁷ Humanities Selective]	3				*ECON-E 103 or *ECON-E 104 (IUE) [⁶ Economics/Finance Selective]	3			
TOTAL CREDIT HOURS	15				TOTAL CREDIT HOURS	15			

Fall 4 th Year	CR	GR	Sem	Fulfilled by	Spring 4 th Year	CR	GR	Sem	Fulfilled by
[³ MET Capstone Selective I]	3				[³ MET Capstone Selective II]	3			
MET 31300 Fluid Mechanics (Pre-reqs: MA 16021, MET 22000 and MET 23000)	3				[¹ MET Elective or Approved Focus Area Elective]	3			
IET 45100 or TLI 33400 (or IT 45000) Engineering Economics	3				STAT 30100 *MATH-K 300 (IUE)	3			
MFET 34400 Automated Mfg. Processes (Pre-req: MET 24500) or ECET 33700 Analog Signal Processing [Pre-reqs: ECET 22400, MA 16010, and PHYS 22000/ *PHYS-P 201 (IUE)] [⁴ Technical Selective or Approved Focus Area Elective]	3				[⁸ Behavioral Social Science Selective]	3			
ENGL 42100 Technical Writing [Pre-req: ENGL 10600/ *ENG-W 121 (IUE)]	3				COM 32000 Small Group Discussion [Pre-req: COM 11400/ *SPCH-S 121 (IUE)]	3			
TOTAL CREDIT HOURS	15				TOTAL CREDIT HOURS	15			

Refer to your Student Services Coordinator regarding 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.
- Complete a Beyond the Classroom Requirement.**

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

MyPurduePlan is the knowledge source for specific requirements and completion.

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2016 MET SUPPLEMENTAL INFORMATION

All pre-requisites must be met.

Bold indicates courses offered at Richmond Location.

***Indicates IUE courses for Richmond Location only.**

See Student Services Coordinator for course availability.

¹MET ELECTIVE

MET 30200 CAD in the Enterprise
MET 31100 Experimental Strength of Materials
MET 31700 Machine Diagnostics
MET 33400 Advanced Fluid Power
MET 34900 Stringed Instrument Design & Manufacture
MET 38200 Controls & Instrumentation for Automation
MET 40000 Mechanical Design
MET 40100 Capstone Projects I
MET 40200 Capstone Projects II

MET 41100 Introduction to the Finite Element Method
MET 42100 Air Conditioning and Refrigeration
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 48600 Fundamentals of Motorsports
MET 49000 Green Manufacturing and Sustainability

²MECHANICS SELECTIVE

MET 31100 Experimental Strength of Materials
MET 31400 Applications of Machine Elements

MET 31500 Applied Kinematics and Dynamics
MET 31601 Mechanics of Machine Design

³MET CAPSTONE SELECTIVES

MET 33400 Advanced Fluid Power
MET 40000 Mechanical Design
MET 40100 Capstone Projects I
MET 40200 Capstone Projects II

MET 42100 Air Conditional and Refrigeration
MET 42200 Power Plants & Energy Con
MET 43200 Hydraulic Motion Control Systems
MET 43600 Pneumatic Motion Control Systems

⁴TECHNICAL 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
***MICR-J 200 + *MICR-J 201**
CGT 22600 Intro to Constraint Based Modeling
CHM 11200/CHM 11600 General Chemistry II
***CHEM-C 106 + *CHEM-C 126**
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 & Properties
FNR 41800 Properties of Wood Related to Mfg.
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 Occupational Safety and Health
IT 43400 Global Transportation & Logistics Mgmt.
MA 26100 Multivariate Calculus

⁵FRESHMAN COMPOSITION

ENGL 10600 First-Year Composition
ENGL 10800 Accelerated First-Year Composition

***ENG-W 131**

⁶ECONOMICS/FINANCE SELECTIVE

CSR 34200 Personal Finance
***BUS-F 260**
ECON 21000 Principles of Economics

ECON 25100 Microeconomics
***ECON-E 103**
ECON 25200 Macroeconomics

***ECON-E 104**
ENTR 20000 Intro to
Entrepreneurship & Innovation

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7HUMANITIES FOUNDATIONAL SELECTIVE: See <http://www.purdue.edu/provost/initiatives/curriculum/course.html>

***ENGL-L 204** ***FREN-F 200, *FREN-F 250** ***PHIL-P 140**
***FINA-A 101, FINA-A 102** ***HIST-H 105, *HIST-H 106** ***SPAN-S 100, *SPAN-S 150,**
***FINA-F 100, FINA-H 100** ***MUS-M 174, *MUS-T 101,** ***SPAN-S 200, *SPAN-S 250**
***FINA-S 200, *FINA-S 260** ***MUS-Z 393** ***THTR-T 210**
***FREN-F 100, *FREN-F 150,** ***PHIL-P 100, *PHIL-P 120,**

8BEHAVIORAL/SOCIAL SCIENCE FOUNDATIONAL SELECTIVE: See <http://www.purdue.edu/provost/initiatives/curriculum/course.html>

***ANTH-A 104, *ANTH-E 320** ***POL-S-Y 103, *POL-S-Y 109,** ***SOC-S 100**
***ECON-E 103, *ECON-E 104** ***POL-S-Y 324** ***SPCH-S 122**
***ENG-G 205** ***PSY-P 103, *PSY-P 216**

9COMPUTER GRAPHICS TECHNOLOGY SELCTIVE

CGT 11000 Technical Graphics Communications
CGT 16300 Graphical Communication & Spatial Anlys.

IT 10500 Intro to Engineering Design

10PROGRAMMING SELECTIVE

CNIT 10500 Intro. to C Programming
CNIT 15500 Intro. to Object-Oriented Programming
CNIT 15501 Intro. To Software Development Concepts
CNIT 17500 Visual Programming

CS 15800 C Programming
CS 15900 Programming Applications for Engineers
MET 16400 Computing in Engineering Technology

11GLOBAL/PROFESSIONAL SELECTIVE

ANTH 20500 Human Cultural Diversity
***ANTH-A 104**
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
EDPS 31700 Leadership: Mentoring
FLL 23500 East Asian Literature in Translation
FLL 23900 Contemp. Foreign Women Writers in Transl'n
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 Civ. I
HIST 33400 Science & Technology in Western Civ. II
HIST 35000 Science & Technology in 20th Century Wrld.
HIST 36000 Gender in Middle East History

JPNS 28000 Intro. to Modern Japanese Civilization
MGMT 45500 Legal Background for Business
MSL 30200 Leadership & Ethics
MUS 37800 World Music
***MUS-Z 393**
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-P 371**
PHIL 29000 Environmental Ethics
PHIL 33000 Religions of the East
PHIL 33100 Religions of the West
***REL-R 152**
POL 23100 Introductions to United States Foreign Policy
PSY 33500 Stereotyping & Prejudice
PTGS 33000 Brazilian, Portuguese & African Cinema
SOC 31000 Racial & Ethnic Diversity
***SOC-S 335**
SPAN 23500 Spanish American Literature in Translation
SPAN 33000 Spanish & Latin American Cinema
TECH 33000 Tech and the Global Society
Approved Study Abroad Course.

12MANAGEMENT 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-A 201**
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 Professional Development Program
OLS 38600 Leadership for Org Change & Innov.
PSY 27200 Intro to Industrial-Organizational Psych.
***PSY-B 366**
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.