

Departmental/Program Major Courses (120 credits)

Required Major Courses (32 credits)

- _____ (3) MET 10200 – Production Specifications
- _____ (3) MET 11100 – Applied Statics
- _____ (1) MET 11300 -- Mechanics Applications
- _____ (3) MET 14400 – Materials and Processes II (MET Gateway Course)
- _____ (1) MET 16200 – Computational Analysis Tools
- _____ (3) MET 23000 -- Fluid Power
- _____ (3) MET 24500 – Manufacturing Systems
- _____ (3) MFET 24800 -- Introduction to Robot Systems
- _____ (3) MET 28400 – Introduction to Industrial Controls
- _____ (3) MFET 34400 – Automated Manufacturing Processes
- _____ (3) MFET 34800 – Industrial Robots and Motion Control
- _____ (3) MFET 37400 – Manufacturing Integration

Robotics Concentration Courses- (24 credits)

- _____ (3) Mechatronics/Controls Selective
- _____ (3) Manufacturing Selective
- _____ (3) Manufacturing/Controls Selective
- _____ (3) ECET 32700 – Data Acquisitions and Signal Processing
- _____ (3) ECET 33700 – Analog Signal Processing
- _____ (3) ECET 43000 – Electronics Product and Program Management
- _____ (3) ECET 46000 – Project Design and Development
- _____ (3) CNIT 10500 – Introduction to C Programming

Other Departmental/Program Course Requirements (64 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 – 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) ECET 38001 --- Global/Professional Issues
- _____ (3) CHM 11100 – General Chemistry
- _____ (4) PHYS Selective (choose from PHYS 21800, PHYS 22000, PHYS 17200) (*satisfies Science for core*)
- _____ (3) TECH 12000 - Design Thinking in Technology (*satisfies Information Literacy and Science, Technology & Society for core*)
- _____ (3) Science Selective
- _____ (3) English Composition Selective (*satisfies Written Communication for core*)
- _____ (3) Human Cultures: Humanities Foundation Selective (*satisfies Human Cultures Humanities for core*)
- _____ (3) Human Cultures: Behavior/Social Sciences Foundation Selective (*satisfies Human Cultures: Behavioral Sciences for core*)
- _____ (3) Humanities/Social Science Elective
- _____ (2) CGT Selective (choose from CGT 11000 or CGT 16300)
- _____ (3) Statistics/Quality Selective (choose between STAT 30100 or IT 34200)
- _____ (3) Technical Elective
- _____ (4) Free Elective

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
MET 14400 Materials and Processes II	3				CHM 11100 General Chemistry	3			
MA 15800 Precalculus* (Prereq: ALEKS Score of 60%)	3				ECET 22400 Electronic Systems (Prereq: MA 15300 or MA 16010)	3			
TECH 12000 Design Thinking in Tech.*	3				MA 16010 Applied Calculus I* (Prereq: MA 15800 with grade of C- or better or ALEKS score of 75%)	3			
Freshman Composition Selective*	3				MET 16200 computational Analysis Tools	1			
Free elective	3				COM 11400 Fund of Speech Communication*	3			
					Humanities Foundation Selective*	3			
TOTAL CREDIT HOURS	15				TOTAL CREDIT HOURS	16			

Fall 2 nd Year	CR	GR	Sem	Fulfilled by	Spring 2 nd Year	CR	GR	Sem	Fulfilled by
MET 28400 Intro to Industrial Controls (Prereq: ECET 22400)	3				MET 10200 Production Specifications (Prereqs: CGT 11000 and MET 16200)	3			
MET 11100 Applied Statics (Prereqs: MA 15800 and MET 16200)	3				MET 11300 Mechanics Applications (Prereq: MET 11100)	1			
MA 16021 Applied Calc/Diff Equations (Prereq: MA 16010 with a grade of C- or higher)	3				MET 24500 Manufacturing Systems (Prereqs: (MET 14300 or MET 14400) and (CGT 11000 or CGT 16300))	3			
Computer Graphics Selective	2				CNIT 10500 Introduction to C Programming	3			
Behavioral/Social Science Foundation Selective*	3				MET 24800 Introduction to Robotics (Prereq: CNIT 17500 or CNIT 10500)	3			
					Physics Selective	4			
TOTAL CREDIT HOURS	14				TOTAL CREDIT HOURS	17			

Fall 3 rd Year	CR	GR	Sem	Fulfilled by	Spring 3 rd Year	CR	GR	Sem	Fulfilled by
ECET 32700 Data Acquisitions and Signal Processing (Prereq: PHYS I, Calculus I, and ECET 22400)	3				Manufacturing Selective	3			
MET 23000 Fluid Power (Prereqs: (MET 11100 or PHYS 22000) and MA 16010)	3				ECET 38001 Global Professional Issues in EET	3			
MFET 34400 Automated Mfg Processes (Prereq: MET 24500)	3				ECET 33700 Analog Signal Processing (Prereq: ECET 27700)	3			
MFET 37400 Mfg Integration I (Prereq: MET 28400)	3				ENGL 42100 Technical Writing (Prereq: ENGL 10600)	3			
Science Selective	3				Statistics or Quality 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
ECET 43000 Elec Product & Prog Mgmt (Prereq: ECET 38001)	3				ECET 46000 Project Design and Development (Prereq: ECET 43000)	3			
MFET 34800 Ind Robots/Motion Ctrl (Prereq: MET 28400)	3				Technical Elective	3			
IET 45100 or TLI 33400 Monetary Analysis for Industrial Decisions	3				Manufacturing/Controls Selective	3			
Mechatronics/Controls Selective	3				Humanities/Social Science Elective	3			
COM 32000 Small Group Communication	3				Free Elective	1			
TOTAL CREDIT HOURS	15				TOTAL CREDIT HOURS	13			

*Fulfills University core.

- 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 Purdue University.

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***** Updated 4/17/2015

MFET PROGRAM SUPPLEMENTAL INFORMATION

Robotics Engineering Technology Major

All prerequisites must be met.

FRESHMAN COMPOSITION SELECTIVE

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First-Year Composition

COMPUTER GRAPHICS SELECTIVE

CGT 11000 Technical Graphics Communications

CGT 16300 Graphical Communication and Spatial Analysis

IT 10500 Intro to Engineering Design

PHYSICS SELECTIVE

PHYS 21800 General Physics

PHYS 22000 General Physics

PHYS 17200 Modern Mechanics

SCIENCE SELECTIVE

BIOL 11000 Fundamentals of Biology I

BIOL 20300 Human Anatomy and Physiology

CHM 11200 General Chemistry II

PHYS 21900 General Physics II

PHYS 2210 General Physics

PHYS 24100 Electricity and Optics

STATISTICS OR QUALITY SELECTIVE

STAT 30100 Elementary Statistical Methods

IT 34200 Introduction to Statistical Quality

MECHATRONICS SELECTIVE

MET 48200 Mechatronics

MET 58100 Design of Mechatronics Systems

CONTROLS SELECTIVE

IT 34500 Automatic Identification and Data Capture

IT 44500 Problem-Solving with Automatic Data Collection

MET 33400 Advanced Fluid Power

MET 43200 Hydraulic Motion Control Systems

MET 43600 Pneumatic Motion Control Systems

MFET 29200 Projects In Automation, Robotics And Mechatronics

MFET 39200 Advanced Projects In Automation, Robotics And Mechatronics

MANUFACTURING SELECTIVE

AT 27200 Intro to Composite Technology
AT 30802 Aircraft Materials Processes
AT 40800 Advanced Aircraft Manufacturing Processes
AT 47200 Advanced Composite Technology
CGT 32600 Graphics Standards for Product Definition
CGT 42300 Product Data Management
CGT 42600 Industrial Applications for Simulation
IT 21400 Introduction to Lean Manufacturing
IT 38100 Total Productive Maintenance
IT 38500 Industrial Ergonomics
IT 43400 Global Transportation and Logistics Management
IT 44200 Production Planning
IT 44600 Six Sigma Quality
IT 48300 Facility Design for Lean Manufacturing
IT 44600 Six Sigma Quality
MET 45100 Manufacturing Quality Systems
MFET 29200 Projects In Automation, Robotics And Mechatronics
MFET 39200 Advanced Projects In Automation, Robotics And Mechatronics
MFET 34200 Advanced Manufacturing Processes and Practices
MFET 34800 Industrial Robotics and Motion Control
MFET 44600 Advanced Manufacturing Operations

TECHNICAL ELECTIVE

All COT courses at the 3xxxx level or above that are not required for the major plus FNR 30100, OLS 28400, and MGMT 45500

HUMANITIES FOUNDATION SELECTIVE: (6 credits) see

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

BEHAVIORAL/SOCIAL SCIENCE FOUNDATION SELECTIVE: see

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

HUMANITIES/SOCIAL SCIENCE ELECTIVE: any 2xxxx course or higher in PSY, SOC, HIS, ECON, POL, PHIL, REL, ANTH, a foreign language, plus AD 22600, AD 22700, AD 25100, AD 25500, AD 30701, AD 31100, AD 31200, MUS 25000, MUS 35500, MUS 37400, MUS 37600, MUS 37800, MUS 38100, MUS 38200

FREE ELECTIVE: Any non-remedial course