

**Departmental/Program Major Courses (120 credits)**

**Required Major Courses (35 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)
- \_\_\_\_\_ (3) MET 23000 – Fluid Power
- \_\_\_\_\_ (3) MET 24500 – Manufacturing Systems
- \_\_\_\_\_ (3) MET 28400 – Introduction to Industrial Controls
- \_\_\_\_\_ (3) MET 38200 – Controls and Instrumentation for Automation
- \_\_\_\_\_ (3) MFET 34400 – Automated Manufacturing Processes
- \_\_\_\_\_ (3) MFET 37400 – Manufacturing Integration
- \_\_\_\_\_ (3) Manufacturing Selective
- \_\_\_\_\_ (3) ENGT 18000—Engineering Technology Foundations
- \_\_\_\_\_ (1) ENGT 18100—Engineering Technology Applications

**MHET courses- (24 credits included in Required Major Courses total)**

- \_\_\_\_\_ (3) Mechatronics Selective
- \_\_\_\_\_ (3) Controls Selective
- \_\_\_\_\_ (3) ECET 27900 – Embedded Digital Systems
- \_\_\_\_\_ (3) ECET 32700 – Instrumentation and DAQ Design
- \_\_\_\_\_ (3) ECET 33700 – Analog Signal Processing
- \_\_\_\_\_ (3) ECET 43000 – Electronics Product and Program Management
- \_\_\_\_\_ (3) ECET 46000 – Project Design and Development
- \_\_\_\_\_ (3) CNIT 10500 (CSCI-C105\*IU) – Introduction to C Programming

**Other Departmental/Program Course Requirements (57 credits)**

- \_\_\_\_\_ (3) COM 11400 (SPCH-S121\*IU) - Fundamentals of Speech Communication (*satisfies Oral Communication for core*)
- \_\_\_\_\_ (3) COM 32000 (SPCH-S229\*IU) – Small Group Discussion
- \_\_\_\_\_ (3) ENGL 42100 (ENG-W234\*IU) – Technical Writing
- \_\_\_\_\_ (3) IET 45100 or TLI 33400 – engineering economics
- \_\_\_\_\_ (3) MA 16010 - Applied Calculus I (*satisfies Quantitative Reasoning for core*)
- \_\_\_\_\_ (3) MA 16020 - Applied Calculus II
- \_\_\_\_\_ (3) ECET 22400 – Electronics Systems
- \_\_\_\_\_ (3) ECET 38001 – Global/Professional Issues
- \_\_\_\_\_ (3) CHM 11100 (CHEM-C101/C121\*IU) – General Chemistry
- \_\_\_\_\_ (4) PHYS Selective (choose from PHYS 21800, PHYS 22000, PHYS 17200, or PHYS-P201\*IU) (*satisfies Science for core*)
- \_\_\_\_\_ (3) TECH 12000 - Design Thinking in Technology (*satisfies Information Literacy and Science, Technology & Society for core*)
- \_\_\_\_\_ (3) Science Selective
- \_\_\_\_\_ (3) Freshmen Composition Selective (ENG-W131\*IU) (*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, CGT 16300, or IT 10500)
- \_\_\_\_\_ (3) Statistics/Quality Selective (choose between STAT 30100 or IT 34200 or MATH-K300\*IU)
- \_\_\_\_\_ (3) Technical Elective

**Free Electives (4 credits)**

- \_\_\_\_\_ (4) Free Electives

**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"/>	_____			

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

myPurduePlan is the knowledge source for specific requirements and completion.

Fall 1 <sup>st</sup> Year	CR	GR	Sem	Fulfilled by	Spring 1 <sup>st</sup> Year	CR	GR	Sem	Fulfilled by
<b>TECH 12000</b> Design Thinking in Tech.*	3				<b>Computer Graphics Selective (CGT 16300)</b>	2			
<b>MA 16010</b> Applied Calculus I * (Prereq: ALEKS score of 75)	3				Free Elective ( <b>ECET 17900</b> is recommended)	3			
<b>CNIT 10500 (CSCI-C105*IU)</b> Intro to C Programming	3				<b>MET 11100</b> Applied Statics (Prereq: ENGT 18000)	3			
<b>ENGT 18000</b> ENG Tech Foundations	3				<b>MET 14400</b> Materials and Processes II	3			
<b>ENGT 18100</b> ENG Tech Applications	1				<b>ECET 22400</b> Electronics Systems (Prereq: MA 15300 or higher math course)	3			
Freshman Comp* ( <b>ENG-W131*IU</b> )	3								
<b>TOTAL CREDIT HOURS</b>	<b>16</b>				<b>TOTAL CREDIT HOURS</b>	<b>14</b>			

Fall 2 <sup>nd</sup> Year	CR	GR	Sem	Fulfilled by	Spring 2 <sup>nd</sup> Year	CR	GR	Sem	Fulfilled by
<b>MA 16020</b> Applied Calculus II (Prereq: MA 16010 with a grade of C- or better)	3				<b>ECET 27900</b> Embedded Digital Systems (Prereq: EET 17900)	3			
<b>MET 10200</b> Production Specifications (Prereqs: CGT Selective and ENGT 18000)	3				<b>MET 24500</b> Manufacturing Systems (Prereqs: (MET 14300 or MET 14400) and CGT Sel)	3			
<b>MET 11300</b> Mechanics Applications (Prereq: MET 11100)	1				<b>MET 28400</b> Intro to Industrial Controls (Prereq: ECET 22400)	3			
Physics Selective* ( <b>PHYS-P201 or PHYS P218</b> )	4				Behavioral/Social Science Foundation Elective*	3			
<b>COM 11400 (SPCH-S121*IU)</b> Fund of Speech Communication*	3				<b>CHM 11100 (CHEM-C101/C121*IU)</b> General Chemistry*	3			
Humanities Foundation Selective*	3								
<b>TOTAL CREDIT HOURS</b>	<b>17</b>				<b>TOTAL CREDIT HOURS</b>	<b>15</b>			

Fall 3 <sup>rd</sup> Year	CR	GR	Sem	Fulfilled by	Spring 3 <sup>rd</sup> Year	CR	GR	Sem	Fulfilled by
<b>MET 23000</b> Fluid Power (Prereq: (MET 11100 or PHYS 22000) and MA 16010)	3				<b>MFET 37400</b> Mfg Integration I (Prereq: MET 28400)	3			
<b>MFET 34400</b> Automated Mfg Processes (Prereq: MET 24500)	3				<b>ECET 33700</b> Analog Signal Processing (Prereq: ECET 22400 + MA 16020)	3			
<b>ECET 38001</b> Global Professional Issues in Engineering Technology	3				<b>ECET 32700</b> Instrument & DAQ Design (Prereqs: ECET 22400, MA 16010, PHYS Sel.)	3			
<b>ENGL 42100 (ENG-W234*IU)</b> Technical Writing (Prereq: ENG-W131)	3				Manufacturing Selective	3			
Science Selective*	3				Statistics or Quality Selective	3			
<b>TOTAL CREDIT HOURS</b>	<b>15</b>				<b>TOTAL CREDIT HOURS</b>	<b>15</b>			

Fall 4 <sup>th</sup> Year	CR	GR	Sem	Fulfilled by	Spring 4 <sup>th</sup> Year	CR	GR	Sem	Fulfilled by
<b>ECET 43000</b> Electronic Product and Program management	3				<b>ECET 46000</b> Product Design and Development (Prereq: ECET 43000)	3			
<b>COM 32000 (SPCH-S229*IU)</b> Small Group Communication	3				<b>MET 38200</b> Controls/Instr for Automation (Prereq: MET 28400)	3			
Controls Selective	3				Humanities/Social Science Elective	3			
Mechatronics Selective	3				Technical Elective	3			
<b>IET 45100</b> or TLI 33400 engineering economics	3				Free Elective	1			
<b>TOTAL CREDIT HOURS</b>	<b>15</b>				<b>TOTAL CREDIT HOURS</b>	<b>13</b>			

Refer to the 2016 MFET Mechatronics Engineering Technology supplemental Information form for options for elective, selectives, and pre-requisites.

\*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 the Purdue University location conferring the degree.

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\*\*\*\*\* Updated 5/27/2016

**2016 MFET SUPPLEMENTAL INFORMATION**  
**Mechatronic Engineering Technology Major (MHET)**

**All prerequisites must be met.**

**Bold indicates courses offered at New Albany Campus.**

**\*Indicates IU Southeast course for New Albany Campus only (See Student Services Coordinator for availability.)**

**FRESHMAN COMPOSITION**

ENGL 10600 (**\*ENG-W131**)

ENGL 10800 Accelerated First-Year Composition

**COMPUTER GRAPHICS SELECTIVE**

**CGT 11000** Technical Graphics Communications

IT 10500 Intro to Engineering Design

**CGT 16300** Graphical Communication and Spatial Analysis

**TECHNICAL SELECTIVE**

A 300-400 level CGT, ECET, MET, MFET, TLI elective IET course.

FNR 30100 Wood Products/Wood Processes

MGMT 45500 (**\*BUS-L201**) Legal Background for Business

**OLS 28400** Leadership Principles

**STATISTICS OR QUALITY SELECTIVE**

STAT 30100 (**\*MATH-K300**) Elementary Statistical Methods

**IT 34200** Introduction to Statistical Quality

**PHYSICS SELECTIVE**

**PHYS 21800** (**\*PHYS-P201**) General Physics I

PHYS 22000 (**\*PHYS-P221**) General Physics

PHYS 17200 Modern Mechanics

**SCIENCE SELECTIVE**

BIOL 11000 (**\*BIOL-L100**) Fundamentals of Biology I

BIOL 20300 Human Anatomy and Physiology

CHM 11200 (**\*CHEM-C102**) General Chemistry II

PHYS 21900 (**\*PHYS-P202**) General Physics II

PHYS 22100 (**\*PHYS-P222**) General Physics

PHYS 24100 Electricity and Optics

**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 Adv Projects in Automation, Robotics and Mechatronics

**MANUFACTURING SELECTIVE**

AT 27200 Intro to Composite Technology

AT 30800 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

**MET 30200** CAD in the Enterprise

**MET 45100** Manufacturing Quality Systems

MFET 29200 Projects In Automation, Robotics And Mechatronics

MFET 34200 Advanced Manufacturing Processes and Practices

MFET 34800 Industrial Robotics and Motion Control

MFET 39200 Advanced Projects In Automation, Robotics And Mechatronics

MFET 44600 Advanced Manufacturing Operations

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

**\*ENG-L104, FINA-F100, FINA-H100, HIST-H105, HIST-H106, MUS-M174, EALC-J101**

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

**\*POLS-Y103, PSY-P101, SOC-S163**

**HUMANITIES/SOCIAL SCIENCE ELECTIVE:** any 2XXXX course or higher in PSY, SOC, HIST, **ECON**, MUS, POL, PHIL, REL, ANTH, a foreign language