

School of Engineering Technology-Kokomo	Name:
Major: Mechatronics Engineering Technology (	MHET)

MFET-BS Suggested Arrangement of Courses

Catalog Term: PUID: For Catalog Terms beginning in Fall 2020

Major Code: MHET Program Code: PIMFET-BS

Accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org

Fall 1 <sup>st</sup> Year	CR	GR	Fulfilled by	Spring 1st Year	CR	GR	Fulfilled by
Materials and Processes Selective	3			TECH 12000 - Design Thinking in	3		
				Technology			
MA 16010 Applied Calculus I (Prereq: ALEKS score of 75)	3			MA 16020 Applied Calculus II (Prereq: MA 16010 with a grade of C- or better)	3		
ENGT 18000 ENG Tech Foundations (Pre-req: ALEKS 60, SAT 570, ACT 24, or MA 15300 or higher)	3			MET 11100 Applied Statics (Prereqs: ENGT 18000)	3		
ENGT 18100 ENG Tech Applications (pre or concurrent with ENGT 18000)	1			ECET 17900 Intro to Digital Systems (Prereqs: ENGT 18000 +18100 and CNIT 10500)	3		
CNIT 10500 Intro to C Programming	3			Humanities Foundation Selective*	3		
Freshman Composition Selective*	3						
TOTAL CREDIT HOURS	16			TOTAL CREDIT HOURS	15		

Fall 2 <sup>nd</sup> Year	CR	GR	Fulfilled by	Spring 2 <sup>nd</sup> Year	CR	GR	Fulfilled by
ECET 22400 Electronic Systems (Prereq: MA 16010)	3			MET 10200 Production Specifications (Preregs: CGT Selective and ENGT 18000)	3		
Physics Selective*	4			ECET 27900 Embedded Digital Systems (Prereq: ECET 17900)	3		
MET 11300 Mechanics Applications (Prereq: MET 11100)	1			MET 28400 Intro to Industrial Controls (Prereg: ECET 22400)	3		
MET 24500 Manufacturing Systems (Prereqs: (MET 14300 or MET 14400) and Computer graphics selective)	3			MET 23000 Fluid Power (Preregs: (MET 11100 or PHYS 22000) and MA 16010)	3		
Computer Graphics Selective	2			Freshman Speech Selective* +	3		
CHM 11100 General Chemistry*	3						
TOTAL CREDIT HOURS	16			TOTAL CREDIT HOURS	15		

Fall 3 <sup>rd</sup> Year	CR	GR	Fulfilled by	Spring 3 <sup>rd</sup> Year	CR	GR	Fulfilled by
Behavioral/Social Science Foundation Elective*	3			MFET 37400 Mfg Integration I (Prereq: MET 28400)	3		
MFET 34400 Automated Mfg Processes (Prereq: MET 24500)	3			ECET 38001 Global Professional Issues in Engineering Technology	3		
Technical Writing Selective +	3			ECET 32700 Instrument & DAQ Design (Prereqs: ECET 22400, MA 16010, PHYS Sel.)	3		
ECET 33700 Analog Signal Processing (Prereq: ECET 22400 + MA 16020)	3			Manufacturing Selective	3		
Science Selective*	3			Statistics or Quality Selective	3		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Fall 4 <sup>th</sup> Year	CR	GR	Fulfilled by	Spring 4 <sup>th</sup> Year	CR	GR	Fulfilled by
Capstone Selective I	3			Capstone Selective II	3		
				(Prereq: Capstone Selective I)			
Communications Selective +	3			MET 38200 Controls/Instr for Automation (Prereq: MET 28400)	3		
Humanities/Social Science Elective	3			Controls Selective	3		
Mechatronics Selective	3			Free Elective	3		
IET 33400 Economic Analysis for	3			Free Elective	1		
Technology Systems							
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	13		

<sup>\*</sup>Fulfills University core.

- 1. 120 semester credits and a 2.0 Graduation GPA are required for the Bachelor of Science degree.
- 2. Students must earn a "D-" or better in all courses.
- 3. Courses at Purdue University may only be attempted a maximum of three (3) times, including W, WF, I, IF and all graded attempts.
- 4. 32 credit hours of 300-level or higher courses must be completed at Purdue University.

5.	Complete a Professional Requirement. —	Complete an Intercultural Requirement. ——
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The student is ultimately responsible for knowing and completing all degree requirements. myPurduePlan is knowledge source for specific requirements and completion. 

## Polytechnic Kokomo

## 2020-2021 MECHATRONICS ENGINEERING TECHNOLOGY SUPPLEMENTAL INFORMATION All prerequisites must be met.

FRESHMAN COMPOSITION SELECTIVE+

ENGL 10600 First-Year Composition SCLA 10100 Transformative Text, Critical Thinking and

ENGL 10800 Accelerated First-Year Composition Communication I: Antiquity to Modernity

FRESHMAN SPEECH SELECTIVE+

COM 11400 Fundamentals Of Speech Communication SCLA 10200 Transformative Texts, Critical Thinking And

Communication II: Modern World

COMMUNICATIONS SELECTIVE+

COM 41500 Discussion Of Technical Problems COM 31500 Speech Communication Of Technical Information

**COM 32000 Small Group Communication** EDPS 31500 Collaborative Leadership: Interpersonal Skills

**MATERIALS & PROCESSES SELECTIVE** 

MET 14300 Materials & Processes I MET 14400 Materials & Processes II

**TECHNICAL WRITING SELECTIVE+** 

**ENGL 42100 Technical Writing** ENGL 42400 Writing For High Technology Industries

**COMPUTER GRAPHICS SELECTIVE** 

**CGT 11000 Technical Graphics Communications** ENGT 10500 Intro to Engineering Design

CGT 16300 Graphical Communication and Spatial Analysis

STATISTICS OR QUALITY SELECTIVE

STAT 30100 Elementary Statistical Methods TLI 31600 Statistical Quality Control

PHYSICS SELECTIVE

**PHYS 22000 General Physics** PHYS 17200 Modern Mechanics

**SCIENCE SELECTIVE** 

BIOL 11000 Fundamentals of Biology I CHM 11600 General Chemistry PHYS 22100 General Physics **BIOL 20300 Human Anatomy and Physiology** CHM 11200 General Chemistry II PHYS 24100 Electricity and Optics

**CONTROLS SELECTIVE** 

**ECET 27400 Wireless Communications** MET 43600 Pneumatic Motion Control Systems

ECET 35901 Computer Based Data Acquisition Applications MET 48200 Mechatronics

ECET 36900 Applied Computer Vision Sensing & Automation MFET 29200 Projects in Automation, Robotics, and Mechatronics

MET 33400 Advanced Fluid Power

MFET 39200 Advanced Projects In Automation, Robotics, and

MET 38200 Controls and Instrumentation for Automation Mechatronics

MET 43200 Hydraulic Motion Control Systems

**MECHATRONICS SELECTIVE** 

MET 43200 Hydraulic Motion Control Systems MFET 29200 Projects In Automation, Robotics And Mechatronics

MET 43600 Pneumatic Motion Control Systems MFET 34800 Advanced Industrial Robotics

MET 48200 Mechatronics MFET 39200 Advanced Projects In Automation, Robotics, And

MET 58100 Design for Mechatronics Mechatronics

MANUFACTURING SELECTIVE

AT 27200 Introduction To Composite Technology **ECET 27400 Wireless Communications** 

AT 30802 Aircraft Materials Processes ECET 36900 Applied Computer Vision Sensing & Automation

AT 47200 Advanced Composite Technology MET 30200 CAD In The Enterprise

CGT 32600 Graphics Standards For Product Definition MET 33400 Advanced Fluid Power

CGT 42300 Product Data Management MET 34600 Advanced Materials In Manufacturing

CGT 42600 Industry Applications Of Simulation And Visualization MET 34900 (Stringed Instrument Design and Manufacture

ECET 27000 Electronics Prototype Development/Construction MET 43200 Hydraulic Motion Control Systems MET 43600 Pneumatic Motion Control Systems
MET 45100 Manufacturing Quality Systems
MFET 24800 Introduction to Robotics
MFET 29200 Projects in Automation, Robotics, and Mechatronics
MFET 34800 Industrial Robotics and Motion Control
MFET 39200 Advanced Projects In Automation, Robotics, and
Mechatronics

MFET 49900 (Technology, Innovation and Culture in Bavaria (Study Abroad)
MGMT 45500 Legal Background For Business I
OLS 28400 Leadership Principles

TLI 33620 Total Productive Maintenance
TLI 44275 Global Transportation And Logistics Management

## **CAPSTONE SELECTIVE I**

ECET 43000 Electrical And Electronic Product And Program Management ECET 43100 International Capstone Project Planning And Design ENGT 40500 Entrepreneurial Capstone I MET 40100 Capstone Projects I MFET 48000 Project Planning For Integration

## **CAPSTONE SELECTIVE II**

ECET 46000 Project Design And Development ECET 46100 International Capstone Project Execution ENGT 40600 Entrepreneurial Capstone II MET 40200 Capstone Projects II MFET 48100 Integration Of Manufacturing Systems

HUMANITIES FOUNDATION SELECTIVE: 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, HIST, ECON, POL, ENGL Lit, PHIL, REL, ANTH, a foreign language, AD 22600, AD 22700, AD 25100, AD 25500, AD 30701, AD 31100, AD 31200, MUS 25000, MUS 37400, MUS 37600, MUS 37800, MUS 38100, MUS 38200

FREE ELECTIVE: Any non-remedial course

+ denotes optional course for Cornerstone Certificate.