



Kokomo School of Engineering Technology Name: _____

Major: Mechatronics Engineering Technology (MHET)

MFET-BS Suggested Arrangement of Courses Catalog Term: _____ PUID: _____

For Catalog Terms beginning in Fall 2019

Major Code: MHET Program Code: PIMFET-BS

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

Fall 1 st Year	CR	GR	Fulfilled by	Spring 1 st Year	CR	GR	Fulfilled by
Materials and Processes Selective	3			Freshman Composition Selective*	3		
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		
TECH 12000 - Design Thinking in Technology	3			MET 11100 Applied Statics (Prereqs: ENGT 18000)	3		
ENGT 18000 ENG Tech Foundations	3			Humanities Foundation Selective*	3		
ENGT 18100 ENG Tech Applications	1			ECET 17900 Intro to Digital Systems	3		
CNIT 10500 Intro to C Programming	3						
TOTAL CREDIT HOURS	16			TOTAL CREDIT HOURS	15		

Fall 2 nd Year	CR	GR	Fulfilled by	Spring 2 nd Year	CR	GR	Fulfilled by
ECET 22400 Electronic Systems (Prereq: MA 16010)	3			MET 10200 Production Specifications (Prereqs: CGT Selective and ENGT 18000)	3		
COM 11400 Fund of Speech Communication*	3			ECET 27900 Embedded Digital Systems (Prereq: EET 17900)	3		
MET 11300 Mechanics Applications (Prereq: MET 11100)	1			MET 28400 Intro to Industrial Controls (Prereq: ECET 22400)	3		
MET 24500 Manufacturing Systems (Prereqs: (MET 14300 or MET 14400) and Computer graphics selective)	3			Behavioral/Social Science Foundation Elective*	3		
Computer Graphics Selective	2			Physics Selective*	4		
CHM 11100 General Chemistry*	3						
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	16		

Fall 3 rd Year	CR	GR	Fulfilled by	Spring 3 rd Year	CR	GR	Fulfilled by
ECET 33700 Analog Signal Processing (Prereq: ECET 22400 + MA 16020)	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		
ENGL 42100 Technical Writing (Prereq: ENGL 10600)	3			ECET 32700 Instrument & DAQ Design (Prereqs: ECET 22400, MA 16010, PHYS Sel.)	3		
MET 23000 Fluid Power (Prereqs: (MET 11100 or PHYS 22000) and MA 16010)	3			Statistics or Quality Selective	3		
Science Selective*	3			Manufacturing Selective	3		
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	15		

Fall 4 th Year	CR	GR	Fulfilled by	Spring 4 th Year	CR	GR	Fulfilled by
Capstone Selective I	3			Capstone Selective II	3		
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		
TLI 33400 Engineering Economics	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.
- Complete a Professional Requirement. Complete an Intercultural Requirement.

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

***** Updated 4/5/2019

KOKOMO 2019-2020 MECHATRONICS ENGINEERING TECHNOLOGY SUPPLEMENTAL INFORMATION

All prerequisites must be met.

**Bold indicates courses offered at the Kokomo Campus.
See Student Services Coordinator for course availability.**

FRESHMAN COMPOSITION SELECTIVE+

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

**SCLA 10100 Transformative Texts, Critical Thinking And
Communication I: Antiquity To Modernity
ENG-W131**

FRESHMAN SPEECH SELECTIVE+

COM 11400 Fundamentals Of Speech Communication
**SCLA 10200 Transformative Texts, Critical Thinking And
Communication II: Modern World**

SPCH-S121

MATERIAL AND PROCESSES SELECTIVE

MET 14300 Materials and Processes I
MET 14400 Materials and Processes II

COMPUTER GRAPHICS SELCTIVE

CGT 11000 Technical Graphics Communications
CGT 16300 Graphical Communication and Spatial Analysis
IT 10500 Intro to Engineering Design

COMMUNICATION SELECTIVE+

COM 31500 Speech Communication Of Technical Information
COM 32000 Small Group Communication
COM 41500 Discussion Of Technical Problems

EDPS 31500 Collaborative Leadership: Interpersonal Skills
SPCH-S223
SPCH-S229

TECHNICAL WRITINNG SELECTIVE+

ENGL 42100 Technical Writing
ENGL 42400 Writing For High Technology Industries

ENG-W321

STATISTICS OR QUALITY SELECTIVE

STAT 30100 Elementary Statistical Methods
IT 34200 Introduction To Statistical Quality

TLI 31600 Statistical Quality Control

PHYSICS SELECTIVE

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
CHM 11600 General Chemistry
PHYS 21900 General Physics II

PHYS 22100 General Physics
PHYS 24100 Electricity and Optics
PHYS-P202 or PHYS-P222
CHEM-C102
BIOL-L100

MECHATRONICS SELECTIVE

MET 43200 Hydraulic Motion Control Systems
MET 43600 Pneumatic Motion Control Systems
MET 48200 Mechatronics
MET 58100 Design for Mechatronics

MFET 29200 Projects In Automation, Robotics And Mechatronics
MFET 34800 Advanced Industrial Robotics
MFET 39200 Advanced Projects In Automation, Robotics, And
Mechatronics

CONTROLS SELECTIVE

ECET 27400 Wireless Communications

ECET 35901 Computer Based Data Acquisition Applications

ECET 49900 Appl Comp Vision Sensng & Auto

MET 33400 Advanced Fluid Power

MET 38200 Controls And Instrumentation For Automation

MET 43200 Hydraulic Motion Control Systems

MET 43600 Pneumatic Motion Control Systems

MET 48200 Mechatronics

MFET 29200 Projects in Automation, Robotics, and Mechatronics

MFET 39200 Advanced Projects In Automation, Robotics, and Mechatronics

MANUFACTURING SELECTIVE

AT 27200 Introduction To Composite Technology

AT 30802 Aircraft Materials Processes

AT 47200 Advanced Composite Technology

CGT 32600 Graphics Standards For Product Definition

CGT 42300 Product Data Management

CGT 42600 Industry Applications Of Simulation And Visualization

ECET 27400 Wireless Communication

ECET 49900 Appl Comp Vision Sensing & Automation

IT 38100 Total Productive Maintenance

IT 43400 Global Transportation And Logistics Management

IT 44200 Production Planning

IT 48300 Facility Design For Lean Manufacturing

MET 30200 CAD In The Enterprise

MET 33400 Advanced Fluid Power

MET 34600 Advanced Materials In Manufacturing

MET 34900 (Stringed Instrument Design and Manufacture

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 SELECTIVES 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 SELECTIVES 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>

HIST-H105, HIIST-H106, HIST-H113, HIST-H114, PHIL-P100, PHIL-P140, FINA-A101, FINA-A102, MUS-M174, SPAN S100-400, FREN-F100-400, GER-G100-400

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

ANTH-A104, ECON-E201, ECON-E202, POLS-Y103, PSY-P103, SOC-S100

HUMANITIES/SOCIAL SCIENCE ELECTIVE: any 2xxxx course or higher in PSY, SOC, HIS, ECON, POL, English Literature, PHIL, REL, ANTH, or a foreign language

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

+ denotes optional course for Cornerstone Certificate.

PROFESSIONAL REQUIREMENT

The SOET Professional Experience requirement is intended to document those experiences which help expose SOET students to the expectations of their professional prior to graduation. This may occur through industrial experience, technical or administrative involvement with community service, military service, et cetera. Approval has been granted for the following experiences. Additional experiences may also satisfy this graduation requirement. Requests for approval should be submitted to the SOET Curriculum Subcommittee Chair for consideration, allowing at least four academic weeks for review and response.

Approved Professional Requirement Experiences

Approval by	Experience
Automatic	Any TECH Professional Practice course (co-op, intern, etc.)
Automatic	MET 29900 Internship for Credit
Automatic	EPICS courses, minimum of two
Advisor	Any approved internship (assuming student and/or employer provide documentation)
Advisor	Military service (ROTC completion, reservist, active duty, veteran)
Faculty	Supervised undergraduate research experiences or laboratory assistantships (e.g., employed in the AEL as lab technician)
Faculty	Independent study – by petition to ensure the project meets the spirit of the requirement
Faculty	Professional society/club activities (e.g., led the Solar Racing team) - by petition
Faculty	Any approved employment or industry project

* Approval Key:

- Automatic – student participation in this professional experience is already documented through existing means.
- Advisor – advisor reviews student’s experience to determine if it meets the spirit of the Professional Experience requirement.
- Faculty – designated committee reviews student’s experience to determine if it meets the spirit of the Professional Experience requirement

INTERCULTURAL REQUIREMENT

Step 1: Complete the Pre-test Intercultural Development Inventory Assessments (1st year)

Step 2: Complete one (1) of the following global experiences:*

- Participate in A Purdue University international capstone, collaborative project, or
- Participate in an international internship (international location), or
- Participate in a full semester abroad program, or

Complete 3 credit hours from the Polytechnic list of recommended Global/Cultural courses.

Step 3: Complete the Post-test Intercultural Development Inventory Assessments (4th year)

NOTE FOR TRANSFER/CODO STUDENTS: Transfer and CODO students with less than 75 credit hours remaining to completed their Polytechnic Plan of Study are exempt from Step 1 (taking the IDI Pre-test).

*Global experiences must take place during the time of enrollment in Polytechnic to complete Step 2. Experiences taken place prior to a student's initial enrollment will not serve to complete Step 2. Intercultural competencies gained on experiences prior to Polytechnic enrollment will be captured as baseline data on a student's IDI.

AAS 27100	Intro to African American Studies	HIST 35000	Science and Society in the 20th-Century World
AAS 37300	Variable Title: History of Injustice	HIST 36600	Hispanic Heritage of the USA
AGR 20100	Communication Across Cultures	HIST 37700	History & Culture of Native America
ANSC 38100	Leadership for a Diverse workplace	HIST 46900	Black Civil Rights Movement
ANTH 20300	Biological Bases of Human Social Behavior	HIST 47900	American Representations of Middle East & North Africa
ANTH 20500	Human cultural Diversity	HIST 49900	History of Sexual Regulation in the United States
ANTH 21000	Technology and Culture	HTM 37000	Sustainable Tourism and Responsible Travel
ANTH 21200	Culture, Food and Health	HTM 37200:	Global Tourism Geography
ANTH 23000	Gender Across Cultures	MSL 20100	Individual Leadership Studies
ANTH 34000	Global Perspectives on Health	OLS 35000	Creativity In Business & Industry
ANTH 34100	Culture and Personality	PHIL 11400	Global Moral Issues
ANTH 37900	Native American Cultures	PHIL 43500	Philosophy of Mind
ARAB 28000	Arabic culture	POL 22200	Women, Politics & Public Policy
ASAM 24000	Intro to Asian American Studies	POL 23500	Rich and Poor Nations
AT 23300	Ethics and Aviation	POL 32600	Black Political Participation in America
COM 22400	Communicating in the Global Workplace	POL 32700	Global Green Politics
COM 30300	Intercultural Communication	POL 36000	Women and the Law
COM 32000	Small Group Communication	POL 41300	The Human Basis of Politics
COM 37300	Self-Presentation & Social Image	POL 42300	International Environmental Policy
COM 38000	Sociolinguistic Study of African American English	POL 42900	Variable Title: It's a Complex World (Cross listed with IE49000, ME29700)
COM 38000	Sociolinguistic Study of African American English		
COM 41200	Theories of Human interaction	POL 43300	International Organization
COM 42300	Leadership, Communication & Organizations	PSY 25000	Psychology of Adjustment
ECET 29000	International Experience	PSY 25100	Health Psychology
ECET 38001	Global Professional Issues in ET	PSY 28500	Consumer Behavior
EDPS 23500	Learning and Motivation	PSY 32200	Research Design
EDPS 30000	Student Leadership Development	SOC 10000	Intro to Sociology
EDPS 30100	Peer Counselling Training	SOC 31000	Racial and Ethnic Diversity
EDPS 31500	Collaborative Leadership: Listening	SOC 33900	Introduction to Sociology of Developing Nations
EDPS 31600	Collaborative Leadership: Cross-cultural Settings	TECH 33000	Technology and the Global Society
EDPS 31700	Collaborative Leadership: Mentoring	WGSS 28200	Intro to LGBT Studies
ENGL 41400	Literature & Culture	WGSS 38000	Gender and Multiculturalism
HDFS 23300	Stress and Human Health	WGSS 38300	Women and Work
HDFS 28000	Diversity in Individual and Family Life		Any foreign language 200 or higher (201, 202, 301, 302, 401, 402)
HDFS 33200	Stress & Coping in Contemporary Families	PSY-P103	General Psychology
HEBR 38500	The Holocaust in Modern Hebrew Literature	SOC-S100	Introduction to Sociology
HIST 19500	Historical Research & Film!	SPCH-S229	Discussion and Group Methods
HIST 30000	Eve of Destruction: Global Crises and World Organization in the 20th Century	SPCH-S223	Business and Professional Communication
HIST 33805	History of Human Rights	CNIT 32000	Policy, Regulation, and Globalization in information Technology
		TLI 11200	Foundations of Tech. Leadership