PURDUE UNIVERSITY

Manufacturing Engineering Technology
Concentration in Mechatronics
College of Technology

TMFET-BS
MFET
120-cr for graduation
"D-" or better required in all major courses

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) MET 28400 – Introduction to Industrial Controls
_____ (3) MET 38200 – Controls and Instrumentation for Automation
_____ (3) MFET 34400 – Automated Manufacturing Processes
_____ (3) MFET 34800 – Industrial Robots and Motion Control
_____ (3) MFET 37400 – Manufacturing Integration

MFET Selectives – (10 credits)

_____ (3) Mechatronics Selective
_____ (3) Technical Elective
_____ (4) Free Elective

Other Departmental/Program Course Requirements (78 credits)

_____ (3) COM 11400 - Fundamentals of Speech Communication *(satisfies Oral Communication for core)*
_____ (3) ENGL/COM Selective
_____ (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 17900 – Introduction to Digital Systems
_____ (3) ECET 22400 – Electronic Systems
_____ (3) ECET 22700 – DC and Pulse Electronics
_____ (3) ECET 29700 – Embedded Digital Systems
_____ (3) ECET 32700 – Instrumentation and DAQ Design
_____ (3) ECET 38001 --- Global/Professional Issues
_____ (3) ECET 43000 – Electronics Product and Program Management
_____ (3) ECET 46000 – Project Design and Development
_____ (3) CNIT 10500 – Introduction to C Programming
_____ (3) CHM 11100 – General Chemistry
_____ (4) PHYS Selective (choose from PHYS 218, PHYS 220, PHYS 172) *(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) General Education Human Cultures: Humanities Selective *(satisfies Human Cultures Humanities for core)*
_____ (3) General Education Human Cultures: Behavior/Social Sciences *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 301 or IT 342)

University Core Requirements

Human Cultures: Behavioral/Social Sciences	☐ _____	*Science*	☐ _____
Human Cultures: Humanities	☐ _____	*Science*	☐ _____
Information Literacy	☐ _____	*Science, Technology & Society*	☐ _____
Oral Communication	☐ _____	*Written Communication*	☐ _____
Quantitative Reasoning	☐ _____		

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

Degree Works is the knowledge source for specific requirements and completion.

PURDUE UNIVERSITY

School of Engineering Technology Name: _____
Major: Manufacturing Engineering Technology (MFET)
Concentration in Mechatronics
MFET-BS Suggested Arrangement of Courses Catalog Term: _____ PUID: _____

For Catalog Terms beginning in Fall 2014
Major Code: MFET Program Code: TMFET-BS

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

Fall 1st Year	CR	GR	Sem	Fulfilled by	**Spring 1st 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				MA 16010 Applied Calculus I (Prereq: ALEKS score of 75 or C- in MA 15800))	3			
Freshman Composition Selective*	3				COM 11400 Fund of Speech Communication*	3			
TECH 12000 Design Thinking in Tech.*	3				Humanities Elective*	3			
Free elective	1				ECET 22400 Electronic Systems (Prereq: MA 15300 or MA 16010)	3			
					MET 16200 Computational Analysis	1			
TOTAL CREDIT HOURS	**13**				**TOTAL CREDIT HOURS**	**16**			

Fall 2nd Year	CR	GR	Sem	Fulfilled by	**Spring 2nd Year**	CR	GR	Sem	Fulfilled by
ECET 22700 DC and Pulse Electronics (Prereqs: MA 16010 and ECET 22400)	3				MET 10200 Production Specifications (Prereqs: CGT Selective 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 Calculus/Diff Eqns (Prereq: MA 16010 with a grade of C- or better)	3				MET 24500 Manufacturing Systems (Prereqs: (CGT 11000 or CGT 16300) and (MET 14300 or MET 14400))	3			
Behavioral/Social Science Elective*	3				MET 28400 Intro to Industrial Controls (Prereq: ECET 22400)	3			
Computer Graphics Selective	2				CNIT 10500 Intro to C Programming	3			
					Physics Selective*	4			
TOTAL CREDIT HOURS	**14**				**TOTAL CREDIT HOURS**	**17**			

Fall 3rd Year	CR	GR	Sem	Fulfilled by	**Spring 3rd Year**	CR	GR	Sem	Fulfilled by
ECET 17900 Intro to Digital Systems (Prereqs: ECET 22400 and CNIT 10500)	3				ECET 27900 Embedded Digital Systems (Prereq: EET 17900)	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				MET 38200 Controls/Instr for Automation (Prereq: MET 28400)	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 4th Year	CR	GR	Sem	Fulfilled by	**Spring 4th Year**	CR	GR	Sem	Fulfilled by
ECET 43000 Elect Product & Prog Mgmt (Prereq: ECET 38001)	3				ECET 46000 Project Design and Development (Prereq: ECET 43000)	3			
ECET 32700 Instrument & DAQ Design (Prereqs: ECET 22400, MA 16010, PHYS Sel.)	3				Technical Selective	3			
MFET 34800 Ind Robots/Motion Ctrl (Prereq: MET 28400)	3				Humanities/Social Science Elective	3			
Mechatronics Selective	3				English/Communication Selective	3			
IET 45100 or TLI 33400 Monetary Analysis for Industrial Decisions	3				Free Elective	3			
TOTAL CREDIT HOURS	**15**				**TOTAL CREDIT HOURS**	**15**			

Refer to _____ for a complete list of requirements, options for selectives and pre-requisites.

*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.

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********** *Updated 5/27/2014*