

## 2017-2018 MFET 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

IT 10500 Intro to Engineering Design

CGT 16300 Graphical Communications and Spatial Analysis

#### TECHNICAL SELECTIVE

- any 2xxxx or higher ECET course which is not currently required on the plan of study.

CGT 32600 Graphics Standards For Product Definition

IT 48300 Facility Design For Lean Manufacturing

CGT 42300 Product Data Management

MET 30200 CAD In The Enterprise

CGT 42600 Industry Applications Of Simulation And Visualization

MET 33400 Advanced Fluid Power

FNR 30110 Sustainable Forest Products Manufacturing

MET 34600 Advanced Materials In Manufacturing

IT 33000 Industrial Sales And Sales Management

MET 43200 Hydraulic Motion Control Systems

IT 34500 Automatic Identification And Data Capture

MET 43600 Pneumatic Motion Control Systems

IT 35100 Advanced Industrial Safety And Health Management

MGMT 45500 Legal Background For Business I

IT 38100 Total Productive Maintenance

OLS 28400 Leadership Principles

IT 43400 Global Transportation And Logistics Management

TLI 31300 Tech Integration:Bar Codes to Biometrics

IT 44200 Production Planning

TLI 33620 Total Productive Maintenance

TLI 44275 Global Transportation And Logistics Management

#### STATISTICS OR QUALITY SELECTIVE

STAT 30100 Elementary Statistical Methods

TLI 31600 Statistical Quality Control

#### PHYSICS SELECTIVE

PHYS 21800 General Physics

PHYS 17200 Modern Mechanics

PHYS 22000 General Physics

#### SCIENCE SELECTIVE

BIOL 11000 Fundamentals of Biology I

PHYS 21900 General Physics II

BIOL 20300 Human Anatomy and Physiology

PHYS 2210 General Physics

CHM 11200 General Chemistry II

PHYS 24100 Electricity and Optics

CHM 11600 General Chemistry

#### MECHATRONICS SELECTIVE

MET 43200 Hydraulic Motion Control Systems

MET 58100 Design for Mechatronics

MET 43600 Pneumatic Motion Control Systems

MFET 34800 Advanced Industrial Robotics

MET 48200 Mechatronics

#### CONTROLS SELECTIVE

MET 33400 Advanced Fluid Power

MFET 29200 Projects in Automation, Robotics, and Mechatronics

MET 43600 Pneumatic Motion Control Systems

MFET 39200 Advanced Projects in Automation, Robotics, and Mechatronics

MET 43200 Hydraulic Motion Control Systems

TLI 31300 Tech Integration:Bar Codes to Biometrics

MET 48200 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 49900 Applied Comp Vision Sensing & Auto  
 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 45100 Manufacturing Quality Systems  
 MFET 29200 Projects in Automation, Robotics, and Mechatronics  
 MFET 39200 Advanced Projects in Automation, Robotics, and Mechatronics  
 TLI 33620 Total Productive Maintenance  
 TLI 44275 Global Transportation And Logistics Management

**HUMANITIES FOUNDATIONAL SELECTIVE:** (6 credits) see <http://www.purdue.edu/provost/initiatives/curriculum/course.html>  
**BEHAVIORAL/SOCIAL SCIENCE FOUNDATIONAL SELECTIVE:** see <http://www.purdue.edu/provost/initiatives/curriculum/course.html>

**HUMANITIES/SS ELECTIVE:**

Any 2xxxx or higher course in Psychology, Sociology, English, History, Political Science, Philosophy, Anthropology, Economics, or a foreign language. Art history, art appreciation, music appreciation or theater appreciation are acceptable.

**FREE ELECTIVE:** Any non-remedial course

**Intercultural Requirement**

All students must complete the School of Engineering Technology (Polytechnic) Growth Plan for Global Awareness and Intercultural Competency at the Developmental Level (see below). Students who are interested in further developing their Global Awareness and Intercultural Competency are encouraged to complete the requirement at the Emerging Level or the Proficient Level (see advisor for more information).

**Polytechnic Growth Plans for Global Awareness & Intercultural Competency**

Intercultural Growth Plan #1	Developmental Level Competency
Assessment	___ Complete the Pre- and Post-Intercultural Development Inventory Assessments (1st year and 4th year) ___ Complete the pre- and post- BEVI (1st and 4th years)
	___ Complete one of the following Intercultural Knowledge and Effectiveness components below: (This list will be reviewed and updated each year) <ul style="list-style-type: none"> <li>· Crosswalk Commons (residential living Experience for a minimum of one semester)</li> <li>· Serve as a BGRI Program leader</li> <li>· PUPIL (Purdue University Passport to Intercultural Learning) (Obtain at least two badges)</li> <li>· Participate in two (2) Boiler Out Program Activities</li> <li>· Participate in Host-a-Boiler</li> </ul>
	Complete one of the following: <ul style="list-style-type: none"> <li>· An international project or collaborative project, or</li> <li>· An international internship, or</li> <li>· A Faculty-led Study Abroad program, or</li> <li>· Three credit hours of courses** from the Polytechnic list of approved of recommended Global/Intercultural courses. <i>**Must be in a category other than Increasing Self-awareness</i></li> </ul>

### Professional Requirement

The SOET Professional Experience requirement is intended to document those experiences which help expose SOET students to the expectations of their profession 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.

**Table 1: Approved Professional Experiences**

Approval by	Experience
Automatic	Any TECH Professional Practice course (co-op, intern, etc.)
Automatic	MET 29900 Internship for Credit
Automatic	Industry-sponsored senior capstone
Automatic	EPICS courses, minimum of two
Automatic	Lab Assistant (satisfactory completion of a minimum of one lab division for one term; e.g., ECET 29900 or MET 39200)
Advisor	Any approved internship (assuming student and/or employer provide documentation)
Advisor	Military service (ROTC, reservist, active duty, veteran)
Faculty	Other undergraduate research experiences (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