PURDUE UNIVERSITY

Name: _____

South Bend Engineering Technology (ET)
Concentration: Technology Integration
ET-BS Suggested Arrangement of Courses

Catalog Term: _____ PUID: _____

For Catalog Term beginning in fall 2019
Major Code: ENGT Program Code: SoET-ET-BS

Fall 1st Year	CR	GR	Sem	Fulfilled by	**Spring 1st Year**	CR	GR	Sem	Fulfilled by
Written Communication Foundation Selective* – **ENG-W 131** (IUSB)	3				Programming Selective	3			
ENGT 18000 – Engineering Technology Foundations	3				MA 16010 Applied Calculus I (P: MA 15800 with grade of C- or better or ALEKS score 75)	3			
ENGT 18100 – Engineering Technology Applications	1				Humanities Foundation Selective*	3			
MA 15800* - Precalculus – Functions & Trigonometry (P: ALEKS score 60)	3				PHYS 22000 General Physics* **PHYS-P 221 or 201** (IUSB)	5			
MET 14300 – Materials & Processes I OR MET 14400 Materials & Processes II	3				COM 11400 Fundamental of Speech Communication* - **SPCH-S 121** (IUSB)	3			
TECH 12000 Design Thinking in Tech.*	3								
TOTAL CREDIT HOURS	**16**				**TOTAL CREDIT HOURS**	**17**			

Fall 2nd Year	CR	GR	Sem	Fulfilled by	**Spring 2nd Year**	CR	GR	Sem	Fulfilled by
CGT 11000 – Technical Graphic Communications OR CGT 11600	3				MET 11100 Applied Statics (P: ENGT 18000 OR MA 15800 and MET 16200)	3			
ECET Selective	3				ECET Selective	3			
Humanities/Liberal Arts	3				Computer-Aided Design Selective	3			
Technical Selective	3				Lab Science Foundation Selective*	5			
TLI 11100 Introduction to Manufacturing & Supply Chain	3				TLI 11200 Foundation of Organizational Leadership	3			
TOTAL CREDIT HOURS	**15**				**TOTAL CREDIT HOURS**	**17**			

Fall 3rd Year	CR	GR	Sem	Fulfilled by	**Spring 3rd Year**	CR	GR	Sem	Fulfilled by
MET 24500 – Manufacturing Systems (P: MET 14300 OR 14400 and CGT 11000)	3				Technical Selective	3			
ENGL 42100 Technical Writing (P: ENGL 10600 or ENG-W 131 (IUSB))	3				Technical Selective	3			
Technical/Management Selective	3				Global/Professional Selective	3			
TLI 31600 Statistical Quality Control (P: MA 15800)	3				**ECON 21000 –** Principles of Econ - **ECON-E 103** Intro to Microeconomics (IUSB) or **ECON-E 104** Intro to Macroeconomics (IUSB)	3			
Advanced Oral Communication Selective	3				Technical Selective (30000- 40000 level)	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
Senior Capstone Project Selective I	3				Senior Capstone Project Selective II	3			
TLI 33400 Economic Analysis for Tech Systems (P: Math or Statistics)	3				Technical Selective (30000- 40000 level)	3			
Technical Selective (30000- 40000 level)	3				Technical Selective (30000- 40000 level)	3			
Technical Selective (30000- 40000 level)	3				Free Elective	3			
Free Elective	3				Global/Intercultural Requirement	0			
Professional Selective	0								
TOTAL CREDIT HOURS	**13**				**TOTAL CREDIT HOURS**	**12**			

*Fulfills University Core Requirement

1. 120 semester credits and a 2.0 Graduation GPA are required for the Bachelor of Science degree.
2. 32 credits of upper division courses (30000 level or higher) must be taken at the Purdue University location conferring the degree.
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. Complete the Global/Intercultural Requirement (ungraded) ☐
5. Complete the Professional Requirement (ungraded) ☐

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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.

********** *Updated 3/2019*

South Bend Engineering Technology Supplemental Information

All prerequisites must be met

WRITTEN COMMUNICATION SELECTIVE

ENGL 10600 First-Year Composition
ENGL 10800 Accelerated First Year Composition
SCLA 10100 Transformative Texts, Critical Thinking & Comm I: Antiquity to Modernity

ORAL COMMUNICATION SELECTIVE

COM 11400 Fundamental of Speech Communication
SCLA 10200 Transformative Texts, Critical Thinking & Comm II: Modern World

PROGRAMMING SELECTIVES

CNIT 10500 Introduction to C Programming
CNIT 15501 Introduction to Software Development Concepts
CNIT 17500 Visual Programming
MET 16400 Computing in Engineering Technology

ECET SELECTIVES

Select one two-course sequence from the table below.

ECET 17700 DAQ & Systems Control (P: ENGT 18000 & 18100)	AND	ECET 17900 Intro to Digital Systems (P: ENGT 18000, ENGT 18100 & CNIT 10500)
ECET 22400 Electronic Systems	AND	ECET 17900 Intro to Digital Systems (P: ENGT 18000, ENGT 18100 & CNIT 10500)
ECET 22400 Electronic Systems	AND	ECET 30201 Introduction to Industrial Controls (P: ECET 17700 or ECET 22400)
ECET 22400 Electronic Systems	AND	ECET 38501 (formerly ECET 38500) Intro to Automotive Electronics (P: ECET 22400 or 22700)

COMPUTER-AIDED DESIGN SELECTIVES

CGT 22600 Introduction to Constraint-based Modeling
MET 10200 Production Design and Specifications

TECHNICAL /MANAGEMENT SELECTIVES

Any Management (MGMT) course at the 200-level or higher

TECH 32000 Technology and the Organization	TLI 15200 Business Principles in Org Leadership
TLI 23100 Project Management	TLI 21400 Intro to Supply Chain Systems
TLI 25300 Principles of Technology Strategy	TLI 25400 Leading Change in Technology Organizations
TLI 31400 Leading Innovation in Org	TLI 43530 Operations Plan & MGMT
TLI 41400 Financial Analysis for Tech	Approved Study Abroad

GLOBAL/PROFESSIONAL SELECTIVES

ECET 38001 Global/Professional Issues in Electrical Engineering Technology	TECH 33000 Technology and the Global Society
TLI 35600 Global Technology Leadership	Approved Study Abroad

ADVANCED ORAL COMMUNICATION SELECTIVE

COM 32000 Small Group Communications
COM 30300 Intercultural Communication OR COM 31400 Adv. Presentational Speaking

TECHNICAL SELECTIVES

At least 15 credit hours must be at the 30000 level or above and at least 6 credit hours must be in the same discipline.
CGT 32300 Virtual Product Integration (P: CGT 22600)
CGT 32600 Graphics Standards for Product Definition (P: CGT 22600)
ECET 30201 Introduction to Industrial Controls (P: ECET 17700 or ECET 22400)
ECET 32100 Introduction to Nanotechnology (P: ECET 22700)
ECET 32700 Instrumentation and DAQ Design (P: Physics I and MA 16010)
ECET 38501 Intro to Automotive Electronics (P: ECET 27700 or ECET 22400) or ECET 38502 Intro to Automotive Electronics Lab
TLI 23500 Introduction to Lean and Sustainable Systems
TLI 31400 Leading Innovation in Organizations
TLI 31500 New Product Development (P: TLI 11200) or TECH 22000 Design Technology For People
TLI 33520 Human Factors for Technology Systems

TLI 33400 Economic Factors for Technology Systems (P: MA 15800 or STAT 30100 or Math-K 310) or IT 45000 Prod Cost Analysis
TLI 33610 Risk Analysis & Assessment or IT 38500 Industrial Ergonomics
TLI 33620 Total Production Maintenance (P: TLI 31600 or IT 34200 or STAT 301, & Physics I) or IT 38100 Total Productive Main
TLI 41400 Financial Analysis for Tech Systems (P:TLI 33400 or IT 45000 or MGMT 20010) or IT 43200 Financial Transaction Distrib
TLI 43530 Operations Planning and Management (P: MA 15800) or IT 44200 Production Planning
TLI 43540 Facilities Planning (P: MET 14300 or 14400, and TLI 43530) or IT 48300 Facilities Design Lean Manufacturing
TLI 43640 Lean Six Sigma (P:TLI 31600 or IT 34200) or IT 44600 Six Sigma Quality
TLI 45700 Technology Policy & Law
MET 30200 CAD in the Enterprise (P: MET 10200 and MET 24500)
MET 32000 Applied Thermodynamics (P: MET 22000 and MA 16010)
MET 38200 Controls & Instrumentation (P: MET 28400 and MA 16010)
MET 34600 Adv. Materials in Manufacturing (P: MET 24500, CHM 11100, and MET 21100)
MET 42100 Air Conditioning & Refrigeration (P: MET 32000 or MET 33000)
MET 43200 Hydraulic Motion Control (P: MET 23000 or MET 33000)
MET 43600 Pneumatic Motion Control (P: MET 23000 or MET 33000)
MET 45100 Manufacturing Quality Control (P: STAT 30100 or Math-K 310)
MFET 30000 Applications of Automation in Manufacturing (P: MET 24500 and ECET 22400)
MFET 34400 Automated Manufacturing Processes (P: MET 24500)
MFET 34800 Advanced Industrial Robotics (P: MFET 24800 and ECET 33700)
MFET 37400 Manufacturing Integration I (P: MET 28400)

HUMAN CULTURES HUMANITIES
See approved UCC Humanities list at: http://www.purdue.edu/provost/initiatives/curriculum/course.html

HUMANITIES/LIBERAL ARTS ELECTIVES
Any course from the following disciplines: Anthropology, English, History, Philosophy, Political Science, Psychology, Religious Studies, Sociology, Theatre, Women's Studies, or Foreign Languages (except native language courses)

LAB SCIENCE SELECTIVES
See approved UCC Science list: http://www.purdue.edu/provost/initiatives/curriculum/course.html

FREE ELECTIVES
Any non-remedial course offered for credit at the University not already required/being used on the Plan of Study.

SENIOR PROJECT CAPSTONE SELECTIVES
Select one two-course sequence from the table below.

Senior Capstone Project Selective I		**Senior Capstone Project Selective II**
ECET 43000 – Product/Project Management (Prerequisite: ECET 38001 & 9-12 cr. hrs. of coursework in technical focus area)	And	ECET 46000 – Project Design & Development
MET 40100 – Capstone Projects I (Prerequisites: MET 10200, MET 23000, MET 28400, MET 346000)	And	MET40200 – Capstone Projects II
MFET 48000 – Project Plan Integration (P: MFET 37400)		MFET 48100 Integration Manufacturing Systems (P: MFET 48000)
ECET 43000 –Product/Project Management (Prerequisite: ECET 38001 and 9-12 cr. hrs. of coursework in technical focus area)	And	MET 40200 – Capstone Projects II
ENGT 40500 – Entrepreneurial Capstone I (for entrepreneurial minor senior students only)	And	ENGT 40600 – Entrepreneurial Capstone II (for entrepreneurial minor senior students only)
ECET 43100 – International Capstone Plan	And	ECET 46100 International Capstone Project Execution
TECH 39900 Special Topics in Technology III	And	TECH 49900 Special Topics in Technology IV

GLOBAL/INTERCULTURAL REQUIREMENT
Completing the Global/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).

School of Engineering Technology (Polytechnic) Growth Plan for Global Awareness & Intercultural Competency

Intercultural Growth Plan	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) • Crosswalk Commons (residential living Experience for a minimum of one semester) • Serve as a BGRI Program leader • PUPIL (Purdue University Passport to Intercultural Learning) (Obtain at least two badges) • Participate in two (2) Boiler Out Program Activities • Participate in Host-a-Boiler
	__ Complete one of the following: • An international project or collaborative project, or • An international internship, or • A Faculty-led Study Abroad program, or • Three credit hours of courses** from the Polytechnic list of approved of recommended Global/Intercultural courses. ***Must be in a category other than Increasing Self-awareness*

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