

Major: Engineering Technology (ET)
Concentration in Technology Integration
ET-BS Suggested Arrangement of Courses

PITLI-ET-BS ENGT Catalog Term: 202010

CR GR Sem Fulfilled by CR Sem Fulfilled by Fall 1st Year Spring 1st Year MA 15800 PreCalculus - Functions & 3 MA 16010 Applied Calculus I 3 (Pre-req: MA 15800 with grade of C- or better or ALEKS score 75) Trigonometry* (Pre-reg ALEKS score 60) **ENGT 18000 Engineering Technology** 3 MET 11100 Applied Statics 3 (Pre-regs: MA 15800 and ENGT 18000) Foundations 1 **ENGT 18100 Engineering Technology** TLI 23500 Intro to Lean and Sust. Systems 3 [8Technical Selective] **Applications** SCLA 10100 – Transformative Texts, 3 SCLA 10200 – Transformative Texts, Critical 3 Critical Thinking & Communication I* Thinking & Communication II* [12Written Communication Selective*] [11Oral Communication Selective*] CGT 11000 Technical Graphic Comm. or 3 MET 14300 Materials & Processes I or 3 CGT 11600 Geom Model for Vis & Comm MET 14400 Materials & Processes II TECH 12000 Design Thinking in Tech.* 3 **TOTAL CREDIT HOURS** 16 **TOTAL CREDIT HOURS** 15

Fall 2 nd Year	CR	GR	Sem	Fulfilled by	Spring 2 nd Year	CR	GR	Sem	Fulfilled by
[³ Programming Selective]	3				MET 10200 Production Design & Specs. [¹Computer-Aided Design Selective]	3			
PHYS 22000 General Physics* *PHYS-P 201, 5 cr. (IUE)	4				*PHYS-P 202, 5 cr. (IUE) [6Lab Science Foundation Selective*]	4			
ECET 22400 Electronics Systems [2ECET Selective]	3				ECET 30201 Intro. to Industrial Controls {Pre-req: ECET 17700 or ECET 22400} [²ECET Selective]	3			
MET 24500 Manufacturing Systems (Pre-regs: MET 14400 & CGT 11000)	3				[10Humanities Foundation Selective*]	3			
TLI 11100 Intro to Mfg & Supply Chain	3				TLI 11200 Found'n of Organiz'l Leadership	3			
TOTAL CREDIT HOURS	16				TOTAL CREDIT HOURS	16			

Fall 3 rd Year	CR	GR	Sem	Fulfilled by	Spring 3 rd Year	CR	GR	Sem	Fulfilled by
TLI 31600 Statistical Quality Control or	3				TLI 43640 Lean Six Sigma or	3			
IT 34200 Intro to Statistical Quality					IT 44600 Six Sigma Quality				
(Pre-req: MA 15800)					[8Technical Selective (300- 400 level)]				
[8Technical Selective]	3				[8Technical Selective]	3			
[9Technical/Management Selective]	3				[4Global/Professional Selective]	3			
[⁷ Humanities/Liberal Arts Elective]	3				MET 213 Dynamics (Pre-regs: MA 16010 & MET 11100) [16Free Elective (200+level)]	3			
[16Free Elective (200+level)]	3				ECON 21000 Principles of Economics	3			
(*Apply excess Physics credits here)					*ECON-E 103 (IUE) or *ECON-E 104 (IUE)				
TOTAL CREDIT HOURS	15				TOTAL CREDIT HOURS	15			

Fall 4 th Year	CR	GR	Sem	Fulfilled by	Spring 4 th Year	CR	GR	Sem	Fulfilled by
TECH 39900 Special Topics in Tech III	3				TECH 49900 Special Topics in Tech IV	3			
[5Senior Capstone Project Selective I]					[5Senior Capstone Project Selective II]				
TLI 33400 Economic Anlys for Tech Systems or IT 45000 Production Cost Analysis (Pre-req: Math/Stat Selective)	3				COM 32000 Small Group Communication [Pre-req: SCLA 10200] [13Adv Oral Communication Selective]	3			
[8Technical Selective (300- 400 level)]	3				[8Technical Selective (300- 400 level)]	3			
[8Technical Selective (300- 400 level)]	3				[8Technical Selective (300- 400 level)]	3			
ENGL 42100 Technical Writing [Pre-req: SCLA 10100]	3								
TOTAL CREDIT HOURS	15				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. 2.0 Graduation GPA required for Bachelor of Science degree.
- 3. 32 credits of upper division courses (30000 level or higher) must be taken at the Purdue University location conferring the degree.
- 4. Courses at Purdue University may only be attempted a maximum of three (3) times, including W, WF, I, IF and all graded attempts.

5.	Complete a	Professi	ional I	Requ	ireme	nt	Com	plete a	an ⁴⁴In	iterci	ultura	l Requir	ement.	.Ш						
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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.

All prerequisites must be met

Bold indicates courses offered at Richmond location.

See Student Affairs Administrator for course availability.

*Indicates IUE courses for Richmond location only.

¹COMPUTER-AIDED DESIGN SELECTIVES

CGT 22600 Introduction to Constraint-based Modeling

MET 10200 Production Design and Specifications

²ECET SELECTIVES

Select one two-course sequence from the table below.

ECET 17700 DAQ & Systems Control	AND	ECET 17900 Intro to Digital Systems
(P: ENGT 18000 & 18100)		(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)

³PROGRAMMING SELECTIVES

CNIT 10500 Introduction to C Programming

CNIT 15500 Introduction to Object-Oriented Programming

CNIT 15501 Introduction to Software Development Concepts

CNIT 17500 Visual Programming

MET 16400 Computing in Engineering Technology

⁴GLOBAL/PROFESSIONAL SELECTIVES

ECET 38001 Global/Professional Issues in EET TECH 33000 Technology and the Global Society

TLI 35600 Global Technology Leadership Approved Study Abroad

⁵SENIOR PROJECT CAPSTONE SELECTIVES

Select one two-course sequence from the table below.

⁵ Senior Capstone Project Selective I		⁵ Senior Capstone Project Selective II
ECET 43000 – Product/Project Management	And	ECET 46000 – Project Design & Development
(P: ECET 38001 & 9-12 cr. hrs. of coursework in technical focus area)		
MET 40100 – Capstone Projects I	And	MET 40200 – Capstone Projects II
(P: MET 10200, MET 23000, MET 28400, MET 34600)		
MFET 48000 – Project Plan Integration		MFET 48100 Integration Manufacturing Systems
(P: MFET 37400)		(P: MFET 48000)
ECET 43000 –Product/Project Management	And	MET 40200 – Capstone Projects II
(P: ECET 38001 and 9-12 cr. hrs. of coursework in technical focus area)		
ENGT 40500 – Entrepreneurial Capstone I	And	ENGT 40600 – Entrepreneurial Capstone II
(for entrepreneurial minor senior students only)		(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

⁶LAB SCIENCE SELECTIVES

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

BIOL 11000 Fundamentals of Biology I PHYS 22100 General Physics

BIOL 20300 Human Anatomy and Physiology *PHYS-P 202

CHM 11200 General Chemistry II PHYS 24100 Electricity and Optics

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⁷HUMANITIES/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)

*FREN-F 200, *FREN-F 250, *ANTH-A 104, *ANTH-E 320 *POLS-Y 324, *ECON-E 103, *ECON-E 104 *HIST-H 105, *HIST-H 106 *PSY-P 103, *PSY-P 216, *ENG-G 205, *ENGL-L 204, *MUS-M 174, *MUS-T 101, *SOC-S 100, *FINA-A 101, *FINA-A 102 *SPAN-S 100, *SPAN-S 150, *MUS-Z 393, *FINA-F 100, *FINA-H 100 *PHIL-P 100, *PHIL-P 120, *SPAN-S 200, *SPAN-S 250, *FINA-S 200, *FINA-S 260, *PHIL-P 140 *SPCH-S 122, *FREN-F 100, *FREN-F 150, *THTR-T 210 *POLS-Y 103, *POLS-Y 109,

***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 **TLI 43530 Operations Planning and Management** CGT 32600 Graphics Standards for Product Definition or IT 44200 Production Planning **ECET 30201 Introduction to Industrial Controls TLI 43540 Facilities Planning** ECET 32100 Introduction to Nanotechnology or IT 48300 Facilities Design Lean Manufacturing ECET 32700 Instrumentation and DAQ Design TLI 43640 Lean Six Sigma ECET 38501 Intro to Automotive Electronics or ECET 38502 Intro or IT 44600 Six Sigma Quality to Automotive Electronics Lab TLI 45700 Technology Policy & Law **TLI 23500 Introduction to Lean and Sustainable Systems** MET 30200 CAD in the Enterprise **TLI 31400 Leading Innovation in Organizations MET 32000 Applied Thermodynamics TLI 31500 New Product Development** MET 38200 Controls & Instrumentation or TECH 22000 Design Technology for People MET 34600 Adv. Materials in Manufacturing **TLI 33520 Human Factors for Technology Systems** MET 42100 Air Conditioning & Refrigeration **TLI 33400 Economic Factors for Technology Systems** MET 43200 Hydraulic Motion Control or IT 45000 Prod Cost Analysis MET 43600 Pneumatic Motion Control

or IT 45000 Prod Cost Analysis

MET 43600 Pneumatic Motion Control

MET 45100 Manufacturing Quality Control

or IT 38500 Industrial Ergonomics

MET 30000 Applications of Automation in Manufacturing

MET 34400 Automated Manufacturing Processes

or IT 38100 Total Productive Main

MET 43600 Pneumatic Motion Control

MET 45100 Manufacturing Quality Control

MFET 30000 Applications of Automation in Manufacturing

MFET 34400 Automated Manufacturing Processes

MFET 34800 Advanced Industrial Robotics

TLI 41400 Financial Analysis for Tech Systems
or IT 43200 Financial Transaction Distrib

9TECHNICAL /MANAGEMENT SELECTIVES

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

TECH 32000 Technology and the Organization TLI 25400 Leading Change in Technology Organizations

TLI 15200 Business Principles in Org Leadership
TLI 23100 Project Management
TLI 21400 Intro to Supply Chain Systems
TLI 41400 Financial Analysis for Tech

TLI 25300 Principles of Technology Strategy Approved Study Abroad

¹⁰HUMANITIES FOUNDATION SELECTIVE

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

*ENGL-L 204	*FREN-F 200, *FREN-F 250	*PHIL-P 140
*FINA-A 101, *FINA-A 102	*HIST-H 105, *HIST-H 106	*SPAN-S 100, *SPAN-S 150,
*FINA-F 100, *FINA-H 100	*MUS-M 174, *MUS-T 101,	*SPAN-S 200, *SPAN-S 250
*FINA-S 200, *FINA-S 260	*MUS-Z 393	*THTR-T 210
*FREN-F 100, *FREN-F 150,	*PHIL-P 100, *PHIL-P 120,	

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¹¹ORAL COMMUNICATION SELECTIVE

COM 11400 Fundamental of Speech Communication

*SPCH-S 121

SCLA 10200 Transformative Texts, Critical Thinking & Com II

¹²WRITEN COMMUNICATION SELECTIVE

ENGL 10600 First-Year Composition

ENGL 10800 Accelerated First Year Composition

*ENG-W 131

SCLA 10100 Transformative Texts, Critical Thinking & Com I

¹³ADVANCED ORAL COMMUNICATION SELECTIVE

COM 32000 Small Group Communications

*300- or 400-level course in *SPCH-S or *CMCL-C

COM 30300 Intercultural Communication or COM 31400 Adv. Presentational Speaking

¹⁴INTERCULTURAL REQUIREMENT

	Polytechnic minimum global 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 Faculty-led Study Abroad program, 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 (4 th year)
	NOTE FOR TRANSFER/CODO STUDENTS: Transfer and CODO students with less than 75 credit hours remaining to complete their
	Polytechnic Plan of Study are exempt from Steps 1 & 3 (taking the IDI Pre & Post-tests) but must complete one option from Step 2.
	* Global experiences must take place during the time of enrollment in the Polytechnic to complete Step 2. Experiences that have 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.

Approved Global Courses:

*ANTH-A 104	*FREN-F 200	*POLS-Y 324	*SOC-S 335
*ANTH-E 300	*FREN-F 250	*PSY-P 103	*SPAN-S 200
*ANTH-E 320	*POLS-Y 206	*SOC-S 100	*SPAN-S 250

AAS	27100	Intro to African American Studies	ANTH	34000	Global Perspectives on Health
AAS	37300	Issues in African American Studies	ANTH	34100	Culture and Personality
AGR	20100	Communicating Across Culture	ANTH	37900	Native American Cultures
ANSC	38100	Leadership for a Diverse Workplace	ARAB	28000	Arabic Culture
ANTH	20300	Bio. Bases of Human So. Behavior	ASAM	24000	Intro to Asian American Studies
ANTH	20500	Human Cultural Diversity	AT	23300	Ethics and Aviation
ANTH	21000	Technology and Culture	CNIT	32000	Policy, Reg, & Globalization in IT
ANTH	21200	Culture, Food and Health	сом	22400	Comm. in the Global Workplace
ANTH	23000	Gender Across Cultures	сом	30300	Intercultural Communication

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¹⁴INTERCULTURAL REQUIREMENT CONTINUED

СОМ	32000	Small Group Communication		нтм	37200	Global Tourism Geography
COM	37300	Self-Presentation and Social Image		MSL	20100	Individual Leadership Studies
COM	38000	Soc. Study of African Amer. English		OLS	35000	Creativity in Business & Industry
						Global Moral Issues
COM	41200	Theories of Human Interaction		PHIL	11400	
COM	42300	Leadership, Communication & Orgs		PHIL	43500	Philosophy of Mind
ECET	29000	International Experience		POL	22200	Women, Politics, and Public Policy
ECET	38001	Global Professional Issues in ENGT		POL	23500	Intl. Rels Among Rich & Poor Nats
EDPS	23500	Learning and Motivation		POL	32600	Black Political Part. in America
EDPS	30000	Student Leadership Development		POL	32700	Global Green Politics
EDPS	30100	Peer Counseling Training		POL	36000	Women and the Law
EDPS	31500	Collab. Ldrship: Interpersonal Skills		POL	41300	The Human Basis of Politics
EDPS	31600	Collab. Ldrship: Cross-Cult. Settings		POL	42300	International Environmental Policy
EDPS	31700	Collab. Leadership: Mentoring		POL	42900	Contemporary Political Problems
ENGL	41400	Studies in Literature and Culture		POL	43300	International Organization
HDFS	23300	Stress & Human Health		PSY	12000	Elementary Psychology
HDFS	28000	Diversity in Individual & Family Life		PSY	25000	Psychology of Adjustment
HDFS	33200	Stress & Coping in Contemp. Fam.		PSY	25100	Health Psychology
HEBR	38500	Holocaust in Mod. Hebrew Lit.		PSY	32200	Neurosci. of Motivated Behavior
HIST	19500	Historian's Craft: Hist. Rsrch. & Film		SOC	10000	Introductory Sociology
HIST	30000	Eve of Des: Glob Cris Wrld Org 20th Cen		SOC	31000	Racial and Ethnic Diversity
HIST	33805	History of Human Rights		SOC	33900	Intro to Soc. of Developing Nations
HIST	35000	Sci. & Soc. in 20th Century World		TECH	33000	Technology and the Global Society
HIST	36600	Hispanic Heritage of the US		TLI	11200	Foundations of Org. Leadership
HIST	37700	Hist & Culture of Native America		TLI	31400	Leading Innovation in Orgs.
HIST	46900	Black Civil Rights Movement		WGSS	28200	Intro to LGBT Studies
HIST	47900	Amer. Reps of Mid. East & N. Africa		WGSS	38000	Gender and Multiculturalism
HIST	49900	History of Sexual Reg. in the US		WGSS	38300	Women and Work
нтм	37000	Sustainable Tourism & Resp. Travel				
Any fo	reign lan	guage course 20100, 20200, 30100, 30	200,	40100, 4	10200.	
	_	proved Study Abroad (SA) that includes				signments.

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POLYTECHNIC STATEWIDE- ADDITIONAL GLOBALIZATION SELECTIVE COURSES THAT ARE PROVIDED BY THE HOST LOCATION OR OFFERED SPECIFICALLY AT STATEWIDE LOCATION.

*RICHMOND – OFFERED THROUGH IU EAST

INTERNATION	AL STUDIES COURSES	CULTURAL PROI	DUCTIONS COURSES
*INTL-I220	Global Connections	*CLAS-C205	Classical Mythology
CULTURAL SYS	TEMS COURSES	*ENG-L225	Intro. to World Masterpieces
*ANTH-E200	Social & Cultural Anthropology	*ENG-L382	Fiction of the Non-Western World
*ANTH-E310	Cultures of Africa	*FINA-A101	Ancient and Medieval Art
*CMCL-C205	Intro to Communication & Culture	*FINA-A102	Renaissance through Modern Art
*CMCL-C380	Nonverbal Communication	*FINA-A342	Twentieth-Century Art
*CMCL-C427	Cross-Cultural Communication	HISTORICAL PER	RSPECTIVES
*CMCL-C450	Gender and Communication	*HIST-A380	The Vietnam War
*GEOG-G110	Introduction to Human Geography	*HIST-B244	The Viking Age
*REL-R152	Jews, Christians, and Muslims	*HIST-B306	European Race, Gender, & Identity
CULTURAL SYS	TEMS COURSES CONTINUED	*HIST-B356	French Revolution
*REL-R153	Religions of Asia	*HIST-B408	European Nationalism and Identity
*REL-R160	Religion in America	*HIST-B418	Germany: Nation and Volk
*REL-R171	Religion, Ethics, and Public Life	*HIST-B436	Making Modern Britain
*PHIL-P200	Problems of Philosophy	*HIST-B444	The Scandinavian Model
*PHIL-P371	Philosophy of Religion	*HIST-D410	Russian Rev. and the Soviet Regime
*PHIL-P393	Biomedical Ethics	*HIST-H108	Perspectives on the World to 1800
*SOC-S217	Social Inequality	*HIST-H109	Perspectives on the World since 1800
*SOC-S313	Religion and Society	*HIST-H205	Ancient Civilization
*SPAN-S284	Women in Hispanic Culture	*HIST-H219	Origins & Hist of the 2nd World War
		*HIST-H232	The World in the Twentieth Century
		*HIST-F341	Latin America: Conquest and Empire

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¹⁵PROFESSIONAL REQUIREMENT

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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

¹⁶FREE ELECTIVES

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

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