BS in Industrial Technology (ITEC) to BS in Engineering Technology (ETEC) Major Change Consideration Check List of Allowed Substitutions

Student Name:_____ **Catalog: Semester Catalog 2022-2023**
Student ID:_____ **Program: Engineering Technology, BS**
Adviser Name:_____ **Minimum Credits Required:** 120 units

Major Change from ITEC to ETEC criteria:

In general, students changing major from ITEC to ETEC must have no more than 24 units of extra requirements necessary to meet the new major; i.e. their new total must not exceed 144 units.

Maintain 2.0 GPA

Lower Division Core Courses (34 units)						
Course Name	**Prerequisites**	**Allowed Substitution**	**Credits:**	**Substitutions**	**Term Taken**	**Grade**
CHEM 1000 Molecules Matters		CHEM 1100 or CHEM 1040 *Chem course must contain a lab	3			
ENGR 1500 Intro to Eng. and Technology			3			
ETEC 1000 Intro. To Automotive Systems		TECH 1000	3			
ETEC 1020 Industrial Safety		TECH 1010	3			
ETEC 1100 Intro. to Engineering Design		TECH 1100	3			
ETEC 1200 Practical Electronics	PHYS 1560/1570 both with minimum C-	TECH 1200 plus PHYS 1560/1570	3			
ETEC 1600 Intro. to Metalworking	Co-Requisite ETEC 1020	TECH 1600 & Tech 1010	3			
ETEC 2070 Eng. Tech. Materials	CHEM 1000 or CHEM 1040 with a minimum C grade	ME 2070	3			
MATH 2110 Calculus I	Math 1040 or (Math 1081 &1083) or STEP placement or AP Calc	Calculus equivalent to Math 2110	4			
PHYS 1560 Physics for the 21st Century	Corequisite: PHYS 1570	PHYS 2100 Or equivalent	2			

PHYS 1570 Physics for the 21st Century Lab____	Pre/Co-requisite: 1560	PHYS 2100 Or equivalent	1			
TECH 1300 Intro. to Graphics Communications	None		3			

Upper Division Core Courses (26 units)

Course Name			**Credits**	**Substitutions**	**Term Taken**	**Grade**
ETEC 3600 Lean Manufacturing	PHYS 1560, PHYS 1570, MATH 2110 all three with a minimum grade C-; and ETEC 1600.	TECH 3600 + Summer Bridge Course (Special Topics)	3			
ETEC 3700 Sustainable Energy and Transportation	PHYS 1560, 1570 and MATH 2110 all with a minimum grade C-	TECH 3700 + Summer Bridge Course (Special Topics)	3			
ETEC 4210 Internetworking Technology	ETEC 1200	TECH 4210 plus TECH 1200	3			
ETEC 4880 Fluid Power	PHYS 1560, 1570 and MATH 2110 all with a minimum grade C-	TECH 4880 + Summer Bridge Course (Special Topics)	3			
ETEC 4890 Industrial Training Methods	ETEC 3600, ETEC 3700	TECH 4890	2			
ETEC 4950 Engineering Technology Senior Project I	ETEC 3600, ETEC 3700, and Senior Standing.		3			
ETEC 4951 Engineering Technology Senior Project II	ETEC 4950 graded C or better.		3			
TECH 3300 Graphic Communications Processes and Materials	Junior standing		3			

TECH 4000 Written Communication Skills for Technology		BUS 3050	3			

Related Core Courses (9 units)

Course Name			Credits:	Substitutions	Term Taken	Grade
ACCT 2100 Principles of Financial Accounting			3			
ECON 3060 Statistics for Business Analysis and Decision Making	GE 4 basic subjects	ECON 2090 & ECON 3090 Note: ECON 3090 does not satisfy UD GE Block B	3			
ME 3000 Economics for Engineers	Junior or Senior Standing	CE/EE 3000 Note: Satisfy LD GE Block D	3			

Electives (15 units from any category)
Category 1: Elective Courses in Manufacturing Systems & Processes

Course Name			Credits:	Substitutions	Term Taken	Grade
ETEC 3130 Product Design and Development	ETEC 1100	TECH 3130 & TECH 1100	3			
ETEC 3150 Project Management and Document Control	ETEC 3130	TECH 3150	3			
ETEC 3820 Metrology and Statistical Process Control	MATH 2110, ETEC 1600		3			
ETEC 4600 Advanced Manufacturing Processes	MATH 2110, ETEC 3600		3			
ETEC 4620 Digital Manufacturing	ETEC 1100, ETEC 3600		3			
ETEC 4660 Additive Manufacturing	Prerequisite: ETEC 1100. Corequisite: ETEC 3600.		3			
ETEC 4670 Emerging Manufacturing	Prerequisite: ETEC 1100. Corequisite: ETEC 3600.		3			

Category 2: Sustainable Energy and Transportation Technologies						
Course Name			**Credits:**	**Substitutions**	**Term Taken**	**Grade**
ETEC 4700 Electric and Hybrid Vehicles	ETEC 3700		Spring 2024	3		
ETEC 4710 Engine Design and Performance	ETEC 3700			3		
ETEC 4720 Photovoltaic Applications	ETEC 3700			3		
ETEC 4740 Fuel Cell Applications and Hydrogen Infrastructure	ETEC 3700			3		
ETEC 4760 Measurement, Instrumentation and Control	ETEC 3700			3		
ETEC 4780 Emerging Sustainable Technologies	ETEC 3700			3		
Category 3: Management						
MGMT 3060 Operations Management				3		
MGMT 4505 Project Management				3		