



# Elec Engr Tech BS

IU Indianapolis School of Engr & Tech (TECH)

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**Student's Catalog Year:** Fall 2017–Summer 2018

**Total Degree Map Credits:** 120

**Description:** An Electrical Engineering Technology Bachelors of Science degree prepares students to solve problems using electrical systems. We apply relevant technologies to address immediate needs both large and small. At IUPUI, we have special expertise in sustainable energy and automation. EET places emphasis on class and laboratory work focused on applications. The focus is on learning theories of how things work in addition to applying those theories in meaningful ways. Our curriculum includes many projects, culminating in a two semester capstone experience. These projects prepare students to effectively manage large assignments when they get into the real world including industries such as industrial controls, power, and systems integration.

**C Critical Courses:** Courses that students should complete by specific points during their degree or certificate program.

**M Milestones:** Conditions or activities that students should complete by specific points during their degree or certificate program.

**Completing a critical course or milestone by the associated term is considered crucial to on-time graduation.**

## Year One (32 credits)

Fall Term	Minimum Grade	Credits		Spring Term	Minimum Grade	Credits	
First Year Seminar for Technology Majors		1	^	Introduction to Circuit Analysis <b>C</b>	C	4	^
<b>Required Semester of Completion:</b> Year 1, Fall				<b>Critical Course</b>			
Technical Graphics Communication		3	^	<b>Course Details:</b> P: TECH 10500 AND P or C: MATH 15300			
<b>Required Semester of Completion:</b> Year 4, Spring				<b>Required Semester of Completion:</b> Year 1, Spring			
Intro to Engineering Technology <b>C</b>	C	3	^	Digital Fundamentals II <b>C</b>	C	3	^
<b>Critical Course</b>				<b>Critical Course</b>			
<b>Course Details:</b> P or C: MATH 11100 AND ENG-W 131				<b>Course Details:</b> P: ECET 10900			
<b>Required Semester of Completion:</b> Year 1, Fall				<b>Required Semester of Completion:</b> Year 4, Spring			
Digital Fundamentals <b>C</b>	C	3	^	Fundamentals of Speech Communication	C	3	^
				<b>Course Details:</b> Also meets Gen Ed Core Communication & Speaking & Listening Competency			
				<b>Required Semester of Completion:</b> Year 1, Spring			

<b>Critical Course</b> <b>Course Details:</b> P or C: MATH 11100 <b>Required Semester of Completion:</b> Year 1, Fall		
Reading, Writing, and Inquiry	C	3
<b>Course Details:</b> Also meets Gen Ed Core Communication Writing Competency <b>Required Semester of Completion:</b> Year 1, Spring		
Gen Ed Arts & Humanities Competency		3
<b>Course Details:</b> Students must select a course from IUPUI's Arts and Humanities Course list. <b>Required Semester of Completion:</b> Year 4, Spring		
<b>Total</b>		<b>16</b>

Gen Ed Cultural Understanding Competency		3
<b>Course Details:</b> Students must select a course from IUPUI's Cultural Understanding course list. <b>Required Semester of Completion:</b> Year 4, Spring		
Calculus for Technology I	C	3
<b>Course Details:</b> Also meets Gen Ed Analytical Reasoning (Math) P: MATH 15900 OR P: MATH 15300 and MATH 15400 all with grades of C or better <b>Required Semester of Completion:</b> Year 1, Spring		
Students should finish ENG-W 131 and COMM-R 110 before the end of the spring semester of their first year. <b>M</b>		
<b>Required Semester of Completion:</b> Year 1, Spring		
<b>Total</b>		<b>16</b>

## Year Two (30 credits)

Fall Term	Minimum Grade	Credits	⌵
Electronics Circuit Analysis <b>c</b>	C	4	⌵
<b>Critical Course</b> <b>Course Details:</b> P: ECET 10700 AND MATH 15300 AND C: TCM 21800 <b>Required Semester of Completion:</b> Year 2, Spring			
Intro to Engr Technical Reports <b>c</b>		1	⌵
<b>Critical Course</b> <b>Course Details:</b> C: Must be taken with ECET 15700. AND P: ENG-W 131 <b>Required Semester of Completion:</b> Year 2, Fall			
Applied Object Oriented Programming <b>c</b>	C	3	⌵
<b>Critical Course</b> <b>Course Details:</b> P or C: MATH 15300 <b>Required Semester of Completion:</b> Year 2, Spring			
General Physics	C	4	⌵
<b>Course Details:</b> Also meets Gen Ed Life & Physical Sciences Competency <b>Required Semester of Completion:</b> Year 4, Spring			
Calculus for Technology II <b>c</b>	C	3	⌵

Spring Term	Minimum Grade	Credits	⌵
AC Electronics Circuit Analysis <b>c</b>	C	4	⌵
<b>Critical Course</b> <b>Course Details:</b> P or C: ECET 15700 AND MATH 15400 <b>Required Semester of Completion:</b> Year 3, Spring			
Computer Communications <b>c</b>		4	⌵
<b>Critical Course</b> <b>Course Details:</b> C: Must be taken with TCM 21900 P: ECET 10700 <b>Required Semester of Completion:</b> Year 4, Spring			
Intro to Technical Presentations <b>c</b>		1	⌵
<b>Critical Course</b> <b>Course Details:</b> C: Must be taken with ECET 28400 AND P: COMM-R 110 <b>Required Semester of Completion:</b> Year 4, Spring			
Electrical Machines <b>c</b>	C	3	⌵
<b>Critical Course</b> <b>Course Details:</b> ECET 23110 (3 cr.) P: ECET 10900 AND ECET 15700 AND P or C: PHYS 21800 <b>Required Semester of Completion:</b> Year 4, Spring			

**Critical Course**  
**Course Details:** Also meets Gen Ed Analytical Reasoning (Other) P: MATH 22100 with a grade of C or better  
**Required Semester of Completion:** Year 4, Spring

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Student should be completed with all first year requirements and have been admitted to the academic department. **M**

**Required Semester of Completion:** Year 2, Fall

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**Total 15**

MATH/Technical Selective 3 ^

**Course Details:** Students must select from the approved MATH/Technical Selective List.  
**Required Semester of Completion:** Year 4, Spring

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**Total 15**

### Year Three (31 credits)

Fall Term	Minimum Grade	Credits	v
Introduction to Microprocessors <b>C</b> <b>Critical Course</b> <b>Course Details:</b> C: Must be taken with TCM 22200 P: ECET 10900 AND P: ECET 16400 or CIT 26200 or CIT 27000 <b>Required Semester of Completion:</b> Year 4, Spring	C	4	^
Intro to Technical Documentation <b>C</b> <b>Critical Course</b> <b>Course Details:</b> C: Must be taken with ECET 20900. <b>Required Semester of Completion:</b> Year 3, Fall		1	^
Industrial Controls <b>C</b> <b>Critical Course</b> <b>Course Details:</b> ECET 23120 (3 cr.) P: ECET 10900 AND ECET 15700 AND P or C: PHYS 21800 <b>Required Semester of Completion:</b> Year 4, Spring	C	3	^
ECET Elective <b>Course Details:</b> Students must select classes from the approved list of ECET Electives <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Quantitative Methods for Technology <b>Required Semester of Completion:</b> Year 4, Spring		3	^

Spring Term	Minimum Grade	Credits	v
Analog Network Signal Processing <b>Course Details:</b> P: ECET 20700 AND MATH 22100 <b>Required Semester of Completion:</b> Year 4, Spring		4	^
ECET Elective <b>Course Details:</b> Students must select classes from the approved list of ECET Electives <b>Required Semester of Completion:</b> Year 4, Spring		3	^
ECET Elective <b>Course Details:</b> Students must select classes from the approved list of ECET Electives <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Ethics & Professionalism in Tech <b>Required Semester of Completion:</b> Year 4, Spring		1	^
Engineering Economics <b>Required Semester of Completion:</b> Year 4, Spring		3	^
General Education Social Sciences Competency <b>Course Details:</b> Students must select a course from IUPUI's Social Science course list. <b>Required Semester of Completion:</b> Year 4, Spring		3	^

Student should have completed all math requirements (through MATH 22200) prior to this semester. ^

**M**

**Required Semester of Completion:** Year 3, Fall

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**Total 14**

Student should complete 3 300/400 level ECET electives by the end of the Spring of the Third Year so that the student can begin ECET 49000 during the Fall semester of the Fourth Year. ^

**M**

**Required Semester of Completion:** Year 4, Spring

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**Total 17**

### Year Four (27 credits)

Fall Term	Minimum Grade	Credits	^
ECET Elective <b>Course Details:</b> Students must select classes from the approved list of ECET Electives <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Senior Design Project Phase I <b>Course Details:</b> C: Must be taken with TCM 41700 P: Completion of 3 ECET 3/400 level ECET Electives. <b>Required Semester of Completion:</b> Year 4, Spring		1	^
Intermediate Technical Communication for Design <b>Course Details:</b> C: Must be taken with ECET 49000 <b>Required Semester of Completion:</b> Year 4, Spring		1	^
Elementary Chemistry I <b>Course Details:</b> Also meets Gen Ed Life & Physical Sciences Competency <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Total Quality Control <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Bus Administration: Intro <b>Course Details:</b> Also meets Gen Ed Social Sciences Competency <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Notify School of Intent to Graduate <b>M</b>			^

Spring Term	Minimum Grade	Credits	^
ECET Elective <b>Course Details:</b> Students must select classes from the approved list of ECET Electives <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Senior Design Project Phase II <b>Course Details:</b> C: Must be taken with TCM 41700 P: ECET 49000 <b>Required Semester of Completion:</b> Year 4, Spring		2	^
Advanced Technical Communication for Design <b>Course Details:</b> Must be taken with ECET 49100 <b>Required Semester of Completion:</b> Year 4, Spring		1	^
TECH Elective <b>Course Details:</b> Students must select class from the approved TECH Elective List <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Sustainability Elective <b>Course Details:</b> Students must select class from the approved list <b>Required Semester of Completion:</b> Year 4, Spring		3	^
Senior Seminar for ET <b>Required Semester of Completion:</b> Year 4, Spring		1	^
		<b>Total 13</b>	

**Milestone Details:** Please contact your school to determine appropriate steps necessary to apply for graduation.

**Required Semester of Completion:** Year 4, Fall

**Total 14**

**Degree Map Link:**

<https://sisjee.iu.edu/sisigps-prd/web/igps/dm/public/maps/view?mapId=2df0db44-3a51-43c2-af89-3910f6ae2b83>

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Achieving minimum grades for individual courses may not result in meeting cumulative GPA requirements for admission to programs or for graduation. Verify requirements with your academic advisor or your Academic Advisement Report (AAR).

Completing 30 credit hours each calendar year is required for full state financial aid eligibility. Be sure to complete your FAFSA before March 10 each year. If you follow your map and find a course unavailable, you may be eligible to take that course for free in a future semester.

[More information about the free course guarantee.](#)