



Student Name <hr/>

Pre-Engineering
Electrical Engineering / Computer Engineering Path
Associate of Science – Transfer to IUPUI
Ivy Tech Community College – Central Indiana
Academic Year: 2011

Students who want a 4-year Bachelor’s Degree in Electrical or Computer Engineering (BSEE/BSCE) can earn an Associate of Science degree in Pre-Engineering at IVY Tech. Students will learn to work in a cooperative team environment and build a strong foundation in science, math, and technology. They will learn qualitative and quantitative analytical skills necessary in engineering design, problem solving, and applied aspects of science and engineering. Students entering the degree program must have a strong background in Math, including Algebra and Trigonometry. Upon graduation, students may transfer to Indiana University-Purdue University Indianapolis, for the second half of their education towards the BSEE or BSCE. Potential job opportunities include engineering, design, and development in analog and digital equipment and computing systems and networks.

General Education Core – 49 Credits		Credits	Grade	Prerequisites (C: Co-requisite)
IVYT 1xx	Student Success Elective	1-3		None
CHEM 105	General Chemistry I	5		C: MATH 136 or assessment
COMM 101	Fundamentals of Public Speaking	3		ENGL 025/093, ENGL 032/083
ECON 202	Principles of Microeconomics	3		ENGL 111, MATH 015 or MATH 023
ENGL 111	English Composition	3		ENGL 025/093, ENGL 032/083
MATH 211	Calculus I	4		MATH 136 & 137 or assessment
MATH 212	Calculus II	4		MATH 211
MATH 213	Multidimensional Mathematics	3		MATH 136 and 137
MATH 261	Multivariate Calculus	4		MATH 212
MATH 264	Differential Equations	3		MATH 261
PHYS 220	Mechanics	5		MATH 211
PHYS 221	Heat, Electricity & Optics	5		MATH 212 , PHYS 220
Xxx xxx	Social Science/Humanities Elective	3		See course descriptions
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Professional/Technical Core – 17 Credits		Credits	Grade	Prerequisites
ENGR 195	Intro to Engineering Profession	1		none
ENGR 196	Intro to Engineering	3		none
ENGR 251	Electrical Circuits I	4		ENGR 196, MATH 212
ENGR 263	Intro to Computing in EE	4		ENGR 196
ENGR 272	Digital Systems Design	4		ENGR 251
ENGR 297	Computer Tools for Engineers (Matlab)	1		ENGR 197 or ENGR 263
	Total Required Credits	66		

Sample Full-time Curriculum Sequence Two Academic Years

Semester 1		Credits
IVYT 1xx	Life Skills Elective	1
CHEM 105	General Chemistry I	5
COMM101	Fund. of Public Speaking	3
ENGR 195	Intro to Engineering Profession	1
ENGR 196	Intro to Engineering	3
MATH 211	Calculus I	4
Total Credits		17

Semester 2		Credits
ENGL 111	English Composition	3
ENGR 263	Intro to Computing in EE	4
MATH 212	Calculus II	4
MATH 213	Multidimensional Math	3
Xxxx xxx	Social Science/Human. Elective	3
Total Credits		17

Semester 3		Credits
ECON 202	Principles of Microeconomics	3
ENGR 251	Electrical Circuits I	4
MATH 261	Multivariate Calculus	4
PHYS 220	Mechanics	5
Total Credits		16

Semester 4		Credits
ENGR 272	Digital Systems Design	4
ENGR 297	Computer Tools for Engr (Matlab)	1
MATH 264	Differential Equations	3
PHYS 221	Heat, Electricity & Optics	5
XXXX xxx	Social Science/Human. Elective	3
Total Credits		16

My Curriculum Plan

Use this chart to plan the length of time until you complete your program.

Semester 1		Credits
Total Credits		

Semester 2		Credits
Total Credits		

Semester 3		Credits
Total Credits		

Semester 4		Credits
Total Credits		

Semester 5		Credits
Total Credits		

Semester 6		Credits
Total Credits		