

Engineering Dual Degree Requirements

Electrical Engineering & Computer Science

University Core Curriculum				Common Engineering			
Common Core Requirements				Mathematics			
FYS	101	First Year Seminar	Credits	MA	106	Calculus & Analytical Geometry 1 ⁺	Credits
FYS	102	First Year Seminar	3	MA	107	Calculus & Analytical Geometry 2 ⁺	4
GHS	201-209	Global and Historical Studies	3	MA	208	Calculus & Analytical Geometry 3	4
GHS	201-209	Global and Historical Studies	3	MA	215	Linear Algebra ⁺	3
				MA	334	Differential Equations	3
General Core Requirements				Science			
TI		Text and Ideas	Credits	CH	105	General Chemistry 1	Credits
PCA		Perspectives in the Creative Arts	3	CH	106	General Chemistry 2	5
SW		The Social World (SW 220-EC) ⁵	3	PH	201	Introduction to Analytical Physics 1	5
AR		<i>Analytical Reasoning (exempt)</i>	3	PH	202	Introduction to Analytical Physics 2	5
NW		<i>The Natural World (exempt)</i>	5				
PWB		Physical Well-Being	1				
		Core Credits	22(30)	Engineering			
Additional Core Requirements				Other			
BCR		Butler Cultural Requirement	8 events	DD	190	Elementary Engineering Design	Credits
ICR		Indianapolis Community Requirement	1 course	DD	297	MATLAB	3
SAC		Speaking Across the Curriculum	1 course	CS	142	Intro to Computer Science & Prog	1
WAC		Writing Across the Curriculum	1 course				3
Liberal Arts and Science Requirements				Engineering Internship			
		Credits		ENGR	200	Engineering Internship	Credits
		Foreign Language (min 6 cr 200 level or above)	6-14				52
		Spanish, French, German, Chinese, Latin					
		Credits	28-36				
Computer Science				Electrical Engineering			
CS	151	Foundations of Computing I	Credits	<i>ECON</i>	201	<i>Microeconomics</i> ⁵	Credits
CS	248	Object-Oriented Prog & Data Structures ¹	3	PH	351	Analog Electronics (WAC)	-
CS	252	Foundations of Computing II*	5	ME	295	Mechanics and Heat	4
<i>CS</i>	321	<i>Computer Organization</i> ²	3	ECE	202	Circuit Analysis II	3
CS	333	Database Systems	-	ECE	208	Electronic Devices & Design Lab	3
CS	351	Algorithms	3	ECE	210	Sophomore Seminar	1
CS	383	EPICS (ICR)	3	ECE	255	Intro to Electronics Analysis & Design	1
CS	452	Parallel Algorithm Design & Prog	3	<i>ECE</i>	264	<i>Advanced C Programming</i> ¹	3
<i>CS</i>	473	<i>Topics in Computer Science</i> ³	-	ECE	270	Digital Logic Design ²	-
CS	485	Computer Ethics (WAC) ⁴	3	ECE	301	Signals and Systems	4
SE	361	Object-Oriented Design (SAC)	1	ECE	302	Probabilistic Methods	3
		Theory Course	3	ECE	311	Electric and Magnetic Fields	3
CS	441	Organization of Prog Languages		ECE	362	Microprocessors Systems & Interface ³	3
CS	447	Computer Graphics		ECE	382	Feedback Systems Analysis	4
CS	451	Theory of Computation		<i>ECE</i>	401	<i>Engineering Ethics</i> ⁴	3
CS	458	Intro to Cryptography and Cryptanalysis		ECE	440	Intro to Communication System Analysis	-
		Systems Course	3	ECE	487	Senior Design I	4
CS	431	Theory of Operating Systems*		ECE	488	Senior Design II	1
CS	435	Computer Networks				EE Electives (*credits used toward 15 cr req)	2
SE	461	Managing Software Development					9
		Credits	33				Credits
							51
164 - 172 Total Credits							

¹⁻⁶ used as equivalents for degree requirements⁺ also required for Computer Science major