

Engineering Dual Degree Requirements

Electrical Engineering & Chemistry

University Core Curriculum				Common Engineering			
Common Core Requirements				Mathematics			
FYS	101	First Year Seminar	Credits 3	MA	106	Calculus & Analytical Geometry 1 ⁺	Credits 4
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 3	Science			
PCA	Perspectives in the Creative Arts		3	CH	105	General Chemistry 1	-
SW	The Social World (SW 220-EC) ¹		3	CH	106	General Chemistry 2	-
AR	Analytical Reasoning (exempt)		3	PH	201	Introduction to Analytical Physics 1 ⁺	5
NW	The Natural World (exempt)		5	PH	202	Introduction to Analytical Physics 2 ⁺	5
PWB	Physical Well-Being		1	Engineering			
		Core Credits	22(30)	DD	190	Elementary Engineering Design	Credits 3
Additional Core Requirements				DD	297	MATLAB	1
BCR	Butler Cultural Requirement		8 events	CS	142	Intro to Computer Science & Prog	3
ICR	Indianapolis Community Requirement		1 course	Other			
SAC	Speaking Across the Curriculum		1 course	COM	101	Rhetoric and the American Demo	3
WAC	Writing Across the Curriculum		1 course	TCM	250	Career Planning for Engineers	1
Liberal Arts and Science Requirements				TCM	360	Comm in Engineering Practice (WAC/SAC)	2
Foreign Language (min 6 cr 200 level or above)			Credits 6-14	ENGR	200	Engineering Internship	1
Spanish, French, German, Chinese, Latin			Credits 28-36				Credits 42
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Chemistry				Electrical Engineering			
CH	105	General Chemistry 1 ⁺	Credits 5	ECON	201	Microeconomics ¹	-
CH	106	General Chemistry 2 ⁺	5	PH	351	Analog Electronics (WAC)	4
CH	351	Organic Chemistry 1	5	ME	295	Mechanics and Heat	3
CH	352	Organic Chemistry 2	5	ECE	202	Circuit Analysis II	3
Additional Chemistry Courses ⁱ			12	ECE	208	Electronic Devices & Design Lab	1
CH	332	Inorganic Chemistry		ECE	210	Sophomore Seminar	1
CH	431	Advanced Inorganic Chemistry		ECE	255	Intro to Electronics Analysis & Design	3
CH	432	Synthesis and Characterization		ECE	264	Advanced C Programming	2
CH	321	Analytical Chemistry 1		ECE	270	Digital Logic Design	4
CH	422	Analytical Chemistry 2		ECE	301	Signals and Systems	3
CH	424	Instrumental Analysis Laboratory		ECE	302	Probabilistic Methods	3
CH	361	Biochemistry 1: Bio-Organic Chemistry		ECE	311	Electric and Magnetic Fields	3
CH	462	Biochemistry IIA: Central Metabolism		ECE	362	Microprocessors Systems & Interface	4
CH	463	Biochemistry Laboratory 1		ECE	382	Feedback Systems Analysis	3
CH	471	Physical Chemistry 1 (Quantum Mechanics)		ECE	401	Engineering Ethics	1
CH	472	Physical Chemistry 2 (Thermo & Kinetics)		ECE	440	Intro to Communication System Analysis	4
CH	473	Physical Chemistry Lab		ECE	487	Senior Design I	1
		Credits	32	ECE	488	Senior Design II	2
				EE Electives			15
162 - 170 Total Credits						Credits	60

¹ used as equivalents for degree requirements

⁺ also required for Chemistry major

[†] may take CH 107 Advanced General Chemistry for 6 cr, must make up 4 addtl cr in Chemistry electives

ⁱ must include two of the four areas of Chemistry- Analytical, Biological, Inorganic, Physical