

Engineering Dual Degree Requirements

Mechanical 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	CH	105	General Chemistry 1	Credits -
PCA		Perspectives in the Creative Arts	3	CH	106	General Chemistry 2	-
SW		The Social World (SW 220-EC) ¹	3	PH	201	Introduction to Analytical Physics 1 ⁺	5
AR		Analytical Reasoning (exempt)	3	PH	202	Introduction to Analytical Physics 2 ⁺	5
NW		The Natural World (exempt)	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	Credits 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 42
		Credits	28-36	<hr/>			
Chemistry				Mechanical Engineering			
CH	105	General Chemistry 1 ⁺	Credits 5	ECON	201	Microeconomics ¹	Credits -
CH	106	General Chemistry 2 ⁺	5	PH	351	Analog Electronics (WAC)	4
CH	351	Organic Chemistry 1	5	MA	359	Probability and Statistics	3
CH	352	Organic Chemistry 2	5	ME	200	Thermodynamics	3
		Additional Chemistry Courses ⁱ	12	ME	225	Mechanical Engineering Lab 1	1
CH	332	Inorganic Chemistry		ME	250	Mechanical Engineering Lab 2	1
CH	431	Advanced Inorganic Chemistry		ME	262	Engr Design, Ethics, & Entrepreneurship	2
CH	432	Synthesis and Characterization		ME	270	Basic Mechanics 1	3
CH	321	Analytical Chemistry 1		ME	272	Mechanics of Materials	3
CH	422	Analytical Chemistry 2		ME	274	Basic Mechanics 2	3
CH	424	Instrumental Analysis Laboratory		ME	310	Fluid Mechanics	3
CH	361	Biochemistry 1: Bio-Organic Chemistry		ME	314	Heat & Mass Transfer	3
CH	462	Biochemistry IIA: Central Metabolism		ME	325	Mechanical Engineering Lab 3	1
CH	463	Biochemistry Laboratory 1		ME	330	Modeling & Analysis of Dynamic Systems	3
CH	471	Physical Chemistry 1 (Quantum Mechanics)		ME	340	Dynamic Systems & Measurements	2
CH	472	Physical Chemistry 2 (Thermo & Kinetics)		ME	344	Intro to Engineering Materials	3
CH	473	Physical Chemistry Lab		ME	350	Mechanical Engineering Lab 4	1
		Credits	32	ME	372	Design of Mechanics	3
164 - 172 Total Credits				ME	425	Mechanical Engineering Lab 5	1
				ME	462	Capstone Design	3
				ME	482	Control Systems	3
				ME	497	Design, Standards, & Contemp. Issues	1
						Design Elective	3
				ME	414	Thermal-Fluid Systems Design	
				ME	453	Machine Design	
						Tech Electives	9
						Credits	62

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