

Engineering Dual Degree Requirements

Mechanical Engineering & Mathematics

University Core Curriculum				Common Engineering			
Common Core Requirements				Mathematics			
FYS	101	First Year Seminar	Credits 3	MA	106	Calculus & Analytical Geometry 1	Credits -
FYS	102	First Year Seminar	3	MA	107	Calculus & Analytical Geometry 2	-
GHS	201-209	Global and Historical Studies	3	MA	208	Calculus & Analytical Geometry 3	-
GHS	201-209	Global and Historical Studies	3	MA	215	Linear Algebra	-
				MA	334	Differential Equations*	3
General Core Requirements				Science			
TI	Text and Ideas		Credits 3	CH	105	General Chemistry 1	Credits 5
PCA	Perspectives in the Creative Arts		3	CH	106	General Chemistry 2	5
SW	The Social World (SW 220-EC) ¹		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	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 28-36	Credits 37			
Mathematics				Mechanical Engineering			
MA	106	Calculus & Analytic Geometry 1	Credits 4	ECON	201	Microeconomics ¹	Credits -
MA	107	Calculus & Analytic Geometry 2	4	PH	351	Analog Electronics (WAC)	4
MA	208	Calculus & Analytic Geometry 3	4	MA	359	Probability and Statistics*	3
MA	108	First-Year Problem Solving	1	ME	200	Thermodynamics	3
MA	200	Basics of Advanced Mathematics	3	ME	225	Mechanical Engineering Lab 1	1
MA	205	Discrete Mathematics	3	ME	250	Mechanical Engineering Lab 2	1
MA	215	Linear Algebra	3	ME	262	Engr Design, Ethics, & Entrepreneurship	2
MA	312	Algebra: Groups	3	ME	270	Basic Mechanics 1	3
MA	326	Analysis: Theory of Calculus (WAC)	3	ME	272	Mechanics of Materials	3
MA	330	Complex Analysis	3	ME	274	Basic Mechanics 2	3
Restricted Elective (choose 1)			3	ME	310	Fluid Mechanics	3
MA	313	Algebra: Rings and Fields		ME	314	Heat & Mass Transfer	3
MA	327	Analysis: Lebesgue Integral		ME	325	Mechanical Engineering Lab 3	1
<i>Math Electives (*credits used toward 9 cr req)</i>			-	ME	330	Modeling & Analysis of Dynamic Systems	3
MA	301	<i>History of Mathematics</i>		ME	340	Dynamic Systems & Measurements	2
MA	305	<i>Graph Theory</i> [^]		ME	344	Intro to Engineering Materials	3
MA	310-399	See Course Catalog		ME	350	Mechanical Engineering Lab 4	1
MA	473	<i>Topics in Mathematics</i>		ME	372	Design of Mechanics	3
			Credits 34	ME	425	Mechanical Engineering Lab 5	1
161 - 169 Total Credits				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* ⁱ			9
				Credits 62			

¹ used as equivalents for degree requirements⁺ also required for Mathematics major[^] CS 252 accepted as equivalentⁱ Tech elective-ME 551 fulfills one 3cr Math elective