

Engineering Dual Degree Requirements

Mechanical Engineering & Computer Science

University Core Curriculum

Common Core Requirements

		Credits
FYS	101 First Year Seminar	3
FYS	102 First Year Seminar	3
GHS	201-209 Global and Historical Studies	3
GHS	201-209 Global and Historical Studies	3

General Core Requirements

		Credits
TI	Text and Ideas	3
PCA	Perspectives in the Creative Arts	3
SW	The Social World (SW 220-EC) ¹	3
AR	<i>Analytical Reasoning (exempt)</i>	3
NW	<i>The Natural World (exempt)</i>	5
PWB	Physical Well-Being	1
	Core Credits	22(30)

Additional Core Requirements

BCR	Butler Cultural Requirement	8 events
ICR	Indianapolis Community Requirement	1 course
SAC	Speaking Across the Curriculum	1 course
WAC	Writing Across the Curriculum	1 course

Liberal Arts and Science Requirements

		Credits
	Foreign Language (min 6 cr 200 level or above)	6-14
	Spanish, French, German, Chinese, Latin	
	Credits	28-36

Common Engineering

Mathematics

		Credits
MA	106 Calculus & Analytical Geometry 1 ⁺	4
MA	107 Calculus & Analytical Geometry 2 ⁺	4
MA	208 Calculus & Analytical Geometry 3	4
MA	215 Linear Algebra ⁺	3
MA	334 Differential Equations	3

Science

		Credits
CH	105 General Chemistry 1	5
CH	106 General Chemistry 2	5
PH	201 Introduction to Analytical Physics 1	5
PH	202 Introduction to Analytical Physics 2	5

Engineering

		Credits
DD	190 Elementary Engineering Design	3
DD	297 MATLAB	1
CS	142 Intro to Computer Science & Prog	3

Other

		Credits
COM	101 Rhetoric and the American Demo	3
TCM	250 Career Planning for Engineers	1
TCM	360 Comm in Engineering Practice (WAC/SAC)	2
ENGR	200 Engineering Internship	1
	Credits	52

Computer Science

		Credits
CS	151 Foundations of Computing I	3
CS	248 Object-Oriented Prog & Data Structures	5
CS	252 Foundations of Computing II*	3
CS	321 Computer Organization	3
CS	333 Database Systems	3
CS	351 Algorithms	3
CS	383 EPICS (ICR)	3
CS	452 Parallel Algorithm Design & Prog	3
CS	473 Topics in Computer Science	3
CS	485 Computer Ethics (WAC)	1
SE	361 Object-Oriented Design (SAC)	3
	Theory Course	3
CS	441 Organization of Prog Languages	
CS	447 Computer Graphics	
CS	451 Theory of Computation	
CS	458 Intro to Cryptography and Cryptanalysis	
	Systems Course	3
CS	431 Theory of Operating Systems	
CS	435 Computer Networks	
SE	461 Managing Software Development	
	Credits	39

181 - 189 Total Credits

Mechanical Engineering

		Credits
<i>ECON</i>	201 <i>Microeconomics</i> ¹	-
PH	351 Analog Electronics (WAC)	4
MA	359 Probability and Statistics	3
ME	200 Thermodynamics	3
ME	225 Mechanical Engineering Lab 1	1
ME	250 Mechanical Engineering Lab 2	1
ME	262 Engr Design, Ethics, & Entrepreneurship	2
ME	270 Basic Mechanics 1	3
ME	272 Mechanics of Materials	3
ME	88 Basic Mechanics 2	3
ME	310 Fluid Mechanics	3
ME	314 Heat & Mass Transfer	3
ME	325 Mechanical Engineering Lab 3	1
ME	330 Modeling & Analysis of Dynamic Systems	3
ME	340 Dynamic Systems & Measurements	2
ME	344 Intro to Engineering Materials	3
ME	350 Mechanical Engineering Lab 4	1
ME	372 Design of Mechanics	3
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 Computer Science major