Engineering Dual Degree Requirements

Mechanical Engineering & Biology

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	*Analytical Reasoning (exempt)*	*3*
NW	*The Natural World (exempt)*	*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 Comptuer 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

Biology			Credits
BI	*111*	*Contemporary Issues in Biology †*	-
BI	210	Genetics	4
BI	220	Cellular and Molecular Biology	4
BI	230	Ecology and Evolutionary Biology	5
BI	*299*	*Biology Seminar †*	-
BI	480	Senior Biology Capstone (WAC)	3
Biology Electives			19

To acquire the remaining credit hours for the major, students must take biology electives at the 300 level or above; at least four of these electives must be lab courses. One of the electives taken must be an organism-based course. Students will be allowed to use a maximum of three hours of independent study credit, internship credit, research or honors thesis credit toward the 37-hour† minimum required for the biology major.

Credits 35

Mechanical Engineering			Credits
ECON	*201*	*Microeconomics* [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	274	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	1
ME	350	Mechanical Engineering Lab 4	3
ME	372	Design of Mechanics	1
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	60

175 - 183 Total Credits

[1] used as equivalents for degree reqirements
[+] also required for Biology major
† EDDP students are exempt from BI 111 and 299 with credits fulfilled from engineering courses