

Engineering Dual Degree Requirements

Electrical 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 <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) Spanish, French, German, Chinese, Latin	6-14
	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

Biology

	Credits
BI 111 <i>Contemporary Issues in Biology</i> †	-
BI 210 Genetics	4
BI 220 Cellular and Molecular Biology	4
BI 230 Ecology and Evolutionary Biology	5
BI 299 <i>Biology Seminar</i> †	-
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

Electrical Engineering

	Credits
ECON 201 <i>Microeconomics</i> †	-
PH 351 Analog Electronics (WAC)	4
ME 295 Mechanics and Heat	3
ECE 202 Circuit Analysis II	3
ECE 208 Electronic Devices & Design Lab	1
ECE 210 Sophomore Seminar	1
ECE 255 Intro to Electronics Analysis & Design	3
ECE 264 Advanced C Programming	2
ECE 270 Digital Logic Design	4
ECE 301 Signals and Systems	3
ECE 302 Probabilistic Methods	3
ECE 311 Electric and Magnetic Fields	3
ECE 362 Microprocessors Systems & Interface	4
ECE 382 Feedback Systems Analysis	3
ECE 401 Engineering Ethics	1
ECE 440 Intro to Communication System Analysis	4
ECE 487 Senior Design I	1
ECE 488 Senior Design II	2
EE Electives	15

Credits 60

175 - 183 Total Credits

¹ used as equivalents for degree requirements

⁺ also required for Biology major

[†] EDDP students are exempt from BI 111 and 299 with credits fulfilled from engineering courses