

Engineering Major
General Education

Fall Semester

Sem	Code	Name	Hrs.
1	MATH 235	Calculus I	4
	PHYS 231	Introductory Physics I	4
	ENGR 101	Introduction to Engineering	1
	CHEM 231	General Chemistry I	4
	CORE 131	Holistic Human Flourishing	1
	LANG	World Languages	4
Total			18

3	ENGR 334	Computer Modeling of Physical Systems	2
	CHEM 341	Organic Chemistry I*	4
	SELECT	Old Testament Literature	4
	LANG	World Languages	4
	SELECT	Thematic Core (1 of 3)	4
	Total		

5	MATH 237	Calculus III	4
	SELECT	Christian Thought	4
	SELECT	Thematic Core (2 of 3)	4
	SELECT	Thematic Core (3 of 3)	4
	Total		

years 1 - 3 credit hours = 105

Biomedical Engineering
Neural Engineering

Spring Semester

Sem	Code	Name	Hrs.
2	MATH 236	Calculus II	4
	PHYS 232	Introductory Physics II	4
	CHEM 232	General Chemistry II	4
	ENGW	Writing (0-4)	4
	COMM	Oral Communication (0-2)	2
	Total		

4	MATH 333	Differential Equations	4
	CHEM 342	Organic Chemistry II*	4
	BITH	New Testament Literature	4
	SELECT	Visual & Performing Arts (1 of 2)	2
	CORE 3xx	Advanced Seminar (with Thematic Core tag)	4
	Total		

6	IIT BIOL 115	Human Biology	3	
	IIT BIOL 117	Human Biology Laboratory	1	
	IIT BME 315	Instrumentation & Measurement Laboratory	2	
	IIT ECE 211	Circuit Analysis 1	3	
	IIT ECE 218	Digital Systems	4	
	SELECT	Visual & Performing Arts (2 of 2)	2	
	ENGR 494	Engineering Ethics Capstone	2	
	Total			17

All courses below this line are based on completion at IIT

7	BME 100	Introduction to the Profession	2
	BME 309	Biomedical Imaging & Sensing	3
	ECE 308	Signals and Systems	3
	BME 422	Mathematical Methods for Biomedical Engineers	3
	BME 433	Biomedical Applications of Statistics	3
	ECE 213	Circuit Analysis 2	4
	Total		

8	BME 310	Biomaterials	3
	BME 325	Bioelectronics Laboratory	1
	BME 443	Biomedical Instrumentation & Electronics	3
	BME	Technical Elective 1	3
	IPRO	IPRO Elective 1	3
	Total		

9	BME 405	Physiology Laboratory	2
	BME 419	Introduction to Design Concepts in Biomedical Engineering	2
	BME 453	Quantitative Physiology	3
	BME	Technical Elective 2	3
	IPRO	IPRO Elective 2	3
	Total		

10	BME 420	Design Concepts in Biomedical Engineering	3
	BME 438	Neuroimaging	3
	BME 445	Quantitative Neural Function	3
	BME	Technical Elective 3	3
	EXAM	Fundamentals of Engineering (Passing is not required)	
	Total		

years 4 - 5 credit hours = 56

TOTAL credit hours = 161

last updated 8/7/2024

*Options for Organic Chemistry Series:

(WC CHEM 341 or IIT MATH 333) and (WC CHEM 342 or IIT Technical Elective - see IIT catalog)

If not both WC CHEM 341 and CHEM 342, then Wheaton requires ENGR 214

Wheaton College - Illinois Tech Biomedical Engineering - Neural

Updated August 2024

