

Wheaton College - Illinois Tech Joint Dual-degree Program

THIS PROGRAM PLAN IS FOR GUIDANCE ONLY. GRADUATION REQUIREMENTS ARE FOUND IN CATALOGS.

Engineering Major
General Education

Biomedical Engineering
Neural Engineering

Fall Semester

Spring 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 101	First Year Seminar	4
<i>Total</i>			17

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
<i>Total</i>			18

3	PHYS 334	Computer Modeling of Physical Systems	2
	CHEM 341	Organic Chemistry I*	4
	SELECT	Old Testament Literature	4
	LANG	Foreign Language	4
	SELECT	Thematic Core (1 of 3)	4
<i>Total</i>			18

4	MATH 237	Calculus III	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
<i>Total</i>			18

5	MATH 333	Differential Equations	4
	SELECT	Christian Thought	4
	SELECT	Thematic Core (2 of 3)	4
	SELECT	Thematic Core (3 of 3)	4
	SELECT	Visual & Performing Arts (2 of 2)	2
<i>Total</i>			18

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
	ENGR 394	Engineering Ethics Capstone	2
	<i>Total</i>		

years 1 - 3 credit hours = 104

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
	<i>Total</i>		

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
<i>Total</i>			13

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
<i>Total</i>			13

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)	3
<i>Total</i>			12

years 4 - 5 credit hours = 56

TOTAL credit hours = 160

last updated 8/21/2023

*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 204

Wheaton College - Illinois Tech Biomedical Engineering - Neural

Updated August 2021

