

## Civil & Biomedical Engineering Program Road Map 2022-23

This program layout applies to students registered in 2022-2023.

Where there are discrepancies in this document, the published [Academic Calendar](#) will always take precedence.

For a detailed breakdown of your course requirements, please refer to your Advisement Report in Mosaic.

CIVIL & BIOMEDICAL - LEVEL II						
	TERM 1			TERM 2		
CIVIL CORE	Engineering Mathematics III	MATH 2Z03	3	3	MATH 2ZZ3	Engineering Mathematics IV
	Surveying and Measurement for Transportation and Construction	CIVENG 2A03	3	4	CIVENG 2J04	Principles of Geological & Geo-Environmental Engineering
	Principles of Environmental Engineering	CIVENG 2B04	4	4	CIVENG 2C04	Structural Mechanics
	Statics & Mechanics of Materials	CIVENG 2P04	4	3	ELECTIVE	Complementary Studies
IBIOMED CORE	Inquiry II: Biochemistry	HTHSCI 2E03	3	3	IBEHS 2P03	Health Solutions Design Projects II: Introduction to Genetic Engineering
	Human Physiology & Anatomy I	HTHSCI 2F03	3	3	HTHSCI 2FF3	Human Physiology & Anatomy II
	<u>TOTAL TERM 1 UNITS</u>		20	20	<u>TOTAL TERM 2 UNITS</u>	
	<u>TOTAL UNITS:</u>		40			

CIVIL & BIOMEDICAL - LEVEL III						
	TERM 1			TERM 2		
CIVIL CORE	Geotechnical Engineering I	CIVENG 3A03	3	3	CIVENG 3B03	Geotechnical Engineering II
	Computer Applications in Civil Engineering	CIVENG 2E03	3	4	CIVENG 2004	Fluid Mechanics
	Civil Engineering Materials and Design	CIVENG 3P04	4	3	CIVENG 3L03	Water Quality
	Engineering Mechanics: Dynamics	CIVENG 2Q03	3			
IBIOMED CORE	Statistics & Epidemiology 1	HTHSCI 2G03	3	3	HTHSCI 3G03	Critical Appraisal of the Medical Literature
	Biomedical Signals and Systems	IBEHS 3A03	3	4	IBEHS 3P04	Health Solutions Design Projects III: Analysis and Decision Making
				3	CHEM 1AA3	Introductory Chemistry II
	<u>TOTAL TERM 1 UNITS</u>		19	20	<u>TOTAL TERM 2 UNITS</u>	
	<u>TOTAL UNITS:</u>		39			

## CIVIL & BIOMEDICAL - LEVEL IV

	TERM 1			TERM 2		
CIVIL CORE	Structural Analysis	CIVENG 3G04	4	4	CIVENG 3J04	Reinforced Concrete Design
	Engineering Systems	CIVENG 3C03	3	3	CIVENG 3M03	Municipal Hydraulics
IBIOMED CORE	Biomechanics	IBEHS 4B03	3	3	IBEHS 4A03	Biomedical Control Systems
	Biomedical Instrumentation and Measurement	IBEHS 4F04	4	3	IBEHS 4C03	Statistical Methods in Biomedical Engineering
	Health Solutions Design Projects IV: Economics and Project Management	IBEHS 4P04	4	3	IBEHS 4D03	Introduction to Medical Imaging
	Introductory Organic Chemistry OR Organic Chemistry I	CHEM 2E03 OR CHEM 20A3	3			
	<u>TOTAL TERM 1 UNITS</u>		21	16	<u>TOTAL TERM 2 UNITS</u>	
	<u>TOTAL UNITS:</u>		37			

## CIVIL & BIOMEDICAL - LEVEL V

	TERM 1			TERM 2		
CIVIL CORE	Intro to Transportation Engineering	CIVENG 3K03	3	3	ENGINEER 4A03	Ethics, Equity and Law in Engineering
	Steel Structures	CIVENG 4N04	4	4	ELECTIVE	Level IV Civil Elective (Choose from list)
	Level IV Civil Elective (Choose from list)	ELECTIVE	4	3	ELECTIVE	Complementary Studies
IBIOMED CORE	Biomedical Capstone Design Project	CIVBME 5P06A	3	3	CIVBME 5P06B	Biomedical Capstone Design Project
	Modelling of Biological Systems	IBEHS 4QZ3	3	4	ELECTIVE	IBEHS Technical Elective
				4	ELECTIVE	IBEHS Technical Elective
	<u>TOTAL TERM 1 UNITS</u>		17	21	<u>TOTAL TERM 2 UNITS</u>	
	<u>TOTAL UNITS:</u>		38			