

# ACADEMIC PLAN

## Fall / 2025

PROGRAM : Undergraduate  
DEGREE: Bachelor of Engineering  
CURRICULUM: Biomedical Engineering  
COLLEGE: Engineering

Faculty Core Requirements [8-8 Courses / 20 Cr.]	CLASSIFICATION	COURSE	COURSE NAME	COURSE Cr.	Minimum Grade	Required
	FACULTY CORE REQUIREMENTS [8 Course(s)/20Cr.]	CSC 200	Introduction to Computer & Software Tools	3.000	D	N
		CSC 201	Computer Programming I - C++	3.000	D	N
		LAW 230	Law & Ethics for Engineers	3.000	D	N
		MGT 225	Engineering Economics & Financial Management	3.000	D	N
		PHY 200	Engineering Mechanics - Dynamics	3.000	D	N
		PHY 202	General Physics LAB	1.000	D	N
		PHY 204	Electric Circuits	3.000	D	N
		PHY 205	Electric Circuits LAB	1.000	D	N
General Education University Requirement [6-6 Courses / 18 Cr.]	CLASSIFICATION	COURSE	COURSE NAME	COURSE Cr.	Minimum Grade	Required
	Business & Management [1 Course(s)/3Cr.]	MGT 223	Project Management for Engineers	3.000	D	N
	Citizenship and Social Responsibility [1 Course(s)/3Cr.]	LAW 210	Fighting Corruption	3.000	D	N
	Computer Literacy [1 Course(s)/3Cr.]	MIS 210	Computer Skills for Business	3.000	D	N
	Job Readiness [1 Course(s)/3Cr.]	HRM 245	Work Ready Now	3.000	D	N
	Language & Communication [1 Course(s)/3Cr.]	EGN 216	Communication and Scientific Cultures	3.000	D	N
		ENG 200	Writing Skills	3.000	D	N
	Religious Diversity [1 Course(s)/3Cr.]	ESC 205	Judaïsme, Christianité et Islam	3.000	D	N
		ESC 225	Enseignement Social de l'Eglise	3.000	D	N
Major Core Requirements [26-26 Courses / 58 Cr.]	CLASSIFICATION	COURSE	COURSE NAME	COURSE Cr.	Minimum Grade	Required
	Major Core Requirements [26 Course(s)/58Cr.]	BME 200	Introduction to Biomedical Engineering	2.000	C	Y
		BME 399	Work Experience	0.000	C	Y
		BME 499	Internship I for Biomedical Engineering	0.000	C	Y

Major Core Requirements [26-26 Courses / 58 Cr.]	Major Core Requirements [26 Course(s)/58Cr.]	BME 520	Biophysics and Bioelectricity	3.000	C	Y
		BME 530	Medical Instrumentation Design and Development	3.000	C	Y
		BME 531	Medical Instrumentation Design and Development Laboratory	1.000	C	Y
		BME 540	Medical Imaging Systems I	3.000	C	Y
		BME 545	Medical Imaging Systems II	3.000	C	Y
		BME 550	Biomaterials and Biocompatibility	3.000	C	Y
		BME 555	Hospital information system and PACS	1.000	C	Y
		BME 698	Final Year Project for Biomedical Engineering	3.000	C	Y
		BME 699	Internship II for Biomedical Engineering	2.000	C	Y
		CSC 300	Computer Programming II - C++	3.000	D	Y
		CSC 301	Computer Programming - C++ Laboratory	1.000	D	Y
		CTE 320	Logic Design	3.000	C	Y
		CTE 410	Signals and Systems Analysis and Processing	3.000	C	Y
		CTE 411	MATLAB application in signal processing	1.000	C	Y
		CTE 444	Engineering graphing and Software Applications	3.000	C	Y
		CTE 510	Microprocessors and Microcontrollers	3.000	C	Y
		CTE 511	Microprocessors and Microcontrollers Laboratory	1.000	C	Y
		CTE 558	Embedded Systems	3.000	C	Y
		CTE 572	Database Systems	3.000	C	Y
		MCE 403	Electric Power System	3.000	C	Y
		MCE 404	Linear Control Systems	3.000	C	Y
		MCE 405	Electric Power System Laboratory	1.000	C	Y
		MCE 409	Mechanics of solids	3.000	C	Y
Science and Math Requirements [18-18 Courses / 43 Cr.]	CLASSIFICATION	COURSE	COURSE NAME	COURSE Cr.	Minimum Grade	Required
	Science and Math Requirements [18 Course(s)/43Cr.]	BCH 200	Structural Biochemistry	3.000	D	N

Science and Math Requirements [18-18 Courses / 43 Cr.]	Science and Math Requirements [18 Course(s)/43Cr.]	BIO 200	General Biology I: Anatomy-Cells and Molecules	3.000	D	N
		CHM 200	General Chemistry I	3.000	D	N
		CHM 201	General Chemistry I LAB	1.000	D	N
		ELE 300	Electronics	3.000	C	N
		ELE 301	Electronics Laboratory	1.000	C	N
		ELE 402	Digital Electronics	3.000	C	N
		ELE 403	Digital Electronics Laboratory	1.000	C	N
		MAT 201	Calculus for Engineers I	3.000	D	N
		MAT 202	Algebra for Engineers I	3.000	D	N
		MAT 211	Calculus for Engineers II	3.000	D	N
		MAT 212	Algebra for Engineers II	3.000	D	N
		MAT 302	Probability and Statistics for engineers	3.000	D	N
		MAT 321	Calculus for Engineers III	3.000	D	N
		MAT 331	Numerical Analysis	3.000	D	N
		PHY 302	Electrostatics & Electromagnetism	3.000	D	N
		PHY 305	Optics & Electromagnetism Laboratory	1.000	D	N
Technical Electives [5-5 Courses / 16 Cr.]	CLASSIFICATION	COURSE	COURSE NAME	COURSE Cr.	Minimum Grade	Required
	Technical Electives [5 Course(s)/16Cr.]	BME 401	Biomedical Instrumentation	3.000	C	N
		BME 560	3D Medical Image Reconstruction	3.000	C	N
		BME 564	Physiology for Biomedical Engineers	3.000	C	N
		BME 570	Biomechanics and Mechanical property of Materials	3.000	C	N
		BME 571	Digital Processing of Medical Images Laboratory	1.000	C	N
		BME 572	Tissue Engineering	3.000	C	N
		BME 573	3D Medical Image Reconstruction Laboratory	1.000	C	N
		BME 574	Optical Imaging	3.000	C	N
		BME 575	Artificial Organs and Rehabilitation Engineering	3.000	C	N

Technical Electives [5-5 Courses / 16 Cr.]	Technical Electives [5 Course(s)/16Cr.]	BME 599	Industrial visit for Biomedical Engineering	1.000	C	N
		CTE 404	Object Oriented Design	3.000	C	N
		CTE 525	Digital Signal Processing	3.000	C	N
		CTE 551	Digital Communication	3.000	C	N
		CTE 570	Artificial Intelligence I	3.000	C	N
		MCE 501	Electric Machines Laboratory	1.000	C	N
		MCE 505	Operations Research	3.000	C	N
		MCE 564	Virtual Instrumentation and Labview	3.000	C	N
		MCE 565	Virtual Instrumentation and VHDL Lab	1.000	C	N