



EGYPTIAN NATIONAL UNIVERSITIES

مشروع إنشاء الجامعات المصرية الأهلية

جامعة العلمين الدولية

ALALAMEIN INTERNATIONAL UNIVERSITY

Al Alamein
International University**Biomedical Engineering Program****برنامج الهندسة الطبية الحيوية****Study Plan****الخطة الدراسية**

Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
1	MEC011	Engineering Drawing (1)	2	0	3	0	5	3	165	6
	PHY111	Physics I	2	2	0	0	4	3	150	6
	MAT111	Mathematics I	3	0	1	0	4	3	150	6
	MAT122	Statics	3	1	1	0	5	3	165	6
	CHE142	Engineering Chemistry	2	3	0	0	5	3	165	6
	UC1	University Requirement (1)	2	0	0	0	2	2	90	4
							25	17	885	34
2	MEC012	Engineering Drawing (2)	2	3	0	0	5	3	165	6
	MEC041	Production Engineering	2	3	0	0	5	3	165	6
	PHY211	Physics II	2	2	0	0	4	3	150	6
	MAT112	Mathematics II	3	0	1	0	4	3	150	6
	MAT121	Dynamics	3	1	1	0	5	3	165	6
	UC2	University Requirement (2)	2	0	0	0	2	2	90	4
							25	17	885	34
3	MEC151	Thermal Energy	2	0	2	0	4	3	150	6
	MAT312	Differential Equations	2	0	2	0	4	3	150	6
	CHE111	Organic Chemistry	2	2	0	0	4	3	150	6
	CHE152	Chemistry	2	0	2	0	4	2	120	6



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	MEC131	Metallurgy & Material testing	2	1	2	0	5	3	165	6
	UC3	University Requirement (3)	2	0	0	0	2	2	90	4
							23	16	825	34
4	BME212	Introduction to Bio Engineering	2	0	1	0	3	2	105	4
	BME252	Biotransport Phenomena	2	2	1	0	5	3	165	6
	BME215	Biology	2	2	1	0	5	3	165	6
	ELE111	Electrical Circuits	2	1	2	0	5	3	165	6
	BME213	Biochemistry	2	1	1	0	4	2	120	4
	PHY281	Biophysics	2	2	0	0	4	3	150	6
	UC4	University Requirement (4)	2	0	0	0	2	2	90	4
							28	18	960	36
5	ELE112	Electronic circuits	2	1	2	0	5	3	165	6
	MEC253	Thermodynamics	2	1	2	0	5	3	165	6
	BME320	Biomechanics 1 : Movement	2	2	1	0	5	3	165	6
	BME211	Human Anatomy and Physiology	2	2	1	0	5	3	165	6
	UC5	University Requirement (5)	2	0	0	0	2	2	90	4
	MAT315	Numerical Analysis	2	0	2	0	4	3	150	6
							26	17	900	34
6	ELE211	Electromagnetic Fields	2	1	2	0	5	3	165	6
	ELE212	Electrical Measurements & Measuring Instruments	2	2	1	0	5	3	165	6
	BME326	Intro to biomedical Signals & Electrical Circuits	2	2	1	0	5	3	165	6
	E1	Elective Course (1)	2	2	1	0	5	3	165	6
	CSE014	Structured Programming	2	3	0	0	5	3	180	6
	BME255	Cell & Molecular Biology	2	2	1	0	5	3	165	6
							30	18	1005	36



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7	BME312	Biomedical Engineering Design	2	2	1	0	5	3	165	6
	BME322	System Psychology & Biomechanics	2	2	1	0	5	3	165	6
	ELE271	Electrical Machines	2	1	2	0	5	3	165	6
	BME224	Introduction to Medical Imaging	2	2	0	1	5	3	120	6
	UC6	University Requirement (6)	2	0	0	0	2	2	90	4
	UE1	Elective University (1)	2	0	0	0	2	2	90	4
							24	16	795	32
8	BME315	Biomedical Systems Analysis	2	2	1	0	5	3	165	6
	BME321	Magnetic Resonance Imaging	2	2	1	0	5	3	165	6
	BME325	Biomaterials & Medical Devices	2	2	1	0	5	3	165	6
	BME327	Biological Performance of materials	2	2	1	0	5	3	165	6
	BME391	Industrial Project	1	6	0	0	7	3	135	6
	UE2	Elective University (2)	2	0	0	0	2	2	90	4
							29	17	885	34
9	BME323	Modern Optical Microscopy & Imaging	2	2	1	0	5	3	165	6
	BME491	Graduation project 1	1	6	0	0	7	3	195	6
	E2	Elective Course (2)	2	2	1	0	5	3	165	6
	E3	Elective Course (3)	2	2	1	0	5	3	165	6
	UC7	University Requirement (7)	2	0	0	0	2	2	90	4
							24	14	780	28
10	BME492	Graduation project 2	1	6	0	0	7	3	195	6
	E4	Elective Course (4)	2	2	1	0	5	3	165	6
	E5	Elective Course (5)	2	2	1	0	5	3	165	6
	E6	Elective Course (6)	2	2	1	0	5	3	165	6
	UE3	Elective University (3)	2	0	0	0	2	2	90	4



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							24	14	780	28
							258	164	8700	330

Elective (E1)

BME333	Microbiology & Immunity
ELE113	Electrical Drawing
ELE234	Logic Design
MEC111	Mechanical engineering Drawing
MEC231	Engineering economy
MEC251	Fluid Mechanics

Elective (E2, E3, E4, E5, E6)

BME222	Biomechanics 2: Biological Tissues
BME311	Biomedical Sensors
BME324	Intermediate Fluid mechanics
BME328	Tissue engineering
BME421	Bio Regenerative Engineering
BME422	Regenerative Engineering Applications
BME499	Special Topic