



EGYPTIAN NATIONAL UNIVERSITIES

مشروع وإنشاء 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	2	1	0	5	3	150	6
	UC1	University Requirement (1)	2	0	0	0	2	2	90	4
							<b>25</b>	<b>17</b>	<b>870</b>	<b>34</b>
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
							<b>25</b>	<b>17</b>	<b>885</b>	<b>34</b>
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	1	1	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
								<b>23</b>	<b>16</b>	<b>825</b>
4	BME212	Introduction to Bio Engineering	2	0	1	0	3	2	105	4
	BME252	Bio transport Phenomena	2	1	1	0	4	3	120	6
	BME215	Biology	2	1	1	0	4	3	120	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
							<b>26</b>	<b>18</b>	<b>870</b>	<b>36</b>
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	1	1	0	4	3	120	6
	BME211	Human Anatomy and Physiology	2	1	1	0	4	3	120	6
	UC5	University Requirement (5)	2	0	0	0	2	2	90	4
	MAT313	Differential Equations & Numerical Analysis	3	0	2	0	5	4	195	8
							<b>25</b>	<b>18</b>	<b>855</b>	<b>36</b>
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	1	1	0	4	3	120	6
	E1	Elective Course (1)	2	1	1	0	4	3	120	6
	CSE014	Structured Programming	2	3	0	0	5	3	180	6
	BME255	Cell & Molecular Biology	2	1	1	0	4	3	120	6
							<b>27</b>	<b>18</b>	<b>870</b>	<b>36</b>



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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
7	BME312	Biomedical Engineering Design	2	1	1	0	4	3	120	6
	BME322	System Psychology & Biomechanics	2	1	1	0	4	3	120	6
	ELE271	Electrical Machines	2	1	2	0	5	3	165	6
	BME224	Introduction to Medical Imaging	2	1	0	0	3	3	105	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
							<b>20</b>	<b>16</b>	<b>690</b>	<b>32</b>
8	BME315	Biomedical Systems Analysis	2	1	1	0	4	3	120	6
	BME321	Magnetic Resonance Imaging	2	1	1	0	4	3	120	6
	BME325	Biomaterials & Medical Devices	2	1	1	0	4	3	120	6
	BME327	Biological Performance of materials	2	1	1	0	4	3	120	6
	BME391	Industrial Project	1	6	0	0	7	3	135	6
	UE2	Elective University (2)	2	0	0	0	2	2	90	4
							<b>25</b>	<b>17</b>	<b>705</b>	<b>34</b>
9	BME323	Modern Optical Microscopy & Imaging	2	1	1	0	4	3	120	6
	BME491	Graduation project 1	1	6	0	0	7	3	195	6
	E2	Elective Course (2)	2	1	1	0	4	3	120	6
	E3	Elective Course (3)	2	1	1	0	4	3	120	6
	UC7	University Requirement (7)	2	0	0	0	2	2	90	4
							<b>21</b>	<b>14</b>	<b>645</b>	<b>28</b>
10	BME492	Graduation project 2	1	6	0	0	7	3	195	6
	E4	Elective Course (4)	2	1	1	0	4	3	120	6
	E5	Elective Course (5)	2	1	1	0	4	3	120	6
	E6	Elective Course (6)	2	1	1	0	4	3	120	6
	UE3	Elective University (3)	2	0	0	0	2	2	90	4



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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
							21	14	645	28
							238	165	7860	332

### 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