



EGYPTIAN NATIONAL UNIVERSITIES

مشروع إنشاء الجامعات المصرية الاهلية

جامعة العلمين الدولية

ALALAMEIN INTERNATIONAL UNIVERSITY

Al Alamein
International University**Bioinformatics Program****برنامج المعلوماتية الطبية الحيوية****Study Plan****الخطة الدراسية**

Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
1	MAT111	Mathematics I	3	0	1	0	4	3	150	6
	PHY281	Biophysics	2	2	0	0	4	3	150	6
	CSE014	Structured Programming	2	3	0	0	5	3	180	6
	UC1	University Requirement (1)	2	0	0	0	2	2	90	4
	UC2	University Requirement (2)	2	0	0	0	2	2	90	4
	UE1	Elective University (1)	2	0	0	0	2	2	90	4
							19	15	750	30
2	MAT112	Mathematics II	3	0	1	0	4	3	150	6
	MAT131	Probability & Statistics I	2	1	2	0	5	3	195	6
	BIO241	Biology II	2	2	0	0	4	3	150	6
	CSE015	Object Oriented Programming	2	3	0	0	5	3	180	6
	UC3	University Requirement (3)	2	0	0	0	2	2	90	4
	UE2	Elective University (2)	2	0	0	0	2	2	90	4
							22	16	855	32
3	MAT212	Linear Algebra	2	2	0	0	4	3	150	6
	CSE111	Data Structures	2	3	0	0	5	3	180	6
	CSE131	Logic Design	2	2	2	0	6	3	195	6
	AIE111	Artificial Intelligence	2	2	1	0	5	3	180	6



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	BIO221	Molecular Biology I	2	2	0	0	4	3	150	6
	BMD191	Field Training 1 in Biomedical Informatics	2	0	0	0	2	2	60	4
								26	17	915
4	MAT312	Differential Equations	2	0	2	0	4	3	150	6
	CSE221	Database Systems	2	2	1	0	5	3	180	6
	CSE315	Discrete Mathematics	2	0	2	0	4	3	150	6
	BMD241	Human Physiology	2	2	1	0	5	3	180	6
	BMD311	Introduction to Bioinformatics	2	2	1	0	5	3	180	6
	UC4	University Requirement (4)	2	0	0	0	2	2	90	4
								25	17	930
5	CSE251	Software Engineering	2	2	1	0	5	3	180	6
	CSE261	Computer Networks	2	2	1	0	5	3	165	6
	CSE281	Image Processing	2	2	1	0	5	3	180	6
	BMD312	Clinical Informatics	2	2	1	0	5	3	180	6
	BMD351	Biomedical Data Acquisition	2	2	1	0	5	3	180	6
	UC5	University Requirement (5)	2	0	0	0	2	2	90	4
								27	17	975
6	CSE112	Design & Analysis of Algorithms	3	0	3	0	6	4	195	8
	CSE352	Systems Analysis & Design	2	2	1	0	5	3	165	6
	BMD361	Biomedical Statistics	2	2	1	0	5	3	180	6
	BMD292	Field Training 2 in Biomedical Informatics	2	0	0	0	2	2	60	4
	E1	Elective Course (1)	2	2	1	0	5	3	180	6



EGYPTIAN NATIONAL UNIVERSITIES

مشروع وإنشاء الجامعات المصرية الأهلية

جامعة العلمين الدولية

ALALAMEIN INTERNATIONAL UNIVERSITY

Al Alamein
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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
	UC6	University Requirement (6)	2	0	0	0	2	2	90	4
							25	17	870	34
7	BMD421	Biomedical Information Systems	2	2	1	0	5	3	180	6
	BMD431	Medical Image Informatics	2	2	1	0	5	3	180	6
	BMD493	Graduation Project 1	2	3	0	0	5	3	180	6
	E2	Elective Course (2)	2	2	1	0	5	3	180	6
	E3	Elective Course (3)	2	2	1	0	5	3	180	6
	UE3	Elective University (3)	2	0	0	0	2	2	90	4
								27	17	990
8	BMD413	Structural Bioinformatics	2	2	1	0	5	3	180	6
	BMD494	Graduation Project 2	2	3	0	0	5	3	180	6
	E4	Elective Course (4)	2	2	1	0	5	3	180	6
	E5	Elective Course (5)	2	2	1	0	5	3	180	6
	E6	Elective Course (6)	2	2	1	0	5	3	180	6
	UC7	University Requirement (7)	2	0	0	0	2	2	90	4
								27	17	990
							198	133	7275	266

Elective (E1)

BIO131 Biology I
 MAT231 Probability & Statistics II
 MAT315 Numerical Analysis



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ELE113	Electrical Drawing
ELE432	Digital Signal Processing
CSE132	Computer Architecture & Organization
CSE211	Web Programming
CSE233	Operating Systems
CSE241	Security of Information Systems

Elective (E2)

CSE234	Embedded Systems
CSE272	Parallel & Distributed Systems
CSE322	Big Data Analytics 1
CSE363	Cloud Computing
CSE344	Introduction to Cyber Security
CSE383	Computer Vision
AIE121	Machine Learning

Elective (E3)

CSE446	Information & Computer Networks Security
AIE231	Neural Networks
AIE241	Natural Language Processing
AIE317	Artificial intelligence in medicine
AIE323	Data Mining

Elective (E4)

AIE342	Advanced Methods for Data Analysis
AIE343	Machine Learning for Text Mining
AIE424	Intelligent Decision Support Systems
AIE425	Intelligent Recommender Systems



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Elective (E5)

- CSE453 Building Information Systems
- CSE464 Internet of Things
- CSE475 High Performance Computing
- CSE484 Interactive Multimedia
- BMD414 Selected Topics in Biomedical Informatics 1: Data Analysis & Visualization

Elective (E6)

- BMD415 Selected Topics in Biomedical Informatics 2: Data Mining & Machine Learning
- BMD422 Systems Biology
- BMD452 Biomedical Text Processing
- BMD462 Bio-Inspired Computing