



EGYPTIAN NATIONAL UNIVERSITIES

مشروع إنشاء الجامعات المصرية الأهلية

جامعة العلمين الدولية

ALALAMEIN INTERNATIONAL UNIVERSITY

**Computer Engineering Program****برنامج هندسة الحاسب****IV. Cyber Security****الأنون السيبراني .IV****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
	MAT123	Mechanics	2	2	0	0	4	3	150	6
	MEC011	Engineering Drawing (1)	2	0	3	0	5	3	135	4
	PHY212	Introduction to Engineering Physics	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
							24	17	855	32
2	MAT112	Mathematics II	3	0	1	0	4	3	150	6
	MAT131	Probability & Statistics I	2	1	2	0	5	3	195	6
	CSE015	Object Oriented Programming	2	3	0	0	5	3	180	6
	CSE315	Discrete Mathematics	2	0	2	0	4	3	150	6
	UC2	University Requirement (2)	2	0	0	0	2	2	90	4
	UC3	University Requirement (3)	2	0	0	0	2	2	90	4
							22	16	855	32



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3	MAT212	Linear Algebra	2	0	2	0	4	3	150	6
	CSE111	Data Structures	2	3	0	0	5	3	180	6
	CSE113	Electric & Electronic Circuits	1	3	2	0	6	3	180	6
	CSE131	Logic Design	2	2	2	0	6	3	195	6
	UC4	University Requirement (4)	2	0	0	0	2	2	90	4
	UC5	University Requirement (5)	2	0	0	0	2	2	90	4
							25	16	885	32
4	MAT231	Probability & Statistics II	2	2	1	0	5	3	195	6
	MAT312	Differential Equations	2	0	2	0	4	3	150	6
	CSE132	Computer Architecture & Organization	2	2	1	0	5	3	165	6
	AIE111	Artificial Intelligence	2	2	1	0	5	3	180	6
	E1	Elective Course (1)	2	2	1	0	5	3	180	6
							24	15	870	30
5	E2	Elective Course (2)	2	2	1	0	5	3	180	6
	CSE221	Database Systems	2	2	1	0	5	3	180	6
	CSE233	Operating Systems	2	2	1	0	5	3	165	6
	AIE121	Machine Learning	2	2	1	0	5	3	180	6
	CSE291	Field Training 1 in Computer Engineering	2	0	0	0	2	2	60	4
	UE1	Elective University (1)	2	0	0	0	2	2	90	4
							24	16	855	32
6	CSE112	Design & Analysis of Algorithms	3	0	3	0	6	4	195	8
	CSE211	Web Programming	2	2	1	0	5	3	165	6



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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
	CSE251	Software Engineering	2	2	1	0	5	3	180	6
	CSE261	Computer Networks	2	2	1	0	5	3	165	6
	CSE234	Embedded Systems	2	2	1	0	5	3	180	6
							26	16	885	32
7	ELE432	Digital Signal Processing	2	1	1	0	4	3	150	6
	CSE241	Security of Information Systems	2	2	1	0	5	3	150	6
	CSE242	Cryptography	2	1	2	0	5	3	180	6
	CSE363	Cloud Computing	2	2	1	0	5	3	180	6
	CSE344	Introduction to Cyber Security	2	2	1	0	5	3	180	6
	UE2	Elective University (2)	2	0	0	0	2	2	90	4
							26	17	930	34
8	CSE243	Secure Programming	2	3	0	0	5	3	180	6
	CSE373	Parallel Programming	2	2	1	0	5	3	180	6
	CSE446	Information & Computer Networks Security	2	2	1	0	5	3	180	6
	CSE464	Internet of things	2	2	1	0	5	3	180	6
	CSE392	Field Training 2 in Computer Engineering	2	0	0	0	2	2	60	4
	UC6	University Requirement (6)	2	0	0	0	2	2	90	4
							24	16	870	32
9	E3	Elective Course (3)	2	2	1	0	5	3	180	6
	E4	Elective Course (4)	2	2	1	0	5	3	180	6
	CSE445	Selected Topics in Information Security	2	2	1	0	5	3	180	6



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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
10	CSE493	Graduation Project 1	2	3	0	0	5	3	180	6
	UC7	University Requirement (7)	2	0	0	0	2	2	90	4
							22	14	810	28
	E5	Elective Course (5)	2	2	1	0	5	3	180	6
	E6	Elective Course (6)	2	2	1	0	5	3	180	6
	CSE447	Selected Topics in Computer Security	2	2	1	0	5	3	180	6
	CSE494	Graduation Project 2	2	3	0	0	5	3	180	6
	UE3	Elective University (3)	2	0	0	0	2	2	90	4
							22	14	810	28
							239	157	8625	312



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Elective (E1)

CHE142	Engineering Chemistry
MAT121	Dynamics
MAT122	Statics
MAT315	Numerical Analysis
PHY211	Physics II

Elective (E2)

ELE115	Electrical Circuits & Measurements
ELE215	Electronics & Digital Circuits
ELE232	Fundamentals of Communication Systems
ELE233	Automatic Control Systems
ELE338	Wireless Communication Networks

Elective (E3)

CSE271	Introduction to Parallel Computing
CSE281	Image Processing
CSE382	Computer Graphics
AIE231	Neural Networks

Elective (E4)

CSE311	Design of Compilers
CSE322	Big Data Analytics 1
CSE335	Real Time & Embedded Systems Design
CSE383	Computer Vision

Elective (E5)

AIE322	Advanced Machine Learning
AIE323	Data Mining
AIE332	Deep Learning
AIE351	Robotics Design

Elective (E6)

CSE272	Parallel & Distributed Systems
CSE425	Big Data Analytics 2
CSE448	Cyber Forensics
BMD311	Introduction to Bioinformatics