



EGYPTIAN NATIONAL UNIVERSITIES

مشروع إنشاء الجامعات المصرية الأهلية

جامعة العلمين الدولية

ALAMEIN INTERNATIONAL UNIVERSITY

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ALAMEIN
INTERNATIONAL UNIVERSITY**Sustainable Energy Program**

برنامج الطاقة المستدامة

Study Plan

الخطة الدراسية

Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
1	GES111	Physical Geology	2	2	1	0	5	3	165	6
	BIO131	Biology I	2	2	0	0	4	3	150	6
	CHE111	Organic Chemistry	2	2	0	0	4	3	150	6
	PHY111	Physics I	2	2	0	0	4	3	150	6
	MAT111	Mathematics I	3	0	1	0	4	3	150	6
	UC1	University Requirement (1)	2	0	0	0	2	2	90	4
							23	17	840	34
2	CHE141	Physical Chemistry	2	2	0	0	4	3	150	6
	MAT112	Mathematics II	3	0	1	0	4	3	150	6
	MAT131	Probability and Statistics I	2	1	2	0	5	3	195	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
	UC7	University Requirement (7)	2	0	0	0	2	2	90	4
	UE1	Elective University (1)	2	0	0	0	2	2	90	4
							21	17	855	34
3	BIO241	Biology II	2	2	0	0	4	3	150	6
	CHE221	Inorganic Chemistry	2	2	0	0	4	3	150	6
	PHY211	Physics II	2	2	0	0	4	3	150	6
	PHY119	Laboratory Safety & good laboratory practice	1	2	0	0	3	2	105	4



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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
		(Physics)								
	E1	Elective Course (1)	2	2	0	0	4	3	150	6
	E2	Elective Course (2)	1	2	0	0	3	2	105	4
	UC5	University Requirement (5)	2	0	0	0	2	2	90	4
							24	18	900	36
4	CSE014	Structure Programming	2	3	0	0	5	3	150	6
	PHY231	Electromagnetic wave	2	2	0	0	4	3	150	6
	PHY232	Modern Physics	2	2	0	0	4	3	150	6
	E3	Elective Course (3)	1	2	0	0	3	2	105	4
	E4	Elective Course (4)	1	2	0	0	3	2	105	4
	UE2	Elective University (2)	2	0	0	0	2	2	90	4
	UC4	University Requirement (4)	2	0	0	0	2	2	90	4
							23	17	840	34
5	PHY311	Introduction to quantum mechanics	1	2	0	0	3	2	105	4
	PHY321	Crystallography & bonding	1	2	0	0	3	2	105	4
	PHY361	Fundamentals of Energy Systems	2	2	0	0	4	3	150	6
	PHY362	Energy Conversion System	1	2	0	0	3	2	105	4
	PHY371	Astronomy & Astrophysics	2	2	0	0	4	3	150	6
	E5	Elective Course (5)	1	2	0	0	4	2	105	4
	UC6	University Requirement (6)	2	0	0	0	2	2	90	4
							23	16	810	32
6	PHY322	Solid state physics	2	2	0	0	4	3	150	6
	PHY323	Solar Photovoltaic Energy Conversion I	1	2	0	0	3	2	105	4
	PHY341	Electronics I	1	2	0	0	3	2	105	4
	PHY364	Solar Thermal Energy I	1	2	0	0	3	2	105	4



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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
	PHY365	Bioenergy I (Biochemical Conversion Systems)	1	2	0	0	3	2	105	4
	PHY366	Energy Storage System I	1	2	0	0	3	2	105	4
	E6	Elective Course (6)	2	2	0	0	4	3	150	6
							23	16	825	32
7	PHY421	Solar Photovoltaic Energy Conversion II	1	2	0	0	3	2	105	4
	PHY461	Solar Thermal Energy II	1	2	0	0	3	2	105	4
	PHY462	Bio-Energy II (Thermo-chemical Conversion of Biomass)	1	2	0	0	3	2	105	4
	PHY463	Energy Storage System II	2	2	0	0	4	3	150	6
	E7	Elective Course (7)	2	2	0	0	4	3	150	6
	E8	Elective Course (8)	2	2	0	0	4	3	150	6
							21	15	765	30
8	PHY419	Graduation Project	2	4	0	0	6	4	210	8
	PHY428	Practical Training & Internship	2	4	0	0	6	4	210	8
	PHY465	Wind Energy	2	2	0	0	4	3	150	6
	E9	Elective Course (9)	2	2	0	0	4	3	150	6
	UE3	Elective University (3)	2	0	0	0	2	2	90	4
							22	16	810	32
							177	132	6645	264



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Elective (E1, E6)

CHE429	Nanosurface chemistry
PHY412	Physics of semiconductor nanostructure
PHY324	Nanochemistry and physics
PHY221	Introduction to Nanoscience
PHY281	Biophysics

Elective (E2, E3, E4, E5)

CHE347	Electrochemistry & Surface Chemistry
CHE346	Thermochemistry & Kinetics
CHE348	Fluid Flow, Heat & Mass Transfer
CHE340	Thin films nanostructure and surface science
CHE345	Silicon Technology
ENV211	Principles of Ecology
CHE231	Quality control

CHE241	Renewable energy & sustainability
CHE318	Scientific writing
PHY319	Journal club

Elective (E7, E8, E9)

PHY312	Statistical mechanics
PHY313	Electrodynamics
PHY363	Energy & Environment
PHY367	Energy Management
PHY422	Solar Selective Materials
PHY464	Introduction to Electric power systems
PHY466	Other Renewable Energy Sources
PHY467	Energy Efficiency in Building & ECBC
PHY495	Special Topic