



EGYPTIAN NATIONAL UNIVERSITIES

مشروع وإنشاء الجامعات المصرية الأهلية

جامعة العلمين الدولية
ALALAMEIN INTERNATIONAL UNIVERSITYAl Alamein
International University

Mechatronics Engineering Program

برنامج هندسة الميكاترونيات

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
							25	17	870	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	MEC111	Mechanical Engineering Drawing	2	3	1	0	6	3	180	6
	MEC151	Thermal Energy	2	0	2	0	4	3	150	6



Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
	ELE111	Electrical Circuits	2	1	2	0	5	3	165	6
	MAT312	Differential Equations	2	0	2	0	4	3	150	6
	UC3	University Requirement (3)	2	0	0	0	2	2	90	4
	MEC121	Manufacturing Technology	2	3	0	0	5	3	165	6
							26	17	900	34
4	CSE014	Structured Programming	2	3	0	0	5	3	180	6
	ELE234	Logic Design	2	1	2	0	5	3	165	6
	MEC253	Thermodynamics	2	1	2	0	5	3	165	6
	MEC112	Strength of Material	2	0	2	0	4	3	150	6
	MEC251	Fluid Mechanics	2	1	2	0	5	3	165	6
	UC4	University Requirement (4)	2	0	0	0	2	2	90	4
							26	17	915	34
5	ELE112	Electronic Circuits	2	1	2	0	5	3	165	6
	MEC211	Mechanics of Machinery	2	1	2	0	5	3	165	6
	MEC252	Heat & Mass Transfer	2	1	2	0	5	3	165	6
	ELE271	Electrical Machines	2	1	2	0	5	3	165	6
	MAT131	Probability and Statics 1	2	1	2	0	5	3	195	6
	UC5	University Requirement (5)	2	0	0	0	2	2	90	4
							27	17	945	34
6	MEC013	Technical Report Writing	2	0	0	0	2	2	90	4
	MEC214	Mechanical Vibration	2	1	2	0	5	3	165	6
	ELE380	Motors and electronic System	2	2	0	0	4	3	150	6
	MEC271	Automatic Control	2	2	2	0	6	3	180	6
	ELE238	Data Communication and Computer Networks	3	2	0	0	5	3	165	6
	MEC131	Metallurgy & Material testing	2	1	2	0	5	3	165	6



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							27	17	915	34
7	MEC313	Mechanical Power Transmission	2	2	1	0	5	3	165	6
	MEC341	Measurement and Instrumentation	1	3	0	0	4	2	120	4
	MEC231	Engineering Economy	2	0	2	0	4	3	150	6
	UC6	University Requirement (6)	2	0	0	0	2	2	90	4
	E1	Elective Course (1)	2	2	2	0	6	3	180	6
	UE1	Elective University (1)	2	0	0	0	2	2	90	4
							23	15	795	30
8	MEC273	Hydraulics and pneumatics Control	2	1	2	0	5	3	165	6
	MEC471	Microcontroller & Embedded Systems	2	1	2	0	5	3	165	6
	MEC475	Digital Control	2	1	2	0	5	3	165	6
	MEC391	Industrial Project	1	6	0	0	7	3	195	6
	MEC455	Industrial Automation	2	1	2	0	5	3	165	6
	UE2	Elective University (2)	2	0	0	0	2	2	90	4
							29	17	945	34
9	ELE384	Image Prosecting and Computer vision	3	3	0	0	6	3	180	6
	MEC472	Mechatronic System Design	2	4	0	0	6	3	180	6
	MEC491	Graduation project 1	1	6	0	0	7	3	195	6
	E2	Elective Course (2)	3	3	0	0	6	3	180	6
	E3	Elective Course (3)	3	3	0	0	6	3	180	6
	UC7	University Requirement (7)	2	0	0	0	2	2	90	4
							33	17	1005	34
10	MEC492	Graduation project 2	1	6	0	0	7	3	195	6
	E4	Elective Course (4)	3	3	0	0	6	3	180	6
	E5	Elective Course (5)	3	3	0	0	6	3	180	6



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Semester	Code	Course Name	LCT	LAB	TUT	OTH	CNTCT	CH	SWL	ECTS
	E6	Elective Course (6)	3	3	0	0	6	3	180	6
	UE3	Elective University (3)	2	0	0	0	2	2	90	4
							27	14	825	28
							268	165	9000	330

Elective (E1)

MEC235 Nanotechnology basics & health risk
 MEC255 Energy Resources
 MEC329 Industrial Robotics
 MEC442 Microfabrication and Thin-Film Technology
 Laboratory

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

MEC343 Micro and Nano system Computer-Aided Design
 MEC363 System Psychology & Biomechanics
 MEC372 Sensors and Measurement Systems
 MEC381 Gait Analysis & Locomotion
 MEC429 Industrial automated assembly mechanisms

MEC441 Computer Integrated Manufacturing
 MEC473 Design of Autonomous Systems
 MEC474 Modeling & Simulation of Mechatronics systems
 MEC481 Rehabilitation Robotics
 MEC482 Refrigeration and Air Conditioning
 MEC499 Special Topic
 AIE111 Artificial Intelligence
 AIE121 Machine Learning
 ELE213 Industrial Electronics
 ELE321 Signals and system fundamentals
 ELE432 Digital Signal Processing
 CSE015 Object Oriented Programming