

COURSE SYLLABUS- SPRING 2016

Curricular Area	Electrical Engineering/ power and mechanical	
Type of Course	Core (3 crd)	
Prerequisites by Courses	POWE331	
Instructors	M. Tarnini m.tarnini@bau.edu.lb Engineering Building – G111 Phone Ext: 3404	
Office Hours		
Textbook	Electric Machinery (Chapman)	
Reference Books		
Topics	<i>Subjects covered</i>	<i>Week</i>
	<ul style="list-style-type: none"> • Revision of basic AC circuits • Fund. Of AC Machinery 	1
	<ul style="list-style-type: none"> • Machine winding, rotating field of 3 phase AC machines. Introduction to Induction Machines 	2
	<ul style="list-style-type: none"> • three-phase induction motors: Construction, theory of operation, equivalent circuit. 	3
	<ul style="list-style-type: none"> • Application of three-phase induction motors: (Construction, theory of operation, equivalent circuit) 	4
	<ul style="list-style-type: none"> • Speed control of 3 phase induction motors and its applications 	5
	<ul style="list-style-type: none"> • Introduction to synchronous machines 	6
	<ul style="list-style-type: none"> • Synchronous machines equivalent circuit and inductance formulas 	7
	<ul style="list-style-type: none"> • Applications and solved problems in synchronous machines 	8

	<ul style="list-style-type: none"> • Synchronous generator: construction, theory of operation, induced voltage, equivalent circuit, voltage regulation 	9
	<ul style="list-style-type: none"> • Application and problems of synchronous generators 	10
	<ul style="list-style-type: none"> • equivalent circuit, voltage regulation, electrical and mechanical diagrams, parallel operation 	11
	<ul style="list-style-type: none"> • three-phase synchronous motors: Construction, theory of operation, equivalent circuit, 	12
	<ul style="list-style-type: none"> • three-phase synchronous motors applications and solved problems 	13
	<ul style="list-style-type: none"> • starting of 3-phase synchronous motors 	14
	3phase motors and generators (synchronous and induction) testing	15

Assessment:

Assessment:	Dates	Weighing
Midterm_1	21-3-2016	20%
Midterm_2	4-5-2016	20%
lab		20%
Final Exam	To be set later by BAU registrar	40%
Total		100%