Course Syllabus

Course ID	**0902311**
Course Title	**Electrical machines**
Prerequisite	**0902311 Electrical machines**
Time & Date	
Coordinator	-
Instructor	**Assoc. Prof. Dr.** Head of Communication and electronics Department
Office hours	**Tue 8:30 – 11:30am & SunTueThu 9:00-10:00 am**
Course Description	Transformers. DC Motors and Generators. Three-Phase Induction motors. Single-Phase Induction Motors. Three-Phase Synchronous Generator and Motor. Single-Phase Synchronous Generator and Motor. AC Series Motor. Repulsion Motor. **Pre :0902306**
Course Objectives	1. The ability to understand the principles of operation of electrical machines. 2-Ability to understand the fundamental characteristics of various types of machines. 3-Understand the concept of equivalent circuit. 4-Understand the construction and design issues associated with electrical machines. 5-The simple testing of electrical machines and transformers.
Course Outcomes	After successfully completing this course, the students should be able to:

	(a) An ability to apply knowledge of mathematics, science, and engineering (b) An ability to design and conduct experiments, to analyze and interpret data (c) An ability to design a system, component, or process to meet desired needs (d) An ability to function on multi-disciplinary teams (e) An ability to identify, formulate and solve engineering problems (f) An understanding of professional and ethical responsibility (g) An ability to communicate effectively (h) The broad education necessary to understand the impact of engineering solutions in a global and societal Context.
Course Topics	1 Magnetic circuit, losses and inductance 2 Transformers 3 DC machines 4. Three phase induction (asynchronous) machines. 5. Synchronous machines 6. Single phase motors
Course Text Book	1- An introduction to electrical machines and transformers By George McPherson, John Wiley, 1981
Course References	1. electric machines fundamental by Chapman, McGraw – Hill , 1991 2. Basic electric machines by Del Toro, Prentice – Hall, 1990 3. Electric machines By Ryff, Prentice – Hall, 1988
Course delivery	Lectures Tutorial Lab

	Homework Project Computer Internet Industrial Visit
Course Assessment	Assignments & short reports…….. 10% 2 exams @ 20% each ……. 40% Final exam …….. 50%
Updated	Dr. saad 10//2009

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO12
CO1											
CO2											
CO3											
CO4											
CO5											
CO6											
CO7											
CO8											
CO9											

	a	b	C	D	e	f	g	h	i	j	K
CO1											
CO2											
CO3											
CO4											
CO5											
CO6											
CO7											
CO8											
CO9											

ABET a-k Engineering and Technology program outcome

(a) An ability to apply knowledge of mathematics, science, and engineering
(b) An ability to design and conduct experiments, to analyze and interpret data
(c) An ability to design a system, component, or process to meet desired needs
(d) An ability to function on multi-disciplinary teams
(e) An ability to identify, formulate, and solve engineering problems
(f) An understanding of professional and ethical responsibility
(g) An ability to communicate effectively
(h) The broad education necessary to understand the impact of engineering solutions in a global and societal context
(i) A recognition of the need for, and an ability to engage in life-long learning
(j) A knowledge of contemporary issues
(k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Plagiarism

Deliberate plagiarism is a serious act of academic misconduct. Students may be suspended from the University if they are found to have plagiarized their course work. Whether inadvertent or deliberate, plagiarism includes the following:

(a) word-for-word copying of sentences or whole paragraphs or presenting of substantial extracts from either paper-based or electronic sources the work or data of others that are published or unpublished (such as books, internal reports, and lecture notes or tapes) without clearly indicating their origin;
(b) using very close paraphrasing of sentences or whole paragraphs without due acknowledgement in the form of reference to the original work;
(c) submitting another student's work in whole or in part;
(d) using of another person's ideas, work or research data without acknowledgement;
(e) copying computer files, algorithms or computer code without clearly indicating their origin;
(f) submitting work that has been written by someone else on the student's behalf; and
(g) submitting work that has been derived, in whole or in part, from another student's work by a process of mechanical transformation (e.g., changing variable names in computer programs).