Course Syllabus

Course ID	0902306
Course Title	Electromagnetic 2
Prerequisite	
Time & Date	**Sun Tue Thu 11:00qm – 12:00pm (Room ENG208)**
Coordinator	-
Instructor	**Ass.Prof. Dr. Khaldoon Ghaidan** E-mail: khldn45@yahoo.com Telephone: Ex.273
Office hours	**Sun Mon Tue Thu 1:00-3:00 pm**
Course Description	Maxwell's equations; Transmission lines; Plane Waves: Propagation, Reflection and Refraction; Wave-guides and Cavities; Introduction to Antennas. **Pre: 0902205**
Course Objectives	1. Understand the basics of plane wave propagation in lossless and lossy materials. 2. Solve basic plane wave propagation problems: normal and oblique incidence on planar boundary. 3. Identify the characteristics of transmission lines and transmission line circuits. 4. Apply the Smith chart to the analysis and design of transmission line matching circuits. 5. Understand the basics of wave propagation inside rectangular waveguides and cavities. 6. Understand the basics of elementary antennas
Course Outcomes	1. Fundamental mathematics 2. Fundamental physics 3. Fundamental circuit theory 4. Static Electric and Magnetic Fields
Course Topics	1. Maxwell's Equations — 3 Hours 2. Plane Wave Propagation — 11 Hours 3. Transmission Lines — 14 Hours 4. Waveguides — 6 Hours 5. Introduction to Antennas — 6 Hours
Course Text Book	1. M. N. Sadiku (2001), Elements of Electromagnetic. 3rd ed., Oxford University Press.
Course References	1- Clayton Paul, Electromagnetic for Engineers, Wiley, 2004. 2- S. Wentworth, Fundamentals of Electromagnetic with Engineering Applications, Wiley, 2004. 3- D. Cheng, Field and Wave Electromagnetic, Addison Wesley, 1989.

Course delivery	Lectures Tutorial Lab Homework Project Computer Internet Industrial Visit
Course Assessment	First 20% Second 20% Assessment 10% Final 50%
Updated	Dr.Haldun 1/10/2009

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

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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).