

EE 214: Engineering Electromagnetics-II
First Semester (1441/42 H)

Instructor Contact Information:

Dr. Ali Albishi Office: building 3, room # 2C9, Office Hours: TBA
Email: aalbishi@ksu.edu.sa

Course Pre-requisite: EE 213- Engineering Electromagnetics-I

Textbook:

M. N. O. Sadiku, “*Elements of Electromagnetic*”, Oxford Press, 2015, 6th ed.

References:

- 1) *Engineering Electromagnetics*, W. H. Hayt, et al, 8th ed.
- 2) *Fundamentals of Applied Electromagnetics*, F. Ulaby, et al, 6th ed.

Topics:

Time-varying fields; Faraday’s law. Transformer and motional EMFs; Displacement current; Maxwell’s equations; Wave equation; Power and Poynting vector; Plane wave propagation in free space, in lossy dielectrics and in good conductors; Polarization; Reflection of plane wave at normal and oblique incidence; Transmission line Theory; Impedance matching.

Grading Policy:

- 20% Homework’s/Quizzes/Tutorial/Attendance
- 20% Mid-term Exam-I (Wed., 02/10/2019), After Asr, 5th week
- 20% Mid-term Exam-II (Wed., 13/11/2019), After Asr, 11th week
- 40% Final Exam

Course Policy:

- Students are expected to attend all classes and participate in all in-class discussions.
- Students are responsible to follow all instructions, either oral or in writing, that are provided in the class.
- Homework is always submitted on time. NO late homework will be accepted.
- Cheating on homework or in exams is NOT tolerated in any way.
- Students are expected to attend the class at the beginning.
- Exams are closed books and notes.

Course outline:

Ch # (Textbook)	Sections	Week #
9	Maxwell’s Equations, 9.1-9.5	1, 2, 3, 4
10	Electromagnetic Wave Propagation, 10.1-10.10	4, 5, 6, 7, 8, 9, 10
11	Transmission Lines, 11.1-11.6	10, 11, 12, 13, 14, 15

Studying EM: Survival Guide

- This is a mathematically intensive course.
- Read all the required sections and their examples in the textbook of each chapter before the lecture.
- Attend all lectures and tutorials.
- Work hard at home after every class.
- Solve all required problems (do not miss the homework).