Course Syllabus

Course Information

Course Number/Section	EEGR 6316-501
Course Title	Fields and Waves
Term	Fall 2016

Professor Contact Information

Professor: Qing Gu

Office: ECSN 3.516

Phone number: 972-883-4345

Email: qing.gu@utdallas.edu

Web: www.utdallas.edu/nanophoton/

Office hours: Monday and Wednesday 4:30PM – 5:30PM.

TA: Ziyu Chen zxc160030@utdallas.edu

TA office hour: Thursday 1PM-3PM, lobby of NSERL (look for sign "TA office hour for fields and waves")

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Undergraduate Electromagnetics

Course Description

Study of electromagnetic wave propagation. Specific topics include: Maxwell's wave equations; plane waves; reflection and refraction at plane boundaries; guided wave propagation; waveguides and cavities.

Student Learning Objectives/Outcomes

1. Ability to explain and analyze Maxwell's equations
2. Ability to manipulate Maxwell's equations to obtain boundary conditions, conversation of charge, and electromagnetic wave equations.

3. Ability solve electromagnetic wave equations.
4. Ability to apply Maxwell's equations and wave equations in transmission/reflection problems.
5. Understand wave propagation in guided geometries and resonant geometries.

Required Textbooks and Materials

Constantine A. Balanis, Advanced Engineering Electromagnetics, 2nd Edition (Wiley)

Suggested Course Materials

Fawwaz T. Ulaby, Eric Michielssen, and Umberto Ravaioli, *Fundamentals of Applied Electromagnetics, 6th Ed.* (Prentice Hall).

Assignments & Academic Calendar

Homework:
The homework will be graded on a completion (with enough technical details) basis. Working through these problems diligently will help your overall grade in the course because these problems and similar ones will appear on the tests.

Exams:
Midterm 1: Wednesday, October 5, 5:30 pm – 6:45 pm
Midterm 2: Wednesday, November 2, 5:30 pm – 6:45 pm
Final exam: TBD

Exams are held in class and must be individual efforts.
Exams are closed book, no calculator.
A one-page, single-sided note is allowed in exams. The note is to be turned it along with the exam.
Students may not leave the room before turning in exam.

Grading Policy

Homework: 10%
Midterm 1: 25%
Midterm 2: 25%
Final: 40%

Final grades in the course will be assigned following the standard scheme. However, based on overall student performance in the course, the instructor may lower the grade thresholds as appropriate.

Course & Instructor Policies

Make up Exams
Only in exceptional circumstances, you may request a written permission from instructor to take an exam at an alternate time and you must have that permission in advance of the regularly scheduled exam time.

Extra Credit
None

Late Work
Homework are due at the start of the class period on the assigned due date.
Late homework will not be graded without a valid excuse (preferably arranged in advance).

Classroom Citizenship
In keeping with this course's professional communication mandate, students are expected to use every opportunity in the course to practice communicating in a civil and professional manner.

Classroom and Equipment Use Policies
Laptops, cell phones, pagers, or other electronic messaging services are strongly discouraged in class.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.