

ELECTROMAGNETIC FIELDS AND APPLICATIONS II
Adapted for COVID

Instructor: Dr. Henry Zmuda,
235 Larsen Hall
Phone: (352) 392 – 0990
Cell: (850) 225 9200 (emergencies only please)
e-mail: zmuda@ece.ufl.edu

Office Hours: Thursdays 3 – 4 pm or by appointment

Class Web Page: On Canvas

Meeting Times: Tuesday 3:00 – 4:55, Thursday 4:05 – 4:55

Zoom ID: **953 7424 1718**

Passcode: **photon**

Text: TBA

Course Topics:

1. Review of Maxwell's Equations for Time-Varying Fields
 - a. The Wave Equation
 - b. Solutions to the wave equation
2. Plane Wave Propagation and Polarization
(Test 1)
3. Wave Reflection and Transmission
4. Waveguides (Rectangular & Circular)
(Test 2)
5. Radiation and Antennas
 - a. Fundamentals of electromagnetic radiation
 - b. Dipole and loop antennas
 - c. Theorems and definitions
 - d. Antenna arrays
 - e. Plane wave decomposition
6. Additional Topics Based on Class Interest. These can include:
 - a. Fiber Optics
 - b. Microwave Network Theory
 - c. Electromagnetic Scattering
(Test 3)

Grading Policy:

Homework: Homework is assigned from the text but not collected. Additional homework may be assigned in class. Computer programming may be required.

Quizzes (40%): Given approximately on a weekly basis. Quizzes are closed-note, closed-book, and no-calculator unless otherwise stated. Quizzes are based on class material, the text, and the homework.

Tests (60%): Three in-class tests. Dates TBD.

Final Exam: None.

There is a zero tolerance policy for cheating. University guidelines for academic honesty must be adhered to 100%.

A \geq 90%	A – \geq 86.67%	
B+ \geq 83.33%	B \geq 80%	B – \geq 76.67%
C+ \geq 73.33%	C \geq 70%	C – \geq 66.67%
D+ \geq 63.33%	D \geq 60%	D – \geq 56.67%

E < 56.67%