



THE CITADEL

ELECTRICAL & COMPUTER ENGINEERING

ELEC 426-81, Antennas and Propagation

Course Syllabus for Summer 2014

MW 5:15pm – 8:00pm, Room: Grimsley 322

Instructor: Dr. Jason S. Skinner, Grimsley 310, Phone: 843-953-3352
Email - jason.skinner@citadel.edu

Office Hours: MW 4pm – 5pm and by appointment

Textbooks: *Elements of Electromagnetics*, 5th Edition, Matthew N. O. Sadiku.

Prerequisites: ELEC 318 – Electromagnetic Fields

Description: Transmission, radiation, and propagation of electromagnetic waves by means of transmission lines, waveguides, optical fibers, and antennas.

Objectives: The student will:

- Understand the behavior of propagating waves (including reflection and refraction).
- Learn the characteristics and equations governing transmission lines and their interaction with terminating impedances.
- Develop skills in using a Smith chart to make impedance matching calculations.
- Learn the characteristics of waveguides.
- Learn the basic antenna types.
- Be able to compute and interpret antenna patterns.
- Be able to compute coupling in a communications link.

Websites: Professor - <http://ece.citadel.edu/skinner>

Course - <http://ece.citadel.edu/courses>

The course website will be used to post course information (such as this syllabus), lecture slides and notes, homework assignments, corrections and answers to questions about assignments, and individual grades.

Important Dates:

Thursday, May 15 Last Day to Add/Drop a Course

Friday, June 6 Last Day to Withdraw with Grade of “W”

Wednesday, June 25 Final Exam

Course Outline:

Reading	Topics	Date
Chapter 9	Introduction, Review of Maxwell's Equations	May 12
Chapter 10	Electromagnetic Plane-Wave Propagation	May 14 May 19
Chapter 11	Transmission Lines	May 21
	NO CLASS DUE TO MEMORIAL DAY	May 26
		May 28
Chapters 9–11	Midterm Exam	June 2
Chapter 12	Waveguides	June 4 June 9 June 11
Chapter 13	Antennas	June 16 June 18 June 23 June 18
Chapters 9 – 13	Final Exam	June 25

Attendance: Attendance is mandatory. Unless circumstances preclude it, it is your responsibility to notify Dr. Skinner of any schedule conflicts or excused absences that will result in your missing class. It is Citadel policy that a grade of F may be awarded to a student if that student misses more than 20% of the course meetings (at least **3 classes**, excused or unexcused).

Classroom Decorum: No food or drink is permitted in the classrooms of this building. Proper attire is encouraged, and ECE department policy prohibits hats, cutoffs, shorts, tank tops, and feet without socks in class.

Special Needs Students currently documented or anticipate being documented as Learning Disabled (LD), as having Attention Deficit Disorder (ADD), or with another condition for which you might need special accommodation during the semester must provide written documentation of the condition and of the accommodation needed to me within two weeks of the semester start. You may then choose, by notifying Dr. Skinner before the start of each exam or assignment, whether you will need any accommodation. Notification after the start of an exam or last minute notification on an assignment will not be accepted. Please Note: To request academic accommodations (for example, a note taker), students must also register with Academic Support/Special Services, 953-1820, located in Thompson Hall. It is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements.

Homework: Homework will be assigned on each Wednesday and will be collected at the **BEGINNING** of the class period on the following Monday. Exact due dates will be provided on the courses website, by email, and in class when the homework is assigned. **Late homework will be assessed a 20% penalty. Homework will not be accepted after solutions are handed out and will be given a zero grade.** If you will be absent on the day of an assignment, arrange to have a classmate turn in your work for you. Homework will be graded for effort, completeness, and neatness (legibility). You may obtain assistance when doing your homework. Copying of homework is not the same as assistance. Your homework is a graded assignment and must be your own work.

Quizzes: The date and topic of each quiz will be announced in advance.

Exams: There will be one midterm exam and one final exam. **Collaboration is not allowed on exams.** The final exam will be comprehensive. Assigned exams are required. Unless authorized to the contrary by Dr. Skinner, assigned exams take precedence over all other duties or activities. If you know you will miss an assigned exam, you must let Dr. Skinner know as soon as possible so a make-up exam time can be arranged. Make-up exams will only be given for those students that have made a **reasonable** attempt to contact Dr. Skinner.

Grading: Students will be graded on everything that is required to be turned in. Work turned in after the assigned due date and time will not be accepted and will receive a grade of zero, unless a prior arrangement is made. If you will be absent on the day an assignment is due, arrange to have a classmate turn in your work for you.

The midterm exam and final exam are scheduled well in advance. Due to the potential unfairness of make-up exams, they will only be given in extreme circumstances. Your final grade in the course will be determined as follows:

Homework	20% total
Quizzes	15% total
Midterm Exam	30%
Final Exam	35%

The grading scale used in this course is:
A = 90 – 100, B = 80 – 89.9, C = 70 – 79.9, D = 60 – 69.9, F = 59.9 or below.

Cheating and Collaborative Work According to The Citadel’s policies for the preparation of work performed outside the classroom:

All papers, reports, senior essays, theses, or other written work performed outside the classroom for which a grade is received will be the individual’s work and is subject to the limitations imposed by the definition of plagiarism.

According to Webster’s New International Dictionary, 3rd Edition: to plagiarize is defined as ”to steal and pass off as one’s own the ideas or words of another” or to ”present as new and original an idea or product derived from an existing source.”

CHEATING IN ANY FORM WILL BE FULLY PROSECUTED.