Course Syllabus

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EEL4461 **EEL5462** **Fall 2017**	**Antenna Systems** **Advanced Antenna Systems**
Instructor	Dr. Joaquin Casanova, **jcasa@ufl.edu (mailto:jenshan@ufl.edu) (When sending emails, add [EEL4461] or [EEL5462] as a prefix to the subject line.)** NEB 565
Class Time and Room	MWF 3 (9:35-10:25am), @ BEN 328
Office Hours	MWF 4 (10:40-11:30am), @ NEB 565 (my office)
Teaching Assistant	N/A
Class Website	on E-Learning System (**http://lss.at.ufl.edu/ (http://lss.at.ufl.edu/)**)
Textbooks	Suggested: Balanis, Antenna Theory - Analysis and Design, 3rd ed. 2005
Prerequisite	EEL3472 Electromagnetic Fields and Applications 1
Objectives	The objective of this course is to introduce the fundamental principles of antenna and to apply them to the design and analysis of antenna systems. Students will learn how to characterize antennas and how to use antennas. Different types of antennas and their applications will be introduced, with focus on linear wire antennas, loop antennas, microstrip patch antennas, antenna arrays, and the design considerations of using antennas in wireless communication systems.
Outline	Introduction; Fundamental principles of antenna Introduction of different types of antennas and their applications Antenna radiation pattern, power density, and intensity Antenna beamwidth, directivity, efficiency, gain Antenna polarization, input impedance, effective aperture

	Friis transmission equation and radar range equation Far-field radiation RF propagation, ground effect, weather effect, RF safety Dipole antennas Loop antennas Microstrip patch antennas Antenna arrays and feed network Broadband antennas Practical antenna design using EDA tool
Grading	Homework (6 or 7 assignments): 20% (Online submissions. Late submissions will not receive grades.) Exam #1: 20% Exam #2: 20% Final Project and Presentation: 30% (report 20%, presentation 10%) Class Participation: 10% (active participation by asking questions and answering questions) Exam makeups can only be scheduled before the exam **with appropriate justifications and supporting documents.** Standard UF grading policy for assigning grade points will be used: **https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx** **(https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx)** Grading scale (numerical grade to letter grade conversion) depends on average and may be different between EEL4461 and EEL5462.
Academic Honesty	Follow UF Student Conduct & Honor Code: **https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/** **(https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/)**
Accommodations for Students with Disabilities	Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the course instructor when requesting accommodation.
Attendance and Classroom Rules	Attendance is required since I use blackboard a lot and you need to take notes. Active class participation also accounts for 10% of the grade. Personal computers and mobile devices can be used for taking notes and working on in-class assignments only. Texting and other non-classroom activities are not allowed.

Updated 6/5/2017

Course Summary:

Date	Details	
Mon Aug 21, 2017	Intro (https://ufl.instructure.com/calendar?event_id=577090&include_contexts=course_340650)	12am
Wed Aug 23, 2017	Antenna Parameters: Radiation pattern (https://ufl.instructure.com/calendar?event_id=577091&include_contexts=course_340650)	12am
Fri Aug 25, 2017	Antenna Parameters: Directivity/Gain (https://ufl.instructure.com/calendar?event_id=577092&include_contexts=course_340650)	12am
Mon Aug 28, 2017	Antenna Parameters: Efficiency/Impedance (https://ufl.instructure.com/calendar?event_id=577093&include_contexts=course_340650)	12am
Wed Aug 30, 2017	Antenna Parameters: Polarization (https://ufl.instructure.com/calendar?event_id=577095&include_contexts=course_340650)	12am
Fri Sep 1, 2017	Antenna Parameters: Polarization (https://ufl.instructure.com/calendar?event_id=582494&include_contexts=course_340650)	12am
	HW1 (https://ufl.instructure.com/courses/340650/assignments/3344620)	due by 9:35am
	Exam 1 (https://ufl.instructure.com/courses/340650/assignments/3344677)	
	Exam 2 (https://ufl.instructure.com/courses/340650/assignments/3344679)	
	HW 2 (https://ufl.instructure.com/courses/340650/assignments/3344624)	
	HW 3 (https://ufl.instructure.com/courses/340650/assignments/3344625)	
	HW 4 (https://ufl.instructure.com/courses/340650/assignments/3344626)	
	HW 5 (https://ufl.instructure.com/courses/340650/assignments/3344673)	
	HW 6 (https://ufl.instructure.com/courses/340650/assignments/3344675)	
	HW 7 (https://ufl.instructure.com/courses/340650/assignments/3344676)	
	Participation (https://ufl.instructure.com/courses/340650/assignments/3344687)	
	Project (https://ufl.instructure.com/courses/340650/assignments/3344686)	