Course Syllabus
EE 5331
Summer, 2008
T-Th 10:30am – 12:20 pm
Nedderman Hall, Room 112

Instructor: Prof. Jonathan Bredow
Office: Room 252C Nedderman Hall
Office Hours: T, Th 2:30-3:30 pm
Phone: 817-272-3497
Mailbox: Room 549 Nedderman Hall
Email: jbredow@uta.edu
Instructor WWW site: www-ee.uta.edu
Course WWW site: www-ee.uta.edu


Course Description: Topics include design and performance analysis of transmitter and receiver circuits for communications and radar. Emphasis is on design using commercially available mixers, amplifiers, oscillators, and modulation circuits. Analysis includes receiver noise figure and path loss effects. Target and clutter scattering effects are also considered for the radar case.

Course Learning Goals/Objectives: To gain theoretical, analytical and practical experience in the analysis, design, implementation and measurements of radio receivers and transmitters.

Attendance Policy:

Drop Policy:
As per University guidelines. See the Registrar’s Bulletin or the University Calendar in the front part of the UTA catalog for drop dates.

Tentative Lecture/Topic Schedule (Course Content) and Specific Course Requirements w/Descriptions:

Grade Computation:

Miniprojects (3) @ 25% total
Research Paper @ 10%
Major Project @ 25%
Exams (2) @ 40% total
Policies:
- Late homework not accepted without approval prior to due date.
- Homework will be due at the beginning of the class period on the due date.
- No make-up exams without approval of instructor prior to the exam period.

May  
27 Introduction/Basic Radio Considerations (Chpt. 1)  
"  29 Receiver System Planning (Chpt. 3)  
June  
3 "  
"  5 System architectures  
"  10 Antennas and antenna coupling (Chpt. 4)/Amplifiers and gain control (Chpt. 5)  
"  12 Mixers (Chpt. 6))  
"  17 Frequency Control and Local Oscillators (Chpt. 7)  
"  19 "  
"  24 Modulators and Demodulators (Chpt. 8)/Decision circuits  
"  26 Digital circuits for receivers/transmitters  
July  
1 Software radio aspects (additional material)  
"  3 "  
"  8 Exam Practice/Communications system-level issues  
"  10 "  
" (Sat) 12 Exam  
"  15 Communications system-level issues  
"  17 Radar/Radiometry system-level issues  
"  22 "  
"  24 Transmitter circuits (additional material)  
"  29 "  
"  31 Current research directions  
Aug.  
5 "  

Final Exam will be on Thursday, August 7 10:30am to 12:30pm

If you require an accommodation based on disability, I would like to meet with you in the privacy of my office, during the first week of the semester, to make sure you are properly accommodated.

Student Evaluation of Teaching

Students will be asked to complete instructor/course evaluation forms at the end of the semester.
**Americans with Disabilities Act:**

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112—The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act – (ADA), pursuant to section 504 of The Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide “reasonable accommodation” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

**Academic Dishonesty**

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

“Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.” (Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22).

**ANY CHEATING WILL RESULT IN SEVERE PENALTIES.**