

**ECE 451/551 COMMUNICATION SYSTEMS  
SYLLABUS FOR SPRING 2007**

Month (Dates)	Topics (The schedule shown below is tentative and may be modified if necessary.)
<b>January</b>	
8	Introduction and General Overview (Ch. 1)
10	Spectral Analysis I: Fourier Series (Review) (Ch. 2)
15	(Martin Luther King, Jr. Day) <b>No Class ☺</b>
17	Spectral Analysis I: Fourier Series (Review) (Ch. 2) (contd.)
22 24	Spectral Analysis II: Fourier Transforms and Pulse (Review) (Ch. 3)
29 31	Amplitude Modulation Methods (Ch. 6) <span style="float: right;"><b>HW-1</b></span>
<b>February</b>	
5 7	Amplitude Modulation Methods (contd.) <span style="float: right;"><b>HW-2</b></span>
12	<b>Review</b>
14	<b>EXAMINATION I</b>
19 21 26 28	Angle Modulation Methods (Ch. 7) <span style="float: right;"><b>SystemVue Project 1 HW-3</b></span>
<b>March</b>	
5 7	<b>Spring Break ☺</b> (March 5-10)
12 14	Angle Modulation Methods (Ch. 7) (Contd.) Pulse Modulation and Time-Division Multiplexing (Ch. 8) <span style="float: right;"><b>HW-4</b></span>
19	Digital Communications I: Binary Systems (Ch. 9) <span style="float: right;"><b>SystemVue Project 2</b></span>
21	<b>Review</b>
26	<b>EXAMINATION II</b>
28	Digital Communications I: Binary Systems (Ch. 9)
<b>April</b>	
2 4 9	Digital Communications I: Binary Systems (Ch. 9) ( <b>contd.</b> )
11	Digital Communications II: M-ary Systems (Ch. 10)
16	Introduction to Antennas (Ch. 15) <span style="float: right;"><b>HW-5</b></span>
18	Consumer Communication Systems (Ch. 21) – <b>Review</b>
23	<b>EXAMINATION III</b>

HW = Homework. It gives the due date of the homework assigned last week.  
There will be surprise quizzes (short quizzes of 10-20 min.)

<b>Grade Distribution:</b>	Examinations (3 at 20 % each)	60%
	Computer Simulation Projects	20%
	Homework, Quizzes and Additional Assignments	20%

### **Main Text Book**

W. D. Stanley and J. M. Jeffords, *Electronic Communication: Principles and Systems*, Thomson Delmar Learning, 2006. ISBN: 1-4180-0003-5.

### **Reference Text Books**

1. H.Taub, D.L.Schilling, *Principles of Communication Systems*, Second Edition, ISBN 0-07-462456-3
2. A.B. Carlson, P.B. Crilly and J.C. Rutledge, *Communication Systems: An Introduction to Signals and Noise in Electrical Communication*, Fourth Edition, 2002. ISBN 0-07-121028-8.

**Software:** Computer simulation projects utilizing SystemVue will be assigned.

### **Examinations**

There will be three examinations scheduled on the dates indicated on the preceding page. The examinations will be given in the Learning Assessment Laboratory (LAL), located in the Gornto TELETECHNET Center, Room 101, and may be taken anytime after 8 a. m. on the scheduled dates. While the exams will be designed to be completed in about 2 hours and 30 minutes (150 minutes), you may take as long as necessary within limits. More information concerning the procedure will be provided in class. The third Examination will be taken on the last day of classes at the end of the semester. The duration of the exam will be 1 hour 15 minutes, same as the duration of the class.

### **Homework and Quizzes**

Homework will be assigned on a regular basis and the completion dates are provided beforehand in the syllabus. There will be surprise quizzes. The quizzes will be based on the material covered after the last quiz. Students will be allowed to **use their homework** to assist in the solution of any quizzes given.

### **Special Projects**

Several special computer simulation projects will be assigned and they will constitute a significant part of the overall course evaluation. Previous comments from students indicate that these assignments are very beneficial in understanding the course material. These assignments will utilize SystemVue. Further information will be provided in class.

### **Note**

All the class presentations and other declarations will be done using Blackboard. Please login to Blackboard ([www.blackboard.odu.edu](http://www.blackboard.odu.edu)), very frequently for presentation slides and other documents.

### **Instructor**

Manish Wadhwa

Email: [mwadh001@odu.edu](mailto:mwadh001@odu.edu)

Home Page: [www.odu.edu/engr/networking/students/manish/manish.html](http://www.odu.edu/engr/networking/students/manish/manish.html)

Office Hours: MW - 1:00 pm-3:00 pm

Office Space: ECE – 232, Wireless Communications and Networking Laboratory