

The University of Texas at Tyler
Department of Electrical Engineering

Course: EENG 5330 – Communication Systems Engineering (Elective)

Syllabus

Catalog Description:

Review Principles of amplitude and Frequency modulation. The main focus for the course will be reliability issues for Digital Communication systems. This will include but not limited to information theory and coding theory

Prerequisites: EENG 4312 or CI

Credits: (3 hours lecture, 0 hours laboratory per week)

Text(s): Digital and Analog Communication Systems , Leon Couch

Additional Material: Access to MATLAB software

Course Coordinator: Ron J Pieper

Topics Covered: (paragraph of topics separated by semicolons)

Evaluation Methods: (only items in dark print apply):

1. Examinations / Quizzes
2. Homework
3. Report
4. Computer Programming
5. Project
6. Presentation
7. Course Participation
8. Peer Review

Course Objectives¹: By the end of this course students will be able to:

1. Calculate the bandwidths required for base band systems (analog and digital)
2. Calculate the probability of errors for digital baseband systems
3. Calculate the bandwidths required for pass-band systems (analog and digital)
4. Calculate the probability of error for digital pass-band systems
5. Use programming tools to analyze communication systems

¹Numbers in brackets refer to method(s) used to evaluate the course objective.

Relationship to Program Outcomes (only items in dark print apply)²: This course supports the following Electrical Engineering Program Outcomes, which state that our students will:

1. Possess a breadth and depth of knowledge in electrical and computer engineering: Students will possess and be able to apply knowledge and principles at a graduate level in two or more of the following areas utilizing modern engineering tools: electronics, power systems, controls, advanced engineering mathematics, signal processing, communications, real-time systems, computer systems, electromagnetic

and power electronics;

2. Possess and demonstrate oral and written communication skills: Students will be adequately prepared for entrance into advanced careers or into a doctoral program through reports, papers, publications or presentations;
3. Demonstrate the capability to perform independent learning and investigation: Students will successfully address electrical or computer engineering problems through independent research activity in coursework or a thesis;

²Numbers in brackets refer to course objective(s) that address the Program Outcome.

Contribution to Meeting Professional Component: (in semester hours)

Mathematics and Basic Sciences:	1	hours
Engineering Sciences and Design:	2	hours
General Education Component:		hours

Prepared By: Ron Pieper

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