COMMUNICATION SYSTEMS
CSCE 3020-001

Instructor: Dr. Pradhumna Shrestha
Office: NTDP F265
E-mail: pradhumna.shrestha@unt.edu
Office hours: MWF 1:00PM-3:00PM and by appointment
Class hours: MoWe 5:30PM - 6:50PM
Laboratory hours (Recitations): Fr 2:30 PM-3:50 PM in F242
Classroom: NTDP B142
Instructional Assistant: Shravan Kumar Reddy Kasam
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   TuTh: 1 PM-2.30 PM

COURSE DESCRIPTION
The objective of this course is to introduce the concepts of transmission of information via communication channels. Topics such sampling and signal processing, and amplitude and angle modulation, frequency response analysis and pole-zero plots and filter design will be discussed. MATLAB software will be used as a teaching tool.

COURSE OUTCOMES
1. Analyze the frequency response of communication systems
2. Represent continuous-time signals by samples
3. Determine the energy and power spectral density of signals
4. Plot pole-zero diagrams
5. Design analog and digital filters.
RECOMMENDED TEXTBOOK
Signals and Systems: Analysis Using Transform Methods & MATLAB, 2nd edition,
M.J. Roberts,
McGraw-Hill

PRE-REQUISITES: CSCE 3010; EENG 3510; and MATH 1780 or MATH 3680

TOPICS TO BE COVERED
1. Sampling and Signal Processing
2. Frequency Response Analysis
3. Communication Systems Analysis
4. Laplace System Analysis
5. z-Transform System Analysis
6. Filter Analysis and Design

SCHEDULE AND GRADING
Attendance/Class Participation: 5%
Homework and Assignments: 25%
Quizzes: 15%
Midterm Exam 03/06: 15%
Final Exam 05/08: 25%
Programming Assignments: 15%
Notes:

ATTENDANCE POLICY
Student attendance will be recorded. Every student who misses a class is responsible to learn the materials discussed and obtain the homework assigned on the missed class. The instructor is not responsible for re-teaching the material missed by a student who did not attend the class. Absence in class and lack of participation in class discussions may result in lowering of the grades.

ASSIGNMENTS
Homework and assignments will be provided throughout the semester and posted on Blackboard Learn. Electronic submission on Blackboard Learn of your solutions/answers by scanning or taking a clear picture is preferred. You will lose 25% points if you are late by a day to turn in your assignments. You will get only half of the points if you turn in the assignments up to a week late. Assignment turned in after a week without instructor’s approval will still be graded but receive zero points. It is expected of the students to show utmost sincerity and honesty in completing their assignments. While discussion among students is encouraged, sharing solutions and copying someone else’s work is strictly prohibited. Any student engaged in such activities will get no credit for their assignment. MATLAB programming assignments will be provided throughout the semester.

LABORATORY
Laboratory hours are provided as recitations for students to get familiar with hands-on design experience. The recitations hours are optional and you will not be graded for that. However attending laboratory hours is recommended as you will get to learn new things, and supervision and help is provided during those hours.

QUIZZES
Multiple choice questions will be available as quizzes throughout the semester. The quizzes will test the students on the theoretical concepts discussed in the class. The students are expected to give the quizzes on their own and no collaboration will be allowed.
MIDTERM EXAM
The midterm exam will be conducted during regular class hours. The exams will cover the topics discussed up to 1 week ahead of the exam date. The students are expected to give the exams on their own and no discussions will be allowed. The format of the exam will be provided at least two weeks before the exam date.

FINAL EXAM
The final exam will be scheduled on the finals week. The exams will cover the topics discussed throughout the semester. The students are expected to give the exams on their own and no collaboration will be allowed. The format of the exam will be provided at least two weeks before the exam date.

GRADING
If the students are not satisfied with their grades, they will have to schedule an appointment with the instructor at least 24 hours after receiving the grades. Classroom hours will not be used for discussing grades. Students are expected to keep track of their academic progress, grades will not be changed after 2 weeks of being provided.

EXTRA CREDIT
The students will get an opportunity to earn extra credit by solving take-home problems. The students are expected to solve the problems on their own. Any evidence of cheating will result in zero credit and no further opportunities to earn extra credit.

ADA STATEMENT
The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any
delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information, see the Office of Disability Accommodation website at http://disability.unt.edu. You may also contact them by phone at (940) 565-4323.

ACCEPTABLE STUDENT BEHAVIOR
Student behavior that interferes with an instructor’s ability to conduct a class or other students’ opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student’s conduct violated the Code of Student Conduct. The university’s expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at http://deanofstudents.unt.edu.