Purpose: The purpose of this course is to give you an understanding of the fundamental concepts in mathematical modeling of random phenomena and their applications in electrical engineering. Key topics for this course include probability, random variables, and random signals.


Prerequisites: EE 3317 – Linear Systems

Grading: There will be home works, three tests, and an optional final exam. If you have a question on grading of an assignment, please contact me about your question within one week of the time the grade is received. The tentative weighting and grading scales are:

<table>
<thead>
<tr>
<th>Weighting of Grades</th>
<th>Grade Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homeworks 10%</td>
<td>90–100</td>
</tr>
<tr>
<td>Average of the three highest scores</td>
<td>80–89.99</td>
</tr>
<tr>
<td>from Test #1, #2, #3, and Final Exam</td>
<td>70–79.99</td>
</tr>
<tr>
<td>and Final Exam</td>
<td>60–69.99</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>F</td>
</tr>
</tbody>
</table>

Tests: All tests will be *comprehensive, close book and close notes*. You are allowed to bring one sheet (three sheets for the final exam) of notes (8.5” × 11”, both sides.) The use of calculator is allowed in the exam. No make up exam unless approval is obtained prior to the scheduled test date.

Assignments: **You must turn in your own work**, not copied from someone else’s. Please write (or print) legibly.

Important Dates:

- **Test #1**: September 28, 2005 (W)
- **Test #2**: October 26, 2005 (W)
- **Test #3**: November 23, 2005 (W)
- **Final Exam**: TBA
Lecture Topics (plan):

1. Random Experiments
2. The Axioms of Probability
3. Random Variables
4. Functions of One Random Variable
5. Multiple Random Variables (Random Vector)
6. Functions of Several Random Variables
7. Sequences of Random Variables
8. General Concepts of Random Processes
9. Correlation Function and Power Spectrum
10. Linear Mean Square Estimation

----------------------------------------------- NOTE -----------------------------------------------

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.