Catalog Description: Engineering applications of probability theory, random variables and random processes. Topics include random signals and system analysis, introduction to mean-square estimation theory and response of linear systems to random inputs.

Prerequisites: Signals and Systems, algebra, calculus.

Meetings: MW 1:50-3:10; Room 2631C

Instructor: Gleb V. Tcheslavski

Office hours: By appointment


Recommended books: A variety of “statistics for engineers” books.


On-line access: The course syllabus, assignments, solutions, and supplementary materials will be available through the EE web server at [http://www.ee.lamar.edu/gleb/stat/Index.htm](http://www.ee.lamar.edu/gleb/stat/Index.htm)

Structure: Two 80 minute lectures per week, up to 10 homework, pop-up quizzes, one midterm, and final examinations.

Course Objectives and Student Learning Outcomes: Having successfully completed this course, the student will be able to:

- understand the meaning of probability (Criterion 3(a),(b),(e),(h),(i),(j),(k));
- be able to use axioms of probability (Criterion 3(a),(e),(k));
- understand the concepts of random variables and their functions (Criterion 3(a),(b),(e),(j),(k));
- understand the concept of probability distribution and be familiar with commonly used distribution models (Criterion 3(a),(b),(e),(h),(k));
- understand and be able to implement the concept of statistical moments (Criterion 3(a),(b),(e),(h),(k));
- be familiar with major theorems of Statistics (Criterion 3(a),(b),(e),(h),(k));
- develop engineering report writing skills (Criterion 3(a),(g),(h),(i),(k)).

IT IS YOUR RESPONSIBILITY TO ACHIEVE THE COURSE OBJECTIVES. IT IS AS MY TASK TO FACILITATE YOUR ACHIEVEMENT.

Tests: The MIDTERM (MT) will be closed book/notes. The FINAL EXAM will be closed book/notes. In-class quizzes will be closed book/notes.

Final exam: TBD – scheduled at 11:00 am on Wednesday, December 10, 2014

Grading Policy: Final Grades will be determined on the basis of overall performance on the midterm exam, the final exam, and quizzes, with the following tentative weights:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Homework</th>
<th>Midterm</th>
<th>Final</th>
<th>Quiz</th>
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</thead>
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<tr>
<td>Percentage</td>
<td>0</td>
<td>25%</td>
<td>40%</td>
<td>5% each</td>
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**Homework/Projects:** up to ten homework will be assigned. Solutions will be posted.

**Attendance policy:** Class attendance is mandatory with exception for medical and family emergencies.

**Special needs:** Students with special needs or circumstances (religious, conflicts, disabilities, etc.) are encouraged to meet with the instructor during his office hours to arrange the necessary accommodations. Also, students with disabilities may contact the office of Services for Students with Disabilities (P.O. Box 10087 Communication 105) for further assistance.

**Academic Dishonesty:** Academic misconduct and dishonesty include copying, cheating, plagiarism, dual submission and items purchased with the intent of deception (i.e. term papers purchased on the internet). Students are expected to do original work, including class assignments, exams and labs. Penalties include failure of the assignment (a grade of zero) and possible stricter penalties, where appropriate. Such action could result in the failure of the course or suspension from the university. Refer to Student Handbook of Lamar University for clarification on Academic dishonesty.

**Honor System:** Cultivate an ethical, professional attitude. Discussions on lecture subject material, to clarify your understanding, are highly encouraged. However, it is your personal/own understanding only that should be reflected in all work that you turn in. You may thus claim credit only for your own work. All graded work is covered by the Academic Honor Code; violations will be prosecuted.

*Special Note on Honor System:* copying of any copyrighted materials (journal articles, book chapters, web pages etc. or their parts) is a violation of Honor Code! You may be allowed to use quotations (short excerpts from published or unpublished works) in your reports IFF the source of quotation is clearly identified.

**Emergency Procedures:**
Many types of emergencies can occur on campus; instructions for severe weather or violence/active shooter, fire, or chemical release can be found at: [http://www.lamar.edu/about-lu/administration/risk-management/index.html](http://www.lamar.edu/about-lu/administration/risk-management/index.html).

Following are procedures for the first two:

**Severe Weather:**
- Follow the directions of the instructor or emergency personnel.
- Seek shelter in an interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside.
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building.
- Stay in the center of the room, away from exterior walls, windows, and doors.

**Violence/Active Shooter (CADD):**
- **CALL** - 8-3-1-1 from a campus phone (880-8311 from a cell phone). Note: Calling 9-1-1 from either a campus phone or cell phone will contact Beaumont City Police Dispatch rather than University Police.
- **AVOID** - If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY** - Barricade the door with desks, chairs, bookcases or any other items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it is safe.
- **DEFEND** - Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.