PROBABILITY AND STOCHASTIC SIGNALS MTH 5425, Aug 19 to Dec 11, Fall of 2019

Instructor: Eugene (aka Jewgeni) Dshalalow, Dr. rer. nat., Professor of Mathematical Sciences

Meets MW from 7:00 to 8:15 pm at Skurla 106

Observed days: (1) Mon, Oct 14 (Columbus Day), (2) Mon-Tu, Oct 14-15 (Fall Break), (3) Mon, Nov 11 (Veterans Day), (4) Wed, Nov 27 to Fri, Nov 29 (Thanksgiving).

Main academic events: (1) Wed noon, Aug 28, last day to drop a class with the full tuition refund and without receiving a grade of W; (2) Fri, Oct 25, last day to withdraw from a class with a final grade of W; (3) Fri, Dec 6, last day of classes; (4) Final Exam, Wed, Dec 11, from 6:00 to 8:00 pm

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PRIMARY TEXT: LECTURE NOTES, by Eugene Dshalalow

Course Information. This course presents an introduction to probability theory, statistics of random processes, linear stochastic systems, and spectral theory of stochastic processes, with applications to physics, electrical and computer engineering. The course is based on instructor’s lecture notes that are self-contained and complete. However, some students may want to consult the book by Lindgren et al. that can complement the lecture notes.

Course Description and Schedule


MIDTERM TEST 1, 75 minutes


MIDTERM TEST 2, 75 minutes


MIDTERM TEST 3, 75 minutes

**FINAL EXAM**, on September 18, from 5:00 to 7:00 pm.

**Grading Policy.** The overall score will be computed using 20% of each midterm test, and 40% of the final exam. The final course grade will be based on the following grading scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89.99%</td>
<td>B</td>
</tr>
<tr>
<td>67-79.99%</td>
<td>C</td>
</tr>
<tr>
<td>56-66.99%</td>
<td>D</td>
</tr>
</tbody>
</table>

Please note that even if your overall score is 90% or more, to earn an A grade, your final exam’s score must be at least 85%. Furthermore, to pass the course you need to score at least 50% in the final exam.

You are strongly encouraged to attend classes on a regular basis. You are responsible for all lecture materials and assignments. During lectures, I will also discuss various problems, pertinent to those in the exams.

All examinations will be closed book and closed notes. You are allowed to use any non-smart calculator. Note that the use of a mobile phone or a smart calculator (such as N-Spire manufactured by TI) during the exams is prohibited, because mobile phones as well as smart calculators can download course materials. Consequently, an underlying exam will be cancelled if any such devices are used.