STAT 344

Probability & Statistics for Engineers/Scientists I

Course Syllabus

Summer 2012

Administrative:

Instructor: Dr. Ilhan M. Izmirlı
Office: Engineering Building, Room 1723
Phone: (703) 993-5168
E-mail: iizmirli2@gmu.edu
Office Hours: Monday/Wednesday 6 pm – 7 pm

GTA: Pin Ren
Office: Engineering Building, Room 1716
Office Hours: Wednesday 9 am – 11 am.

Meeting Place: Robinson B, Room 104
Meeting Time: Monday/Wednesday 7:20 pm – 10:00 pm, from June 4 Monday to July 25 Wednesday.
Final Exam: July 25 Wednesday

Prerequisite: Math 114 or permission of the instructor (multivariate calculus).
Software: Minitab 16 at GMU lab or your PC (license is available at Patriot Computers). Note that Minitab & Mac’s are incompatible without special software.
Calculator: TI-8x

Course Objectives:

• To learn to communicate information contained in data.
• To develop a discerning eye in evaluating the statistical presentations of others.
• To learn probability and statistical principles, methods, and tools that will prove useful in later coursework and in work situations.
• To learn how to use statistical tools, i.e., Minitab.

Outline of Topics: Shown on the course Assignment Sheet. Since this is the first of the two-course statistics introduction series (Stat 354 is the follow-on course), we will focus on the basic topics of probability and statistics in Chapters 1 through 10. The same textbook is used for the follow-on course.
**Study Approach:** You are to skim the assigned reading before class to familiarize yourself with the material and its organization. The lecture will build your understanding of difficult concepts – not all topics will be included in the lectures and not all lecture topics are in the text. Lecture notes will be posted on Blackboard before class. Then you are to study carefully the assigned reading after the lecture to increase understanding – working the textbook examples yourself with paper and pencil. Then do the WileyPLUS homework, followed by the off-line homework. Not following this study sequence is an invitation to course difficulty. Be aware of the due dates. It is a good idea to form study/homework groups with other students.

**Class:** Class participation is encouraged to help the overall class to better understand the material through student interaction. A lot of student/instructor interaction is expected. Certain topics, not in the textbook, will be covered in class and tested.

**Homework Assignments:** There is both on-line and off-line homework as shown on the course Assignment Sheet. The on-line homework is accomplished on WileyPLUS. Only three attempts to get the correct answer are allowed. Some questions change data sets between attempts and may be different from the published data sets. Numerical answers are sensitive to accuracy and significance. Use calculators and software to organize data and to obtain absolutely correct answers. Your performance on the on-line questions is recorded on the WileyPLUS gradebook. Be aware of the due dates. Your first assignment on WileyPLUS is Assignment Zero -- it serves to familiarize you with the WileyPLUS features and is graded.

The off-line homework is shown on the course Assignment Sheet posted on Blackboard. Do your assignments in Minitab, and present them in Word. Answers must be shown to the proper level of accuracy. Data sets for homework problems may be copied from the e-book. Manual work will not be accepted. Supporting work must be shown for credit, not just the answer. Be aware that the answers in the back of the book are not always correct or precise. Your attractively formatted and printed homework assignments are to be handed in at the beginning of the first class of the week. Late homework, without prior permission, will be penalized 50% if turned in within the week – later submissions will not be accepted. If you must be absent, submit your homework on time via a classmate or by properly formatted email. Routine submission of homework by email will not be accepted – your instructor is not your printing service. During the week following the due date, homework (graded by the GTA) will be returned and homework solutions will be reviewed in class. In addition to the assigned turn-in problems, the conscientious student will work many additional problems. Practice makes perfect!

**Exams:** All exams will be closed book, closed notes, open formula sheet and tables. Your personally-created formula sheet is intended to eliminate the need to memorize formulas, but may contain anything. Exam questions will be generally drawn from the textbook and will be similar to the homework questions. Therefore, in a theoretical sense, the student has a legal advance copy of the exams! There is no “extra credit” or forgiven grades – you are responsible for all of your work done (or left undone). If an exam is scheduled on a religious holiday that you observe, see me to make alternative arrangements.

**Office of Disability Services:** If you have a disability that requires academic accommodation, contact the Office of Disability Services (703) 993-2474 for authorization.
**Honor Code:** Your instructors take the GMU Honor Code very seriously and will enforce it – don’t make a mistake! Other people’s work, with your name on it, is a violation.

**Grading Scheme:**

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<th>Percentage</th>
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<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
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<tr>
<td>Exam I</td>
<td>25%</td>
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<tr>
<td>Exam II</td>
<td>25%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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<tr>
<td>Total</td>
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Your grades are posted on Blackboard and shown in WileyPLUS – you can check your running grade at any time, so there are no surprises. In fact, you should audit the correct entry of your grades. No grade corrections will be made after the last week of the semester. Course letter grades are assigned as follows and are not curved:

- 90 – 100 points A
- 80 – 89 points B
- 70 – 79 points C
- 60 – 69 points D
- 0 – 59 points F