

## STAT 4706 Probability and Statistics for Engineers II

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**Course Description:** Basic concepts of probability and statistics with emphasis on engineering applications: Sampling distributions, estimation, hypothesis testing, simple and multiple regression, analysis of variance, factorial experiments. Pre-requisites: Stat 4705 or Stat 4105.

**NOTE: Only one of the courses {3006, 3616, 4706} may be taken for credit.**

**\*\*\*\*Documentation of Excused Absences: If you have medical documentation or other documentation from your dean's office for missing an exam or quiz, it needs to be provided upon the event occurring, not at the end of the semester. It is the student's responsibility to make arrangements to make up the work in a timely fashion. \*\*\*\***

**Blackboard:** Announcements, lecture notes, homework, and exam reviews will be available on Blackboard.

**Lecture Notes:** Class notes (with blank examples) will be posted prior to the lectures, and it is highly recommended that you bring these with you. Completed class notes will not be available.

**Textbook:** *Probability & Statistics for Engineers and Scientists* by Walpole, Myers, and Ye  
The bookstore carries the most recent edition (8<sup>th</sup>). You may purchase an older edition (6<sup>th</sup> or 7<sup>th</sup>) if you prefer.

**Use of Software:** We will be using JMP throughout the entire semester. There is a free download from <http://www.ita.vt.edu/studentsoftware/website/products/stuproductinfo.jmp.html>. The download will only work if you are on a VT network connection (on campus wireless or connect through VPN) when you try to download. If you choose not to download the software, the inability to get a computer in a lab is not a valid excuse for trying to turn in a late homework.

**Homework:** Homework will be assigned and collected throughout the semester, either via paper submission or as an on-line assignment in Blackboard. Most will be graded for accuracy and detail. LATE HOMEWORK WILL NOT BE ACCEPTED – NO MATTER THE REASON. To allow for illness, emergencies, etc., the lowest homework grade will be dropped.

**Paper Homework Submission Guidelines:** Problems must be submitted in order. Sheets must be stapled or paper-clipped together. Papers turned in without a staple or paper-clip will LOSE ½ of a letter grade. Your name and the class (Stat 4706) must appear on the first page. Papers turned in without this information will LOSE ½ of a letter grade. When JMP is used, a printout of the worksheet and the output must be attached or the problem will not be graded. However, it is not enough to just submit JMP output – you must make sure to answer the question in the problem as well. Work must be shown to receive credit for each problem.

**Tests:** There will be 3 Tests given during class time and a cumulative final exam given during the scheduled exam time (December 14, 1:05 – 3:05pm). The grade of any test missed due to a documented excused absence will be replaced by the final exam grade. No make-up tests will be given. No test grades will be dropped. AN UNEXCUSED ABSCENCE RESULTS IN A ZERO FOR THE EXAM.

**Test Format:** Each in-class test will have a mix of forced-choice and an open response items. The final exam will have two sections: a section covering the material taught after the material on Exam 3 (15%) and a cumulative section (10%).

**Grading:** Grades will be assigned based on the following percentages:

Test 1	15%
Test 2	15%
Test 3	15%
Homework	20%
Final Exam	25%
Project	10%

Notes on grades:

- 1) It is the student's responsibility to verify grades in BB upon the return of homework assignments and tests. Once the final exam is given, I will not modify inaccuracies in BB that could have been corrected earlier in the semester.
- 2) When I assign final course grades, the following scale is used.

A	[89.5, 100+]
B+	[87, 89.5)
B	[79.5, 87)
C+	[77, 79.5)
C	[69.5, 77)
D	[59.5, 69.5)
F	[0, 59.5)

**Changes to Syllabus:** The instructor reserves the right to make changes to the syllabus during the course. Any necessary changes will be announced in class, via e-mail, and posted on Blackboard.

**Disability Statement:** Reasonable accommodations are available for students who have a documented disability. Please notify the instructor during the first week of class of any accommodations needed for the course. Students are responsible for arranging exam accommodations a week prior to each exam.

**Honor Code Statement:** The Honor Code will be strictly enforced in this course.

<http://www.honorsystem.vt.edu/>

Expectations regarding student work:

You may discuss the homework with other students, but do not directly copy from another paper. The tests and final exam will be in-class and closed-book (except for a student-provided formula sheet and a set of tables provided by the instructor), and must be entirely your own work.