

## STA 3032 Engineering Statistics – Spring 2011

**Section 7347: MWF 8<sup>th</sup> period 15:00 - 15:50 in MAT 18**

**Prerequisite:** MAC2311

**Instructor:**

Demetris Athienitis ([dathien@stat.ufl.edu](mailto:dathien@stat.ufl.edu))

**Office:** Griffin Floyd 116D,

**Phone:** 352 – 273 – 1849

**Course Web Address:** <http://www.stat.ufl.edu/~dathien/sta3032.html>

**Office Hours:** Office Hours subject to change and will be posted on the course website

**Teaching Assistant:**

Zhe Chen

**Office:** Griffin Floyd 218

**Phone:**

**Office Hours:** Office Hours subject to change and will be posted on the course website

**Course Description:**

A survey of the basic concepts in probability and statistics with engineering applications. Topics include probability, discrete and continuous random variables, estimation, hypothesis testing and linear and multiple regression.

[General Education: Mathematics (M), Math Requirement (MR)]

**Course Materials Required:**

- 1) *Statistics for Engineers and Scientists 3rd Edition* by William Navidi [ISBN: 978-0-07-337633-2]
- 2) Calculator capable of calculating means and standard deviations

**Additional Material:**

Examples to topics covered in the class will be provided but due to time restrictions and the fact that some theoretical results and procedures need to be covered, it is strongly recommended that students look at additional examples/problems in the 2<sup>nd</sup> edition of the book and in *Probability and Statistics for Engineering and the Sciences* by Jay L. Devore (any edition). These books and solution manuals are available in the Marston Science Library.

**Statistical software:**

Some assignments require the use of statistical software, such as Minitab (a statistical computing package) and tests will use Minitab printouts. Minitab can be found on the CIRCA lab computers, may be purchased at a campus bookstore. You may download Minitab free for 30 days at [www.minitab.com](http://www.minitab.com).

**Homework and Quizes:**

There will be 5 – 10 problems assigned each week. These will not be collected. However, one or more of these questions will be a quiz question. There will be a **5 minute quiz every week** (with the exception of the first week), based on the assigned homework questions. The lowest quiz grade will be dropped.

**Exams:** There will be three (3) in-class exams, given on the dates listed below.

Exam 1: Friday, February 11<sup>th</sup>

Exam 2: Wednesday, March 23<sup>rd</sup>

Exam 3: Wednesday, April 20<sup>th</sup> (last day of classes)

If a student is unable to take an exam at the scheduled time, they must notify the instructor as early as possible. If an emergency situation precludes an advance arrangement, you should let the instructor know within 24 hours of the missed exam. Each case will be reviewed individually. You will be required to provide official documentation to be eligible for make-up examination.

**Grades:**

Exam 1 and 2 account for 25% of the grade each, Exam 3 for 30% and the quizzes for 20%.

**Grading Scale:**

The grading scale will be as follows:

A:	93-100%,	A-:	88-92%,		
B+:	85-87%,	B:	81-84%,	B-:	78-80%,
C+:	75-77%,	C:	71-74%,	C-:	68-70%,
D:	56-67%,				
E:	< 55%.				

It is the policy of the Department of Statistics not to give grades of D+. To see the effect of the + and – grades on your GPA, look at the following link:

<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>.

**Course Policies:**

**Academic Dishonesty:** I adhere to the University of Florida rules and guidelines for handling instances of academic dishonesty. Please refer to the Office of Students Services for detailed information about the current policies.

**Instructor's Honor Code:** We the members of the University of Florida community pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

**Grading:** Grades will be changed only when an error has been made by the instructor.

**Incomplete:** Incompletes are only assigned when extraordinary circumstances, arising after the date for dropping off the course, prevent the student from completing the course requirements. The student must be currently passing the course and discuss the circumstances with the instructor before the final exam takes place. Having a failing grade in the course is not a valid reason for requesting an incomplete.

**Getting Help:** Students may ask questions during the lectures (preferred) or the office hours. The TAs will answer questions during office hours. A list of private tutors (if needed) may be obtained from the Statistics Department Secretary in Griffin Floyd 103.

**Students with disabilities:** Students requesting classroom accommodation must first register with the Dean of Students office. The Dean of Students will provide documentation to the students who must then provide this documentation to the instructor when requesting information.

**Privacy Policies:** Student records are confidential. Only information designated “UF directory information” may be released without your written consent. UF views each student as the primary contact for all communication. If your parents contact me about your grade, attendance or other information that is not “UF directory information”. I will ask them to contact you.

The instructor reserves the right to update any parts of this syllabus as necessary. Students will be notified of any changes.

**Tentative schedule:**

Week	Subjects	Sections
1	Numerical and graphical summaries	1.1 – 1.3
2	Basic Ideas of Probability	2.1 – 2.3
3	Random Variables (RV), Jointly Distributed RV	2.4, 2.6
4 + 5	Discrete and Continuous Distributions, CLT	4.1 – 4.11
6	Exam - 1	1.1–2.4, 2.6, 4.1–4.11
7	Confidence interval for population means	5.1, 5.3, 5.4, 5.6
8	Confidence interval for population proportions	5.7, 5.2, 5.5
9	Significance tests for population means	6.1, 6.4
10	Significance tests for $\mu_1 - \mu_2$ , $p$ , $p_1 - p_2$	6.3, 6.5, 6.6, 6.7, 6.8, 6.11
11	Exam - 2	5.1 – 5.7, 6.1 – 6.8, 6.11
12	Simple Linear Regression and Correlation	7.1 – 7.4
13	Multiple Linear Regression	8.1 – 8.4
14	Statistical Quality Control	10.1 – 10.3
15	Exam – 3	7.1 – 8.4, 10.1 – 10.4

**Other Important Dates:**

January 28 <sup>th</sup>	Withdrawal, All Courses, with 25% Refund (W assigned)
April 8 <sup>th</sup>	Drop or Add a Course by College Petition
April 8 <sup>th</sup>	Withdrawal from UF (W assigned)

**There will be no classes on the following days:**

January 17 <sup>th</sup>	Martin Luther King Jnr. Day
March 5 <sup>th</sup> -12 <sup>th</sup>	Spring Break