

**Math 363 - Statistics**

Class: MWF 10:25-11:20 ES 146

**Instructor** Elizabeth Munch, Ph.D.  
**Office** ES 120D  
**E-mail** emunch@albany.edu  
**Phone** 518-442-4632  
**Office Hours** (TBD)

**Course Description:**

A calculus-based introduction to statistics. Confidence intervals and hypothesis tests for means and variances, differences of means and ratios of variances, including P-values, power functions and sample size estimates and involving normal, binomial, t, chi-square, and F distributions. This course will also include linear regression, analysis of variance, and an introduction to the R programming language.

**Website:**

The blackboard website, <http://blackboard.albany.edu>, has announcements about the course and any necessary files. Homework will also be announced and saved on this website.

**Textbook:**

Jay L. Devore & Kenneth N. Berk - Modern Mathematical Statistics with Applications, 2nd Ed.

**Homework:** I cannot stress how important homework is for your success in this class. That being said, I will not be grading it. You are expected to have completed the previous day's homework problems before the subsequent class, and all problems before the final exam. If you choose to do the homework, you will find the quizzes particularly easy. This should be taken into account if you choose to not do the homework.

**Quizzes:** Short pop quizzes will be at the beginning of class regularly, likely weekly. These will be open notes, open book, and open homework and will be based on the most recent homeworks (note this could also be from several days previous). If you have done the homework, they should be easy.

There will be no make-up quizzes. Of course, there are times in your life when missing a class is unavoidable (illness, personal crisis, etc). So, you have two free passes to use as you wish. You can choose to use them to drop the grade for a quiz that you missed, or to drop your lowest quiz grade at the end of the semester. Please manage these carefully!

**Calculators and computers:** Out of class work will often require the use of R, a statistical software package available on Windows, Mac, and Linux. If you are more comfortable with other utilities such as Excel, python, etc, you are free to use these resources, but I may not be able to help you when you run into problems. In this case, you should make great use of websites and tutorials such as <http://www.stackoverflow.com> for help with your questions.

In class and on tests, you may use a calculator. During tests, this may NOT be your cell phone. A four function calculator will be enough to do everything we need, please do not buy a TI-83 or anything like that if you do not already have one.

**Tests:** There will be 3 exams plus a final exam. Please check the dates of these exams on the syllabus. Each exam will have two parts: an in class portion dedicated to showing that you understand the theory, and a take home portion dedicated to applying the concepts to data.

**Test Makeup Policy:**

*In class portion:* If you know you will be absent on the day of an exam, send me an email ASAP. If you have emailed me BEFORE the start of the exam letting me know that you will not make it, and provide written documentation to me before 24 hours after the exam that you could not attend the class for reasons in accordance with the Undergraduate Academic Regulations ([http://www.albany.edu/undergraduate\\_bulletin/regulations.html](http://www.albany.edu/undergraduate_bulletin/regulations.html)), your grade for the missed exam will be the average of your other exams.

*Out of class portion:* If you choose to turn in the out of class portion on the day of the test, it will be graded out of the full points. If it is up to 3 days late, it will be graded out of 80% of the points. After that, it will be reviewed and returned to you with comments, but will be given a score of 0.

**Project:** A major component of this course is applying the concepts you have learned to a data set. This project will be done in groups and will consist of finding data, using the methods you have learned for an analysis of the data, a written project report explaining your analysis, and a brief presentation to the class on your results.

**Grading:** Your grade will be based on the total number of accumulated points from the semester. The *estimated* number of points is below.

<i>Estimated Points</i>	
Quizzes	200
Project	100
Tests (3)	300
Final Exam	200
<b>TOTAL:</b>	<b>800</b>

**Students with Disabilities:** Reasonable accommodations will be provided for students with documented physical, sensory, systemic, cognitive, learning and psychiatric disabilities. If you believe you have a disability requiring accommodation in this class, please notify the Director of the Disability Resource Center (Campus Center 137, 442-5490). That office will provide the course instructor with verification of your disability, and will recommend appropriate accommodations.

**Approximate Schedule:**

Please note that it is likely that what is covered each day will change; however, dates of the tests will not.

Wk	Date	Topic
1	Aug 26	Review 6.1-4
	Aug 28	Review 6.1-4
2	Aug 31	Review 6.1-4
	Sep 2	7.1
	Sep 4	7.1
3	Sep 7	NO CLASS
	Sep 9	7.2
	Sep 11	7.2
4	Sep 14	NO CLASS
	Sep 16	Review
	Sep 18	<b>Exam – Ch 6,7</b>
5	Sep 21	8.1
	Sep 23	NO CLASS
	Sep 25	8.1
6	Sep 28	8.2
	Sep 30	R
	Oct 2	R
7	Oct 5	8.4
	Oct 7	9.1
	Oct 9	9.1
8	Oct 12	9.2
	Oct 14	Review
	Oct 16	<b>Exam – Ch 8,9</b>

Wk	Date	Topic
9	Oct 19	9.4
	Oct 21	10.1
	Oct 23	10.1
10	Oct 26	10.2
	Oct 28	10.3
	Oct 30	11.1
11	Nov 2	11.1
	Nov 4	11.2
	Nov 6	11.2
12	Nov 9	11.3
	Nov 11	Review
	Nov 13	<b>Exam – Ch 10,11</b>
13	Nov 16	12.1
	Nov 18	12.1
	Nov 20	12.2
14	Nov 23	12.2
	Nov 25	NO CLASS
	Nov 27	NO CLASS
15	Nov 30	12.5
	Dec 2	Project
	Dec 4	Project
16	Dec 7	Project
	Dec 9	Review
<b>Final – Thurs Dec 17, 3:30 – 5:30</b>		