

Course Policies and Syllabus

Instructor	Lelys Bravo de Guenni
Office	Baskin Engineering 365B
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Phone	831-459-2513 (email is preferred)
Office Hours	Monday and Wednesday 1:30-2:30 pm or By Appointment

Website at UCSC: <https://ams007-fall16-01.courses.soe.ucsc.edu>. Course contents will be also available in the *TopHat* platform (<https://tophat.com/>). You can log into *TopHat* at the following url: <https://app.tophat.com/e/532827> with your user name and password.

Lectures: Tuesday and Thursday, 07:10-8:45 pm, Jack Baskin Auditorium 101

Required Text: *Biostatistics for the Biological and Health Sciences*, M. M. Triola and M. F. Triola, Pearson (2006).

Discussion Sections: TAs will work through additional examples and answer questions. *Sections are mandatory.* All the quizzes and exams will be passed back in your enrolled section.

Section	Days	Time	Room
01A	Mo	08:00AM-09:05AM	J Baskin Engr 372
01B	Mo	09:20AM-10:25AM	J Baskin Engr 372
01C	Fr	12:00AM-01:05PM	J Baskin Engr 372
01D	Th	01:30PM-02:35PM	Porter Acad 148
01E	We	10:40AM-11:45AM	Porter Acad 148
01F	We	04:00PM-05:05PM	Porter Acad 148

Teaching Assistants:

- Bohan Liu - bliu47@ucsc.edu **Office hours:** TBA
- Raquel Barata- rbarata@ucsc.edu **Office hours:** Mo, 10:30 - 11:30 am, Tu, 5:30 - 6:30 pm, BE312B
- Chelsea Lofland - clofland@ucsc.edu **Office hours:** TBA

Additional Information: We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. Top Hat will require a paid subscription. A full breakdown of all subscription options available can be found here: www.tophat.com/pricing.

Our Top Hat Website is : <https://app.tophat.com/e/532827>

Our Top Hat course code is: 532827

Computer Labs: Enrollment in AMS 7L is a co-requisite. Material will be linked, but **administratively 7L is a separate course** and you will receive a separate grade for 7L. This lab is on-line. Please see the web page for your lab sections. All questions, especially administrative ones,

about AMS 7L should be answered by Lab Instructors. The Lab instructors are: Yifei Yan and Cheng-Han Yu.

Reading: The material in this course may go quickly. It is expected that you will stay up to date in reading the relevant sections of the text. The tentative schedule is at the end and it will be also available online. The reading material for each class is listed there.

Course Description

The main goal of this class is to introduce the basic ideas of probability and statistics with emphasis on applications to the life sciences and to everyday life. While we will learn how to do some calculations by hand, the primary goal is understanding of concepts, including the ability to interpret results. Topics are detailed in the schedule in page 4.

Homework

Homework will be assigned every Thursday, but will not be collected or graded. Answers to the odd numbered problems are in the back of the book. If you feel it would help, you are encouraged to work together on homework. But remember that you have to take the homework quizzes individually, so the point of the homework is to learn the material.

Grading Policy and Exams Information

- **Quizzes (15%):** There will be **three (3) quizzes** based on the homework, as indicated on the schedule. They will be held on Oct 04, Oct 13 and Nov 08. Many questions will be selected homework problems with the numbers changed. The quizzes are closed book, but you should bring a calculator. You must show all work (where applicable) for full credit. **Your lowest quiz score will be dropped when computing your quiz average**, and this is meant to account for nearly all reasons you might have to miss class, including illness. There will be **no make-up for quizzes, no exceptions**.
- **Top Hat Assignments (10%):** TopHat will be used in class to present the class contents. We will make use of the TopHat software to typically answer multiple-choice or numerical questions about the class contents. There will be questions associated to each class. Questions from the previous class will be assigned as homework for the students, and they can only be answered during the following class. Questions presented in class can be answered right away, but they will not be graded until they are assigned as a homework. Each question will be graded with a 50% weight for correctness and 50% weight for participation.
- **Midterm (30%):** There will be one **in-class midterm** on **October 20**, The midterm will cover material from chapters 1-6. Be sure to bring a calculator. You must show all work for full credit.
- **Final (40%):** The **final exam** will be on Wednesday, **December 07** as designated by the registrar, from 7:30 pm to 10:00 pm. Be sure to bring a calculator. **The date of the final will not be changed**. The final will be a comprehensive exam, covering all chapters discussed in class.

- **Session Attendance:** Attendance to sessions will be 5% of your final grade. This will be based on your attendance record.
- **Additional information about quizzes and exams:** You will need a calculator for all the exams and quizzes. It is important that the calculator has a square root key and logarithms, in addition to the usual arithmetic operations. All the exams and quizzes are closed book. **Only for the midterm and the final** (not for the quizzes) you may bring one single 8½in by 11in piece of paper with notes on both sides. This piece of paper should have your name and will be collected with your exam. You are not allowed to include solutions to any of the homework problems in this piece of paper. You must show all your work (when applicable) in the quizzes and exams to get full credit.

Exam Accommodation:

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me privately during my office hours or by appointment, preferably within the first two weeks of the quarter. At this time, we would also like us to discuss ways we can ensure your full participation in the course. We encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu.

Tentative Schedule for Statistics

AMS 7-01

Fall 2016

Date	Book Sections	Topics
September 22	1.1-1.3	Intro to the course. Why study statistics? Data types, experiments
27	2.1-2.4	Looking at data Measures of central tendency
29	2.5-2.7 3.1-3.2	Measures of dispersion Definition of Probability
October 04	3.3-3.7	Addition and Multiplication rules, Risks and Odds
		QUIZ 1
06	4.1-4.5	Discrete distributions – Binomial and Poisson
11	5.1-5.4 5.5-5.7	Normal distribution, Sampling distributions Central limit theorem Normal approximation to Binomial
13	6.1-6.2	Confidence intervals for proportions
		QUIZ 2
	6.3-6.4	Confidence intervals for means
18		Review
20		MIDTERM EXAM
25	7.1-7.3	Hypothesis Testing
27	7.4-7.5	Testing claim for Proportions and Means
November 01	8.1-8.2	Two-sample hypothesis tests
03	8.3-8.4	More two-sample tests Comparing proportions and means
08	9.1-9.2	Correlation and regression
		QUIZ 3
10	9.3-9.4	More on regression
15	9.5	Multiple regression
17	10.1-10.3	Contingency Tables. Chi-square tests
22	11.1-11.2	Analysis of Variance
24		HOLIDAY
29		More on Analysis of Variance
December 01		Review
December 07		FINAL EXAM