AMS 7L   Computer Lab for Statistics (AMS 7)   Winter 2018

Course Policies and Syllabus

Instructors:	Raquel Barata	Dan Spencer
Email:	rbarata@ucsc.edu	daspence@ucsc.edu

Computing Lab Hours:

MW	9:00 – 10:45am	Soc Sci 1 135	Spencer	***
MW	11:00am – 12:45pm	Soc Sci 1 135	Spencer	***
MW	1:00 – 2:45pm	Soc Sci 1 135	Spencer	***
MW	3:00 – 4:45pm	Soc Sci 1 135	Spencer	***
MW	5:00 – 6:45 pm	Soc Sci 1 135	Barata	***
TuTh	9:00 – 10:45 am	Soc Sci 1 135	Barata	***
TuTh	11:00 am – 12:45 pm	Soc Sci 1 135	Barata	***
TuTh	7:00 – 8:45 pm	Soc Sci 1 135	Barata	***

*** These labs will only be attended by an instructor the first mandatory occurrence on either January 16th or 17th. After that, you will need to attend a drop-in lab for help. If no drop-in lab fits your schedule, contact Raquel or Dan to schedule an appointment.

Drop-in Lab Times / Office Hours:

Wednesday	9:00 – 10:45am	Soc Sci 1 135	Spencer
Wednesday	11:00am – 12:45pm	Soc Sci 1 135	Spencer
Wednesday	1:00 – 2:45pm	Soc Sci 1 135	Spencer
Wednesday	3:00 – 4:45pm	Soc Sci 1 135	Barata
Wednesday	5:00 – 6:45 pm	Soc Sci 1 135	Barata
Monday	5:00 – 6:45 pm	Soc Sci 1 135	Barata

Attendance is NOT required for drop-in lab sessions after the first meeting.

Web page: All announcements and lab assignments are in *Canvas*. Login to your *Canvas* using your GoldID and password and enter AMS 7L Winter 2017. The login page for *Canvas* can be accessed using the following URL:

<div align="center">

http://canvas.ucsc.edu

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Associated Lectures:
Matthew Heiner, MWF 2:40 – 3:45pm, J Bask Aud 101
Immanuel Williams, TuTh 5:20 – 6:55 pm, J Bask Aud 101

Text: *Biostatistics for the Biological and Health Sciences (2nd Edition)*, M. M. Triola, M. F. Triola, J. Roy. Pearson (2017)

Course Objectives: To acquire the technological skills needed to implement methods learned in AMS 7 using the statistical software JMP, and to reinforce various concepts from AMS 7 through computer simulation and data analysis.

Lab Assignments: Lab assignments will be completed, submitted, and reviewed in *Canvas*. The labs will be posted in the *Quizzes* section.

A (single) lab assignment will be posted and due once a week. Students are allowed 2 attempts and the highest score will be recorded. Labs will be posted every Monday at 9:00 am and due the following Monday at 9:00 am with the exception of the last lab. Lab 10 will be due on the last Friday of the Winter finals week, 3/23/2018 at 9:00 am.

Labs are self-paced and do NOT have a time limit; however, ALL labs MUST be submitted by the posted due date. You do not have to complete lab assignments in one session. You can save assignments in *Canvas* and return to complete them at a later time. Most lab assignments will consist of multiple sections, each of which you will be expected to complete, submit, and review one at a time BEFORE starting the next section of the lab. Labs are designed to take approximately 90 minutes to complete all parts combined, but may be shorter or longer depending on your familiarity with the material. You are allowed and encouraged to work on labs alongside your peers, but every student is expected to do their own calculations and JMP analysis required by the lab. Submitting work not completed by you is a violation of academic integrity.

In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript. For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the Academic Integrity page https://www.ue.ucsc.edu/academic_misconduct at the Division of Undergraduate Education.

Late Work: Late submissions will **NOT** be accepted. The class accommodates missing an entire Lab assignment by taking the highest 9 out of 10 Labs (see **Course Grade** section below). **Therefore, instructors will adhere to a strict assignment submission policy.** Complete the Labs early in the week. Do not wait until the day the assignments are due! In cases of extenuating circumstances, accommodating late work will be left at the discretion of the instructors. In such cases, email both instructors at least 48 hours before the due date of the assignment. Documentation of the extenuating circumstance (for medical emergency, etc) may be required.

Student Support: Students are encouraged to email instructors at any time throughout the course. Note that last minute emails may not be answered immediately. Thus, be sure to send your inquiries to instructors well before the due date (don't wait until the night before to do the lab). In person appointments may be scheduled if additional help is needed.

All data files used in labs can be found in *Files* in *Canvas*.

Schedule and Content List:

Lab #	Due Date	Content
Lab 1	Jan. 22, 9 am	Practice with Data Types, Starting JMP.
Lab 2	Jan. 29, 9 am	Looking at data. Measures of central tendency, Measures of dispersion.
Lab 3	Feb. 5, 9 am	Relative Frequency, Probability (including Bayes Theorem), Binomial and Poisson distribution.
Lab 4	Feb. 12, 9 am	Means of Normals, Central Limit Theorem, Normal Approximation to Binomial
Lab 5	Feb. 19, 9 am	Review lab.
Lab 6	Feb. 26, 9 am	Confidence Intervals for Means, Confidence Intervals for Proportions.
Lab 7	Mar. 5, 9 am	One Sample Hypothesis Tests for Means, Hypothesis Tests for Proportions. Two-sample Tests for Means.
Lab 8	Mar. 12, 9 am	Regression, Residuals and Transformations
Lab 9	Mar. 19, 9 am	Multiple Regression, Goodness-of-Fit Tests
Lab 10	Mar. 23, 9 am	Optional lab: Polynomial Regression, Optimization.

Course Grade: Grades will be based on a point system. Labs are worth 100 points each. 40 points will be awarded simply for completing (and submitting) ALL sections of a lab assignment. Students may receive 20 completion points if AT LEAST half the lab sections are completed (eg. 2 out of 3, 2 out of 4, 3 out of 5, etc.). The remaining 60 points will be awarded for correct answers. The first nine labs are required, so the total number of points for the course is 900. A tenth lab assignment will be available to replace your lowest Lab score. The same rubric applies to Lab 10: 40 points for completing ALL elements of the lab and 60 points for correct answers. The percentage of the total points earned (out of 900) will determine a student's letter grade: 90% - 100% is an A, 80% - 89% is a B, 70% - 79% is a C, 60% - 69% is a D, and 0 - 59% is an F. Note that A+ will not be given for people who earn more than 900 total points.