POINT LOMA
N A Z A R E N E   U N I V E R S I T Y

Syllabus for Introduction to Statistics—Fall 2012

Instructors:
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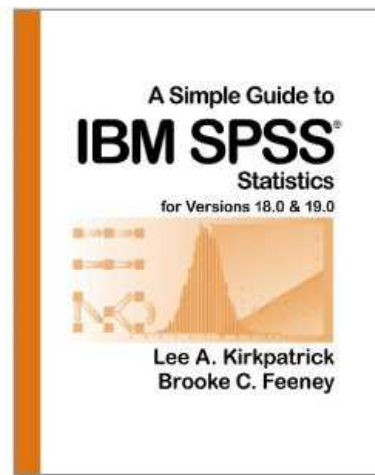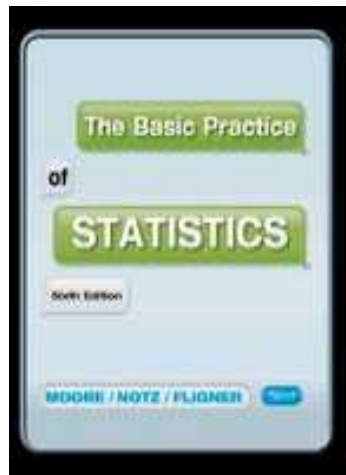
Greg Crow
RS 220
849-2604

Class meetings:
Sec. 1 RLC108
MWF 1:30-2:35

Sec 2 RS 236
TR 10-11:40

Sec 3 RLC108
TR 3-4:40

Text:
The Basic Practice of Statistics, 6th Edition, David S. Moore, W. H. Freeman, 2010. ISBN-13 978-1-4641-0254-7

Lab Manual for SPSS:
A Simple Guide to SPSS for Versions 18.0 and 19.0, Lee A. Kirkpatrick and Brook C. Feeney.

Course Description
MTH 203 (3 Units) Introduction to Statistics

A first course in statistics for the general student. Description of sample data, probability theory, theoretical frequency distributions, sampling, estimation, and hypothesis testing. Not applicable toward a major in mathematics.

Prerequisite: Mathematics 099 (or equivalent).

Learning Outcomes
- Students will be able to apply their technical knowledge to solve problems.
- Students will be able to compute measures of central tendency for data.
- Students will be able to compute measures of dispersion for data.
- Students will be able to use statistical methods to test hypotheses.

Required Materials
- Calculator: A cheap calculator (with at least a square root key).

Course Philosophy

Mathematics is learned primarily by **doing** Mathematics–not simply listening to it; that is, the effective learning of mathematics is an active process, involving participation. Thus, the course aims to maximize student involvement, hence student achievement.

Individual concepts in mathematics are **learned** (mastered as opposed to memorized) by thinking and working through numerous examples and exercises which involve these concepts; by this process mathematical concepts become familiar, and less abstract.

The instructor is responsible for overall planning, for directing instructional activities, and for evaluation of student achievement.

You are ultimately responsible for your own achievement. For example, you are responsible for meeting all scheduled activities of the course, such as class meetings, problem assignments, exams, and the final examination; you are also responsible for regular work outside of class in preparation for class lectures and discussions.

There is an option that with the written consent of the instructor, a student may be graded using tests only. This option will remove reports and exercises from the above distribution and prorate the rest of the tests to 1000 points.

Grading Policies

Grading Distribution	Points
Two Examinations at 200 points each	400
Laboratory Test	150
Final Exam	250
Homework (text exercises)	150
Laboratory (reports)	50
Total	1000

Grading scale
Grades are based on the number of points accumulated throughout the course.
Approximate minimal percentages required to obtain a given grade are:

Grading Scale in percentages	A	B	C	D
+		(87.5, 90)	(77.5, 80)	(67.5, 70)
	[92.5, 100]	[82.5, 87.5]	[72.5, 77.5]	[62.5, 67.5]
-	[90, 92.5)	[80, 82.5)	[70, 72.5)	[60, 62.5)

Grade components.
The grade components are homework (text exercises), tests (class and laboratory), and the final examination.
- **Late work**. A written assignment or computer assignment is late if it is not received at the beginning of class on the due date. Late work need not be accepted. Work accepted late may be assessed a penalty. Make-up tests will only be given by arrangement with the instructor for reasons of documented emergency.
- **Accuracy of solutions**. Written assignments and examination questions and problems must be formulated carefully in terms of words and symbols used in the course. Credit is determined by the degree to which answers and solutions respond to the specific question or problem stated. Maximize your credit by learning the language and symbols of the course.
- **Written Assignments**. Collected assignments must be prepared in a style suitable for grading. The following guidelines are used to determine credit:
  - the organization must be easy to follow
  - the work must be legible
  - complete solutions must be written for problems (not just answers); answers must be clearly marked
  - use complete sentences to answer questions
- **Electronic Assignments**. Assignments sent in as attachments must be prepared in a style suitable for grading. The following guidelines are used to determine credit:

- o the organization must be easy to follow
- o the formatting must enhance the organization
- o complete solutions must be written for problems (not just answers); answers must be clearly indicated
- o use complete sentences to answer questions
- **Examinations and the Final Examination**. Examinations and the Final Examination will include problems and questions over material assigned in the text, readings and handouts, as well as material presented in class.

  No examination shall be missed without prior consent or a well documented emergency beyond your control. A score of zero will be assigned for an examination that is missed without prior consent or a well documented emergency beyond your control.

  The examination schedule is included in the daily schedule. This instructor does not intend to accept excuses such as poor communication with parents, benefactors, surf team sponsors and/or travel agents.

Attendance Policy
After you miss the equivalent of 10% of the classes and labs, you will be warned of impending de-enrollment. If you miss the equivalent of 20% of the classes, you may be de-enrolled or given a course grade of "F" for the semester. Tardiness may result in being marked absent.

Attendance is expected at each class section. In the event of an absence you are responsible for the material covered in class and the assignments given that day. See the Point Loma Nazarene University Catalog for a statement of the university's policy with respect to attendance:

> Regular and punctual attendance at all classes in which a student is registered is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements to be met. There are no allowed or excused absences except when absences are necessitated by certain university-sponsored activities and are approved in writing by the Provost. Whenever the number of accumulated absences in a class, for any cause, exceeds ten percent of the total number of class meetings, the faculty member has the option of filing a written report to the Vice Provost for Academic Administration which may result in de-enrollment, pending any resolution of the excessive absences between the faculty member and the student. … If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of W or WF (no grade). There are no refunds for courses where a de-enrollment was processed. (See the Catalog for full text)

Class Enrollment
It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

Classroom Attire
All students are expected to dress in ways that make the classroom a place where all students are comfortable and can work efficiently. Distracting attire is not permitted in the classroom. For example, attire associated with the "rush" activities of fraternities and sororities simply causes too many distractions in the classroom. If you choose to "rush" one of the fraternities or sororities, please make sure the "rush" officials know that "rush" attire will not be allowed in this classroom.

Academic Accommodations
While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic accommodations. At Point Loma Nazarene University, students requesting academic accommodations must file documentation during the first two weeks of the semester with the Disability Resource Center (DRC), located in the Bond Academic Center. Once the student files the documentation, the Disability Resource Center will contact the student's instructors and provide written recommendations for reasonable and appropriate accommodations to meet the individual needs of the student. This policy assists the University in its commitment to full compliance with Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990 (ADA), and ADA amendments Act of 2008, all of which prohibit discrimination against students with disabilities and guarantees all qualified students equal access to and benefits of PLNU programs and activities.

Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.

Academic Honesty

The Point Loma Nazarene University community holds the highest standards of honesty and integrity in all aspects of university life. Academic honesty and integrity are strong values among faculty and students alike. Any violation of the university's commitment is a serious affront to the very nature of Point Loma's mission and purpose.

Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. Such acts include plagiarism, copying of class assignments, and copying or other fraudulent behavior on examinations. For more details on PLNU's policy go to:
http://www.pointloma.edu/experience/academics/catalogs/undergraduate-catalog/point-loma-education/academic-policies

A student who is caught cheating on any item of work will receive a zero on that item and may receive an "F" for the semester. See the PLNU Catalog for a further explanation of the PLNU procedures for academic dishonesty.

Final Exam: Date and Time
The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. Only in the case that a student is required to take three exams during the same day of finals week is an instructor authorized to change the exam date and time for that particular student.

The Final Exam is a Comprehensive Examination.

Fall 2012   MTH 203   Sec. 1 1:30-2:45 MWF

S	M	T	W	T	F	S
26	28 (OnTuesday) Introduction Chapter 1 Picturing Distributions as Graphs		29 Chapter 2 Describing Distributions with Numbers Chapter 3 The Normal Distributions	30	31 Chapter 3 The Normal Distributions	1
September 2	3 Labor Day	4	5 Gold Team Lab 1	6	7 Green Team Lab 1	8
9	10 Chapter 4 Scatterplots and Correlation	11	12 Chapter 5 Regression Cautions About Correlation and Regression	13	14 Chapter 8 Producing Data: Sampling	15
16	17 Chapter 9 Producing Data: Experiment	18	19 Gold Team Lab 2	20	21 Green Team Lab 2	22
23	24 Chapter 10 (Skip pages 266-277) Introducing Probability **Spiritual**	25	26 Chapter 11 Sampling Distributions **Renewal**	27	28 Chapter 11 Sampling Distributions **Week**	29
30	1 Chapter 14 Confidence Intervals: The Basics	2	3 Gold Team Lab 3	4	5 Green Team Lab 3	6
October 7	8 Chapter 15 Tests of Significance: The Basics Review & Catch-up	9	10 **Exam 1**	11	12 Chapter 15 Tests of Significance: The Basics	13
14	15 Gold Team Lab 4	16	17 Green Team Lab 4	18	19 Fall Break	20
21	22 Chapter 17 Inference about a Population Mean	23	24 Chapter 17 Inference about a Population Mean	25	26 Chapter 18 Two Sample Problems	27
28	29 Chapter 18 Two Sample Problems	30	31 Gold Team Lab 5	1	2 Last Day to Drop Green Team Lab 5	3
November 4	5 Chapter 24 One-Way Analysis of Variance: Comparing Several Means	6	7 Chapter 24 One-Way Analysis of Variance: Comparing Several Means	8	9 Chapter 19 Inference about a Population Proportion	10
11	12 Chapter 19 Inference about a Population Proportion Review & Catch-up	13	14 Gold Team Lab 6	15	16 Green Team Lab 6	17
18	19 **Exam 2**	20	21 Thanksgiving Recess	22	23	24
25	26 Chapter 20 Comparing Two Proportions	27	28 Gold Team Lab Final	29	30 Green Team Lab Final	1
December 2	3 Chapter 20 Comparing Two Proportions	4	5 Chapter 22 Two Categorical Variables Chi-Square Test	6	7 Chapter 22 Two Categorical Variables Chi-Square Test	8
9	10	11	12 **Sec. 1 Final Exam 1:00-3:00**	13	14	15

Fall 2012 MTH203 Sec. 2 10:00-11:40 TTh
Sec. 3 3:00- 4:40 TTh

	S	T		W	T	F	S
	26	27	28 No Class (Monday Schedule)	29	30 Introduction Ch 2 Describing Distributions with Numbers	31	1
September	2	3 **Labor Day**	4 Gold Team Lab 1	5	6 Green Team Lab 1	7	8
	9	10	11 Ch. 3 The Normal Distribution	12	13 Ch. 3 The Normal Distribution	14	15
	16	17	18 Ch.4 Scatterplots and Correlation Ch. 5 Regression	19	20 Ch. 5 Regression Ch. 8 Producing Data	21	22
	23	24	25 Gold Team Lab 2 Spiritual Renewal Week	26	27 Green Team Lab 2 Spiritual Renewal Week	28	29
	30	1	2 Ch. 9 Experiments	3	4 Ch. 10 Introducing Probability (skip pgs. 266-277)	5	6
October	7	8	9 Ch. 11 Sampling Distributions Review	10	11 # Exam 1	12	13
	14	15	16 Gold Team Lab 3	17	18 Green Team Lab 3	19 Fall Break	20
	21	22	23 Ch. 14 Confidence Intervals Ch. 15 Tests of Significance	24	25 Ch. 15 Continued Ch. 17 Inference About a Population Mean	26	27
	28	29	30 Ch. 17 Inference About a Population Mean	31	1 Ch. 18 Two Sample Problems	2 Last Day to Drop	3
November	4	5	6 Ch. 24 ANOVA	7	8 Ch. 24 ANOVA	9	10
	11	12	13 Gold Team (Sec. 2 Bresee Lab) Lab 4	14	15 Green Team Lab 4	16	17 Homecoming
	18	19	20 # Exam 2	21	22 **Thanksgiving Day**	23	24
	25	26	27 Gold Team (Sec. 2 Bresee Lab) Lab Final	28	29 Green Team Lab Final	30	1
December	2	3	4 Ch. 19 Inference About a Population Proportion Ch. 20 Comparing Two Pproportions	5	6 Ch. 22 Two Categorical Variables Chi-Squared Test	7 Classes End	8
	9	10	11	12	13 Sec. 2 Final 10:30-12:30 Sec. 3 Final 3:30- 5:30	14	15