

# Math 382 Spring 2015

**Time and Place:** T 4:30-6:00 p.m. RS236

**Instructor:** Maria Zack, Ph.D.

**Phone Number:** 849-2458

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**Office Number:** S222

**Office Hours:**

Monday	2:00-3:00 p.m.
Tuesday	6:00-7:00 p.m. by appointment
Wednesday	7:00-8:30 a.m.
Thursday	By appointment
Friday	7:00-8:30 a.m. and 12:00-1:00 p.m.

These are the hours that I will definitely be available. You can come by my office any time and if I am free I will help you (you can also call me at home if you call **before 8:45 p.m.** 760-753-7861). I keep a sign-up sheet on my office door and you can sign up for any empty time slot (there are slots other than my office hours) if you want to be sure that the time is reserved for you. If you have a question or just want to hang out, come by my office.

**Text:** *Modern Mathematical Statistics with Applications* (2<sup>nd</sup> Ed)  
Jay Devore and Kenneth Berk  
Note: you will be using this same textbook for MTH392

**Online Content:** We will also be using some software from Acrobatiq which provides an introduction to some key statistical concepts. This is web based so there is nothing for you to buy. I will give you the needed information via email to log in. To build a basic foundation in statistics, working with this software is what you will be doing first in this class.

**Content:**

A first course in descriptive and inferential statistics for students with sophisticated mathematics exposure. Topics include applied work in experimental design, sampling distributions, point estimation and hypothesis testing supported by the use of statistical software. In addition, the theoretical basis for these techniques is explored. Prerequisite: Mathematics 274

**Learning Outcomes:**

- Students will be able to apply their mathematical knowledge to solve problems.
- Students will be able to use technology to solve problems.
- Students will collaborate effectively in teams.

**Required Materials:**

- A scientific calculator (it does not need to be an expensive one)

**Grading:**

The components of the grades:

Homework	300
Labs and projects	150
Exam	250
Final	300
Total Points	1000

Approximate minimal points required to obtain a given grade are:

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
+		(875, 900)	(775, 800)	(675, 700)
	[925, 1000]	[825, 875]	[725, 775]	[625, 675]
-	[900, 925)	[800, 825)	[700, 725)	[600, 625)

Note that scores of 599 or lower will result in an F.

**Homework:**

Homework will be assigned each day at the end of class. The homework will be due by midnight the following Tuesday. Since we are only meeting once per week, you may need to come by my office to ask some homework questions. I will answer homework questions at the start of class and give you a few hours after class to finish up your work. No late homework will be accepted except by prior arrangement or with a documented emergency. Homework assignments are posted in Canvas. The object of the homework is to learn how to do the problems so I expect to see calculations on your homework using the terminology and methods of the class and not just the answer. A random selection (the same for all people) of the problems will be graded on any homework assignment.

**Labs and Projects:**

You will be given some additional work to learn how to use Excel for data analysis. This will substitute for part of our class time. You may also be given a few additional data sets to analyze.

**Exams:**

There is one in-class exam. If you do not take an exam you will receive a zero for it. Late exams may be taken only by prior arrangement or with a documented emergency. I must participate in the decision for you to miss an exam; this means that you need to phone me before missing an exam.

**Final:**

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 for MTH242 is cumulative and is given at the assigned final time on **THURSDAY MAY 7, FROM 4:30-7:00 P.M.**

**Attendance:**

Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day.

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 as approved in writing by the Provost for specific students participating in certain university-sanctioned activities. Excused absences still count toward the 10%-20% limits, but allow students to make up work, quizzes, or tests missed as a result of a university-sanctioned activity. Activities of a unique nature, such as labs or other activities identified clearly on the syllabus, cannot be made up except in rare instances when instructors have given advanced, written approval for doing so. Whenever the number of accumulated absences in a class, for any cause, exceeds ten (10) percent of the total number of class meetings, the faculty member should send an e-mail to the student and the Vice Provost for Academic Administration (VPAA) warning of attendance jeopardy. If more than twenty (20) percent of the total number of class meetings is reported as missed, the faculty member or VPAA may initiate the student's de-enrollment from the course without further advanced notice to 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 consistent with university policy in the Grading section of the catalog. There are no refunds for courses where a de-enrollment was processed. For more details see the PLNU catalog: [http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Class Attendance](http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Class_Attendance)

### **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.

### **Academic Accommodations:**

While all students are expected to meet the minimum academic standards for completion of their courses as established by the instructors, students with special needs may require academic accommodations. At Point Loma Nazarene University, students requesting academic accommodations must file documentation with the Disability Resource Center (DRC), located in the Bond Academic Center. Once the student files documentation, the Disability Resource Center contacts the student's instructors and provides 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, the Americans with Disabilities (ADA) Act of 1990, and ADA Amendments Act of 2008, all of which prohibit discrimination against students with special needs and guarantees all qualified students equal access to the benefits of PLNU programs and activities. For more details see the PLNU catalog:

[http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic Accommodations](http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic_Accommodations)

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. Any violation of the university's commitment is a serious affront to the very nature of Point Loma's mission and purpose. Violations of academic honesty include cheating, plagiarism, falsification, aiding academic dishonesty, and malicious interference. The details of PLNU's meaning of each of these words can be found in the PLNU catalog at:

[http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic Honesty](http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic_Honesty)

A student remains responsible for the academic honesty of work submitted in PLNU courses and the consequences of academic dishonesty beyond receipt of the final grade in the class and beyond the awarding of the diploma. Ignorance of these catalog policies will not be

considered a valid excuse or defense. Students may not withdraw from a course as a response to a consequence.

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

([http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic\\_Honesty](http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic_Honesty)).

I do encourage working in groups on homework assignments, but each individual is expected to turn in his or her own write-up of the assignment.

### **Copyright Protected Materials**

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

### **Credit Hour Information: Distribution of Student Learning Hours**

It is anticipated that you will spend a minimum of 37.5 participation hours per credit hour in your course. The estimated time expectations for this course are shown below:

Reading Text	14
Lab Practice and Lab Reports	12
In-Class Meeting + Written Exam	18.5
Written Homework	28
Exam Preparation	8
Final Exam	2.5
TOTAL	83

Monday	Tuesday	Wednesday	Thursday	Friday
12-Jan <b>NO CLASSES</b>	13-Jan No Class meeting Monday on Tuesday	14-Jan	15-Jan	16-Jan
19-Jan <b>MLK DAY</b>	20-Jan 1.1 Populations and Samples 1.2 Pictorial and Tabular Methods	21-Jan	22-Jan	23-Jan
26-Jan	27-Jan 1.3 Measures of Location 1.4 Measures of Variability Lab 1	28-Jan	29-Jan	30-Jan
2-Feb	3-Feb 2.1 Sample Spaces and Events 3.1 Random Variables	4-Feb	5-Feb	6-Feb
9-Feb	10-Feb 4.3 Normal Distribution	11-Feb	12-Feb	13-Feb
16-Feb	17-Feb 6.1 Statistics and Their Distribution 6.2 Distribution Sample Mean	18-Feb	19-Feb	20-Feb
23-Feb	24-Feb 8.1 Confidence Intervals 8.2 Large Sample Confidence Intervals	25-Feb	26-Feb	27-Feb
2-Mar STUDY SESSION	3-Mar <b>EXAM</b>	4-Mar	5-Mar	6-Mar
9-Mar <b>SPRING BREAK</b>	10-Mar <b>SPRING BREAK</b>	11-Mar <b>SPRING BREAK</b>	12-Mar <b>SPRING BREAK</b>	13-Mar <b>SPRING BREAK</b>
16-Mar	17-Mar 8.3 Normal Intervals 9.1 Hypothesis Test	18-Mar	19-Mar	20-Mar
23-Mar	24-Mar 9.2 Tests of Pop Mean 9.3 Test of Pop Proportion	25-Mar	26-Mar	27-Mar
30-Mar	31-Mar NO CLASS - Labs 2: t-tests Lab 3: Regression and Correlation	1-Apr	2-Apr <b>EASTER BREAK</b>	3-Apr <b>EASTER BREAK</b>
6-Apr <b>EASTER BREAK</b>	7-Apr 9.4 P-Values 9.5 Selecting a Test	8-Apr	9-Apr	10-Apr
13-Apr	14-Apr 10.1 z-Tests for Differences 10.2 Two-sample t-Test	15-Apr	16-Apr	17-Apr
20-Apr	21-Apr 10.3 Paired Data 10.4 Two Proportion Inference	22-Apr	23-Apr	24-Apr
27-Apr	28-Apr 11.1 ANOVA 11.2 Multiple ANOVA Lab 4	29-Apr	30-Apr	1-May
4-May	5-May	6-May	7-May <b>FINAL EXAM 4:00-7:30 PM</b>	8-May