Math 1132
INTRODUCTION TO STATISTICS - Online Course
Catawba College
Block 6, Fall 2014
January 13, 2014 to May 8, 2014

Materials: (Required)

Basic Practice of Statistics
David S. Moore,
6th Edition, Freeman and Company, 2012
with access code to MathPortal
ISBN: 1-4292-8002-6
There is an ebook that comes with this access code.
The access code may be purchased through the Catawba College bookstore or directly from the publisher at its website *http://portals.bfwpub.com/bps6e.php*

Instructor: Mr. John Sullivan
Office: Ketner Hall, Room 337
e-mail: jpsulliv@catawba.edu
I will respond to emails within 24 hours (48 hours on the weekend)

Class Meetings: **There are no physical class meetings.**
This class meets online and is available 24 hours a day, 7 days a week

Technology Requirements: You must have access to the internet. Course material will be provided both through **MathPortal** and **Blackboard**. You must have a valid email account and be a registered user of **MathPortal** and **Blackboard**.

To sign up for the online component-MathPortal for the course:

Go to *http://portals.bfwpub.com/bps6e.php*

(Mac users need to use Firefox! Chrome and Safari WILL NOT work with this online component.)

Click on the link "Register an activation code" or "Purchase an activation code."

You will be prompted to follow the on-screen instructions to find your course. You will start by selecting North Carolina, Catawba College, and my name (Sullivan).

You will enter the activation code you purchased. You will also need to enter your email address and choose a password.

Do not forget your password. You should now be all set!

Email me if you have difficulty accessing Blackboard or MathPortal.

Course Description: Introduction to Statistics is a general-education course that meets three hours of the mathematics distribution requirement of the college. Data analysis, the design of

data production, and probability-based inference are the major content areas. Homework assignments, quizzes and tests will be given through MathPortal. Discussion questions will be given through Blackboard.

Course Objectives: The successful student will be able to:

1. display distributions with graphs.
2. describe distributions with numbers.
3. do calculations for normal distributions using the 68-95-99.7 rule and standard values.
4. display relationships between quantitative variable using scatterplots.
5. use correlation to measure the direction and strength of the linear relationship between quantitative variables.
6. use the least-squares method for fitting a regression line to data.
7. use statistical designs for choosing samples.
8. design experiments.
9. use laws of probability to make statistical inferences.
10. apply the Central Limit Theorem to derive information about the sampling distributions.
11. construct confidence intervals for estimating confidence of the population mean and write confidence statements from the intervals.
12. test significance of parameters using hypothesis testing techniques.
13. compare the characteristics of two populations; primarily using the population means.
14. compare several proportions using two-way tables and the Chi-Square Test.

Learning Outcomes:

A) Mathematics General Education Requirement (*Catalog* 2011-2012)

Students who have successfully completed the course will be able to:

1. interpret mathematical models and draw inferences from them
2. use appropriate mathematical methods to solve real world problems
3. reason quantitatively and communicate general principles of mathematics effectively

B) Quantitative Literacy Requirement (*Catalog* 2012-2013)

Courses in this area will help students to think and communicate quantitatively and mathematically at a college level.

1. Students will apply mathematical methods to draw inferences from a mathematical model of real-world phenomena.
2. Students will create a mathematical model from an informal description of real-world phenomena.
3. Students will communicate mathematical ideas clearly and concisely.

The Course Objectives and Learning Outcomes will be assessed using homework, tests, quizzes, and a final exam.

Class Policies:

There are a variety of tools and learning aids on MathPortal and Blackboard to help you succeed in this course. Such material includes video clips, applets, vocabulary flash cards, self-directed practice tests, and many examples similar to homework problems. Explore the MathPortal site to see what works for you! In addition, I will post worked out solutions as needed. The more work you put into this course, the more you will get out of it!

There will be eight **tests** (about 1 test every 2 weeks) and a final exam administered online.

Quizzes will be assigned from each chapter. These will typically consist of 10 questions. You will get two attempts to complete a quiz.

Homework will be assigned for each chapter. You will have approximately 1 week to complete the homework before the due date. I strongly suggest that you practice the homework and ask me any questions before you take the quizzes.

Discussion Board: Discussion questions and posts will be conducted through Blackboard. Each discussion question requires a "primary post" from each student. Each student should also reply *at least twice* to two other students in a substantive manner. Posts such as "I agree" or "I see you point" are OK to post but they do NOT count as substantive. A substantive reply should ask additional questions and make further points. So, at a minimum, the student is required to post one Primary Post and two Substantive Replies for *each* assigned discussion question. Please note that the discussion question replaces our face-to-face meeting time. Therefore, you are not allowed to "make-up" any missed work in this area. Missing a discussion question is similar to missing class in the face-to-face course.

<u>Discussion Question Grading Guidelines:</u>

4 points: Minimum requirements are met, student has added additional depth to the primary post than required or the student has posted more than 2 substantive replies to others.
3.5 points: Minimum requirements are met and the work is well above average but may have minor errors.
3 points: Minimum requirements are met and the work is above average but has several minor errors.
2.5 points: Minimum requirements are met and the work is average
2 points: Minimum requirements are met but the student completed all work on one day and in one short session
1.5 points: Student made an acceptable primary post but only one substantive reply
1 point: Student failed to submit either a primary post or two substantive replies
0 points: All submissions were below expectations or no submission was made at all

This class is 100% online. Students are expected to be active in the class on four of seven days. You should plan on spending 11-15 hours per week on the course.

Missed Work Policy:

Late permission must never be assumed. You are REQUIRED to contact the instructor BEFORE due dates if you have a reason for missing an assignment. Only reasons expressed in the catalog are recognized. Do NOT procrastinate. Requests are granted at the discretion of the instructor and partial credit or full credit will be given at the discretion of the instructor. But you should never assume that late permission will be granted unless it is a college recognized excuse published in the catalog. Please realize that technical issues can pop up at unexpected times, so working on an assignment at the last possible moment is NOT a good idea. Be sure to use your time wisely!

Evaluation:

Your course grade will be based on the following:

Homewok	15%
Quizzes	15%
Discussion Board	10%
Tests	30%
Final Exam	30%

The corresponding letter grades are as follows. Typical rounding rules do apply.

A- 90-92	A 93-100	
B- 80-82	B 83-86	B+ 87-89
C- 70-72	C 73-76	C+ 77-79
D- 60-62	D 63-66	D+ 67-69
	F 0-59	

Honor Code:

As a member of the Catawba College community, I will practice academic honesty, communicate truthfully, and show respect for the rights and property of others. I will also encourage others in the community to behave honorably.

Topic Dates:

Chapter 1	January 13	-	January 27
Chapter 2	January 27	-	February 10
Chapter 3	February 10	-	February 24
Chapters 4 and 5	February 24	-	March 10
Chapters 8 and 9	March 10	-	March 24
Chapter 11	March 24	-	April 7
Chapter 14	April 7	-	April 21
Chapter 15	April 21	-	May 5
Review/Final Exam	May 5	-	May 8

Further details on specific homework assignments, quizzes, discussion questions, and tests will be posted on Blackboard and through MathPortal.

Do not procrastinate! Due dates are the last day/time that work will be accepted. Work at a pace to allow yourself to take advantage of the available resources. Give yourself time before the deadline to read the text, do practice problems, rework homework problems or take the quiz a second time if necessary.