math 12 – statistics – section 43163

Course Information

instructor: daniel cicala
email: daniel.cicala@rcc.edu
couse webwite: danielmichaelcicala.github.io/teaching
room: mtsc 101
time: tth 1230-1435
textbook: *elementary statistics 10th ed.* by Allan Bluman
technology: a *scientific* calculator and an account at *www.connectmath.com*

Course Outline

In the below text, the **emphasized words** are described in more detail in the **Definitions** section of the syllabus.

This class is report focused. On the first day, we will form groups in which you will work for the entire semester. You will spend the vast majority of class-time doing group work instead of listening to me lecture. That means you must be self-motivated to teach this material to yourself and your peers.

On the course website (see above), you will find a list of questions from each section. Class-time is primarily devoted to working on these questions with your group. In solving these questions, you have access to any **approved materials**.

After you complete all problems for a given section, your group will submit the corresponding **section report**. In order to submit reports for sections in the next chapter, all section reports for the current chapter must be satisfactory. You may submit reports as many times as needed to acheive this.

After all reports in a given chapter an successfully submitted, this opens up the **chapter test**. This is taken using connectmath.com and is to be taken individually at any time before the end of the semester.

At the end of every class, each group will take the final 15 minutes to draft the **minutes** outlining the progress made in the day.

Each group may work at its own pace. There are minimum chapters to advance past in order to acheive a certain grade and bonuses for each successive chapter past those.

Most classes will be spent working towards completing the section reports. In lieu of a final exam, there will be a final group project that will be presented on during the time alloted for the final exam. The last few classes may also be used to prepare for this. The projects themselves will be detailed later in the semester.

Definitions

(approved materials)

These include the textbook, the internet, group members, myself, and non-group peers. However, to ask for help from non-group peers, your entire group must pause the class, approach the whiteboard, and state your problem to the class and ask a specific question. A question cannot be in the form of "how do you do this?" or "can you help with that?". To help phrase a question to the class, ask me.

(section report)

The section report will contain solutions to every problem assigned from the corresponding section. It must be professional. That means it will be neat, easy to read, written in complete sentences. It cannot contain scratch work strewn aimlessly about the page. Handwriting is fine. I will not grade it. Instead, I will provide comments that followup drafts must address. Once all comments are addressed, then I will mark it as complete. All section reports for a given chapter must be satisfactory before handing in section reports for the following chapter. A sample section report is on the course website.

(chapter test)

After all section reports are satisfactory for a given chapter, then you must take the online chapter test. This is taken individually and can be completed at anytime before the final day of classes. Unlike section reports, you only have several attempts to answer each question. It is likely that different groups will take a different number of chapter tests, however, your total grade considers only those chapter tests that you must take. Each group member will take a different chapter test, but all on the same material. You will find these available on connectmath.com. See the **Chapter Test** section below for more details

(minutes)

At the end of every class, your group will take the final 15 minutes to compose a short report on the happenings of the day. Things to include are problems solved, help sought, questions asked, section report submitted, group questions, things like "Tiffany explained standard deviation to the group" or "John asked about Pareto charts". This will be handed in at the end of the class and signed by each present group member. Your being present will be recorded here and goes towards the "participation" portion of your final grade.

Group Mediation

In the case a group member is causing difficulties, whether by being difficult to work with or not pulling their weight, I can mediate any discussions or discuss issues privately with said student. This may be triggered by sending me an email outlining the problem or asking me in person during class.

Grades

The following outlines the effect of completing the test for each chapter.

ch5	required to earn atleast a C
ch6	required to earn atleast a B
ch7	required to earn an A
ch8	add 3% to final grade
ch9	add 4% to final grade
ch10	add 5% to final grade
ch11	add 6% to final grade
ch12	add 7% to final grade

To motivate you to help your group members, there is a bonus if each group member does well on the chapter tests. If, on a single chapter test, each member gets above

70%	add 5% to each chapter test grade
80%	add 10% to each chapter test grade
90%	everyone gets 100% on the chapter test

Final grades will be computed as follows:

participation	25 %
average chapter tests	50 %
final project	25 %

The final letter grade is determined by the final percentage average:

90-100%	A
80-89%	B
70-80%	C
60-69%	D
$\leq$ 59 %	F

Taking the Chapter Tests

The chapter tests will be online at your Connectmath account. Your Connectmath account at www.connectmath.com will give you access to the textbook, homework assignments, video lectures, and other such resources for the course. You will be able to view your grade at all times, as your homework problems are graded as you do them. You may submit your homework problems as many times as you need in order to get the best score you can before the due date.

The Connectmath account can also be purchased in the RCC bookstore or online at www.connectmath.com. If you cannot purchase the code right away, there is a 14-day free trial period that you can convert to your permanent account within a specified time by paying online.

I cannot assist with the technical issues, unfortunately, so please call Technical Support (1.949.390.2095) who will be able to help you! Common problems include the ability to accept "cookies" and using the wrong browser. Chrome and Firefox are the recommended browsers.

Course codes for connectmath registration is:

QRFWT-6HY4H

Finacial aid codes for those wanting a 2-week free trial are:

8D946-AEE49-C3BD2-46BE0

Exams

There are no exams in this class. In lieu of a final exam, there is a final project, to be detailed later in the semester. This consists of a report and presentation to be delivered during the time alloted for the final exam. In order to receive a final project grade, you must be present during the presentation.

Prerequisites

math 35 intermediate algebra

It is natural to forget things and discussion on what is assumed knowledge may take place at the instructors discretion. However, time for such recollection may not be sufficient, thus it is the student's absolutely full responsibility to prepare for themselves the prerequisite material.

Course Description

A study of statistical methods and theri application to hypothesis testing and estimation of population parameters.

Learning Outcomes

Upon successful completion of the course, students will be able to:

- Distinguish among different scales of measurement and their implications.
- Identify the standard methods of obtaining data and advantages and disadvantages of each.
- Interpret data displayed in tables and graphically.
- Calculate measures of central tendency and variation for a given data set.
- Apply probability concepts.
- Calculate the mean and variance of a discrete distribution.
- Calculate and interpret probabilities using normal and t-distributions.
- Distinguish between sample and population distributions and analyze the role played by the Central Limit Theorem.
- Construct and interpret confidence intervals.
- Determine and interpret levels of statistical significance, including p-values.
- Identify the basic concepts of hypothesis testing, including Type I and II errors.
- Formulate hypothesis tests involving samples from one and two populations, including selecting the appropriate technique and interpreting the result.
- Use linear regression and ANOVA for estimation and inference and interpret the associated statistics.
- Interpret the output of a technology-based statistical analysis.
- Use appropriate statistical techniques to analyze and interpret applications based on data from business, education, health science, life science, psychology, and the social sciences.

Attendance

Regular attendance is necessary in order to be successful in this math class. It is a portion of your total grade.

Students who choose not to continue the course are responsible for dropping the course to avoid getting a failing grade. Please do not assume that I have done that for you.

Academic Dishonesty

The College's policy will be enforced:

"For instances of academic dishonesty a faculty member may take any one of the following actions:

The faculty member may reduce the score on tests or assignment(s), reduce the grade in the course, fail the student in the course or recommend to the appropriate administrative officer that the student be suspended from the course. If course suspension is recommended, the administrative officer will review the information regarding the instance of academic dishonesty, notify the student, and will prescribe appropriate due process procedures.

The administrative officer will make note of the offense in the student's educational records. A second instance of academic dishonesty may result in expulsion proceedings. Any tuition and applicable fees will not be refunded as a result of disciplinary action for academic misconduct."

Special Needs

If you have a documented disability requiring accommodation to achieve course objectives, please contact the Disability Resource Center immediately in order to ensure timely services. If you have not already done so, you should call 222-8060 or visit one of their offices on our three campuses: SCI & TECH 150 on the Moreno Valley Campus, CAK 130 on the City Campus or STU SERV building on the Norco Campus.

Academic Support

Help from tutors and instructors are available in the Math Learning Center located in MLK 305 & 308. Math Lab hours are 10am to 6pm on Mondays through Thursdays and from 10am to 1pm on Fridays. Free One to One Tutoring is also available through tutorial services in the second floor of the MLK building by appointment.

Important Dates

- first day of class – 11 feb
- holiday (no class) – 15-18 feb
- last day to add – 22 feb
- holiday (no class) – 1 april
- spring break – 8-12 april
- holiday (no class) – 27 may
- last day of class – 30 may