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## MATH 2314

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# MATH 2314-476 Elementary Statistical Methods 

 Fall 2015Class Time: Online
Classroom:
Instructor: Jairo Santanilla
Office: MATH 243
Office Hours: MW 1:30-3:30; F 11-1
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## Required Materials:

Introductory Statistics, Custom Edition for UNO, by Neil A. Weiss
MyMathLab (an on-line homework program packaged with book) ISBN: 9781256700975.
A scientific calculator (with basic statistical functions to calculate the mean, standard deviation, etc.) is required for the course. However, a graphing calculator is allowed but not required.

## Tentative Dates:

| Week of | Sections |  |
| :---: | :---: | :---: |
| Aug 19 | 1.1, $2.1-2.5$ | (Descriptive Statistics: Organizing Data) |
| Aug 24 | $3.1-3.4$, Test 1 | (Calculating Desc Statistics) |
| Aug 31 | 4.1-4.6 | (Probability Concepts) |
| Sept 7 | 5.1-5.3, Test 2 | (Discrete Random Variables) |
| Sept 14 | 6.1-6.3, 6.5 | (The Normal Distribution) |
| Sept 21 | $7.1-7.3$, Test 3 | (Sampling Distribution of the Sample Mean) |
| Sept 28 | 8.1-8.2 | (Confidence Intervals for One Population Mean) |
| Oct 5 | 8.3-8.4 | (Conf. Intervals continued) |
| Oct 12 | 9.1-9.3 | (Hypothesis Tests for One Population Mean) |
| Oct 19 | $9.4-9.5$, Test 4 | (Hypothesis Tests for One Population Mean) |
| Oct 26 | 10.1-10.3, 10.5 | (Inferences for Two Population Means) |
| Nov 2 | 12.1-12.3, Test 5 | (Inferences for Population Proportions) |
| Nov 9 | 16.1-16.3 | (Analysis of Variance) |
| Nov 16 | 14.1-14.2, Test 6 | (Regression) |
| Nov 23 | Review |  |
| Nov 30 | Review |  |

## Final Exam: Monday, Dec. 7, 2015, 3:00 pm - 5:00 pm, Room To Be Announced

## Important Dates

| Last day to adjust schedule w/out fee | $08 / 18 / 2015$ |
| :--- | :--- |
| Semester Classes Begin | $08 / 19 / 2015$ |
| Last day to adjust schedule w/fee, |  |
| or withdraw with $100 \%$ refund | $08 / 25 / 2015$ |
| Last day to apply for December commencement | $09 / 25 / 2015$ |
| Final day to drop a course or resign | $10 / 14 / 2015$ |
| Mid-semester examinations | $10 / 05-10 / 09 / 2015$ |
| Final examinations | $12 / 07-12 / 11 / 2015$ |
| Commencement | $12 / 18 / 2015$ |

*Note: check Registrar's website for Saturday and A/B sessions, and for items not listed here:
http://www.registrar.uno.edu

## Notes:

- Syllabus is subject to change.
- The final exam is comprehensive.
- Free tutoring is available in the Math Tutor Center, Room 105 of the Mathematics Building.
- For each test, students are allowed to bring in one 3 " $\times 5$ " formula card (both sides). For the final exam, one $8.5 " \mathrm{x} 11$ " formula sheet (both sides) is allowed. No additional information (including examples) is allowed in formula card/sheet.
- If you are a Business major, you should be enrolled in Math 2785 instead of this class. Please see a counselor.

Prerequisites: MATH 1115 or higher or six hours of MATH courses numbered at least 1000 or an ACT Math score of at least 26 or SAT Math Score of at least 590 or Compass College Algebra score of at least 46.

## Course Description

Prerequisite: MATH 1115 or higher or six hours of mathematics courses numbered at least 1000. Introduction to statistical methods. Topics include data analysis, frequency distributions, probability, inference, estimation, hypothesis testing, regression and correlation. Technology is required to explore and solve problems. Credit will not be allowed in both MATH 2314 and MATH 2785.

## Student Learning Outcomes:

After the completion of the course students should be able to present data in tables and graphs, calculate descriptive measures including measures of location and dispersion, calculate probability of discrete and continuous distributions, estimate parameters using point estimates and confidence intervals, and perform hypothesis tests.

## Student Identification Procedure

To ensure academic integrity, all students enrolled in distance learning courses at the University of New Orleans may be required to participate in additional student identification procedures. At the discretion of the faculty member teaching the course, these measures may include on-campus proctored examinations, off-site or online proctored examinations, or other reasonable measures to ensure student identity. Authentication measures for this course are identified below and any fees associated are the responsibility of the student.

- Final exam will be proctored on campus. If a student cannot take the final exam on campus and has valid excuse, the student must use ProctorU ( $\$ 25.00$ for a 2 hour test), a live, online proctoring service that allows students to complete exams from any location using a computer, webcam, and reliable internet connection.
- Participation on Moodle and MyMathLab.


## Homework:

No late homework assignments will be accepted
Assignments are posted on MyMathLab/MyStatLab. Please see instructions under "Main Online tool". If you do not understand a concept, a formula, an assignment question, or cannot get the correct answer to an assignment question, please post your question on the appropriate Forum (see "Grading"). Please post your question using the terminology from the textbook (or "Questions"). Please email me a full copy of your post. I usually delay my participation to allow others to post.

You are not authorized to use an electronic/web media/tools to "get the answer". A scientific calculator is allowed to solve problems only after you have solved at least one of such problems using "pencil and paper".

You are not authorized to use calculator formulas to find means or standard deviations in Chapters 1-3. Starting with Chapter 4, you are allowed to use your calculator to find means and standard deviations without showing the details. For instance, if as an intermediate step in an assignment or exam question, you need to find the standard deviation (SD) the sample $11,15,35,9,33,21$; you can write $\operatorname{SD}(11,15,35,9,33,21)=11.13$. If you do not know how to do this using your calculator, please read the instructions of your calculator.
You are not authorized to use the "View an example" tool for the SOLE purpose of "getting the correct answer". However, you may use the "View an example" tool to check your answer, or help you understand the material. Please keep in mind that getting the correct answer is a result of a learning process. Please ask if you do not understand how "a correct answer" was obtained.
Please review the post "Academic Integrity" about using unauthorized material.
To handle questions with large data, click on the right upper corner of the data window to copy the data. Then you can paste it to Excel.

The results in your assignments are used to update your "Study Plan". Work on your "Study Plan".
Some questions do not provide the "View an Example" tool. However (after reading the Warning) you should be able to find an example similar to the one you are interested in. For instance, Question 6 in Ch 3 Assignment does not show "View an example" but on the upper right corner of this question you see "3.3.23". You can find one example via the "Study Plan" as follows: Please go to "study Plan" Choose Chapter 3, then Section 3 and find Question 3.3.23, where you can "View an Example". If you do see a "x.y.z" number on the question, look for the question on Chapter x Section via the Study Plan. If this does not help, please post here specific questions or email me.

Assignments are usually due on Sundays at $11: 59 \mathrm{pm}$. Some students start working on the assignments a few hours before that time. I strongly discourage this practice. Assume that you are not going to have internet connection or that you are going to need more time than anticipated to complete the assignment.

If there is something (a concept, a formula, or an assignment question), you do not understand, it is your responsibility to email me before proceeding. Accumulating unanswered question is a formula for disaster.

## Suggestions to prepare for a test.

Before you start reviewing assignments you should review the concepts using the slides for a summary and the text-book for details. Please note that Assignments and Study Plan (in MyMathLab) are very important in your preparation, but questions on tests/exams are only limited by the syllabus (See "Course topics and tentative dates").
Please follow the steps below (in this order)

1. Read the concepts critically (ask why) each sections including examples. Use the slides as a guide.
2. Check your understanding of each concept by determining if you can give your own example or if you can explain the concept in your OWN words (not those from an instructor or the book).
3. Review the videos to enhance your understanding.
4. After completing the above steps you are ready to start reviewing the assignment for those sections you just read and understood. Unfortunately many students omit the above steps thinking that they will save time. My experience is that, in general, if you follow the above steps you will not only save time, but you will save a great deal of frustration.
5. The results in your assignments are used to update your "Study Plan". Make sure you work on your "Study Plan" after each assignment.
6. If you have followed the above steps for each assignment, you will ready to review the assignments before the test.
7. Go to Quizzes and Tests and take practice tests.
8. Observe that no mention of calculators is giving above. This is because the calculator should play a minor role in the learning process. A calculator should be used only to do tedious, long calculations, or to check answers to questions you have previously worked on using pencil and paper.
Programs you may have created (related to the material) on your calculator must be cleared before starting time. No
Internet tools are allowed during an exam"

## Tests:

Over the course of the semester there will be 6 tests.

## Course Grade:

Tests 1-6: 54\% (9\% each).
Final Exam: 35\%.
Assignments MyStatLab: 10\%,
Following instructions: $1 \%$.
Generally, you are required to show some work in exams as part of your grade. Please see "Online exams rules..."
Makeup tests/exams are rarely given. A makeup test will only be given for extreme emergencies with a written notice and must be taken promptly.
If you have a commitment requiring early completion of the course, you must make arrangements now as I
may not be able to accommodate your request.
All "Questions" on a test have the same credit (1 point), and some give partial credit. You should work first on those questions that you think are "easy" or "short".

To calculate your current grade in the course, please use the individual scores on MyStatLab and the percentages given above. Do not use the overall \% on MyStatLab. Do NOT use the "Max Grade" under GRADE (on Moodle) to calculate your grade.

Progress, as shown by the grades, may be taken into account when assigning a final grade.
There is no predefined grading scale, but the standard scale $(100 \%-90 \%=\mathrm{A}, 89 \%-80 \%=\mathrm{B}, 79 \%-70 \%=\mathrm{C}, 69 \%-60 \%=\mathrm{D}, 59 \%-0 \%=\mathrm{F})$, is the least favorable scale. Final grades are assigned based on "GAPS" between total scores. Examples of "GAPS" will be provided with test scores.

When visiting MyStatLab, check their announcements for times when their site is unavailable and please let me know if I have not made that announcement.

Assignments are usually posted one week before the due date.
Attempts per Assignment question is limited to 10.
If a student has excellent scores on assignments and poor scores on the test covering the same assignments, the student may be required to demonstrate knowledge of relevant concepts and formulas on that test. Do not hire a tutor to do your assignments. See "Academic Integrity" for a definition of cheating.

## Student Conduct:

The University of New Orleans (UNO) is a multicultural community composed of diverse students, faculty and staff. UNO will not tolerate discrimination or harassment of any person or group of persons based on race, color, religion, sex, disability, national origin, age, sexual orientation, marital or veteran status or any other status protected by law. Each member of the university is held accountable to this standard, which is strongly reflected in this code.

## Academic Dishonesty:

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at http://www.studentaffairs.uno.edu.

## Accommodations for students with disabilities:

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.

## Expectations of students:

Students are expected to review the notes prior to each class and do practice problems and graded homework on a regular basis. This is necessary in order to perform well on the tests. Students are also expected to arrive on time, remain for full class session, conduct themselves in a respectful manner to other students and the instructor and not use cell phones during class.

Incomplete or late coursework: Late assignments will not be accepted.
Student Support Services: Your instructor is your first resource. Office hours are available for you if you should any questions. Free tutoring is also available in the Math Tutor Center, Room 105 of the Math Building. Based upon the availability of tutors, the math department may be able to provide free one-on-one tutoring.

Additional information is posted on Moodle.

