



Spring 2022

Math 1350: Intro to Statistics

MW, 9:00am-10:15am

Workforce Training Center, Rm. 1205

Instructor: Andy Taylor

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1 Office and Contact Information:

Office: A-123B
Office Phone: 505-925-8607
Email: ataylor19@unm.edu

2 Office Hours (Instructor-Led Help Sessions):

These will be held online via Zoom, with the link to be posted in Blackboard Learn under 'Office Hours'. Office hours will be accessible during these times:

12:00pm-2:30pm, Mondays and Wednesdays, or by appointment

Please plan to regularly check into my office hours (tutoring hours). The purpose of this is to increase your accountability for the course, and for me to give you more immediate feedback on questions you may have, as well as your current status in the course. Also, the secret phrase is '*I can do this*'.

3 Overview

Welcome to Math 1350! Here is the UNM course description:

This course discusses the fundamentals of descriptive and inferential statistics. Students will gain introductions to topics such as descriptive statistics, probability and basic probability models used in statistics, sampling and statistical inference, and techniques for the visual presentation of numerical data. These concepts will be illustrated by examples from a variety of fields. *MATH 1130 is NOT a prerequisite for MATH 1350.

Prerequisites/placement: Successful completion of MATH 1170 or (MATH 1215X + 1215Y) or MATH 1215 or MATH 1220 or MATH 1230 or MATH 1240 or MATH 1250 or MATH 1430 or MATH 1440 or MATH 1512 or MATH 1522 or MATH 2530, or minimum ACCUPLACER score of ≥ 262 (QRAS) or ≥ 233 (AF), or ACT score of ≥ 20 , or SAT score of ≥ 520 . Meets University of New Mexico Core Curriculum Area 2: Mathematics and Statistics.

Please note: This syllabus is subject to change, if needed.

4 Student Learning Outcomes (SLOs)

At the completion of this course students will be able to:

1. Explain the general concepts of statistics.(Chapter 1)
2. Present and describe data. (Chapter 1 and Chapter 2)
3. Summarize data using measures of central tendency and variation. (Chapter 2)
4. Present the concepts of probability. (Chapter 3)
5. Calculate probabilities using the standard normal distribution and relate them to areas under the curve. (Chapter 3)
6. Give examples of independent and dependent variables. (Chapter 4)
7. Calculate and interpret the linear correlation coefficient. (Chapter 5)
8. Analyze data using regression and correlation. (Chapter 4 and Chapter 5)
9. Distinguish between populations and samples, and parameters and statistics. (Chapter 15)
10. Interpret basic probabilities. (Chapter 12)
11. Describe the relationship between the sampling distribution and the population distribution. (Chapter 15)
12. Compute point and interval estimates. (Chapter 16)
13. Perform hypothesis tests.(Chapter 17, 20, 21)

5 Technical Requirements

5.1 Computer

- A high-speed Internet connection is highly recommended.
- Supported browsers include: *Detailed Supported Browsers and Operating Systems*
- Any computer capable of running a recently updated web browser should be sufficient to access your online course. However, bear in mind that processor speed, amount of RAM and Internet connection speed can greatly affect performance. Be aware, some programs that use mathematics will not work well on mobile devices such as smart phones or tablets.
- Microsoft Office products are available free for all UNM students:
UNM IT Software Distribution and Downloads page
- Please update your contact information in Loboweb: *MyUNM*. When you log into MyUNM, Enter LoboWeb. Click on the Personal Information link to make sure your contact information is up to date.
- Laptops may be available for checkout for the semester from the *UNM-Valencia Library* . Contact *UNM-Valencia Student Services* for more information.

5.2 Printer/Scanner

You will need access to a printer/scanner in order to print out written assessments such as projects or exams, and scan them in order to submit via UNM Learn. You may download an app such as 'Adobe Scan' on your device in order to scan your work and convert to a PDF for submission.

5.3 Web Conferencing

Web conferencing will be used in this course, particularly during office hours and study sessions. For the online sessions, you will need:

- A USB headset with microphone is recommended. Headsets are widely available at stores that sell electronics, at the UNM Bookstore or online.
- A high-speed internet connection is highly recommended for these sessions. A wireless Internet connection may be used if successfully tested for audio quality prior to web conferencing.
- You should also dress as you would when attending an in-person class, even if you do not turn on your video camera.
- To create a UNM supported Zoom account, visit the [*UNM Zoom log in page*](#).

6 Netiquette

NOTE: For links to online PDF formatted documents, you may need to give permission for the document to open. Look for a pop-up window asking for your permission.

One of the overriding principles in online conversations is to craft your responses effectively. It is sometimes difficult to remember that there are real people reading posted messages. This is especially true of online communication where others do not have the opportunity to see body language or hear tone of voice; therefore, misunderstandings are more likely.

Please, follow these guidelines in all of your online responses and discussion postings:

- Honor everyone's right to an opinion.
- Respect the right of each person to disagree with others.
- Respond honestly but thoughtfully and respectfully; use language which others will not consider foul or abusive. You may also use emoticons to convey a lighter tone.
- Respect your own privacy and the privacy of others by not revealing information which you deem private and which you feel might embarrass you or others.
- Be prepared to clarify statements which might be misunderstood or misinterpreted by others.

6.1 A Special Note about Anger

- Do not send messages that you have written when you are angry, even anonymous ones. In the online world, angry messages are known as “flaming” and are considered bad behavior. Venting and flaming are two different things. It is possible to vent without becoming “ugly.” Stick to the facts of what is causing you frustration.
- Do not send messages that are written all in upper case; this is the visual equivalent of SHOUTING. It is considered aggressive and is considered bad behavior. If you ever feel like shouting a message, take a deep breath and wait until you have calmed down before responding. Then, respond in a calm and factual manner.
- For more information on netiquette, please refer to [UNM Netiquette document](#).

7 Notes to students about participation in course using UNM Learn:

7.1 Tracking Course Activity

UNM Learn automatically records all students’ activities including: your first and last access to the course, the pages you have accessed, the number of discussion messages you have read and sent, web conferencing, discussion text, and posted discussion topics. This data can be accessed by the instructor to evaluate class participation and to identify students having difficulty.

7.2 Submitting Assignments

When you submit an assignment (project/exam) via UNM Learn, please do so by submitting a **single PDF file** as an attachment in the appropriate dropbox. If you don’t have access to a traditional scanner, you may find the Adobe Scan app a helpful tool on your smartphone to create and compile a PDF document using your phone’s camera. When submitting, *do not submit as a link in the comment box*. You should be able to view your document in the submission preview window. You will receive an email receipt of your submission from do-not-reply@learn.unm.edu. Save this email as confirmation of your submission.

8 Coursework and Participation

8.1 Communication with Instructor

I routinely check for student emails, Monday through Friday, at various times throughout the morning, afternoon and evening, as well as occasionally on weekends. Expect a response no later than 24-48 hours. If I haven’t responded within 48 hours, please resend your email, as it may have (accidentally) been overlooked!

8.2 Late or Missing Work

- Late homework may be accepted up to 4 days after the due date, but please note that it is subject to a penalty of up to 10% per day. In class quizzes will not be able to be made up after the class has taken them. If for some reason you need to make up a quiz, you must arrange this with me in advance and take it before-hand. The midterm and final exams must be submitted on time.
- All written work (quizzes, exams) will be submitted in person.
- If you are ill and are not able to complete work on time, please let me know as soon as possible. I will work with you to shift deadlines but be aware that all assignments must be complete by the end of the semester. This may mean that when you are feeling better you will need to spend a lot of extra time to catch up.

8.3 Expectations for Students

Please note that in order to be successful in this course, and in mathematics courses in general, you will need to spend a fair amount of time each week working on this course.

Here are my recommendations for the amount of time you should be spending in this course *each week*:

- Learning Curves/Homework: 4-6 hours/week
- Office Hours: 30 min to 2 hours/week
- General Studying: 1-3 hours/week outside of homework and office hours

A more detailed schedule for assignments, quizzes, exams and their due dates can be found on Blackboard, and may be subject to change.

9 Required Text and Program

The required text (or eText) for this course is:

- The Basic Practice of Statistics, 9th edition by Moore, Notz and Fligner.
- **Macmillan Achieve** access will be **required** in order to complete homework assignments and quizzes. An electronic textbook will be included with access.
- You can obtain Achieve access via Inclusive Access through the RedShelf tool in Blackboard Learn. Click on the 'Course Materials' tab, then 'RedShelf Materials'. Do not use a credit/debit card to purchase access to Achieve - your Bursar's account will be billed for this access after February 4, 2022.
- Our Course ID is "ne7oaf". You should make sure you are registered for "Math 1350 - 501 (Taylor)".

10 Attendance Policy

Attendance in the course is **required**. If a student misses two or more classes in the first two weeks of the semester, three consecutive class periods or five total, I reserve the right (but not the obligation) to drop the student from the class. If you stop attending class for any reason, it is your responsibility to make sure you drop the class, or risk getting a failing grade. If you have extenuating circumstances that prevent you from being in class regularly, please contact me so we can discuss this within the first two weeks of the semester.

11 Course Structure

This course will consist of the following graded components:

- Homework/Learning Curves (20%)
 - 10/11 Achieve Chapter Homework/Learning Curve Assignments
 - Your lowest two homework/LC scores will be dropped.
 - On each question for a given homework assignment, you will have unlimited attempts, without penalty. Solutions will be available for viewing upon completing the problem.
- Quizzes (20%)
 - There will be 4-6 in-class quizzes.
 - Your lowest quiz score will be dropped.
- Projects (20%)
 - (10% each) These will involve gathering your own data set and using some of the concepts discussed in the class to critically examine this data set.
- Midterm Exam (20%)
 - The midterm exam will be given on Wednesday, March 10th (the week before Spring Break).
- Final Exam (20%)
 - The comprehensive final exam will be given in class on Wednesday, May 11, 9-11am.

For written assessment submissions such as quizzes/exams, you should typically expect your grades within one week. Assignments through Sapling should offer immediate grading upon submission.

11.1 Ordering of Assignments

I would recommend completing assignments or activities in the following order. Following each lecture:

1. Read through your notes.
2. Complete the chapter Learning Curves for practice with the material.
3. Complete the given chapter homework.

4. Revisit this material periodically to study for the upcoming quizzes and exams.
5. If you need additional assistance, you can use the StatTutor resources, look at the additional learning resources in Achieve, come talk with me in office hours, send me an email with a question, or seek tutoring through the campus tutoring services mentioned in the 'UNM Resources' section.

12 Grading Policy

Your final grades will be calculated as follows. Your current average can be found in the 'My Grades' section in Blackboard.

| Cumulative Average | Final Grade |
|--------------------|-------------|
| [96.5%, 100%] | A+ |
| [93%, 96.5%) | A |
| [89.5%, 93%) | A- |
| [86.5%, 89.5%) | B+ |
| [83%, 86.5%) | B |
| [79.5%, 83%) | B- |
| [76.5%, 79.5%) | C+ |
| [69.5%, 76.5%) | C |
| [66.5%, 69.5%) | D+ |
| [59.5%, 66.5%) | D |
| [0%, 59.5%) | F |

13 Semester Deadlines

Spring 2021: 16-week classes (deadlines will be different for first and second 8-week classes)

- **Tuesday, January 18th:** First day of class, classes available in Blackboard Learn
- **Friday, January 28th, by 5:00 PM:** Last day to add a class or to change credit hours or grade mode in LoboWEB.
- **Friday, February 4th:** Last day to drop without "W" grade and with 100% refund on LoboWEB
- **March 13th through March 20th:** SPRING BREAK
- **Friday, April 15th:** Last day to drop without Dean's permission on LoboWEB. Will receive "W" grade and will be responsible for tuition for the course.
- **Friday, May 6th:** Last day to drop with Dean's permission. Will receive "W" grade and will be responsible for tuition for the course.
- **May 9th- May 14th:** Finals week.

14 UNM Policies

14.1 EQUAL OPPORTUNITY AND NON-DISCRIMINATION:

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered “responsible employees” by the Department of Education (see page 15 of this link). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity (oeo.unm.edu). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>.

14.2 Copyright

All materials in this course fall under copyright laws and should not be downloaded, distributed, or used by students for any purpose outside this course. The [*UNM Copyright Guide*](#) has additional helpful information on this topic.

14.3 Accessibility and Accommodations

The American with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodations of their disabilities. If you have a disability requiring accommodation, please contact:

- [*UNM-Valencia Student Services*](#) if you are a Valencia campus student. The phone number is 505-925-8560.
- The [*UNM Accessibility Resource Center*](#) in 2021 Mesa Vista Hall if you are a main campus student. The phone number is 505-277-3506.

14.4 Academic Integrity

You should be familiar with [*UNM’s Policy on Academic Dishonesty*](#) and the [*Student Code of Conduct*](#) which outline academic misconduct defined as plagiarism, cheating, fabrication, or facilitating any such act.

15 UNM Resources

- [*UNM Valencia Campus Tutoring Services*](#)
- [*UNM Main Campus CAPS Tutoring Services*](#)
- [*UNM-Valencia Library*](#)
- [*UNM Libraries*](#)
- [*“Life” Resources available to UNM-Valencia Students*](#)
- [*Student Health Counseling \(SHAC\) Online Services*](#)

16 General Education Core Curriculum Essential Skills

In addition to the course learning objectives listed above, because this class meets a UNM General Education Core Curriculum requirement, activities in each unit (i.e.: discussions, assignments, and assessments) are developed so that you can demonstrate development of these essential skills:

16.1 Critical Thinking

- **Problem Setting:** Delineate a problem or question to be considered critically.
- **Evidence Acquisition:** Identify and gather the information/data necessary to coherently address the problem or question.
- **Evidence Evaluation:** Evaluate the information given by sources for credibility (e.g. bias, reliability, validity) and probably truth.
- **Reasoning/Conclusion:** Develop conclusions and outcomes that reflect an informed, well-reasoned argument.

16.2 Communication

- **Genre and Disciplinary Conventions:** Use formal and informal rules/registers appropriate for the particular audience, community, purpose, context, and kind of text and/or media at hand; use them to guide formatting, organization, and stylistic choices are present.
- **Strategies for Understanding and Evaluating Messages:** Apply strategies such as reading/analyzing for main points or themes; recognizing the variety of rhetorical situations and accompanying strategies that may contextualize messages; locating supportive documentation for arguments to understand and evaluate messages in terms of the rhetorical situation.
- **Evaluation and Production of Arguments:** Recognize and evaluate the authority of sources in their own arguments and those of others; distinguish among supported claims, unsupported claims, facts, inferences, and opinions.

16.3 Quantitative Reasoning

- **Communication and/or Representation of Quantitative Information:** Express quantitative information symbolically, graphically, and in written or oral language
- **Analysis of Quantitative Arguments:** Interpret, analyze and critique information or a line of reasoning presented by others
- **Application of Quantitative Models:** Apply appropriate quantitative models to real-world or other contextual problems