



Math 1350: Intro to Statistics

T/R: 12:00pm-1:15pm, VACTC-101

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):

Office hours will be accessible during these times:

Mon/Wed: Valencia Workforce Training Center Lobby/Library, 1:15pm-2:30pm
Tues/Thurs: Learning Center/Math Center, Valencia Campus, 1:30pm-2:45pm
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. Select a simple random sample using a random number table, and understand the differences between various sampling techniques (SRS, stratified, convenience, etc.) (Chapter 8)
10. Distinguish between populations and samples, and parameters and statistics. (Chapter 15)
11. Interpret basic probabilities. (Chapter 12)
12. Describe the relationship between the sampling distribution and the population distribution. (Chapter 15)
13. Compute point and interval estimates. (Chapter 16)
14. Perform hypothesis tests.(Chapter 17,20)
15. Compare two means using t procedures (Chapter 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 Web Conferencing

Web conferencing may be used in this course if needed for office hour appointments. If you are utilizing web conferencing:

- 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 (mistakes happen – please be properly clothed).
- 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

Canvas 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

You will submit all written assignments (quiz/project/exam) in class by the due date. All assignments and work therein should be neat, legible, appropriately organized, and include detailed and well-justified work. Any work that is illegible, or that lacks proper substance/explanation/justification will not receive credit. Please make sure to show ALL your work so that partial credit can be awarded for simple mistakes. Remember, you can use words to explain your thinking alongside your mathematics.

Projects should be treated as a report, and submitted in the format of a report. These should NOT be handwritten, and should include computer-generated graphs/tables/visual representations of your data. Please report the source of your data, as well as any programs/tools you used to complete your analysis.

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

- Every student has the opportunity to submit up to 4 homework/learning curve assignments up to one week late with no penalty. The quizzes, midterm and final exams **must be submitted on time to be accepted**. Late project submissions are subject to a penalty of 10% per day, up to 1 week (the minimum late penalty for submissions within one day from the due date is 10%). Projects submitted beyond 1 week late will not be accepted.
- All written work needs to be submitted online. If you have a difficulty using a tool to complete work, use the "Create a Tech Support Ticket" link in the Course Menu immediately and notify your instructor, as well.

- 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. Also, if you are behind, the posted lectures or class session recordings may not be as helpful to your learning until you are ready to learn that material.

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 *minimum* 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 Canvas, 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.
- **Achieve (Macmillan)** access will be required in order to complete homework assignments and quizzes. If you don't mind having an electronic book, I would recommend getting the Achieve package that includes the e-text with the Achieve course.
- A link to our course in Achieve is available, below. You can receive a semester-long access code via RedShelf in the Canvas component of our course. Using the RedShelf access code in our Canvas course will give you a lower price, and enable the course to be charged to your Bursar's account (DO NOT PURCHASE THROUGH THE PUBLISHER). Here is the link to our Achieve course!

9.1 Technical Support for Achieve Account

- **Need assistance?** The Achieve technical support team can be reached via their website or by phone at 1(800)936-6899.

9.2 Temporary Access

There is a 14 day temporary access to the online Achieve course, if you need it. Please do not do this directly through the publisher – use the RedShelf link in the Canvas course. If this is the case, you must continue using the same **UNM email address** that you used to acquire temporary access, otherwise you will lose that work progress on Achieve.

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 or three consecutive class periods without communication, 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 (20%)
 - 11 Achieve Chapter Homework Assignments
 - Your lowest homework score will be dropped.
 - On each question for a given homework assignment, you will have unlimited attempts, but will lose 5% of that question's points per incorrect attempt (so, be careful when completing homework – if you aren't yet prepared to complete the assignment, complete the Learning Curves first to build confidence with the material *before* attempting the homework).
 - Late homework can only be accepted with the "4 free late submissions" policy.
- Learning Curves (10%)
 - 11 Achieve Chapter Learning Curves
 - No Learning Curves will be dropped.
 - Learning Curves are an introductory assignment to a given chapter. They help to introduce terminology and typically take students roughly 20-40 minutes to complete depending on familiarity with the material. They are graded based on completion.
 - Late Learning Curves can only be accepted with the "4 free late submissions" policy.
- Quizzes (15%)
 - 4 in-class, written quizzes. Each will cover 2-3 chapters worth of material.
 - Your lowest quiz score will be dropped. Quizzes can **ONLY** be made up before-hand during office hours, unless there is an emergency circumstance. There is a built-in dropped quiz just in case you need to miss one for a non-emergency circumstance.
- Projects (20%)
 - You will 2 projects that will involve creating or gathering your own data set and using some of the concepts discussed in the class to critically examine and draw conclusions from this data set.
- Midterm Exam (15%)
 - The midterm exam will be given on or around October 11, 2022.

- Final Exam (20%)
 - The comprehensive final exam will be given in class on Tuesday, December 13, 2022 from 12pm-2pm.

For written assessment submissions such as exams/projects, you should typically expect your grades within one week. Assignments through Achieve 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. Complete the given chapter quiz.
5. If you need additional assistance, you can use the StatTutor resources, look at the additional Achieve learning resources, come talk with me in office hours 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)

- **Monday, August 22nd:** First day of class, classes available in Canvas.
- **Friday, September 3rd, by 5:00 PM:** Last day to add a class or to change credit hours or grade mode in LoboWEB.
- **Monday, September 5th** Labor Day: No class.
- **Friday, September 9th, 5:00pm:** Last day to drop without “W” grade and with 100% refund on LoboWEB
- **October 13th and 14th:** FALL BREAK: No class.
- **Friday, November 11th:** Last day to drop without Dean’s permission on LoboWEB. Will receive “W” grade and will be responsible for tuition for the course.
- **November 24th and 25th** Thanksgiving break: No class.
- **Friday, December 9th:** Last day to drop with Dean’s permission. Will receive “W” grade and will be responsible for tuition for the course.
- **December 12th - 16th:** Finals week.

14 UNM Policies

14.1 COVID-19 Health and Awareness

UNM is a mask friendly, but not a mask required, community. To be registered or employed at UNM, Students, faculty, and staff must all meet UNM’s Administrative Mandate on Required COVID-19 vaccination. If you are experiencing COVID-19 symptoms, please do not come to class. If you have a positive COVID-19 test, please stay home for five days and isolate yourself from others, per the Centers for Disease Control (CDC) guidelines. If you do need to stay home, please communicate with me via email, or Canvas course messaging; I can work with you to provide alternatives for course participation and completion. UNM faculty and staff know that these are challenging times. Please let us know that you need support so that we can connect you to the right resources and please be aware that UNM will publish information on websites and email about any changes to our public health status and community response.

Support:

Student Health and Counseling (SHAC) at (505) 277-3136. If you are having active respiratory symptoms (e.g., fever, cough, sore throat, etc.) AND need testing for COVID-19; OR If you recently tested positive and may need oral treatment, call SHAC.

LoboRESPECT Advocacy Center (505) 277-2911 can offer help with contacting faculty and managing challenges that impact your UNM experience.

14.2 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>.

14.3 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.

14.4 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.

14.5 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.

14.6 Land Acknowledgement

Founded in 1889, the University of New Mexico sits on the traditional homelands of the Pueblo of Sandia. The original peoples of New Mexico Pueblo, Navajo, and Apache since time immemorial, have deep connections to the land and have made significant contributions to the broader community statewide. We honor the land itself and those who remain stewards of this land throughout the generations and also acknowledge our committed relationship to Indigenous peoples. We gratefully recognize our history. Resource: Division for Equity and Inclusion.

14.7 Citizenship/Immigration Status

Citizenship and/or Immigration Status: All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community. The

Administration's welcome is found on our website: <http://undocumented.unm.edu/>.

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