VALENCIA

Syllabus-Fall 2019

Title of Course-Section:	**MATH 1350-503 Statistics**
Name of Department:	Mathematic, Engineering, & Computer Science
Instructor:	Andisheh Dadashi, Assistant Prof. of Mathematics
E-Mail:	andisheh@unm.edu
Class Meeting Days/Times:	Lecture: TR 4:30pm - 5:45pm
Credit Hours and Contact Hours:	3 credit hours
Class Location:	VA**AS**-141
Office Location:	VA**AS**-105
Office Hours:	M: 10:20 am to 11:20 am (at the LRC) W: 10:20 am to 11:20 am (my office) MW: 11:30 am to 12:30 pm (my office) TR: 3:15 pm to 4:15 pm (my office) or by appointment

What is Introduction to Statistics

This course is an introductory course in statistics intended for students in a wide variety of areas of study. Topics discussed include displaying and describing data, the normal curve, regression, probability, statistical inference, confidence intervals, and hypothesis tests with applications in the real world. Students also have the opportunity to analyze data sets using technology in their weekly laboratory discussions.

Pre-requisites/Co-requisites

Techniques for the visual presentation of numerical data, descriptive statistics, introduction to probability and basic probability models used in statistics, introduction to sampling and statistical inference illustrated by examples from a variety of fields.

Learning Objectives and Outcomes

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.

1. Students will explain the general concepts of statistics. (Chapter 1)
2. Students will presentation and description of data. (Chapter 1 and Chapter 2)
3. Students will summarize data using measures of central tendency and variation. (Chapter 2)
4. Students will present the concepts of probability. (Chapter 3)
5. Students will calculate probabilities using the standard normal distribution and relate them to areas under the curve. (Chapter 3)
6. Students will give examples of independent and dependent variables. (Chapter 4)
7. Students will calculate and interpret the linear correlation coefficient. (Chapter5)
8. Students will analyze data using regression and correlation. (Chapter 4 and Chapter5)

9. Students will distinguish between populations and samples, and parameters and statistics. (Chapter 15)
10. Students will interpret basic probabilities. (Chapter 12)
11. Students will describe the relationship between the sampling distribution and the population distribution. (Chapter 15)
12. Students will compute point and interval estimates. (Chapter 16)
13. Students will perform hypothesis tests. (Chapter 17)

** Email **

In subject of your email to me, please mention your course name, number, and section number. For example, the subject of your email to me should be:

MATH 1350-503

Besides, you should only contact me with your **UNM e-mail**.

I **CANNOT** respond to your email if you don't follow this instruction.

Check your UNM email **frequently**. You are responsible for missing any announcement I sent via email.

QR codes/Attendance/Absence

- Please, download any free QR scanner on your smart phone. Then scan the QR code that I am providing for you. In order for me to receive your attendance follow the instruction, please!
- **Attendance:** You are expected to be on time to each class and stay the entire class, have the necessary course materials on hand, and participate in the lecture and/or group activities to receive full credit for attendance each day. Please, put your initial in the sign sheet provided to you!
- **Absences:** I do not require you to give me any sort of documentation for missing up to 3 class days. Even if you miss class, you are still expected to complete the assignments posted in Sapling. You will only be excused for any in-class activity we did.

Here are the reasons I may **drop** you from the class:

- If you miss the first week of the semester.
- If you have 3 or more absences during the first three weeks of the semester.
- If you are not registered in Sapling and completing assignments by the end of the first week you are in the class.
- If you added late, your counted absences start the day you registered for the class.

Sign up to Slack

Slack is where work flows. It's where the people you need, the information you share, and the tools you use come together to get things done. Slack can replace email, text **messaging**, and instant **messaging** for your team, and keep all those **communication** styles together in one app. With both desktop and mobile versions, Slack can help your team collaborate and coordinate their work no matter where they are — in the field office, at home, or out knocking doors.

You can join our MATH1350 Slack group by following the link below to sign up using your **UNM-Email**:

https://join.slack.com/t/math1350stati-f056419/signup

The display name must be your first name – Last name. Also, please write down and send me your UNM-ID in a private message (Click on my name and you can send me a private message).

Course Outline

The Basic Practice of Statistics (eight edition: ISBN10: 1-319-21323-5), Sapling Package (e-book). Sapling is the online learning system which accompanies the textbook and includes an e-book. Sapling **is required for Stat145**. **If you don't use** Sapling**, your** Sapling **Assignments scores will be 0s, which is 55% of your course overall grade.**

Access Code: Sapling Access codes are available from the UNM bookstore or the publisher. If you decide to buy the package using the other path please use the ISBN10 mentioned above (1-319-21323-5). Hard text copies are not required since Sapling includes an e-book. My online course is open for student registration. Follow these steps to get started. **STUDENT INSTRUCTIONS**

- Go to www.saplinglearning.com/login to log in or create an account. **(Use your UNM-Email)**
- Under Enroll in a new course, you should see Courses at University of New Mexico, Valencia. Click to expand this list and see courses arranged by subject. Click on 'Introduction to Statistics' to see the terms that courses are available.
- Once the menus are fully expanded, you'll see a link to our specific course: Math1350 (Section 501, 503) – Fall 19 – DADASHI
- You will be prompted to enter the key code when you choose your specific course your specific course in Sapling Learning at the time of enrollment
- The key code for section 503 is ***dadashi503***
- To access your e-book, click on the image of the cover on the right sidebar of your course site. Create an account or log in with an existing Macmillan Learning eBook account.
- **Need Help?** The Sapling Learning technical support team can be reached by phone or by webform via the Student Support Community. Here are their hours and contact information: https://macmillan.force.com/macmillanlearning/s/contactsupport. Phone: (800) 936-6899

The following link includes more detailed instructions on how to register for your course: https://macmillan.force.com/macmillanlearning/s/article/Sapling-Learning-Registering-for-courses.

Temporary Access:

If you are not able to purchase Sapling access code right away, you can have temporary access to our online Sapling course using the temporary access while you're following the instruction above. The temporary access starts on the first day of class and expires after 15 days.

When you purchase the access code you can continue your access to the Sapling. In this case, you must continue using the same email address **(UNM-Email)** that you were using to get the temporary access otherwise you will lose your work on Sapling.

Introduction to Assessments for students on Sapling Learning

Please watch this video in order to know how to use Sapling learning: https://youtu.be/-fiD1mJefKI

Teaching Materials

Where can you find the materials for this class?

a. You can find my **lectures note/ Pdf** in Sapling News Forum section. On the homepage, you can find the News Forum section on the left side of the page. Also, the News Forum can be accessible in the Announcement section on the homepage.

b. There are some **PowerPoint** and image and clicker slides on the home page of Sapling provided by Macmillan Learning you may find useful. You can find them all in the resource section on the homepage

c. UNM Mathematics and Statistics department has provided the **past exams** for you which is similar to the exams we have in this course. https://www.math.unm.edu/OLD/courses/stat145/index.php

d. There are **StatTutors/videos** provided by MacMillan publisher for each chapter. StatTutors will help you to enhance your learning. StatTutors are accessible on Sapling homepage under each chapter's resource section.

e. **Learning Curves** which count as a part of your overall grade are the best resource to practice the chapter content. It shows you the weakness or strength in a certain section of a chapter. It will give you more questions from the section that you need to work on more. Learning curves are accessible on Sapling's homepage, under each chapter's section.

UNM Learn (Blackboard)

Course information including this syllabus, course agreement, some necessary links and etc. will be available via Blackboard. You can find **Statistical table** on UNM-Learn, too. Also, you can find it here; https://macmillan.vitalsource.com/#/books/9781319058036/cfi/6/720!/4/12@0:0

CrunchIt with Sapling!

https://www.youtube.com/watch?v=npC8UP-E2uI

Lectures Video

Lectures videos of previous semester will be available on this YouTube channel:
https://www.youtube.com/channel/UCxEWQetw3yXHsROZylsUuFQ/playlists?view_as=subscriber

Evaluation/Grading Methods

Your final grade in this class is based on the following components:

Homework (22%) and online Quizzes (30%) and Learning Curves (3%)	55 %
First in-class exam	15 %
Second in-class exam	15 %
Final in-class Exam	15 %

Note: Passing grade is 70% or better.

Overall Grades: pluses and minuses may or may not be added to letter grades at the instructor's discretion. Grades of A+ are extremely rare and will only be awarded for exceptional work.

Grade	From	To	Grade	From	To	Grade	From	To
A+	98	100	B+	88	89.99	C+	78	79.99
A	93	97.99	B	83	87.99	C	70	77.99
A-	90	92.99	B-	80	82.99	D	60	69.99
						F	0	59.99

Online Assignments

For each chapter assignments (Homework and online Quizzes and Learning Curves) will be assigned in Sapling and will be graded automatically. Points and the number of assignments will vary. For homework, you have infinite trials and it is not timed. For quizzes, you have three trials, for each wrong answer you lose 5% of the question's point, but the quiz is not timed.
For assignments, you will have an initial due date and a final due date. When you exceed the initial due date you will receive a 20% penalty for each day of delay before the final due date. You should be done with your assignments before the final due dates otherwise you will receive a zero.
After the final due dates, no assignment is accepted! This method keeps us up to date with our assignments and not letting ourselves get behind. Please, don't ask for an extension because it won't be fair to other students who are always on time.

Assignments order

After each lecture read the notes, finish the Learning curves, take the homework, at the end take the Quiz. Stat tutors are not part of your grade but if you need more assistance you should go through the Stat tutors.

In-Class Exams

Announcement of exams will be given during semester also you can see the dates of In-class exams in the last page of this Pdf. All exams are closed book closed notes. For the in-class exams to get full credit on graded work you must address all mathematical components presented by the problem, showing all steps and calculations.
The use of proper notation, well-structured procedures, and legibility will be considered when assigning points. There are almost 5 problem-solving questions with multiple parts, worth 70% of your exam's grade and almost 10 multiple choice questions each worth 3 pts.

Exam Cards: A 3-inch by 5-inch note card is permitted on Midterm exam for your notes. A 5-inch by 8-inch card is permitted on the final exam. Your notes must be hand-written; use of both sides of the note card is permitted.

Missed Exams: If you know you are going to miss an exam you must make prior arrangements with me in order to take a make-up exam in the testing center. If you miss an exam due to an emergency you must provide documentation of the emergency (doctor's note, police report, etc.) to take a make-up exam.

Calculator

A scientific calculator may be used on all homework and exams. A calculator with statistical functions (mean, standard deviation, etc.) is recommended but not required. Use of cell phone calculators or calculators on other WIFI-capable devices is not allowed on exams.

Support!

If you are struggling in this course, do not be afraid to ask for help!

- Office Hours: See my office hours listed at the beginning of this syllabus. Feel free to come by or log in for online office hours, or make an appointment to get help.
- Form study groups: You may work together with other members of our class on **Slack.**
- Free Tutoring: The Math Center at Valencia campus has free tutoring and open labs. Call 505-925-8907 for more information. CAPS on main campus also provides tutoring for which I can get documentation.
- Student Services: There are various services provided in our Student Services Department. See below about equal access. Also, we have a testing center, advising, and career placement available: Valencia Student Services

Student Behavior

According to the Code of Conduct as stated in the Policies and Regulations for UNM, student activities that interfere with the rights of others to pursue their education or to conduct their University duties and responsibilities will lead to disciplinary action.
This includes any activities that are disruptive to the class and any acts of academic dishonesty. Students are expected to behave in a courteous and respectful manner toward the instructor and their fellow students. Students may be dropped from a class for inappropriate behavior. For more information:
https://pathfinder.unm.edu/code-of-conduct.html

Collegial Behavior:

Since we assume you are all adults, we will expect from you, respectful adult behavior. Engaging in disruptive or unruly behavior could result in your being asked to leave, at which time you will be counted absent and a referral will be sent to the Associate Dean of Student Services. Continuing to behave in this way could result in your being dropped from the course. Disruptive or unruly behavior includes but is not limited to:

- texting or talking on your cell phone or Laptop at any time during class,
- continually talking with your neighbor when we are not working on a group activity,
- working on homework from another class,
- reading material or watching media on a mobile device not related to this course or at a time that is inappropriate,
- refusing to participate in the class activities.

Academic Dishonesty

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy:

https://policy.unm.edu/regents-policies/section-4/4-8.html. The policy states:

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic Dishonesty is defined as:
"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Cheating students will be prosecuted according to University guidelines. Students should get acquainted with their rights and responsibilities as explained in the Student Code of Conduct http://dos.unm.edu/student-conduct/academic-integrityhonesty.html

UNM Valencia Title IX Representative

Title IX (9) Statement: 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 pg. 15 - http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf). 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

Responsibility

EXPECTATIONS: Students are expected to conduct themselves in a polite, courteous, professional and collegial manner. **Cell phones must be set on silent and be out of sight during class. No food or drink is allowed in the computer labs.**

Time for This Course: Plan to spend a *minimum* of 9 to 12 hours per week for this class. There is no guarantee you will pass if you dedicate this amount of time, you still need to learn the material and use your time wisely, but those who pass generally are the ones who spend the time needed to do the work to learn the material.

You are **responsible** for all material covered in this Syllabus and in class, in assigned readings, and on homework assignments. Not all material on tests will necessarily be covered in class but will be in the assignments. The use of cell phones, headphones, etc. is not permitted in class or exams.

Chapters of Book		
Part I	Part II	Part III
Chapter 1: sections 1 to 5		Chapter 12: sections 1 to 7
Chapter 2: sections 1 to 8	Chapter 8: sections 1 to 6	Chapter 15: sections 1 to 6
Chapter 3: sections 1 to 8	Chapter 9: sections 1 to 7	Chapter 16: sections 1 to 4
Chapter 4: sections 1 to 6		Chapter 17: sections 1 to 5
Chapter 5: sections 1 to 8		Chapter 20: sections 1 to 7

Fall 2019	**Math 1350 Schedule**	**(subject to change if necessary)**
Week of	**Material Covered**	**Notes / Holidays**
Aug 19	IMP: Syllabus and Sapling & Ch. 1 Picturing Distributions with Graphs	
Aug 26	Ch. 1 Picturing Distributions with Graphs	No Class on 27th August
Sep 02	Ch. 2 Describing Distributions with Numbers	~~2nd Sep Monday: Labor-day~~
Sep 09	Ch. 2 Describing Distributions with Numbers & Ch. 3 The Normal Distributions	
Sep 16	Ch. 3 The Normal Distributions	No Class on ~~16th~~, 17th, and ~~18th~~ Sep
Sep 23	Ch. 3 The Normal Distributions & Exam review	
Sep 30	**First Exam** Tuesday Oct 1st (Ch1, 2, 3) & Ch. 4 Scatterplots and Correlation	
Oct 07	Ch. 5 Regression	10th & ~~11th~~ Oct Fall break Thursday Oct 10th
Oct 14	Ch. 8 Sampling	
Oct 21	Ch. 9 Experiments	
Oct 28	Exam review & **Second Exam** Thursday Oct 31st (Ch4, 5, 8, 9)	
Nov 04	Ch. 12 Introducing Probability	
Nov 11	Ch. 15 Sampling Distributions	
Nov 18	Ch. 16 Confidence Intervals: The Basics	
Nov 25	Ch. 17 Tests of Significance: The Basics	28th Nov – 1st Dec: Thanksgiving Thursday Nov 28th
Dec 02	Ch. 17 Tests of Significance: The Basics & Exam review	
Dec 09	**Final Exam** Thursday Dec 12th (4:30 pm to 6:30 pm) (Ch12, 15, 16, 17)	**Final week: No class after final**

Disabilities Policy: (ARC)

https://valencia.unm.edu/students/advisement/equal-access-faqs.html
Contact Equal Access Services at 925-8560 to schedule an appointment.

The Center for Academic Learning

https://valencia.unm.edu/campus-resources/the-learning-center/index.html
The Learning Center is open Monday – Friday with evening hours Monday – Thursday
To schedule an appointment or for additional information call (505)-925-8907

UNM Valencia Registrar's Office

https://valencia.unm.edu/academics/catalog/2018-2019/admission-registration/index.html
Contact Registration Office by calling 925-8580

Deadlines

http://registrar.unm.edu/semester-deadline-dates/fall-2019.html

Chapter 1

YouTube videos for this chapter:
https://youtu.be/40X3cgNd_1U
https://youtu.be/pg0mE5xTj4k

Chapter 1: Picturing Distributions with Graphs

1.1Individuals and Variables
1.2Categorical Variables: Pie Charts and Bar Graphs
1.3Quantitative Variables: Histograms
1.4Interpreting Histograms
1.5Quantitative Variables: Stemplots

Chapter 1: SLO

In this unit:
Students will Explain the general concepts of statistics.
Students will Explain and evaluate statistics used in the real world (from a news article, research project, etc.).
Students will Use statistical vocabulary appropriately.
Students will Distinguish between descriptive and inferential statistics.
Students will Distinguish between qualitative and quantitative data.
Students will Presentation and description of data.

Chapter 1: Assignments on Sapling

Chapter 1 Learning Curve	Due date: Sep 02 (11:00 pm)
Chapter 1 Homework	Due date: Sep 02 (11:00 pm)
Chapter 1 Quiz	Due date: Sep 02 (11:00 pm)

Chapter 2

YouTube videos for this chapter:
https://youtu.be/lWuYDxaR3qE

https://youtu.be/D9eBrewVCcs
https://youtu.be/Xvh1WaF2aFY
https://youtu.be/D4iBKnKwfBY
https://youtu.be/SIH6FDjUa74

Chapter 2: Describing Distributions with Numbers

2.1Measuring Center: The Mean
2.2Measuring Center: The Median
2.3Comparing the Mean and the Median
2.4Measuring Variability: The Quartiles
2.5The Five-Number Summary and Boxplots
2.6Spotting Suspected Outliers and Modified Boxplots*
2.7Measuring Variability: The Standard Deviation
2.8Choosing Measures of Center and Variability

Chapter 2: SLO

In this unit:

Students will Presentation and description of data.

Students will Present data graphically using histograms, frequency curves and other statistical graphs.
Students will Interpret graphs of data, including histograms and shapes of distributions.
Students will Summarize data using measures of central tendency and variation.
Students will Calculate and interpret the mean, median, and mode to describe data.
Students will Calculate and interpret range, variance, and standard deviation to describe data.

Students will Inter-quartile range, box-plots, stem-and-leaf plots.

Chapter 2: Assignments on Sapling

Chapter 2 Learning Curve	Due date: Sep 16 (11:00 pm)
Chapter 2 Homework	Due date: Sep 16 (11:00 pm)
Chapter 2 Quiz	Due date: Sep 16 (11:00 pm)

Chapter 3

YouTube videos for this chapter:
https://youtu.be/7-BHzKSRhqM
https://youtu.be/-wYuT38n9Mg
https://youtu.be/ItNdMZlAeBA
https://youtu.be/1qrMSShwoYE
https://youtu.be/Ti8dwzHNfBE

Chapter 3: The Normal Distributions

3.1Density Curves
3.2Describing Density Curves
3.3Normal Distributions
3.4The 68–95–99.7 Rule
3.5The Standard Normal Distribution
3.6Finding Normal Proportions
3.7Using the Standard Normal Table
3.8Finding a Value Given a Proportion

Chapter 3: SLO

In this unit:

Students will present the concepts of probability.

Students will Calculate probabilities using the standard normal distribution and relate them to areas under the curve.

Students will Calculate probabilities using different methods.

Students will Calculate proportion of normal curve using standard normal table.

Chapter 3: Assignments on Sapling

Chapter 3 Learning Curve	Due date: Sep 29 (11:00 pm)
Chapter 3 Homework	Due date: Sep 29 (11:00 pm)
Chapter 3 Quiz	Due date: Sep 29 (11:00 pm)

Chapter 4

YouTube videos for this chapter:
https://youtu.be/WgwWis4TZt4
https://youtu.be/WubnfAhcTGM

Chapter 4: Scatterplots and Correlation

4.1Explanatory and Response Variables
4.2Displaying Relationships: Scatterplots
4.3Interpreting Scatterplots
4.4Adding Categorical Variables to Scatterplots
4.5Measuring Linear Association: Correlation
4.6Facts about Correlation

Chapter 4: SLO

In this unit:
Students will Give examples of independent and dependent variables.

Students will Analyze data using regression and correlation.
Students will Explain the difference between correlation and causation.
Students will Construct and interpret scatter plots.

Chapter 4: Assignments on Sapling

Chapter 4 Learning Curve	Due date: Oct 14 (11:00 pm)
Chapter 4 Homework	Due date: Oct 14 (11:00 pm)
Chapter 4 Quiz	Due date: Oct 14 (11:00 pm)

Chapter 5

YouTube videos for this chapter:
https://youtu.be/STsDuSvesOo
https://youtu.be/oeP-91kLIJQ
https://youtu.be/wdp1TF_TtxI

Chapter 5: Regression

5.1Regression Lines
5.2The Least-Squares Regression Line
5.3Examples of Technology
5.4Facts about Least-Squares Regression
5.5Residuals
5.6Influential Observations
5.7Cautions about Correlation and Regression
5.8Association Does Not Imply Causation

Chapter 5: SLO

In this unit:

Students will Analyze data using regression and correlation.
Students will Explain the difference between correlation and causation.
Students will Calculate and interpret the linear correlation coefficient.

Students will Determine and use the equation of a least-squares regression line between two variables to make predictions.
Students will Interpret the meaning of the coefficient of determination.

Chapter 5: Assignments on Sapling

Chapter 5 Learning Curve	Due date: Oct 14 (11:00 pm)
Chapter 5 Homework	Due date: Oct 14 (11:00 pm)
Chapter 5 Quiz	Due date: Oct 14 (11:00 pm)

Chapter 8

YouTube videos for this chapter:
https://youtu.be/3lRh4yN-qNU

Chapter 8: Producing Data: Sampling

8.1Population versus Sample
8.2How to Sample Badly
8.3Simple Random Samples
8.4Inference about the Population
8.5Other Sampling Designs
8.6Cautions about Sample Surveys

Chapter 8: SLO

In this unit:
Students will Distinguish between population and sample.
Students will Calculate probabilities using sampling distribution.
Students will Collect individual for a sample using simple random sample.

Chapter 8: Assignments on Sapling

Chapter 8 Learning Curve	Due date: Oct 29 (11:00 pm)
Chapter 8 Homework	Due date: Oct 29 (11:00 pm)
Chapter 8 Quiz	Due date: Oct 29 (11:00 pm)

Chapter 9

YouTube videos for this chapter:
https://youtu.be/fOsp1KYbyjI

Chapter 9: Producing Data: Experiments

9.1Observation versus Experiment
9.2Subjects, Factors, and Treatments
9.3How to Experiment Badly
9.4Randomized Comparative Experiments
9.5The Logic of Randomized Comparative Experiments
9.6Cautions about Experimentation
9.7Matched Pairs and Other Block Designs

Chapter 9: SLO

In this unit:

Student will Distinguish between

Student will Determine subjects, factors and treatments in an experiment.

Student will Distinguish between different experimental designs.

Chapter 9: Assignments on Sapling

Chapter 9 Learning Curve	Due date: Oct 29 (11:00 pm)
Chapter 9 Homework	Due date: Oct 29 (11:00 pm)
Chapter 9 Quiz	Due date: Oct 29 (11:00 pm)

Chapter 12

YouTube videos for this chapter:

https://youtu.be/8IKiGW5G_YU
https://youtu.be/RQvO5tDvdfQ

Chapter 12: Introducing Probability

12.1 The Idea of Probability
12.2 The Search for Randomness*
12.3 Probability Models
12.4 Probability Rules
12.5 Finite Probability Models
12.6 Continuous Probability Models
12.7 Random Variables

Chapter 12: SLO

In this unit:

Students will Interpret basic probabilities.

Students will Calculate probabilities using compound probability rules and the discrete distribution.

Chapter 12: Assignments on Sapling

Chapter 12 Learning Curve	Due date: Nov 11 (11:00 pm)
Chapter 12 Homework	Due date: Nov 11 (11:00 pm)
Chapter 12 Quiz	Due date: Nov 11 (11:00 pm)

Chapter 15

YouTube videos for this chapter:
https://youtu.be/RQvO5tDvdfQ
https://youtu.be/MOb8DRoDyEA

Chapter 15: Sampling Distributions

15.1 Parameters and Statistics
15.2 Statistical Estimation and the Law of Large Numbers
15.3 Sampling Distributions
15.4 The Sampling Distribution of $\bar{x}$
15.5 The Central Limit Theorem
15.6 Sampling Distributions and Statistical Significance*

Chapter 15: SLO

In this unit:
Students will Distinguish between populations and samples, and parameters and statistics.

Students will Describe the relationship between the sampling distribution and the population distribution.

Students will Use the central limit theorem to approximate the probability distribution and calculate probabilities.

Students will Compute point and interval estimates.

Chapter 15: Assignments on Sapling

Pre - Chapter 15 Homework	Due date: Nov 15 (11:00 pm)
Chapter 15 Learning Curve	Due date: Nov 25 (11:00 pm)
Chapter 15 Homework	Due date: Nov 25 (11:00 pm)
Chapter 15 Quiz	Due date: Nov 25 (11:00 pm)

Chapter 16

YouTube videos for this chapter:
https://youtu.be/ibaeCsf77I4
https://youtu.be/utOYlwE_4w0
https://youtu.be/zwAWF3a9lpg

Chapter 16: Confidence Intervals: The Basics

16.1 The Reasoning of Statistical Estimation
16.2 Margin of Error and Confidence Level
16.3 Confidence Intervals for a Population Mean
16.4 How Confidence Intervals Behave

Chapter 16: SLO

In this unit:
Students will Compute point and interval estimates.
Students will Determine the confidence interval for a parameter.
Students will Interpret the confidence level and margin of error.

Chapter 16: Assignments on Sapling

Chapter 16 Learning Curve	Due date: Dec 02 (11:00 pm)
Chapter 16 Homework	Due date: Dec 02 (11:00 pm)
Chapter 16 Quiz	Due date: Dec 02 (11:00 pm)

Chapter 17

YouTube videos for this chapter:
https://youtu.be/7Jb4evPU7WY
https://youtu.be/zwAWF3a9lpg

Chapter 17: Tests of Significance: The Basics

17.1 The Reasoning of Tests of Significance
17.2 Stating Hypotheses
17.3 *P*-Value and Statistical Significance
17.4 Tests for a Population Mean
17.5 Significance from a Table*

Chapter 17: SLO

In this unit:

Students will Perform hypothesis tests.
Students will Determine whether a statistical test is appropriate under stated conditions.
Students will Identify null and alternative hypothesis.

Students will Perform and interpret statistical tests (e.g. z-test, t-test, one-tailed and two-tailed, one-sample, two-sample) and determine whether data is statistically significant.
Students will State the conclusion of a hypothesis test.
Students will Interpret a p-value as compared to a significance level.

Students will Explain why a test can lead us to reject a null hypothesis, not accept one.
Students will Distinguish between Type I and Type II errors.

Chapter 17: Assignments on Sapling

Chapter 17 Learning Curve	Due date: Dec 08 (11:00 pm)
Chapter 17 Homework	Due date: Dec 08 (11:00 pm)
Chapter 17 Quiz	Due date: Dec 08 (11:00 pm)

Summer Project

If you are here in this section, perhaps you would like to know about the exciting summer project!
Critical Technology Studies Program on the main campus offers a $**** Stipend to a couple of qualified, talented, and hard work students who work on a project during Summer 2020 under my supervision!

For more information please send me an email as soon as possible. ☺