

Date	Section	Topic
Sep7	1-1,1.2,2.1-2.2	The Nature of Statistics, Simple Random Sample; variables
12	2.2-2.3	Organizing Data
14	2.4-2.5,3.1	Distribution Shapes, Central Tendencies
15	3.2,3.4	Variation, 5 Number Sum, Boxplots
19	3.5,4.1-4.2	Populations; Probability, Events
21	4.3,6.1-6.2	Rules of Probability, Normal Distribution, Standard Normal Curve
26	6.3-6.4	Normally Distributed Variables, Normal Probability Plots
28	7.1-7.3	Sampling Error, Mean, distribution of sample mean
Oct 3	8.1-8.2	Estimating Population Mean, Margin of Error,
5	*****	*** Test # 1 (Ch. 1-6) ***
10	8.2-8.3	Confidence Intervals for 1 Population Mean
12	9.1-9.4	Hypothesis Testing, P-value Approach, Hyp. Test – 1 Mean, $\sigma$ known
17	9.5	Hyp. Test – 1 Mean, $\sigma$ NOT known
19	10.1-10.2	Sampling Distrib Diff 2 Sample Means, Popul with $= \sigma$ 's
24	10.3	Inferences 2 Population Means Independent Samples, $\sigma$ 's not =
26	10.4-10.5	Mann-Whitney Test, Inferences Paired Samples
###W 31	12.1 12.2-12.3	CI Population Proportion, Inferences 1 Population Prop, 2 Popul Proportions
Nov 2	13.1-13.2	Chi-squared Distribution, Goodness-of-Fit
7	13.3-13.5	Association, Independence, Homogeneity
9	***** 14.1-	*** Test # 2 (Ch. 7-10) ***
14	14.2	Linear Regression, 1 Independent Variable
16	14.3-14.4	Coefficient of Determination, Linear Correlation
21	15.1-15.2	Regression Model, Inferences for Slope of Population Regression Line
28	15.3	Estimation, Prediction
30	15.4	Inferences in Correlation – Correlation t-Test
5	16.1-16.2	F-distribution, One Way ANOVA Logic
7	16.3	ANOVA Procedure
12	16.5	Kruskal-Wallis Test
14	Ch16	ANOVA, Kruskal-Wallis
19		Last day of classes: Overview of FE, Which Procedure?
*21*	*****	FINAL EXAM (2 hours) [Dec 22 if school is closed on Dec 21]

**FINAL GRADE = 2/3 Class Ave. + 1/3 Final Exam**

**This class has synchronous meetings via zoom during the regularly scheduled class time, MW 8-9:50 pm. All students are expected to attend the zoom classes. During both tests and the final exam, students must be in attendance and visible on camera.**

**Class Ave:** Mean of Tests and Quizzes, Quiz Ave= 1 test.

**Tests:** Full period, **NO MAKEUPS**. Students visible on camera. If a test is not taken, the grade for that test is 0.

One test grade may be replaced with a 4-to-5-page project/paper (See below).

Material covered on test includes material since last exam.

**Quizzes:** Unannounced, **any WEDNESDAY, NO MAKEUPS** Expect 6 to 9 quizzes. The 6 best quiz scores will be averaged to equal a test grade. Covers material from previous week. A quiz not taken will have a grade of 0.

**FINAL:** Comprehensive; **Date: Dec 21** You must be in class for the Final Exam, with your camera on and you must be visible. (Note: If WCC is closed on 12/21, then Final Exam on Dec 22)

**PROJECT/REPORT:** 4-5 pages, typed, double spaced. Subject should be one of the topics covered on the test to be replaced. Students will collect and analyze data in accordance with the topic selected. For a grade of C, the paper must include 1) a list of the data collected, 2) analysis of the data, 3) an interpretation of or conclusion about the data, and 4) three references. Use citations of the form (author, page) for ALL content new in this course. For a higher grade, the paper should include such additional information as scientific or social applications, historical development of technique, relationship of the topic to other topics in the course, etc. Required only if a test is missed. See [http://www.battaly.com/stat/PROJECT\\_REPORT\\_STATS.pdf](http://www.battaly.com/stat/PROJECT_REPORT_STATS.pdf)

**ATTENDANCE:** Students are expected to attend all classes. Absence from class will not affect your final grade, except as it effects quiz and test grades.

**ASSIGNMENTS:** All odd problems unless otherwise noted.

**W ### LAST DAY TO WITHDRAW with a W (10/31) ###;** no class on 9/5 and 11/23(Wed before Thanksgiving)

## MATH 140 – STATISTICS STUDENT LEARNING OUTCOMES

<b>STUDENT LEARNING OUTCOMES</b> - Upon successful completion, the student will be able to	
<b>SLO1:</b> The student will become acquainted with the language, philosophy, and methodology of statistics.	
<b>Objectives:</b>	
<ol style="list-style-type: none"> <li>1. Use appropriate vocabularies and terminologies to express ideas and conclusions while performing descriptive and inferential statistics</li> <li>2. Solve probability and statistics problems by using correct mathematical symbols, formulas and expressions</li> <li>3. Choose appropriate methods to solve problems in probability, descriptive and inferential statistics</li> </ol>	
<b>SLO2:</b> The student will achieve competence in the manipulation and computation of mathematical formulae.	
<b>Objectives:</b>	
<ol style="list-style-type: none"> <li>1. Choose appropriate formulae to solve application problems in statistics</li> <li>2. Understand how a mathematical formula is derived</li> <li>3. Use technology, such as TI graphing calculators to efficiently compute numerical results that involve mathematical formulae</li> <li>4. Know the meaning of an approximated result from the exact result of a computation</li> </ol>	
<b>SLO3:</b> The student will achieve a basic understanding of probability and its application to statistical inference.	
<b>Objectives:</b>	
<ol style="list-style-type: none"> <li>1. Understand the meaning of probability values and know how to calculate these values</li> <li>2. Understand the concept of probability distributions and sampling distributions, as well as being able to work with key distributions such as the Binomial, the Normal, the T and the <math>X^2</math> Distributions</li> </ol>	
<b>SLO4:</b> The student will develop competency in using statistical procedures and in reaching valid conclusions.	
<b>Objectives:</b>	
<ol style="list-style-type: none"> <li>1. Be able to find and interpret confidence intervals for one and two population means, where the population standard deviation is known, versus when it is unknown</li> <li>2. Be able to find and interpret confidence intervals for one population proportion</li> <li>3. Know how to conduct hypothesis tests in regard to testing one and two population means, both when the population standard deviation is known and when it is unknown</li> <li>4. Perform hypothesis tests for one population proportion</li> <li>5. Perform the Goodness-of-Fit test and the Chi-Square Independence test</li> <li>6. Understand how to perform linear regression with one independent variable</li> </ol>	
<b>SLO5:</b> The student will develop competency in using technology to perform statistical inferences.	
<b>Objectives:</b>	
<ol style="list-style-type: none"> <li>1. Be able to use the graphing calculator to find confidence intervals and to perform various hypothesis tests</li> <li>2. Be able to use the graphing calculator to compute the probability for the Binomial, the Normal, the T and the <math>X^2</math> Distributions</li> </ol>	

**Outcomes will be measured by one or more of the following:**    \*Homeworks    \*Class participation  
 \*Quizzes (in class or take home)    \*Tests (in class or take home)    \*Projects    \*Final Exam

The **SUNY General Education (GE) Mathematics** requirement are addressed by the objectives above. Upon successful completion, students will demonstrate the ability to:

SUNY GE 1: Interpret and draw inferences from mathematical models such as formulas, graphs, tables and schematics	SLO 2, 3
SUNY GE 2: Represent mathematical information symbolically, visually, numerically and verbally	SLO 1, 2, 3
SUNY GE 3: Employ quantitative methods such as, arithmetic, algebra, geometry, or statistics to solve problems	SLO 1, 2, 3, 4
SUNY GE 4: Estimate and check mathematical results for reasonableness	SLO 2, 3, 4
SUNY GE 5: Recognize the limits of mathematical and statistical methods	SLO 2, 3, 4

### Student Contributions

Students are expected to attend every class meeting, arriving on time.

Cell phones and/or other communication devices should be turned off for the duration of each class meeting.

Assignments are to be completed on time.

Students are expected to take all tests and quizzes as scheduled. There are no exemptions for any exams.

Students should expect to spend a minimum of 2 hours per week outside of class for every hour spent in class.

Students should comply with the [WCC Student Code of Conduct](#), including: 1) respect for all, 2) no cheating.



## **Academic Support Information**

Website: <https://www.sunywcc.edu/academics/asc/>

## **Students with Disabilities & ADA**

Website: <https://www.sunywcc.edu/student-services/disability-services/>

Westchester Community College (WCC) is committed to creating a learning environment that meets the needs of its diverse student body. If a student has a documented disability, it is the student's responsibility to self-identify by signing up through the Disability Services Office (DSO) either online or in person. Once signed up for accommodations, the student must inform the professor via a Referral to Faculty notification provided by the DSO. A Testing Accommodations Request form must be completed online or in person no later than three business days before the quiz/exam date to allow for accommodations to be arranged with the DSO.

The DSO is located in room G-51 on the ground floor of the Library in the back of the Academic Support Center. For more information regarding accommodations offered at WCC you may visit the Disability Services Office Website at <https://www.sunywcc.edu/disabilityservices>.

A "Testing Accommodations Request" form must be completed online or in-person no later than three business days before the quiz/exam date to allow for accommodations to be arranged with the DSO. The DSO is located in Room G-51 on the ground floor of the Library, in the back of the Academic Support Center (ASC).

## **Information on Title IX**

Website: <https://www.sunywcc.edu/about/title-ix/>

Westchester Community College values and respects the self-worth and belonging of all individuals in our community and affirms their right to engage in an environment that is safe, nonthreatening, and respectful.

In accordance with Title IX of the Education Amendments of 1972, Westchester Community College prohibits unlawful sexual harassment against any participant in its education programs or activities. Sexual harassment includes quid pro quo (this for that) harassment, hostile environment, sexual assault, dating/domestic violence, stalking, unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment as prohibited by state and federal law. This prohibition against sexual harassment - including sexual violence - applies to students, WCC employees, and visitors to campus.

Community members who have been or know someone who has been the victim of sexual violence, assault, harassment, stalking, domestic/dating violence, or any other form of sexual misconduct are encouraged to make a report to the College. Incidents of Sexual Misconduct should be reported to the college Title IX Coordinator, as outlined in the WCC Title IX policy. For more information on Title IX, resources or options to file a report, please visit: <https://www.sunywcc.edu/about/title-ix>. Anonymous reports are accepted.

## **Delayed Opening/Early Closing/Weather Announcements**

Website: <https://www.sunywcc.edu/about/weather-announcements/>

## **Amendments or Changes to Syllabus**

This syllabus may be updated or changed during this semester. If this is necessary, appropriate notice will be given to students.

All students must read and sign the below statement regarding requirements for withdrawing from class after the official college Final Withdrawal Date.

I understand that the final date to withdraw from this class is Monday, October 31, 2022.  
If I need to withdraw after that date, I will need to bring a note to Professor Battaly from the WCC Health Office, explaining the medical need to withdraw.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

All students must read and sign the below statement regarding test taking expectations.

I understand that all quizzes and tests will be submitted through Brightspace portals. Further, both tests, the final exam, and most of the quizzes will be taken during our zoom class time. For the two tests and the final exam I will turn on my camera and remain in full view of the camera.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name