

STA2023-004 Introduction to Probability and Statistics Florida A&M University

The syllabus is subject to change with notice.

Fall 2023 3 Credit Hours Modality: face-to-face

Instructor:	Dr. Mohsen Gheibi	Email: mohsen.gheibi@fam.u.edu
Office:	410 Jackson Davis Hall	Office Phone: (850) 412-5235
Office Hours:	MoTuWeTh 2:00 PM – 4:00 PM or by appointment	
Class meetings:	TuTh 9:05 AM – 9:55 AM at UNIVERSITY COMMONS ...	
Textbook:	Understandable Statistics: Concepts and Methods-13e by Brase and Brase If you are content with the e-book version of the text in WebAssign, it is your choice whether or not to purchase a hardcopy version of the text.	
Required Online Access Code:	Access to Cengage WebAssign is required. Online homework and online quizzes must be completed using Cengage WebAssign . You can access your course in WebAssign through Canvas by clicking on Assignments or through the Cengage WebAssign webpage: https://www.webassign.net/wa-auth/login . Failure to purchase an access code to WebAssign will result in failing this course.	
Calculator:	A scientific calculator TI-84 or TI-83 is required.	
Course Description:	This course is an introduction to the basic concepts and principles of statistics with elementary applications. Topics include data organization, data description, probability theory, random variables, normal distribution, the Central Limit Theorem, sampling distributions, confidence intervals, and hypothesis testing.	
Prerequisites:	A grade of “C” or better in MAC 1105 or MAC 1147	

Learning Outcomes:	<p>At the end of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Recognize the terminology of statistics 2. Summarize data into tables, charts, and other means 3. Estimate different statistics 4. Apply the principles of probability and probability distributions to solve problems 5. Construct confidence intervals for the given conditions 6. Create and test hypotheses and support their acceptance or rejection 7. Locate, organize, and analyze information from tables, charts, and other means with emphasis on the use of information technology like graphing calculators and Excel. 												
Grading Policy:	<p>Your grade for the course will be based on the following percentages:</p> <p>18% 23 online homework assignments (completed in WebAssign)</p> <p>6% class work/attendance (completed in class)</p> <p>13% 13 online quizzes (1% each) (completed in WebAssign)</p> <p>48% 4 tests (12% each) (completed in class)</p> <p>15% Final Exam (completed in class)</p>												
Grading Scale:	<p>The final course grade will be a weighted average based on the percentages of the five categories described in the Grading Policy above. A letter grade will be assigned to your rounded to the nearest whole number course grade as follows:</p> <table border="1" data-bbox="446 1402 1222 1486"> <tr> <td>Percentage %</td> <td>100...90</td> <td>89...80</td> <td>79...70</td> <td>69...60</td> <td>59...0</td> </tr> <tr> <td>grade</td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>F</td> </tr> </table>	Percentage %	100...90	89...80	79...70	69...60	59...0	grade	A	B	C	D	F
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Viewing Grades in CANVAS:	<p>Grades you receive for assignments will be posted in the CANVAS Gradebook. To view your grades in the Canvas gradebook, click on the Grades link on the left navigation course menu. <u>Any grade discrepancies must be brought to my attention within one week after they are posted in the Canvas Gradebook.</u></p>												

Resolving Complains about Grades:	<p>The first step in resolving a complaint about grades is for the student to attempt to resolve the problem directly with the course instructor. See the Student Handbook for additional guidance under Academic Grievances, beginning on page 14.</p>
Incomplete Policy:	<p>Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if supporting documentation is submitted. All incomplete course assignments must be completed within the first five weeks of the next semester. See the details in Procedure for Assigning Incomplete Grades.</p>
Withdrawal Policy:	<p>It is the students' responsibility to understand when they need to consider dropping a course. To earn a grade of "W" students must withdraw no later than November 9, 2023 – see FAMU Calendar. Students who withdraw after that date will receive a grade of "WF." A "WF" is calculated in the GPA as an "F". The FAMU Withdrawal Form is available online and in the Office of the Registrar.</p>
Procedure for Resolving Faculty-Student Conflict:	<ol style="list-style-type: none"> 1. Student first attempts to resolve an issue with the instructor. 2. Student submits written notification of the problem to Chair. 3. Chair forwards student letter to instructor. 4. Instructor responds in writing to Chair. 5. Chair meets with the instructor and/or student if necessary. 6. Chair forwards response/recommendation to Dean's office. 7. Dean decides what further course of action is available to the student.
Academic Honesty Policy:	<p>As a Florida A&M University student, it is your responsibility to know the university policy on academic/intellectual dishonesty and abiding it. It is your responsibility to do your own work. All ideas/materials that are borrowed from other sources must have appropriate references to the original sources. Any student caught cheating in any manner is awarded the grade of F. No warnings are given; all students collaborating in cheating will receive the grade of F. The University Academic Honor Policy is in the Student Handbook.</p>

Attendance:	Attendance is essential for doing well in this class. Students who miss too many classes do poorly or fail the course. <i>Students are responsible for all information and materials given in class, whether or not they were present.</i> Being absent from a class does not excuse you from any assignments or exams that may occur the following class. You need to notify your instructor through email before class if you cannot come to class for any reason. Excused absences include documented illness, deaths in the immediate family, and other documented emergencies, call to active military duty or jury duty, and official university activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse.
Course Structure:	This course will be delivered face-to-face in a classroom (see your schedule on iRattler), the course management system Canvas, and Cengage WebAssign. In Canvas, you will access course materials, resources, and WebAssign.

Important Note: This is a *tentative schedule* for the course, and the instructor may change it without any prior notice. Refer to the *Pacing Guide* for specific due dates and times. Activity and assignment details will be explained in detail within each week's corresponding learning module.

Course Outline:

Module	Weeks	Readings	Assessments	
Unit 1	Weeks 1, 2, 3	1.1, 1.2, 2.1, 3.1, 3.2, 3.3	HW 1 - 6, Quizzes 1 - 3	Unit 1 Test
Unit 2	Weeks 4, 5, 6, 7	4.1, 4.2, 4.3, 5.1, 5.2, 5.3	HW 7 - 12, Quizzes 4, 5, 6, 7	Unit 2 Test
Unit 3	Weeks 8, 9	6.1, 6.2, 6.3, 6.4, 6.5	HW 13 - 17, Quizzes 8, 9	Unit 3 Test
Unit 4	Weeks 10, 11, 12, 13, 14	7.1, 7.2, 7.3, 8.1, 8.2, 8.3	HW 18 - 23, Quizzes 10, 11, 12, 13	Unit 4 Test
Final	Weeks 15, 16		Catch up and Review for the Final Exam	Final Exam

Exams:

You will be given 4 tests during the semester. See the **Pacing Guide below** for the test dates. The tests will be given in class during your regular class time.

Make-Up Tests:

Make-up tests will be allowed only in extraordinary circumstances with an excused absence. If you cannot take the test at the scheduled time, you must notify me **through email before the test**. You will be required to bring proper documentation, such as a note from a doctor, coach, or counselor, an obituary or program from a funeral service, etc., to take the make-up test. *All make-up tests must be completed within a week of the date of the test.*

Test Retakes:

No test retakes are allowed in this course. Every student is allowed to take each test only once.

<p>Final Exam:</p>	<p>The Final Examination will be given in class during the final's week according to the University Final Examination Schedule. See <i>Pacing Guide</i>. The Final Exam is <i>comprehensive and cumulative</i> and, therefore, will cover all the material of the semester. You will have TWO hours to complete the exam.</p>
<p>Online Homework:</p>	<p>Doing homework is extremely important for your success in this course. Homework will be assigned in WebAssign for each section from the textbook that is scheduled to be covered in this course. See Pacing Guide. For this type of assignment (Homework), you submit answers by questions and not by submitting the entire assignment. 20 submissions will be allowed for each question. After you click anywhere within the question, the <i>Submit Answer</i> button will appear below the question.</p> <p>You will be required to use new randomization after every 2 question submissions to generate a similar question with different values. After you click on the <i>Submit Answer</i> button the second time, the correct answer will be displayed next to your wrong answer if you miss the question the second time. Click anywhere within the question for the <i>New Randomization</i> button to appear on the screen below the missed question. Click on the <i>New Randomization</i> button to generate a similar question with different values. Your best submission for each question will be used for the final score of the question. You can solve problems in the homework assignment in any order you like. You do not have to finish the entire homework assignment in one sitting. You can save your homework assignment progress by clicking on the <i>Save Assignment Progress</i> button to continue working on it later. You must finish it before the due date. You will not be able to work on the assignment after the due date unless you request an extension (See <i>Late Work Policy</i> below). All homework assignments of the week must be complete by 11:59 pm on Sunday of that week. See Pacing Guide.</p>
<p>Online Quizzes:</p>	<p>Quizzes are made of questions from the homework of the previous week. For this type of assignment (Quiz), you submit the entire quiz before you can see which problems you missed and which ones you did correctly. FOUR attempts will be allowed for each quiz. You do not have to take all four attempts. Your best quiz attempt will be used for the final score of the quiz. You can solve problems on the quiz in any order you like. Each quiz is time-restricted. Once the quiz is opened, you will have 90 minutes to complete it. The remaining time will be displayed in the upper right corner. You must finish each quiz before the due date. You will not be able to work on the quiz after the due date unless you request an extension (See <i>Late Work Policy</i> below). All quizzes (except six quizzes that are due on the day of the test) must be complete by 11:59 pm on Monday. See Pacing Guide. The six quizzes that are due on the day of the test are exceptions. They must be completed by 8:00 am on the day of the test.</p>

<p>Late Work Policy:</p>	<p>It is the student's responsibility to keep up with class assignments. Don't procrastinate! Don't wait until the last minute! Within a period of 7 days of the due date, students can request and receive ONE automatic extension of 3 days per assignment. <i>Late assignments will be accepted with a 10% penalty on the points earned after the due date and will not be accepted more than 7 days late</i> unless a prior agreement has been made with the instructor for an alternate due date. The due dates of the assignments can be found in the <i>Pacing Guide</i> and are displayed in WebAssign next to the assignment. If the due date of an assignment is changed, it will be announced via Canvas email and Canvas announcement.</p>
<p>Special Accommodations:</p>	<p>If you have a documented disability and verification from the Center for Disability Access and Resources (CEDAR) and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to CEDAR and meet with a CEDAR counselor to request special accommodation <i>before</i> classes start.</p> <p>CEDAR is located at 1601 S. Martin Luther King Jr Blvd, Tallahassee, FL 32307, and can be contacted by phone at 850-599-3180.</p>
<p>Required Technology:</p>	<p>Desktop or Laptop Computer</p> <p>Internet connection (DSL, LAN, or cable connection desirable) to access Canvas and Cengage WebAssign, also to respond to emails, watch videos, and more.</p>
<p>Technical Assistance with CANVAS:</p>	<p>If you need technical assistance at any time during the course or to report a problem with CANVAS, you can:</p> <ol style="list-style-type: none"> 1. Visit the Office of Instructional Technology page. 2. Contact the Office of Instructional Technology at 850-599-3460 or oit@famu.edu 3. View student CANVAS Guides to learn more about using Canvas.
<p>Technical Assistance with WebAssign:</p>	<p>If you need technical assistance at any time during the course or to report a problem with WebAssign, you can:</p> <ol style="list-style-type: none"> 1. Visit the WebAssign Student Help page 2. Contact WebAssign at 800-354-9706.

Etiquette :

1. **Respect others and their opinions.** In online learning, students from very different backgrounds come together to learn. It is important to respect their feelings and opinions even when they are quite different from your own.
2. **Watch your language and tone carefully.** When you are communicating online, you have to rely solely on words to get your point across. The other person cannot see your facial expression or hear your tone of voice, so things like sarcasm and humor often don't come across very well. That is why it is important to take your time, choose your words carefully, and be as straightforward as you can.
3. **Consider people's privacy.** Always ask for permission before you forward someone's email messages to somebody else, and if you do reuse somebody else's words (with their permission), make sure to acknowledge them appropriately. Keep in mind that all private email mail is considered copyrighted by the original author.
4. **Avoid inappropriate material.** It is tempting to forward messages you find clever or links to websites you find entertaining to classmates. If they are not directly relevant to the course, please do not do this, especially if the material is sexually suggestive, politically sensitive, or otherwise "edgy." The same goes for frivolous "joke" emails and chain messages. This is not the place for it.
5. **Be forgiving.** If someone writes something that you find offensive, mention it directly to the instructor. He or she is best equipped to address the situation. Remember that the person contributing to the discussion might be new to this form of communication. What you find offensive may have been unintended.
6. **Be concise.** When you are contributing to a discussion, be as brief as you can to get your point across. Adding a lot of unnecessary words just makes your message less clear. Try to stick to the point and not go off on irrelevant tangents.
7. **Read first, write later.** Do not add your comments to a discussion before reading the comments that are already there. And if you are responding to a previous comment, always make clear which comment you are responding to.
8. **DON'T TYPE IN ALL CAPS OR USE EXCESSIVE PUNCTUATION!!!!!!** Most people find this annoying, and you may not be communicating your thoughts effectively.
9. **Think before you hit the send button.** Learning to be your own editor is a difficult and important skill. Think carefully about the content of your message before you send or post it. Once you push the button, there is no taking it back. Grammar and spelling errors reflect badly on you, and misspelled words or poorly constructed sentences can make it hard to decipher your meaning accurately.

STA 2023 – Understandable Statistics-12e by Brase and Brase - Fall 2022

Week #	Beginning	Sections to cover from the textbook	Assignments Due by 11:59 pm
Week 1	August 28	1.1 What Is Statistics? (HW 1) 1.2 Random Samples (HW 2)	HW 1 (1.1), HW 2 (1.2)
Week 2	September 4	2.1 Frequency Distributions and Histograms (HW 3) 3.1 Measures of Central Tendency: Mode, Median, and Mean (HW 4) <i>Monday is Holiday – (Labor Day)</i>	Quiz 1, HW 3 (2.1), HW 4 (3.1), HW 5 (3.2)
Week 3	September 11	3.2 Measures of Variation (HW 5) 3.3 Percentiles and Box-and-Whisker Plots (HW 6) 4.1 What Is probability? (HW 7)	Quiz 2, HW 6 (3.3), Quiz 3 (1.1-3.3)
Week 4	September 18	Unit 1 Test on Ch 1 (Getting Started), Ch 2 (Organizing Data), Ch 3 (Averages and Variation) 4.2 Some Probability Rules – Compound Events (HW 8)	Unit 1 Test HW 7 (4.1), HW 8 (4.2)
Week 5	September 25	4.3 Trees and Counting Techniques (HW 9) 5.1 Introduction to Random Variables and Probability Distributions (HW 10)	Quiz 4, HW 9 (4.3), Quiz 5 (4.1-4.3)
Week 6	October 2	5.2 Binomial Probabilities (HW 11) 5.3 Additional Properties of the Binomial Distribution (HW 12)	HW 10 (5.1), HW 11 (5.2)
Week 7	October 9	Unit 2 Test on Ch 4 and 5 6.1 Graphs of Normal Probability Distributions (HW 13) 6.2 Standard Units and Areas Under the Standard Normal Distribution (HW 14), (HW 15)	Unit 2 Test Quiz 6, HW 12 (5.3), Quiz 7 (5.1-5.3),
Week 8	October 16	6.2 Standard Units and Areas Under the Standard Normal Distribution (HW 14), (HW 15) 6.3 Areas Under Any Normal Curve (HW 16)	HW 13 (6.1), HW 14 (6.2), HW 15 (6.2)

Week 9	October 23	6.4,6.5 Sampling Distributions, the Central Limit Theorem (HW 17) Unit 3 Test on Ch 6 (Normal Curves and Sampling Distributions)	Quiz 8, HW 16 (6.3), HW 17 (6.4, 6.5), Quiz 9 (6.1-6.5), Unit 3 Test
Week 10	October 30	7.1 Estimation mean μ When Population StdDev. σ Is Known (HW 18) 7.2 Estimating mean μ When Population StdDev. σ Is Unknown (HW 19)	HW 18 (7.1), HW 19 (7.2)
Week 11	November 6	7.2 Estimating mean μ When Population StdDev. σ 7.3 Estimating a Proportion p in the Binomial	Quiz 10, HW 20 (7.3), Quiz 11 (7.1-7.3)
Week 12	November 13	8.1 Introduction to Statistical Tests (HW 21) 8.2 Testing the Mean μ	HW 21 (8.1)
Week 13	November 20	8.2 Testing the Mean μ (HW 22) <i>November 22-24 Thanksgiving Holiday</i>	Quiz 12, HW 22 (8.2), HW 23 (8.3)
Week 14	November 27	8.3 Testing a Proportion p (HW 23) Unit 4 Test on Ch 7, 8	Quiz 13 (8.1-8.3) Unit 4 Test
Week 15	December 4	Review for the Final Exam	
Week 16	December 11	Final Exam: according to the University Final Examination Schedule	

Important Dates:

Classes start on August 28

No classes on September 4 (Labor Day)

November 9 Last day to withdraw

No classes on November 22-24 (Thanksgiving)

December 8 Last day of classes

December 11-15 Group Final Exams based on the university schedule