

Introduction to Probability and Statistics
STA 2023 003
Fall 2022
M W Fr- 10.10am- 11.00am, 3 Credit Hours

Professor: Narayana Bandara

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.

This course will be delivered face to face in classroom.

Required Textbooks and Instructional Materials:

Understandable Statistics: Concepts and Methods-12e by Brase and Brase

Calculator:

A graphing calculator TI-84 or TI-83 is required.

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 or through Cengage WebAssign webpage:

<https://www.webassign.net/wa-auth/login>.

FAILURE TO PURCHASE AN ACCESS CODE TO WEBASSIGN WILL RESULT IN FAILING THIS COURSE.

Prerequisites:

A grade of "C" or better in MAC 1105 or MAC 1147

Required Technology:

- Desktop or Laptop Computer
- Internet connection (DSL, LAN, or cable connection desirable) to access Canvas and Cengage WebAssign, also to respond to emails, watch videos, and more.

Course-level Student Learning Objectives:

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.

Course Content:

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	4.1, 4.2, 4.3	HW 7 - 9, Quizzes 4, 5	Unit 2 Test
Unit 3	Weeks 6, 7	5.1, 5.2, 5.3	HW 10 - 12, Quizzes 6, 7	Unit 3 Test
Unit 4	Weeks 8, 9	6.1, 6.2, 6.3, 6.4, 6.5	HW 13 - 17, Quizzes 8, 9	Unit 4 Test
Unit 5	Weeks 10, 11	7.1, 7.2, 7.3	HW 18 - 20, Quizzes 10, 11	Unit 5 Test
Unit 6	Weeks 12, 13, 14	8.1, 8.2, 8.3	HW 21 - 23, Quizzes 12, 13	Unit 6 Test
Final	Weeks 14, 15, 16		Review for the Final Exam	Final Exam

Course Assessment/Evaluation Methods:

Your grade for the course will be based on the following percentages:

- | | | |
|-----|--------------------------------|-----------------------------------|
| 20% | 23 online homework assignments | (completed in WebAssign) |
| 10% | class work/attendance | (completed during class meetings) |
| 20% | 13 online quizzes | (completed in WebAssign) |
| 30% | 6 tests | (completed during class meetings) |
| 20% | Final Exam | (completed in class) |

Your course grade is calculated as:

$$\begin{aligned} \text{Course Grade} &= 0.20(\text{all online homework}) \\ &\quad + 0.10(\text{In class all Assignments/ attendance }) \\ &\quad + 0.20 (\text{all online quizzes}) \\ &\quad + 0.30 (\text{Test-01 + Test -02+ Test -03+ Test -04+ Test -05 + Test 06}) \\ &\quad + 0.20 (\text{Final}) \end{aligned}$$

Course Grading Distribution Scale:

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. The following grading scale will be *strictly* followed:

Percentage %	100-90	89-80	79-70	69-60	59-0
grade	A	B	C	D	F

Attendance:

Attendance is mandatory and is up to the instructor's discretion when to take roll. Attendance may be taken at any time during the scheduled class period. In class quiz also used to determine attendance. Students not present at the time that attendance is taken will be marked as absent. Students whose number of absences is greater than two may have 2 points deducted from their overall course grade for each additional absence. Students whose number of absences is greater than 5 may be assigned a grade of "F" in the course. Exceptions may be made at the discretion of the instructor in the case of verifiable, unavoidable emergencies.

Students are responsible for all information and materials given in class whether or not they were present. 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 taken from their college dean and submitted to the instructor through an email within the first week of the return to the class after any absence. No late excuses will be accepted.**

Online Homework:

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 *Submit Answer* button will appear below the question.

You will be required to use a new randomization after every 2 question submissions to generate a similar question with different values. After you click on the *Submit Answer* 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 *New Randomization* button to appear on the screen below the missed question. Click on the *New Randomization* 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 *Save Assignment Progress* 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 *Late Work Policy* below). All homework assignments of the week must be complete by **11:59 pm on Saturday** of that week. See **Pacing Guide**.

Online Quizzes:

A quiz will be due in **WebAssign** each week on Monday. See **Pacing Guide**. Quizzes are made of questions from 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 **ONE hour** 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 *Late Work Policy* 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**.

Late Work Policy:

Make-ups for in class Homeworks, Quizzes will not be given regardless of circumstances. No late assignments will be accepted for any in class homework or quiz.

It is the student's responsibility to keep up with class assignments. Don't procrastinate! Don't wait until the last minute!

For WebAssign homeworks and quizzes, the late work policy explained as below.

Within a period of 2 days of the due date, students can request and receive ONE automatic extension of 3 days per assignment. Late submission requests for assignments will be

accepted with a 10% penalty on the points earned after the due date and will not be accepted more than 2 days late unless prior agreement has been made with the instructor for an alternate due date. The due dates of the assignments can be found in the ***Pacing Guide*** 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.

Make-up Exams:

Make-up tests will be allowed only in extraordinary circumstances with an excused absence, **taken from the students' college dean, submitted within the first week of the test date. Any make-up test must be completed within the first week of the date of the test.** However, a student cannot request a makeup test for more than one missed test regardless of reasons, and if more than one test is missed, the score on one of the tests remains zero. The instructor will assess the student's online participation (work on homework, quiz and self-checks) before granting a request for a makeup test. The instructor will determine how and when a makeup test is offered in the semester. If you cannot take the test at the scheduled time, you must notify me **through email before the test.**

NO MAKE-UP EXAM WILL BE ARRANGED AFTER 25th OF OCTOBER 2022.

Test Retakes:

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

Final Exam:

The **Final Examination** will be given in class during the final's week according to the University Final Examination Schedule. See ***Pacing Guide***. The Final Exam is ***comprehensive and cumulative*** and, therefore, will cover all the material of the semester. You will have **TWO hours** to complete the exam.

Incomplete Policy:

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](#).

The "I" grade is given at the instructor's discretion and then only to students whom are PASSING and who are prevented from completing the course by UNAVOIDABLE circumstances not of their own doing. Students who have missed more than one test are NOT eligible for an "I" grade.

Withdrawal Policy:

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 4, 2022 – see [FAMU Calendar](#). Students who withdraw after November 4 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.

Procedure for Resolving Faculty- Student Conflict:

1. Student first attempts to resolve issue with instructor.
2. Student submits written notification of problem to Chair.
3. Chair forwards student letter to instructor.
4. Instructor responds in writing to Chair.
5. Chair meets with 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.

Class Time:

1. On most class days, I will take time to answer homework questions. You are expected to have your questions ready. There will be a limit to the time that I spend on reviewing homework.
2. You are welcome to participate in class to the extent that it is productive.
3. I prepare a certain amount of material for each class day. The amount of time it takes to present the material depends on student questions and participation. Because of this, it is possible that class will end early on any given day. It is also possible that I will limit student participation in order to finish presenting the material within the class time.

Office Hours:

1. Students are expected to have their notes/questions organized before coming to my office for help.
2. If a student comes to my office, I will expect to see where homework has been attempted.

Technical Assistance with CANVAS:

If you need technical assistance at any time during the course or to report a problem with CANVAS you can:

- Visit the [Office of Instructional Technology](#) page.
- Contact the Office of Instructional Technology at 850-599-3460 or oit@famuedu

View student [CANVAS Guides](#) to learn more about using Canvas.

Technical Assistance with WebAssign:

If you need technical assistance at any time during the course or to report a problem with WebAssign you can:

- Visit the [WebAssign Student Help](#) page
- Contact WebAssign at 800-354-9706.

Intent to Grieve Form:

Students must submit Intent to Grieve Forms, online, within two weeks of grades being made available for students to view in accordance with the University Registrar's calendar. Students cannot submit an Academic Grade Grievance without submitting an Intent to Grieve Form unless they receive an exception from the Associate Dean. Grievances submitted to the College of Science and Technology Grievance Committee for Spring semester grade disputes must be communicated to the College of Science and Technology Dean's Office by the deadlines listed. These will only be reviewed if an Intent Grieve Form was filed by the stated deadline or an exception is provided by the Associate Dean allowing the student to submit a grievance without filing an Intent to Grieve form.

End of Course Evaluations:

Student evaluations of faculty are administered online at the end of each term/session for all courses. Students will receive an email containing a unique link to a survey for each course in which they are enrolled. All responses are anonymous and completion of evaluations are voluntary.

Policy Statement on Non-Discrimination:

It is the policy of Florida Agricultural and Mechanical University to assure that each member of the University community be permitted to work or attend classes in an environment free from any form of discrimination including race, religion, color, age, disability, sex, marital status, national origin, veteran status and sexual harassment as prohibited by state and federal statutes. This shall include applicants for admission to the University and employment.

Academic Honor Policy Statement :

Florida A&M University is committed to academic honesty and its core values, which include scholarship, excellence, accountability, integrity, fairness, respect, and ethics. These core values

are integrated into this academic honesty policy. Being unaware of the Academic Honesty Policy is not a defense for violations of academic honesty. Additional detail on FAMU Academic Honesty Violations are provided in University Policy 2.012 (10.)(s). If you have any questions, please see your Academic Advisor.

University Americans with Disabilities Act (ADA) Statement:

The Florida A&M University Americans with Disabilities Act (ADA) Policy Statement states that “Individuals who need a reasonable accommodation must notify the Office of Equal Opportunity Programs at 599-3076.” It is the responsibility of the FAMU Equal Opportunity Programs (EOP) Office, through the ADA Coordinator, to ensure the Florida A&M University is in compliance with the Americans with Disabilities Act. If you have any questions, please contact your Academic Advisor or the University EOP Officer, Equal Opportunity Programs, 674 Gamble Street, Tallahassee, FL 32307, (850) 599-3076.

Disclaimer: This syllabus is intended to provide student guidance on the type of content and activities that will be covered in this course throughout the semester. It will be followed to the extent possible. However, modifications may be made to supplement and/or enhance student learning.