# FLORIDA ATLANTIC UNIVERSITY

Current Course

## **COURSE CHANGE REQUEST Undergraduate Programs**

UUPC Approval <u>2/26/24</u> UFS Approval \_\_\_\_\_ SCNS Submittal Confirmed \_\_\_\_\_ Banner Posted \_\_\_\_\_ Catalog \_\_

**Department** Mathematics and Statistics

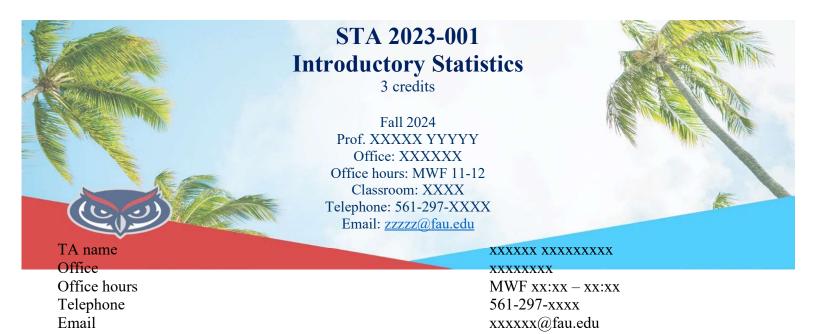
College Science

that may be affected by the Change title to:	e cnanges; attach aoc		Change description to:		
			details. See <u>Template</u> . Please consult o	and list departments	
Prefix and Number	STA2023	Introductory Statistics			
Carrera Course	OT 4 0000	Carrent Co			

**Current Course Title** 

Syllabus must be attached for ANY changes to current course	details. See <u>Template</u> . Please consult and list departments	
that may be affected by the changes; attach documentation.  Change title to:	Change description to:	
Change prefix From: To: Change course number From: To:	In this course students will utilize descriptive and inferential statistical methods in contextual situations, using technology as appropriate. The course is designed to increase problem-solving abilities and data interpretation through practical applications of statistical concepts. This course is appropriate for students in a wide range of disciplines and programs.	
Change credits*		
From: To:	Change prerequisites/minimum grades to: MAT 1033, or MAC 1105, or MGF 1130, or MAC 2233	
Change grading		
From: To:		
Change WAC/Gordon Rule status**	Change corequisites to:	
Add Remove		
Change General Education Requirements***  Add Remove  *See Definition of a Credit Hour.  **WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.	Change registration controls to:  Please list existing and new pre/corequisites, specify AND or OR	
***GE criteria must be indicated in syllabus and approval attached to this form. See <a href="Intellectual Foundations Guidelines">Intellectual Foundations Guidelines</a> ,	and include minimum passing grade (default is D-).	
Effective Term/Year for Changes: Fall / 2024	Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone Yonas Abraha / yabraha	@fau.edu	
Approved by  Department Chair  College Curriculum Chair	Date Jan 26, 2024 02 / 01 / 24	
College Dean		
UUPC Chair Korsy Jorge	2/26/24	
Undergraduate Studies Dean Dan Meeroff	2/26/24	
UFS President		
O I D I T C STCC TT C		

Email this form and syllabus to <a href="mailto:mjenning@fau.edu">mjenning@fau.edu</a> seven business days before the UUPC meeting.



## **Course Description**

In this course students will utilize descriptive and inferential statistical methods in contextual situations, using technology as appropriate. The course is designed to increase problem-solving abilities and data interpretation through practical applications of statistical concepts. This course is appropriate for students in a wide range of disciplines and programs.

#### **Textbook**

Elementary Statistics Using My-Lab Access w/E-text Pearson Triola 14th ed., ISBN for the access as less 0.790128168500. Access will be via Convert.

ISBN for the access codes: 9780138168599. Access will be via Canvas.

Note: Purchase required. Only the online access code is required.

#### **Instructional Method**

Fully On-site or Fully On-line modes.

## **Prerequisites/Corequisites**

• MAT 1033 or MAC 1105 or MGF 1130 or MAC 2233 (grade of C or better in any)

## **Course Objectives/Student Learning Outcomes**

- Students will visualize and summarize data using descriptive statistics.
- Students will apply basic probability concepts to draw reasonable conclusions.
- Students will employ concepts of random variables, sampling distributions, and central limit theorem to analyze and interpret representations of data.
- Students will choose an appropriate method of inferential statistics, including confidence intervals and hypothesis testing, to make decisions about a population based on sample data.
- Students will model linear relationships between quantitative variables using correlation and linear regression.

#### **Course Evaluation Method**

•	Homework	20%
•	Quizzes	20%
•	Exam 1	15%
•	Exam 2	15%
•	Exam 3	15%
•	Final Exam	15%

### **Course Grading Scale**

A: 90-100	A-: 87-89	B+: 84-86	B: 80-83	B-: 77-79	C+: 74-76
C: 70-73	C-: 67-69	D+: 64-66	D: 60-63	D-: 57-59	F: 0-56

# Policy on Makeup Tests, Late Work, and Incompletes (if applicable) Late Assignment Policy:

I do not accept late homework submissions for credit. Technological problems are not a valid reason for late work. I suggest that you start early so that if there is a technical glitch, we can come up with a solution to work around it.

#### **Make-up Policy for Exams:**

Please note that you must have a genuine and valid reason for missing or taking a test at a later time. This could be something like surgery (with a doctor's note) or proof of jury duty. An excuse such as "I had a headache," or "my boss wanted me to work an extra shift" is unacceptable. The exam schedule is given. Valid reasons for missing the test must be given in advance. If a student misses a quiz or an exam due to an emergency, such as a car accident or illness, the instructor must be notified WITHIN 24 HOURS after the quiz or exam, and written verifiable documentation is required. Not following this rule means that I don't have to reschedule a test for you.

#### Withdrawals and Incomplete Policy:

Students are responsible for withdrawing themselves from this course if that is what their personal situation requires. The instructor makes no promise either implicit or explicit to withdraw students from the course. Students who wish to drop from the course, should do so before the official university deadlines. **Friday**, **XX XX, XXXX** (last day to drop with a "W")

Incompletes are discouraged. They will be given ONLY when extraordinary events intervene to prevent the completion of the course. A student who is passing a course but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete ("I"). The assignment of the "I" grade is at the discretion of the instructor but is allowed only if the student is passing the course.

## **Attendance Policy**

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

## Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <a href="http://www.fau.edu/counseling/">http://www.fau.edu/counseling/</a>

## **Disability Policy**

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at <a href="www.fau.edu/sas/">www.fau.edu/sas/</a>.

## **Code of Academic Integrity**

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see <u>University Regulation 4.001</u>.

## **Course Topical Outline**

- Week-1
  - 1-1 Statistical and Critical Thinking
  - 1-2 Types of Data
- Week- 2
  - 2-2 Histograms
  - 2-4 Scatterplots, Correlation, and Regression
- Week- 3
  - 3-1 Measures of Center
  - 3-2 Measures of Variation
- Week -4
  - 3-3 Measures of Relative Standing and Boxplots
  - 4-1 Basic Concepts of Probability
- Week-5
  - 5-1 Probability Distributions
  - 5-2 Binomial Probability Distributions
- Week-6
  - 6-1 The Standard Normal Distribution
  - 6-2 Real Applications of Normal Distributions
- Week-7
  - 6-4 The Central Limit Theorem
- Week-8
  - 7-2 Estimating a Population Mean
- Week-9
  - 8-3 Testing a Claim About a Mean
- Week-10
  - 9-2 Two Means: Independent Samples
- Week-11
  - 10-1 Correlation
  - 10-2 Regression
- Week-12
  - 10-3 Prediction Intervals and Variation
- Week-13
  - 10-4 Multiple Regression
- Week-13
  - Review and Catch up
- Week-15
  - Final Exam Period

## Math and Quantitative Reasoning Syllabus Description

## Intellectual Foundation (General Education) Program Outcomes.

Mathematics is a peculiarly human endeavor that attempts to organize our experience in a quantitative fashion. It aids and supplements our intuitions about the physical universe and about human behavior. The Mathematics and Quantitative Reasoning requirement is intended to give students an appreciation of mathematics and prepare them to think precisely and critically about quantitative problems.

Students who satisfy the Mathematics and Quantitative Reasoning requirement will be able to:

- Identify and explain mathematical theories and their applications.
- Determine and apply appropriate mathematical and/or computational models and methods in problem solving.
- Display quantitative literacy.