



# STA 2023: Statistical Methods

## Summer 2024, CRN 52004 (3 credits)

**In-person class start-end:** Jun 24, 2024 - Aug 02, 2024

**Meeting Times:** MWF 03:30 pm - 05:50 pm Lutgert Hall 2201

**Instructor:** Faysal A Chowdhury, Ph.D., Assistant Professor, CAS, Dept of Mathematics.

**Office/email:** Seidler Hall, Room #207 ; [fchowdhury@fgcu.edu](mailto:fchowdhury@fgcu.edu)

**Office Hours:** Monday & Wednesday by an appointment from 12.00 pm to 2 pm. [Click Here!](#)

### Course Information

**Prerequisite:** ( MAT 1033 for level Undergraduate with minimum grade of C or MAC 1105 for level Undergraduate with minimum grade of C or MAC 1147 for level Undergraduate with minimum grade of C or MAC 2233 for level Undergraduate with minimum grade of C or MGF 1107 for level Undergraduate with minimum grade of C or MGF 1106 for level Undergraduate with minimum grade of C ) or ( SAT Math Score 490 or MATH SECTION score 520 ) or ACT Math 21 or ( Accuplacer Algebra Subscore 090 or Mobius Alg & Pre-Calc Readi Test 15 ) or PERT Mathematics 123 or ALEKS APPL 46

**Course Description:** Basic concepts of probability, data collection, organization and presentation, descriptive statistics, parameter estimation for normally distributed r.v., confidence intervals, hypothesis testing and regression. Emphasis will be on developing conceptual understanding, model selection, and interpretation skills. This is a general education course in mathematics being offered by the College of Arts & Sciences that meets the College-Level Mathematics Skills requirement.

### Course Learning Outcomes:

- Basic Ideas: Populations, samples, variables, parameters, statistics, random sampling, and experimentation.
- Descriptive statistics: Graphical, tabular, and numerical summaries of data.
- Relationships between two quantitative variables: Scatter plots, correlation, and regression: association, the correlation coefficient, least squares regression for modeling bivariate data to make prediction.
- Probability and Distribution: Probability, random variables, distributions, sampling distributions, the binomial (discrete distribution) and normal distributions (continuous distribution).
- Inference for one parameter: Confidence intervals and hypothesis tests for one mean or one proportion based on a single sample.
- Inference for two parameters: Confidence intervals and hypothesis tests for the difference between two means or proportions based on independent or paired samples.

**Websites:** Canvas will be used for handouts, links to useful Website, reminders and announcements, grades, etc.

**Textbook:** Elementary Statistics (Picturing the World) 8th edition by Larson and Farber, Textbook ISBN 9780137493227

**General class structure:** The class will be a mixture of lecture, individual work, class works, quizzes and group works. Students may often work in small groups while in class. You are more than welcome to ask questions in class. Also, you may sometimes be asked to explain your solutions. Group work is intended to help you master ideas and techniques. You should write your solutions legibly in a clear, connected manner. In most circumstances, writing down only the final answer is not good practice, and will not be of much use to you when you look back on it.

**My teaching philosophy/expectations:** As an instructor of the course, here are some of my expectations:

- The textbook prescribed are meant to read regularly, not just to buy. According to the course syllabus, I will cover almost all of the sections, but not all materials in the textbook. Students are expected to read the text and learn material not explicitly covered in the class lectures.
- You have to work hard to earn the grade you want. There is no alternative other than a consistent hard work throughout the course.
- I expect you will attend regular class, and participate active class discussion/conversation. It's your responsibility to grab the ideas and implement those in practice. You are more than welcome to ask questions in class or come to my office hours for help/discussion.
- Homework is meant to provide practice in preparing for exams, not just as a grade booster. I expect you will finish all HWs by due time.
- At the college level, the student is responsible for his/her own education. I do my best to present the material as simple as possible with practical applications.
- Lack of attendance, poor study habits, and last-minute” studying are sure ways of failing my class.
- If you put effort into learning the material, I am certain that it would help pass my class and leave with a more educated and savvy perspective about the world and the subject.
- At the college level, the student is responsible for managing his/her own time according to the subject to excel in the class. If he/she just attends the class and expects to excel in the course, then that is a fallacy. The student has to spend time outside the class to learn, revise, review, and understand the material discussed in the class to excel in the subject.
- I expect you in my office or through the online platform such as Zoom/MS-Team. Should you need any kind of help regarding lectures/HWs/exams etc, don't hesitate to communicate with me.

## Required Materials

1. TI-83/84 graphing calculator. Calculators may be available for check out from the FGCU library. You can also purchase them used from various retailers. You should have access to your calculator every class.
2. My Math Lab (MML) student access code. You will have access to the course text as an e-text through MML. When you register your MyMathLab account, make sure your name matches your exact name as it shows in Canvas. There are two options for gaining access to MML:

Your option to have your MyMathLab account for the entire semester:

- Option 1: Go to Canvas → Modules → Course Resources → Pearson MyLab and Mastering. Click any link on the page. Follow the directions to register and purchase an access code.
- Option 2: Purchase an access code from the FGCU bookstore (18-week Access Card, Author: Larson, Title: Elementary Statistics, Edition: 8th, ISBN 9780137493227). Then, go to Canvas → Modules → Course Resources → Pearson MyLab and Mastering. Click any link on the page. Follow the directions to register and input your access code.
- Temporary Access Code: If you cannot purchase an access code within the first week of class, go to Canvas → Modules→Course Resources→Pearson MyLab and Mastering. Click any link on the page. Follow the directions to register and select the option for a temporary access code. After two weeks, you will need to input an access code that you purchased using one of the above options to continue using MyMathLab.

Note: There may be differences in price for different options. **YOU DO NOT NEED A COURSE ID.** If you are asked to input one you are on the wrong website. Also, **you don't need a hard copy of the textbook.** I hope e-book version (on MyLab) will be enough for your reading unless you have preference on hard copy of the textbook.

## Assessments

**Attendance & class participation:** You are required to attend classes regularly and attendance is a part of class participation grade. Also, **attendance assignment (will be counted as a quiz), Federal Financial Aid Requirement:** As of fall 2015, all faculty members are required to confirm a student's attendance for each course by the end of the first week of classes. Failure to do so will result in a delay in the disbursement of your financial aid. The confirmation of attendance is required for all students, not only those receiving financial aid. This confirmation will be done through Canvas using an assignment called "Attendance Assignment" and will be due on 06/28 Friday at 11:59 pm.

**Homework:** You will have online homework to complete on MyLab as described above.

**Quizzes:** There will be at least two quizzes (on MyLab) before each test. Quizzes are important in that they encourage you to not fall behind and help you retain what you have learned for a longer time. They will be based predominantly on homework exercises, along with concepts

covered in class. The quizzes will be on MyLab platform.

**Tests:** There will be three in class tests during the semester; the tentative dates are given in page-6. **Tests will be taken on campus and along with regular class time with 60 minutes duration, which will be from the beginning of a class.** Dates are subject to change with notice. Make-ups are not automatically granted; see General Policies for details. If you have an unexpected reason for missing class or quizzes or exam, please contact me ASAP.

**Final Exam:** Final exam will be a comprehensive exam and it is mandatory for all. Exam schedule is on August 2nd, Friday during class time and in classroom.

**Grading - Points Distribution:**

Attendance and participation	5%
Homework	10%
Quizzes and class work	15%
Three Tests	50%
Comprehensive Final Exam	20%

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Total	100%
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**Grading - Policies:**

- Letter grades will be based on the total percentage of points earned during the semester. The expected curve for course letter grades will be as follows: A(90-100%), B+(86-89%), B(80-85%), C+(76-79%), C(70-75%), D(60-69%), and F(0-59%).
- To pass the class with a C or better, you must earn a minimum of a C on at least one of your test/exam scores.

**Attendance Policies:** You are expected to attend every class and are responsible for all information given out during class. This course requires your full effort, so it is expected that you will give your complete attention to the instructor for the full class period. Summer classes are longer in duration, so there will be a **10-minutes** break between two session of a regular class period. Attendance will be taken in both session. *Activities such as sleeping, reading, listening to headsets, operating unapproved electronics (e.g., cell phones, computers, PDA, etc.), conversing with other students, and so on do not constitute class participation and will be noted as an absent. Please turn off all unapproved electronics during class periods. Students engaging in such behavior during the lecture may be asked to leave the class and will be marked absent for the day.* Come prepared for class: bring with you all of your notes (even those for prior chapters), extra notebook paper, pencils, erasers, and your calculator. A backup calculator and/or backup batteries are recommended for exam days. If you are absent and miss an announcement, assignment, a lesson plan change, or some handout, you are responsible for seeking out that information from a classmate. Office hours will not be used to re-teach a lesson missed due to student absence. But still you could ask for further clarification or help to understand the concept.

**Should you come 5 minutes late after the class start, you may be marked absent for the day.**

An authorized absence is absent due to participation in a sponsored activity approved in advance by the program director and the appropriate student affairs officer. Such an absence

permits the student to make up the work missed when practical or given a special allowance so that he/she is not penalized for the absence.

An **excused absence** is absent due to other causes, such as illness, family emergency, death in the family, or religious holiday. A student seeking an excused absence should obtain documentation such as a physician's statement, accident report, or obituary and contact all instructors or the Dean of Student Affairs Office. Valid documentation does NOT include notes from your parents, roommate, etc. If you are seen at Student Health Services, be sure to obtain a walkout statement to be used as valid documentation. Without a valid documentation, missing class may be penalized.

Although students are graded on intellectual effort and performance rather than attendance, absences from a course meeting, excused or otherwise, may result in a lower grade. Only students registered for this course and this section may attend class meetings without the instructor's advance permission. If you miss an assignment due solely to authorized or excused absences, you must bring documentation to your lecture instructor during office hours. If make-up is allowed (except for the final exam), it should be completed within a week from the end of the excused time period or by the last day of classes, whichever is earlier; otherwise, zero will be given as a credit for that assignment. If you miss many classes or assignments — whether as a result of authorized, excused, or unexcused absences — you may need to withdraw from the course.

If you miss an in-class exam/classwork with a 'legitimate reason', you need to submit documentation on CANVAS and make it up during regular office hours. **There will be 5% points for attendance. About 2% [meaning 40 points out of 100] will be deducted for each day of recorded missing class; about 1% [meaning 20 points out of 100] will be deducted for missing a session of a regular day of class.** Only university authorized/approved & documented excuses will be exempted. For requesting absence (authorized or excused), [visit here](#).

**Tutoring:** Free tutoring is available through the Department of Mathematics weekdays in Wilson Bradshaw Library East Wing, ground floor or via Zoom; the schedule is available at <https://www.fgcu.edu/cas/departments/math/MDTC>. Additional free support (such as testing strategies, study techniques, etc.) may be available through the Center for Academic Achievement (CAA), <http://www.fgcu.edu/CAA>.

**Adaptive Service:** Adaptive Services provides accommodations and services for students registered with their office. If you are a prospective student, please email at [adaptive@fgcu.edu](mailto:adaptive@fgcu.edu), or call at 239-590-7956 if you have any questions about the program. Note that adaptive service require at least 5 business days to schedule an exam with applicable extended time limit. Should you need their service for scheduling exam, you need to schedule for it at there place 5 business days prior the exam date. For details, [click here](#).

## General Policies

**Classroom & Exam Etiquette.** Please turn your cell phones, iPod, and all other electronic devices off while you are in class. If you need to use the restroom or get a drink of water during class, you may get up quietly and do so. **Do not leave early without my permission or**

**otherwise you will be marked absent.** During any exam time, students must put cell phone and any other electronic devices in their bag or instructor desk until the exam is over. Please be respectful to your classmates and be present in class few minutes early if possible.

**Make-ups.** Make-up tests are not automatically given, and require appropriate official written documentation for consideration, and (when possible) advanced permission from the instructor. Events for extracurricular clubs are generally not acceptable absences. Make-ups are not given for the Final Exam unless there is sufficient, and documented, reason to give an incomplete (I) for the course. If you miss a lot of classes, authorized or not, you may need to withdraw from the course.

**Grade Disputes.** If students have a dispute with a grade recorded by the instructor, the student must present the graded assignment to the instructor to obtain a change of score. It will be the student's responsibility to keep all of the returned assignments. Scores will NOT be changed without the original assignment being presented to the instructor.

**Electronics.** Cell phones and similar devices must be silenced during class. Only note-taking on tablets or laptops are allowed. **Texting, phone calls, gaming, listening music, talking to classmates etc. are not permitted in class.** Unauthorized use of electronic devices may result in the student being asked to leave the class room, and will be absent for the day.

## Core Syllabus Policies

FGCU has a set of central policies related to student recording class sessions, academic integrity and grievances, student accessibility services, academic disruption, and religious observances that apply to all courses at FGCU. Be sure to review these online at: [\*\*Core Syllabus Policy Statements.\*\*](#)

## Academic Behavior Standards and Academic Dishonesty

All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the Student Code of Conduct and Policies and Procedures sections. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at [Here](#).

## Tentative lesson plans and topics

Day	Topics
June 24-July 3	Brief Chapt 1, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 4.1, 4.2
July 3	<b>Test-1 based on chapter 1, 2, 3, and 4</b>
July 5- July 15	Section 5.1, 5.2, 5.3, 5.4, 6.1, 6.2, 6.3
July 15	<b>Test-2 based on chapter 5 and 6</b>
July 17- July 26	Section 7.1, 7.2, 7.3, 7.4, 8.2, 8.3, 8.4, 9.1, 9.2
July 26	<b>Test-3 based on chapter 7 and 8</b>
July 29	Final exam review
July 31st	<b>Final exam during class time (in class)</b>

**Note:** Exam dates and topics subject to change with prior notice in class. Final exam is comprehensive and mandatory for all, the date and time is also subject to change with prior notice in class. Also, no make up for a missing final exam.

### Important Dates: Summer 2024 (Session B)

- First day of class: Monday, June 24th, 2024.
- Add/Drop a course: Wednesday, June 26th, 2024.
- Test-1 day along with regular class: July 3rd, 2024.
- Test-2 day along with regular class: July 15th, 2024.
- Test-3 day along with regular class: July 26th, 2024.
- Comprehensive Final exam: July 31st, 2024.
- Last day of Summer B term and Final exam paper review: Friday, August 2nd, 2024

## **Acknowledgement**

This STA 2023-CRN 52004 syllabus & class policy may be subject to change at the instructor's discretion. Any changes, including test dates, due dates, assignments, etc., will be announced in class and on CANVAS/email. The students are responsible for getting the update & notes from the class if absent.

I have read the syllabus & class policy; I acknowledge any change or adjustment that might be necessary as time demands. I will sincerely follow the syllabus & policy.

Name (PRINT): \_\_\_\_\_

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Please sign this page and upload it on Attendance Verification Quiz on CANVAS.