



STA 2023 Syllabus

Miami Dade College – North Campus

SUMMER 2021

Course Syllabus - Please note that the instructor reserves the right to modify the course syllabus as he/she deems necessary to address unforeseeable circumstances.

Course Title: Statistical Methods
Course Number: STA 2023
Class Number: 4797
Schedule: T/Th – 6:40 – 10:00
Term: Summer 2021

Catalog Description	Collecting, grouping and presenting data; measures of central tendency and dispersion; probability; testing hypotheses; confidence intervals, and correlation.
Prerequisites	MAT 1033 or MGF 1106 or equivalent with a grade of “C” or better.
Credit Hours	3 Credits
Instructor’s Name	Mario Desrosiers
Instructor’s Email Address	mdesrosi@mdc.edu
Instructor’s Office Location	Blackboard Collaborate (Virtual Room).
Instructor Office Hours	5:30 – 6:30 T/Th
Remote Learning Course Link	Virtual Room Link on Blackboard Collaborate Ultra. https://us.bbcollab.com/guest/70dcf1e3320245c4be43b7381f8d39ba
Textbook Title, Edition and Author	<i>Elementary Statistics, 13th Edition, by Mario F. Triola, Addison Wesley.</i>
Class Times	Synchronous
Instructional Method	Lecture
Class Policy	Students are expected to keep their microphones off in case they are not talking to minimize surround noise. Mobile phones should be silenced during our synchronous meetings.
Attendance Policy	Attendance and punctuality to class is mandatory. Class will meet online (Remotely on Blackboard). Late arrivals and early leaves are supposed to be only on breaks of the session to eliminate disruptions. Students with 3 or more unexcused absences

	<p><u>may be withdrawn</u> by the instructor. Students are still responsible for withdrawing themselves if they want to receive a “W”. Absences, lateness, illnesses, emergencies, failure to submit an assignment, exam, class participation, or posting/discussion board may result to a withdrawal.</p>
Grading Policy	<p>There are five possible grades in this course: ‘A’, ‘B’, ‘C’, ‘D’ or ‘F’.</p> <ul style="list-style-type: none"> • A grade of ‘A’ or ‘B’ or ‘C’ promotes the student to the next course. • A grade of ‘D’ or ‘F’ means the student must repeat the course. • A grade of ‘F’ will adversely affect your GPA, so be careful!
Academic Dishonesty Policy	<p>Students may be penalized on an assignment grade or receive a “F” in the overall grade in the course if they cheat. Please refer to the <i>Student Rights and Responsibilities Handbook</i> for the official Academic Dishonesty Policy. https://www.mdc.edu/procedures/Chapter4/4035.pdf</p>
<u>ADA</u>	<p>In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to reasonable accommodations. Please notify the instructor during the first week of class of any accommodation needed for this course. Also contact the ACCESS Services Department at (305) 237-1272 or visit Room 6112 or their webpage at: http://www.mdc.edu/north/accessservices/</p>
Make-Up Policy	<p>Make-up tests will be at the discretion of the instructor.</p>
Course Requirements	<ul style="list-style-type: none"> • Computer with audio/video capability and internet access • Graphing calculator TI 83/84 Plus
Online Assignment	<p>You will need to purchase an Access Code in order to access your online assignments and exams. To access online homework, use the link on Blackboard Collaborate</p>
Math Center (Online)	<p>https://us.bbcollab.com/collab/ui/session/guest/73dcd2cc5ffb45c5a2d77760f6dd70db</p>
Technical Support for online platform	<p>For MyMathLab go to: http://www.mymathlab.com/student-support for live CHAT email, or phone support. To resolve MyMathLab enrollment issues, please contact Dr. Ibrahim Abusieba email: aibrahim@mdc.edu phone: 786-390-9010</p>
Withdrawal Dates	<p>Last day to drop with full Refund: May 12 Last day to drop with a grade of W: June 4. *Students are expected to initiate the withdrawal process.</p>
Chairperson of the Dept. Of Math	<p>Dr. Claudia Bonilla: cbonill2@mdc.edu / T: 305-237-1144</p>

Course Evaluation/Grading Policy/Grading Scale/Assessment Methodizing

Grade Weights by Category

Category of Assignments	Percentage
Homework Assignments	20%
Test # 1	20%
Test # 2	20%
Test # 3	20%
Test # 4	20%
TOTAL:	100%

Grading Scale

Average Score	Grade
90% – 100%	A
80% – 89%	B
70% – 79%	C
60% – 69%	D
Below 60%	F

Learning Outcomes:

1. Construct a frequency distribution, which also shows cumulative and relative frequencies
2. Construct a histogram
3. Construct and interpret stem-and-leaf plots
4. Compute measures of central tendency
5. Compute measures of dispersion
6. Find the percentile of a score or find the score corresponding to a percentile
7. Construct a box-and-whisker diagram
8. Use various counting rules, including the Multiplication Rule, Permutations and Combinations
9. Know the meanings of sample space, outcome, event, classical vs. empirical probability
10. Compute probabilities of simple events, complement probabilities, and odds
11. Apply the addition rules of probability
12. Apply the multiplication rules of probability
13. Compute conditional probabilities
14. Understand the meaning of a probability distribution and be able to construct discrete probability distributions
15. Compute the mean & variance of a probability distribution
16. Find the expected value of a discrete probability distribution
17. Compute probabilities using the binomial probability distribution
18. Apply the empirical rule for normally distributed data
19. Calculate z-scores and find probabilities for normally distributed data
20. Compute the mean of the sampling distribution of the means or proportions
21. Apply the Central Limit Theorem
22. Apply the normal approximation to the binomial distribution
23. Construct confidence intervals for proportions

24. Construct confidence intervals for a mean (Known or Not known)
25. Perform hypothesis tests for proportions
26. Perform hypothesis tests for means (Known or Not known)
27. Perform hypothesis tests for variances or standard deviations (OPTIONAL)
28. Compute the p-value associated with a hypothesis test
29. Understand the relationship between a confidence interval and a two-tail hypothesis test.
30. Perform hypothesis tests for the difference between two means (independent samples)
31. Perform hypothesis tests for the difference between two means (small, dependent samples: Matched Pairs.)
32. Perform hypothesis tests for the difference between two proportions
33. Construct a scatter-plot for paired data
34. Compute and understand the meaning of the linear correlation coefficient
35. Determine the linear regression equation for paired data
36. Be able to graph a linear regression equation and use it to make predictions

TENTATIVE SCHEDULE	
Dates	Sections Covered
Week 1	Introduction - Syllabus Chapter 1: Statistical Thinking (1.1) Types of Data (1.2)
	Collecting Sample Data (1.3) Chapter 2: Frequency Distributions (2.1) Visualizing Data – Histograms (2.2)
Week 2	Chapter 3: Measures of Center (3.1) Measures of Variation (3.2)
	Measures of Relative Standing (3.3) Review for test # 1 Test # 1 Available on Blackboard
Week 3	Chapter 4: Basic Concepts of Probability (4.1); The Addition Rule and the Multiplication Rule (4.2) Complements and Conditional Probability (4.3)
	Chapter 5: Probability distributions (5.1) Binomial probability distributions (5.2) Review for test # 2 Test # 2 is available on Blackboard
Week 4	Chapter 6: The standard normal distribution (6.1) Applications of normal distributions (6.2) Central Limit theorem (6.4)
	Chapter 7: Estimating population proportion (7.1) Estimating population mean (7.2). Review for test # 3 TEST # 3 is available on Blackboard
Week 5	Chapter 8: Basics of hypothesis testing (8.1) Testing claims about proportion (8.2)
	Testing claims about mean σ known, σ not known (8.3). Chapter 10: Correlation (10.1) Regression (10.2)
Week 6	Review for test # 4 Test # 4 is available on Blackboard
	TEST # 4 IS DUE

NOTE: Your instructor reserves the right to amend the schedule in this syllabus as needed.

Collegewide Student Learning Outcomes

Purpose: Through the academic disciplines and co-curricular activities, General Education provides multiple, varied, and intentional learning experiences to facilitate the acquisition of fundamental knowledge and skills and the development of attitudes that foster effective citizenship and life-long learning.

As graduates of Miami Dade College, students will be able to:

- 1. Communicate effectively using listening, speaking, reading, and writing skills.** Professor will address this outcome through all assessments described in the syllabus.
- 2. Use quantitative analytical skills to evaluate and process numerical data.** In this course students will need to read and identify data from graphs and charts. Students will also learn to develop quantitative skills to interpret data from graphs. Also, students will solve algebraic equations and inequalities and manipulate data through unit analysis.
- 3. Solve problems using critical and creative thinking and scientific reasoning.** In the process of solving mathematical problems, students will need to use critical thinking skills to interpret solutions. Creativity in solving problems is constantly encouraged in this course and viewed as an important skill in mathematics. Critical skills are heavily emphasized in this course.
- 4. Formulate strategies to locate, evaluate, and apply information.**
In this course students will often need to solve real-life word problems which apply the mathematical concepts presented. Students will work to solve these problems and identify relevant information in the problems in order to be able to solve them.
- 5. Demonstrate knowledge of diverse cultures, including global and historical perspectives.**
In this course, whenever possible, students will be introduced to the use of mathematics through diverse cultures as well as historical notes on the mathematical concepts you learn.
- 6. Create strategies that can be used to fulfill personal, civic, and social responsibilities.** This outcome is not reinforced in this course.
- 7. Demonstrate knowledge of ethical thinking and its application to issues in society.** This outcome is not reinforced in this course.
- 8. Use computer and emerging technologies effectively.** In this course students will be frequently informed about their progress in the course via email.
- 9. Demonstrate an appreciation for aesthetics and creative activities.**
This outcome is not reinforced in this course.
- 10. Describe how natural systems function and recognize the impact of humans on the environment.** This outcome is not reinforced in this course.

<https://www.mdc.edu/learningoutcomes/>

Academic Resources

Ask a Librarian

Need more research help? The Florida Electronic Library connects you to librarians across the State of Florida.

[Chat](#) | [Email](#) | [Text](#)

Library Catalog Search

<http://www.mdc.edu/learning-resources/>

Online Library Guides (LibGuides by Subject)

<http://libraryguides.mdc.edu/>

Research Tools and Services

<http://www.mdc.edu/learning-resources/research-tools-services/>

Students are invited to visit the professor during office/advisement hours. Additional support is available in the Math Resource Center

Mathematics Resource Center

► The Mathematics Resource Center is made available online to provide MDC mathematics students free tutoring assistance.

To access our virtual space, please visit us at:

<https://us.bbcollab.com/collab/ui/session/guest/73dcd2cc5ffb45c5a2d77760f6dd70db>

Phone: 305-237-1457 | 305-237-1421 | **Contact Person:** Carl Louis

Math Center Online Hours of Operation

Monday – Thursday: 8:00 AM – 9:00 PM

Friday: 8:00 AM – 5:00 PM

Saturday: 8:00 AM – 1:00 PM

MyMathLab

MyMathLab is an interactive website where you can:

- Self-test & work through practice exercises with step-by-step help to improve your math skills.
- Study more efficiently with a personalized study plan and exercises that match your book.
- Get help when YOU need it. MyMathLab includes multimedia learning aids, videos, animations, and live tutorial help.

Before You Begin:

To register for MyMathLab, you need:

- A MyMathLab student access code (packaged with your new text, standalone at your bookstore, or available for purchase with a major credit card at www.pearsonmylab.com)
- Your instructors' Course ID: _____
- A valid email addresses

Student Registration:

- Enter www.pearsonmylab.com in your web browser.
- Under Register, click Student, then click Register Now.
- Enter your Course ID exactly as provided by your instructor and click Continue. Your course information will appear on the right side of the next screen. If it does not look correct, contact your instructor to verify the Course ID.
- If you already have an account, including an established login name and password, use the "Log In" box on the left.
- Note: You already have a Pearson Account if you have previously used any My...Lab, My...Kit, Mastering, or Course Compass course, such as MyMathLab, MyITLab, MyReadingLab, MyWritingLab, MySpanishLab, MyCriminalScienceLab, MasteringA&P, MyPhotographyKit, etc. or any Course Compass course.
- If you do not have an account and this is the first time you have registered for a Pearson online product, "Create an Account" using that box (in the middle of the page). Use an email address that you check, preferably your MDC student e-mail, and use that same entire e-mail address as your username. Read and accept the License Agreement and Privacy Policy.
- If you are NOT SURE, click "Forgot User Name and Password", using the e-mail that you used to create your account the first time. You will receive an email with your login name and password for any pre-existing accounts.
- Click Access Code. Enter your Access Code in the boxes and click Next. If you do not have an access code and want to pay by credit card or PayPal, select the access level you want and follow the instructions. ***

Once your registration is complete, a Confirmation page appears. You will also receive this information by email. Make sure you print the Confirmation page as your receipt. Remember your password. (By using your MDC e-mail as your user name, you will only need to remember your password). You are now ready to access your resources!

Signing In:

- Go to www.pearsonmylab.com and click Sign in.
- Enter your username and password and click Sign In.
- On the left, click the name of your course.

The first time you enter your course from your own computer and anytime you use a new computer, click the Installation Wizard or Browser Check on the Announcements page. After completing the installation process and closing the wizard, you will be on your course home page and ready to explore your MyMathLab resources!

Need help?

Contact Product Support at <http://www.mymathlab.com/student-support> for live CHAT, email, or phone support.

MyMathLab

Temporary Access

*** Students may get temporary access without payment by creating one (and only one) 14-day free account on or before the registration deadline, when registering for their course in MyMathLab. Look at the very bottom of the webpage for the link.

Once the deadline expires (14 days after the term begins) students must purchase an Access Code, either online or at the bookstore; registration is locked, and can only be re-opened with special permission from the MyMathLab coordinator. Call the Math Department at 305-237-1358.

Remote Learning Resources:

1. Student Support for Remote Learning: <https://libraryguides.mdc.edu/remotestudents>
2. Blackboard: <https://mdc.blackboard.com/>

Student and Campus Resources

- Student Portal: <https://my.mdc.edu/>
- Admissions and Registration: <https://www.mdc.edu/about/contact/admissions.aspx>
- Academic and Career Advisement: <https://www.mdc.edu/north/advisement/>
- ACCESS Disability Services: <https://www.mdc.edu/access/>
- Student Life: <https://www.mdc.edu/north/student-life.aspx>
- TRIO Student Support Services: <https://www.mdc.edu/north/trio/>
- Singlestop- One Stop Source for Students: <https://www.mdc.edu/main/singlestop/>
- Learning resources: <https://www.mdc.edu/learning-resources/>
- The Writing Center: https://www.mdc.edu/north/english/english_support_center.asp

Other

- Statement about your teaching/learning philosophy
- Supplementary material to help students succeed (tutorials, web resources)
- Provide space for 2 - 3 class members' names, telephone, email to contact if they miss class
- Contract & signature
- Your suggestions for success
- What you expect of students and what they can expect from you