
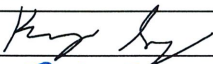



 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Undergraduate Programs		UUPC Approval <u>11/6/23</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Mathematical Sciences College Science		
Current Course Prefix and Number MGF 1107	Current Course Title Math for Liberal Arts 2		
<i>Syllabus must be attached for ANY changes to current course details. See Template. Please consult and list departments that may be affected by the changes; attach documentation.</i>			
Change title to: Mathematical Thinking in Context II Change prefix From: _____ To: _____ Change course number From: 1107 To: 1131 Change credits* From: _____ To: _____ Change grading From: _____ To: _____ Change WAC/Gordon Rule status** Add <input type="checkbox"/> Remove <input type="checkbox"/> Change General Education Requirements*** Add <input type="checkbox"/> Remove <input type="checkbox"/> <small>*See Definition of a Credit Hour. **WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines. ***GE criteria must be indicated in syllabus and approval attached to this form. See Intellectual Foundations Guidelines.</small>		Change description to: Through this course, students will experience the practicality of mathematics in a global society. Students will engage in an applications of tools and techniques of mathematics in a variety of contextual situations from everyday life. The course is appropriate for students in a wide range of discipline/ programs. Change prerequisites/minimum grades to: Change corequisites to: Change registration controls to: Please list existing and new pre/corequisites, specify AND or OR 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 Papiya Bhattacharjee, pbhattacharjee@fau.edu, 7-3340			
Approved by Department Chair <u></u> College Curriculum Chair <u></u> College Dean <u></u> UUPC Chair <u></u> Undergraduate Studies Dean <u></u> UFS President _____ Provost _____		Date 10/19/2023 10/25/23 <u>10/25/23</u> <u>11/6/23</u> <u>11/6/23</u>	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.



MGF 1131 Mathematical Thinking in Context II

3 credits

Fall 2024

Dr. Papiya Bhattacharjee

Office: SE 248

Office hours: TBA

Classroom: TBA

Email: pbhattacharjee@fau.edu



Course Description

Through this course, students will experience the practicality of mathematics in a global society. Students will engage in an applications of tools and techniques of mathematics in a variety of contextual situations from everyday life. The course is appropriate for students in a wide range of discipline/programs.

Instructional Method

In-Person. There is no remote option for this course.

Prerequisites

None.

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:

- SLO 1 - Identify and explain mathematical models and their applications.
- SLO 2 - Determine and apply appropriate mathematical and/or computational models and methods in problem solving.
- SLO 3 - Display quantitative literacy.

Course Objectives

1. Apply mathematical models to civically contextual situations (e.g., stocks, finance, voting, population dynamics, etc.). (SLO 1, 2 & 3)
2. Organize, visualize and model data in a meaningful way. (SLO 2 & 3)
3. Analyze and interpret representations of data to draw reasonable conclusions. (SLO 3)
4. Engage in ways of thinking that may involve sample size, counting strategies, chance, ratios and proportions. (SLO 2 & 3)

Gordon Rule, Computational

This course satisfies the Gordon Rule, Computational requirements. Computational skills will be developed and assessed throughout the entire course by worked examples provided during lectures, and homework and exam questions, that require calculation of mathematical quantities by hand or with the aid of calculator.

Course Evaluation Method

Assessment Policies:

Category	Percentage
Homework	20%
6 Quizzes	20%
6 Tests (Top 5 scored)	60%

All grades will be posted in the Canvas gradebook.

1. Homework, Quizzes, and Tests will be completed online through Canvas. These assignments should be opened through the links in the course modules. All due dates for homework assignments and quizzes are posted on Canvas.
2. The free textbook for the class is available on Canvas through the “Textbook - Access” page near the top of the Canvas course homepage. At the beginning of each chapter’s assignments is the chapter from the book corresponding to those assignments.
3. The Homework portion of the grade will be calculated as the average of all homework assignment scores. Homework assignments may be worked on until their due date and each question has unlimited attempts with no penalty for wrong answers. It is the responsibility of the student to know when each homework assignment is due. Homework not attempted by the due date will receive a grade of zero. Computer, internet, or Canvas trouble are not excuses for not being able to complete a homework assignment by their due date.
4. The Quiz portion of the grade will be calculated as the average of the six quiz scores. Each quiz question may be attempted a total of two times with no penalty for a wrong answer on the first attempt. Quizzes may be worked on until their due date. It is the responsibility of the student to know when each quiz is due. Quizzes not attempted by their due date will receive a grade of zero. Computer, internet, or Canvas trouble are not excuses for not being able to complete a quiz assignment.

5. The Test portion of a student’s grade will be calculated as the average of the student’s five highest test scores out of the six tests. Each test has a time limit of 50 minutes from when it is opened and each test question may be attempted a total of two times with no penalty for an incorrect answer on the first attempt. Test can be reopened during the 50 minute time limit of the test and can not be reopened after the 50 minute time period has expired. The tests are computer based and are completed on Canvas. If a password is needed, then it will be given by the instructor, and only the instructor; it is a violation for a student to share or receive a password from someone other than the course instructor. Tests that are not taken will receive a grade of grade of zero. Computer, internet, or Canvas trouble are not excuses for not being able to complete a test.
6. It is the responsibility of the student to keep up with due dates and times for the various assignments. The assignment due dates and times are available on Canvas. The student is responsible for completing each homework assignment, quiz, and test on time and during the time window it is available.
7. Students must give themselves ample time to complete assignments well before the posted due date as some assignments may take more time to complete when compared to other assignments.
8. Students must check the “Announcements” tab periodically for information regarding the class.
9. All course times are in Eastern Standard Time, that is Boca Raton, FL time zone.

Course Grading Scale

Letter Grade	Percent
A	100% - 93%
A-	<93% - 90%
B+	<90% - 87%
B	<87% - 83%
B-	<83% - 80%
C+	<80% - 77%
C	<77% - 65%
D	<65% - 55%
F	<55% - 0%

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

If a student is unable to submit an assignment on time, it is the student’s responsibility to contact the instructor and provide documentation prior to the due date of the assignment for consideration for a delayed submission. Circumstances for a delayed submission include situations that seriously disrupt and affect the health and well being of the student. Be mindful that these do not include changes in work schedules, vacations or “computer problems”. Makeup tests will be given only under circumstances which coincide with university policy. If you will miss an assignment, you must provide the instructor a written, verifiable excuse prior to the deadline in

order to make up the assignment. Documentation received by the instructor after the deadline for the assignment will only be acceptable for emergency situations. Request for a make up should be forwarded to the course instructor and documentation for a legitimate excuse must be submitted along with the request. It is up to the instructor to approve or deny make up opportunities if appropriate documentation is provided and a make-up date can be reasonably found. The decision of the instructor to approve or deny make up opportunities is the final decision. Doctor notes from immediate family members are not accepted. If a make up is approved, then the make up must be completed in reasonable amount of time determined by the instructor. If the make up is not completed within the reasonable amount of time determined by the instructor, then no make up will be provided.

Special Course Requirements

Scientific calculator.

Policy on the Recording of Lectures

Because of a new Florida Statute in 2021, the following model language is suggested for inclusion in course syllabi, at the discretion of individual faculty:

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

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 <http://www.fau.edu/counseling/>

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 www.fau.edu/sas/.

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 [University Regulation 4.001](#).

If your college has particular policies relating to cheating and plagiarism, state so here or provide a link to the full policy—but be sure the college policy does not conflict with the University Regulation.

Required Texts/Readings

Liberal Arts Textbook by R. Albert and D. Lippman, and
Elementary Algebra by L. Marecek and M. Anthony-Smith

(Both are free textbooks provided through Canvas.)

Course Topical Outline

Week 1	Syllabus 2.1 (EA) Solving Linear Equations and Inequalities: Solving Equations using the Subtraction and Addition Properties of Equalities
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	2.2 (EA) Solving Linear Equations and Inequalities: Solving Equations using the Division and Multiplication Properties of Equations
Week 2	2.3 (EA) Solving Linear Equations and Inequalities: Solving Equations with Variables Constant on Both Sides 2.4 (EA) Solving Linear Equations and Inequalities: Using a General Strategy to Solve Linear Equations
Week 3	Test 1 10.1 Percent Increase and Percent Decrease Applications: Percent Increase and Percent Decrease 10.2 Percent Increase and Percent Decrease Applications: Solve Sales Tax Applications
Week 4	10.3 Percent Increase and Percent Decrease Applications: Solve Commission Applications 10.4 Percent Increase and Percent Decrease Applications: Solve Discount Applications 10.5 Percent Increase and Percent Decrease Applications: Solve Mark-up Applications
Week 5	Test 2 9.1 Finance: Simple Interest 9.2 Finance: Compound Interest
Week 6	9.3 Finance: Annuities 9.4 Finance: Payout Annuities
Week 7	9.4 Finance: Payout Annuities 9.5 Finance: Loans
Week 8	Test 3 6.2 Probability: Counting 6.3 Probability: Basic Concepts of Probability
Week 9	6.4 Probability: Probability Using Permutations and Combinations 6.5 Probability: Complementary Events
Week 10	6.6 Probability: Odds 6.7 Probability: Probability of Two Independent Events
Week 11	6.8 Probability: Probability of A or B 6.9 Probability: Conditional Probability
Week 12	Test 4 7.1 Voting: Preference Schedules 7.2 Voting: Plurality Method
Week 13	7.3 Voting: Instant Runoff Voting 7.4 Voting: Borda Count 7.5 Copeland's Method (Pairwise Comparisons)
Week 14	Test 5 3.1 Measurements: US Units of Measurement
Week 15	3.2 Measurements: The Metric System 3.3 Measurements: Using Metric Conversions to Solve Problems Test 6

