Medgar Evers College of the City University of New York
Department of Mathematics and Computer Science
MTH 231-001 (35873): Mathematics for Elementary School Teachers
Course Information/Policy/Syllabus Spring 2025

INSTRUCTOR: Jean Marc Cadet

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I will share information with you by e-mail. I will do this under the assumption that you check your e-mail at least once a day, so please make sure you do so, whenever possible. Feel to e-mail me with any course-related questions you might have.

CLASS HOURS: Friday from 10:00 AM -12:40 PM

CLASSROOM: Acam Com1 311

COURSE DELIVERY: This class will meet in person every Friday for the Spring 2025.

OFFICE HOURS: By appointment Friday 1:00 - 2:00 PM in-person / ZOOM, WEBEX, BLACKBOARD COLLABORATE and in person.

Required Text: A Problem-Solving Approach to Mathematics for Elementary School Teachers 13th Edition Author: Billstein, Libeskind, Loft

Brightspace: I will use Brightspace to send you announcements of relevance to our course. I will also use Brightspace to post course materials and corresponding lectures (Announcements). Please make sure that your e-mail address is up to date in Brightspace. For help with Brightspace, check the Medgar Evers College support site.

Course Goals

After completing this course the successful student will be able to

1. Setup and understand how to approach real-life situations throughout the Problem-solving strategies.
2. Describe the four-steps process by Georges Polya to solve problems.
3.
4. Solve for the unknown quantity using simple or compound interest formulas, including the formulas for both present and future value.
5. Determine the unknown quantity using the future or present value of an ordinary annuity or annuity due product.
6. Calculate payment amounts, the remaining balance, and the amortization schedule of loans.
7. Solve system of linear equations using the substitution method, elimination method, and matrices.

COURSE REQUIREMENTS: There will be at least 3 quizzes, weekly Homework every class meeting from the textbook, two exams including the final exam for the Spring 2025**.**

GRADING CRITERIA: Your course grade will be determined as follows:

Quizzes 20%, Homework (Collected) 10%, class participation (Including **Attendance:** The instructor monitors attendance for financial aid certification and for his or her own information; **attendance/Class participation 10%** into your final grade, meaning a good attendance may count in your favor. If you miss a class, it is your responsibility to review the course syllabus and the course content to find out what you missed for the day and how you should catch up. **Exam1(Midterm) 15%**, **Exam2 15%, and Final Exam 30%.**

Make-up:

1. **Exams and Final**
   Unless there is an emergency circumstance there will not be any makeup for exams and Final. Reasons such as I forgot that we had a test, my work schedule did not allow me to take the test, I was out of town will not merit a make-up. No due date will be extended past the last day of the course for any reason.
   By no means will an exam be extended after the last day of class.
2. **Quizzes**
   There is no makeup quiz. If you are forced to miss an in-person quiz, I need to be notified within 48 hours. Your final exam grade will fill in for the score of any quiz you have to miss. **If you do not follow these guidelines, a score of zero will be given for the missed in-person quiz.**

3. **Withdrawal Policy:** It is the student's responsibility to initiate all withdrawals in this course. Students considering withdrawal from this course should keep in mind the possible serious consequences of doing so including probation, suspension, and loss of financial aid. It would be wise to speak to your advisor before making such a decision.

Expectations for student participation and attendance: Attendance percentage is not given to a student whom I observe leaving the class or using all kinds of distractive behavior during lectures. Please make sure to review all the assigned homework and lectures provided, to prepare personal notes of the course content, and to consider the respective homework assignments. All of these tasks should be completed prior to our next class meetings covering the corresponding course content. I strongly recommended you fully engage in class meetings. This syllabus provides only guidelines, and you will need to actively engage with the course content to be aware of what is actually being covered during each lecture.

Work Outside of Class: While attending our classes will help you in grasping the material, it will probably not be sufficient to pass the course. This means you are expected to devote approximately 135 hours to work on the course content on your own which during a 17 week-long fall semester corresponds to an average of approximately 8 hours biweekly working on the

course content of class. (This number may vary depending on how comfortable you feel with the class material.)

Classroom behavior: Disruptive classroom behavior negatively affects the classroom environment as well as the educational experience for students enrolled in the course. Any serious or continued disruption of class will result in a report to the Office of Judicial Affairs.

Final Exam: To be given by the end of the course. Information will be mailed to your Cunyfirst email. Make sure that you are able to login to your email account. The final exam will be in -person, on campus.

Please don't make travel plans before the final.

COURSE EVALUATION: Possible grades are A, A-, B+, B, B-, C+, C, C-, D, and F.
Let G be the sum of your scores on the quizzes, homework, attendance, midterm and final exam:

A will be 93--100,	A- will be 90--92,
B+ will be 87--89,	B will be 84--86,
B- Will be 80--83,	C+ will be 76--79,
C will be 70--75,	C- will be 68--69,
D will be 60--67 and	below 60 is F.

Academic Integrity
Academic dishonesty (such as plagiarism and cheating) is prohibited at Brooklyn College and is punishable by penalties, including failing grades, dismissal and expulsion. For additional information and the full policy on Academic Integrity, please consult the Brooklyn College Catalog.

Accommodations/Disabilities
Medgar Evers College respects and welcomes students of all backgrounds and abilities. In the event you encounter any barrier(s) to full participation in this course due to the impact of a disability, please contact the disability Services Office as soon as possible this semester. The disability Services specialists will meet with you to discuss the barriers you are experiencing and explain the eligibility process for establishing academic accommodations for this course. You can reach the disability Services Office at: disability.services@mec.cuny.edu

Mathematics Department
Medgar Evers College, City University of New York
Math 231-001(35873): Mathematics for Elementary School Teachers

Course Chapters

Course Description: This course is designed to help prospective teachers of elementary school mathematics to view elementary mathematics from a higher standpoint. Students will be provided with an enriched background in a broad selection of topics from advanced mathematics through exploration, conjecture and reasoning. The topics covered include Problem Solving, Sets, numeration systems, Geometry, Probability/Statistics and Real numbers.

Textbook:

- A Problem-Solving Approach to Mathematics for Elementary School Teachers 13th Edition Author: Billstein, Libeskind, Loft

1. **Problem Solving**
- Introduction to problem solving strategies
- Inductive and deductive reasoning

2.**Real Numbers**

- Brief review of set of Rational and Irrational numbers

3. **Sets**
- Brief review of set language and operations, including Cartesian products

4. **Number Systems**
- Written numerals in base-n; development of multiple algorithms for arithmetic operations
- Theory of the standard algorithms for arithmetic
- Integers; properties of integer arithmetic; arithmetic operations with integers
- Integer properties; prime and composite numbers; divisibility; Euclidean algorithm
- Rational numbers; arithmetic operations with rational. Decimal fractions; arithmetic operations

5. **Geometry**
- Concepts of plane and space geometry: lines, angles, polygons, parallelism, polyhedra
- Quantitative properties of figures: angles, length, area, volume
- Transformational geometry: translations, rotations, reflections, and dilations. Symmetry

6. **Probability and Statistics**

- Probability: Sample spaces; model building; applications; empirical probabilities; probability of events drawn from sample spaces with equally likely outcomes
- Statistics: measures of central tendency