

Fall 2023

MATH 599-001, Fall 2023: Teaching Mathematics

Jonathan Luke

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THE DEPARTMENT OF MATHEMATICAL SCIENCES

MATH 599: Teaching Mathematics

Fall 2023 Course Syllabus

NJIT Academic Integrity Code: All Students should be aware that the Department of Mathematical Sciences takes the University Code on Academic Integrity at NJIT very seriously and enforces it strictly. This means that there must not be any forms of plagiarism, i.e., copying of homework, class projects, or lab assignments, or any form of cheating in quizzes and exams. Under the University Code on Academic Integrity, students are obligated to report any such activities to the Instructor.

COURSE INFORMATION

Course Description: Required of all master's and doctoral students in Mathematical Sciences who are receiving departmental or research-based awards. Provides students with the skills needed to communicate effectively and to perform their teaching and related duties. Students are exposed to strategies and methods for communicating and for teaching undergraduate mathematics, and they are required to practice and demonstrate these techniques. Not counted for degree credit.

Number of Credits: 3

Prerequisites: Departmental approval.

Course-Section and Instructors:

Course-Section	Instructor
Math 599-001	Professor J. Luke

Office Hours for All Math Instructors: [Fall 2023 Office Hours and Emails](#)

Required Textbook:

Title	<i>Teaching Math Colleges and Universities Case Studied Today's Classroom</i>
Author	Friedberg
Edition	Grad Ed.
Publisher	American Math Society
ISBN #	978-0821828236

University-wide Withdrawal Date: The last day to withdraw with a W is **Monday, November 13, 2023**. It will be strictly enforced.

COURSE GOALS

Course Objectives:

- The course assists and supports teaching assistants in the performance of their duties by developing their conceptual understanding, essential skills and practical experience required for teaching mathematics at the university level.
- The course lays the foundations for students planning careers requiring the effective communication of mathematical ideas.

Course Outcomes: Students will be able to

- conceptualize and articulate the essential considerations of the processes associated with teaching mathematics such as grading, proctoring and presentation,
- develop basic skills with tools for teaching mathematics such as LaTeX, MATLAB, and Canvas.

POLICIES

DMS Course Policies: All DMS students must familiarize themselves with, and adhere to, the **Department of Mathematical Sciences Course Policies**, in addition to official **university-wide policies**. DMS takes these policies very seriously and enforces them strictly.

Attendance Policy: Attendance at all classes will be recorded and is **mandatory**. Please make sure you read and fully understand the **Math Department's Attendance Policy**. This policy will be strictly enforced.

ADDITIONAL RESOURCES

Further Assistance: For further questions, students should contact their instructor. All instructors have regular office hours during the week. These office hours are listed on the Math Department's webpage for **Instructor Office Hours and Emails**.

Accommodation of Disabilities: The Office of Accessibility Resources and Services (OARS) offers long term and temporary accommodations for undergraduate, graduate and visiting students at NJIT.

If you need an accommodation due to a disability, please contact the Office of Accessibility Resources and Services at oars@njit.edu, or visit Kupfrian Hall 201 to discuss your specific needs. A Letter of Accommodation Eligibility from the office authorizing student accommodations is required.

For further information regarding self identification, the submission of medical documentation and additional support services provided please visit the Office of Accessibility Resources and Services (OARS) website at:

<https://www.njit.edu/accessibility/>

Important Dates (See: **Fall 2023 Academic Calendar, Registrar**)

Date	Day	Event
September 4, 2023	Monday	Labor Day
September 5, 2023	Tuesday	First Day of Classes

September 11, 2023	Monday	Last Day to Add/Drop Classes
November 13, 2023	Monday	Last Day to Withdraw
November 21, 2023	Tuesday	Thursday Classes Meet
November 22, 2023	Wednesday	Friday Classes Meet
November 23 to November 26, 2023	Thursday and Saturday	Thanksgiving Recess - Closed
December 13, 2023	Wednesday	Last Day of Classes
December 14, 2023	Thursday	Reading Day 1
December 15, 2023	Friday	Reading Day 2
December 17 to December 23, 2023	Sunday to Saturday	Final Exam Period

Course Outline

This course meets twice per week: Monday 11:30 a.m - 12:50 a.m. and Friday 10:00 a.m.-11:20 a.m. Monday meetings address the mathematical infrastructure needed to teach mathematics successfully at the university level. Topics will include mathematical typesetting (LaTeX), mathematical software such as MATLAB, and the use of computer languages such as C and FORTRAN in scientific computing. Friday meetings will focus on discussion and practice of classroom and tutoring situations. Use of online tools for teaching, such as Canvas and MATLAB grader, will also be considered. A typical Friday meeting will involve a discussion of a case study from the textbook, practice lectures (by students), and simulated tutoring situations. A final presentation making use of properly formatted slides and illustrative graphics is required. The schedule of practice lectures and presentations will depend on the number of students in the class and will be prepared early in the semester. Creation of a MATLAB grader assignment is also required for completion of the course.

*Updated by Professor J. Luke - 9/1/2023
Department of Mathematical Sciences Course Syllabus, Fall 2023*