

MATH 123 - COURSE SYLLABUS

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MATH 123 is an academically-based community service (ABCS) course which provides the opportunity to Penn students to develop effective methods for teaching and understanding, to enhance their math communication skills, and to share their passion for math by teaching fundamental concepts to students in one of our partnership schools. At the same time, the course aims to academically engage local high school students, sharpen their math skills while getting them excited about the subject, and ultimately promote their interest in STEM.

High school partnership: This semester we will be working together with **Paul Robeson High School** in West Philadelphia.

Schedule: This class will meet on MW 12-1:30pm. Wednesdays we meet in FAG214. Mondays we will meet with the Robeson high school students in Harrison House. During the Wednesday class period we will discuss lesson plans and activities for the upcoming sessions with high school students, and the Monday class period we will meet with the Robeson high school students. During these meetings you will work in small groups with the students. You will be with the same group for the entire semester and will be able to get to know your students and their specific needs over the course of the semester.

Lesson plans: We will form five groups, each of which will be in charge of preparing two lesson plans. The first five lessons will be on algebra topics that are covered on the Keystone exam and the last 5 lessons will be hands on practice for the Keystone. The preparation for each lesson plan will be a moving parts two week long process, proceeding as follows.

- The week before that lesson is taught, part of the class time will be a brainstorming session on ideas for that topic (which of course you are encouraged to think about in advance) and there will be an associated discussion on Slack.
- Next, the group that is in charge of that topic will use the input from everyone and come up with a lesson plan. They will then to go over their outline with me outside of class and I will help them finalize the plan.
- Next, the group will work together to finalize all the details and write a lesson plan.
- The following class meeting, the group in charge will have some time in class to present the lesson plan to everyone.
- The following meeting with Robeson students everyone will follow that lesson plan.

Means of communication: We will use Slack to communicate with our class.

Clearance needed: The Commonwealth of Pennsylvania and the School District of Philadelphia requires that all students in this class obtain clearance to teach in the classroom through a criminal history background check if you have not obtained this through previous classroom outreach activities.

Grade Breakdown

Participation: 45% of your grade.

This includes your contribution to class discussions (live and over Slack) as well as your dedication to teaching the high school students. Both attendance and level of engagement in the discussions will be taken into account when calculating your grade. By taking this class, you are making a commitment to your students, so attendance is essential. If you need to miss classes or meetings due to extenuating circumstances, such as illness, family emergencies, circumstances that cause you to not have access to a good internet connection, please let me know promptly.

Two lesson plans: 30% of your grade.

The lesson plan development is described above. This will be a group effort and in general the entire group will receive the same grade, though there can be exceptions to that if not all members of the group put in the necessary effort and dedication to this very important task, which affects the entire class and your students.

Reflections and assignments: 15% of your grade.

A few reflective assignments will be posted on Canvas during the semester. These will consist of reflections on the student meetings and reflections or discussions on readings. These will be either in the form of a short submission or in the form of adding comments to a Slack discussion. Other assignments will include but are not limited to mathematic proofs, lab refinement assignments, and other similar assignments, which will be guided by our developing work.

Final Reflection: 10% of your grade.

At the end of the semester, a longer reflection will be due, which will cover both your educational experience and your experience with the mathematical content.

Week Starting	Day	
Aug 30, 2023	Monday	
	Wednesday	First Class
Sep 04, 2023	Monday	NO CLASS (Labor Day)
	Wednesday	Theresa Simmonds visits, prep for introductory meeting
Sep 11, 2023	Monday	Meet & Greet with Robeson students
	Wednesday	Prep Lesson 1
Sep 18, 2023	Monday	Lesson 1
	Wednesday	ROBESON TOUR
Sep 25, 2023	Monday	NO CLASS
	Wednesday	Prep Lesson 2
Oct 02, 2023	Monday	Lesson 2
	Wednesday	Prep Lesson 3
Oct 09, 2023	Monday	Lesson 3
	Wednesday	Prep Lesson 4
Oct 16, 2023	Monday	Lesson 4
	Wednesday	Prep Lesson 5
Oct 23, 2023	Monday	Lesson 5
	Wednesday	Prep Lesson 6
Oct 30, 2023	Monday	Lesson 6
	Wednesday	Prep Lesson 7
Nov 06, 2023	Monday	Lesson 7
	Wednesday	Prep Lesson 8
Nov 13, 2023	Monday	Lesson 8
	Wednesday	Prep Lesson 9
Nov 20, 2023	Monday	Lesson 9
	Wednesday	NO CLASS (Friday schedule)
Nov 27, 2023	Monday	NO CLASS
	Wednesday	Prep Lesson 10
Dec 04, 2023	Monday	Lesson 10
	Wednesday	Final reflections
Dec 11, 2023	Monday	End of semester celebration