

# 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 via synchronous zoom sessions on **Tuesdays 12-1:30pm**, in which we will discuss lesson plans and activities for the upcoming sessions with high school students. These meetings will be recorded so that students who have to miss them for an excused reason can watch them later.

Your second weekly meeting for the class will be on Fridays, during the time slot that you are assigned to. During these meetings you will work in small groups with Robeson 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 preparation for each lesson plan will be a moving parts two week long process, proceeding as follows.

- The Tuesday of 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 meet with me outside of class to go over their outline and I will help them finalize the plan. The office hours dedicated to this will by default be Thursdays 12pm, but can be rescheduled if this time doesn't work for someone in the group in any given week.
- Next, the group will work together before the following Tuesday to finalize all the details and write a lesson plan.
- The following Tuesday, the group in charge will have some time in class to present the lesson plan to everyone.
- The next Friday everyone follows that lesson plan in their meetings with the Robeson students.

**Means of communication:** We will use Slack to communicate with our class and also with the high school students.

**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:** 50% 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:** 10% of your grade.  
Some short assignments will be posted on Canvas throughout 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.

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