NYC iSchool

Bridge Building

COURSE SYLLABUS 2014-2015

Ms.Prendergast

Course Objectives

This class is an elective course at the iSchool. The class incorporates topics from mathematics, physics, history and technology. The class will cover the history and construction of the bridges of New York City as well as the math and physics behind their engineering. The course will meet three times a week for the first quarter and as a blended learning class, will include online activities that must be completed successfully to pass the class. The class is worth a ½ Elective Credit.

Expectations for Students:

- **Entering the classroom:** Enter only when the door is open and a teacher is present.
- **Seating:** Sit in your assigned seat, get out your out-of-class work, and begin the Get Ready.
- **Class Notes:** You are expected to take class notes, as they help you process and learn new information.
- **Out of Class Work:** Students should expect to complete out of class work 2-3 times a week. This can include readings, online activities, worksheets and projects.

- **Supplies:** You must be prepared with the following materials every class:
  - Writing utensils- *pencil and pen*
  - Binder (1/2 inch) or folder with prongs or a Folder with loose leaf paper and graph paper

- **Class Website**: you should be checking the class website daily.

Ischoolpolymath.com

- **Respect/Behavior:** You are young adults and will be treated as such. That means I expect you to be respectful of your teacher and your fellow classmates, just as we will be respectful of you. I expect you to come to class prepared to learn and put in your best effort.

- **Specific Classroom Guidelines**
  - Do not talk while another person in the room is speaking.
  - Raise your hand if you have something to share.
  - No hats on your head or phones out- I will take them from you
  - Water bottles with lids are okay- please don't leave your garbage in my room.
  - You may chew gum but not chomp, blow bubbles, or snap it.
  - If you don't do your homework- I will be disappointed in you.
  - If you have a positive attitude, study, and do your homework you will get treats!
  - Office hours are meant for YOU- please use them!!!

XACTO KNIVES WILL BE USED IN THIS COURSE! Students are not to leave the room with the knives or use them inappropriately. Students are only to use the numbered knife that is assigned to their group.

Grading

** All grades will be posted in JupiterGrades**

It is the responsibility of the student and family to check JupiterGrades at least once a week

Each student's grade is comprised of the following components:

Final Bridge Project- students will work in small groups to build a model bridge and compete in a contest of bridge strength. The project will also include writing a report (see rubric below)

Quizzes- short check ins covering the material

Homeworks- out of class assignments including readings and worksheets

Grade Percentages:

Mastery	***70%***
Final Bridge Project	50%
Quizzes	20%
Work Habits	***20%***
Worksheets	
Software Packet	
Contributing Factors	***10%***
Attendance/Lateness	5%
Behavior/Participation	5%

Course Outline

Below is an outline of the units that the course will cover of the span of the quarter:

Week 1 -2	Intro, history, physics of bridges
Week 3-4	Bridge Building Software and Building 101
Week 5-8	Design and Build Bridge
Week 9	Bridge Testing and Final Report Writing

Mastery Demonstration Task (MDT)

In order to demonstrate mastery and pass the course a student must successfully complete the Final Bridge Project which will be graded on the rubric to the right.

Final Bridge Project Rubric

Bridge Construction	20 pts
Design (blueprints + software model)	20 pts
Bridge Strength	10 pts
Daily Work Log	10 pts
Group Evaluation	10 pts
Report	30 pts
Total:	100 pts

Student Absences

If a student is absent, it is their responsibility to check the class website as soon as possible. It may be possible for the student to complete some or all of the work based on what is posted on the site. Upon the student's return they must attend office hours to make sure they received all materials and completed all work.

Resources

If you've already checked the course website (ischoolengineering.wordpress.com), JupiterGrades, and your class materials and you are unable to find an answer to your question, additional help is available during Office Hours (Tuesdays, Wednesdays and Thursdays, 3:20 – 4:00 pm) or by appointment in **room 404.** You can also email your teacher at sprendergast@nycischool.org