Nanotechnology

*Engineering of Tiny Machines*

*(Rising High School Sophomores, Juniors, and Seniors)*

**Description**

This course is designed to introduce students to the world of nanotechnology and its biomedical applications. In this course students will learn about the new science of nanotechnology and how its applications can change the world. Participants will be able to describe the positive and negative impacts of nanotechnology on society. Students will learn about nanoscale, nanotools, nanostructures in nature and nanobiotechnology. Students will also learn about the role of nanotechnology in medicine and other health developments. Students will be matched with a research mentor for once-a-week sessions at a Nanotechnology Laboratory based in NYC.

**Highlights**

- Hands-on laboratory work.
- Work with a dyad partner.
- Establish a research study.
- Collect and analyze data.
- Perform database searches on-line and at the Levy Library.
- Integrate background reading into project.
- Get to know the Mount Sinai campus and its facilities.
- Meet Mount Sinai Research faculty.

**Requirements**

- Full attendance.
- Maintain a detailed logbook.
- Regular oral and written progress reports.
- Completion of pre/post tests.
- Completion of a final written and oral research report.

**Eligibility**

- Demonstrated interest in biomedical sciences and research.
- Must be an under-represented minority and/or disadvantaged.
- Must be a rising high school sophomore, junior or senior with a minimum GPA of 85.

**The application must include:**

- At least one letter of recommendation from a science teacher, math teacher, or other applicable professional.
- A personal essay expressing how this course will help the student pursue a specific career in the health field and help the student reach his or her goals.
- A fully completed application form (including signed consent forms: parental/medical/publicity).
- Copy of student’s latest transcript.