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## BACKGROUND

Research shows that many successful high school students do not maintain the same level of academic excellence during their early college years because they are under-prepared for the unique challenges of the college environment. **The STEM Institute** was founded in 1992 with the support of NASA and CASHEE to ensure that Hispanics, female, and other minority students continue to achieve, academic excellence throughout their pre-college, undergraduate, and graduate years by means of continuous programmatic support.

**The STEM Institute** prepares students for the greater demands of college-level study and helps them adjust to campus life. It offers academic and tutoring support services designed to help students prepare for these new challenges.

## COST

**The STEM Institute is a FREE program.** Students who are accepted will receive free textbooks and supplies. Public transportation, breakfast and lunch will be provided free of charge for eligible students, **ONLY if funds will be available.**

## BENEFITS

Students who successfully complete the program will receive **one elective high school credit** depending on the courses they enroll in. Courses vary each summer and focus on teamwork, creative hands-on experiences, and critical thinking skills. Courses are supervised by the program assistant director and a team of CCNY instructors and Ph.D. students teach the courses.

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## ABOUT THE STEM INSTITUTE

**The STEM Institute** is a challenging academic enrichment program designed to encourage minority students in grade 9-11 to maximize their academic potential by providing them with an educational program in college-level study. **The STEM Institute** offers courses in the physical sciences, mathematics, English, engineering and computer programming. A select group of students are also offered the opportunity to conduct research with faculty at The Grove School of Engineering. All students who participate are encouraged to pursue careers in the field of engineering, technology, science, business, and mathematics.

**The STEM Institute** The STEM Institute is a collaborative initiative between the STEP Program, Alan Levine '57ME-CCNY, Lincoln Fund, Dorr Foundation, Bruce J. Heim Foundation, Provost office, the New York City Department of Education, and the Center for the Advancement of Hispanics in Science and Engineering Education (CAHSEE).



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## DATES OF THE STEM INSTITUTE

**The STEM Institute** is offered during the New York City Public High School summer session. This year the program will be offered:

**July 2 to August 10, 2018**

**Monday to Thursday**

**9:00 am – 4:00 pm**

**Note: the last day of classes is Friday, Aug. 10**

## PROGRAM COMPONENTS

- **A Unique Classroom Experience:** Students learn from engineering, science, and mathematics faculty at The City College of New York, as well as High School teachers.
  - **Career Information Sessions:** Students are provided with exposure to science and mathematics as applied to the industry. As part of the program representatives from the faculty at The City College of New York and outside corporations visit the students to speak to them about the different career choices available in engineering and other science-related disciplines.
  - **Parental Involvement:** A parent and student orientation session is held before the program begins, in order to discuss the roles and responsibilities of both parents and students.
  - **College Information Sessions:** Students who participate in The STEM Institute take part in information sessions on the college application process, scholarships and research opportunities.
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## PROGRAM ELIGIBILITY

Students will be nominated and screened by sponsoring high school on the basis of:

- Demonstrating “Ganas” – Spanish for *commitment to succeed* – in science, engineering or mathematics
- Successful completion of academic instruction in math and science at student’s grade level
- A High School Average of 90 or better
- Math and Science Regents score(s) of 90 or better
- Good record of school attendance
- Willingness to participate in different aspects of the program until graduation from high school and to continue to maintain contact with the program throughout college

## APPLYING TO THE STEM INSTITUTE

Submit your application online at <https://stem.cuny.cuny.edu> or you can download it from

<https://facebook.com/steminstccny> or contact Mr. Marte at [marte@ccny.cuny.edu](mailto:marte@ccny.cuny.edu) for an application.

**Mail complete applications to:**

Otto Marte, Assistant Director  
Grove School of Engineering  
The City College of New York  
140th Street & Convent Avenue, ST-2M11  
New York, NY 10031  
Tel: (212) 650-6190  
Fax: (212) 650-8139

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## SUMMER 2018 AVAILABLE CLASSES:

**Group A: 1. Calculus I** (1 elective HS credit) & **MUST** select ONLY one option:

Option 2: **Engineering Design I- Robotics/3D Printer** (Non-credit)

Option 3: **Biomedical Engineering Research** (Non-credit)

### **Biomedical Engineering Research Topics:**

for more information refer to the application form

- a. Thermal Regulation of Human Mesenchymal Stem Cell Differentiation
- b. Tumor cell adhesion in a microfluidic system mimicking real vasculature
- c. Migration of Retinal Cells for Regenerative Therapy
- d. Neural Engagement in Online Education

Pre-requisite: Pre-Calculus or being placed by STEM Admission Exam

**Group B: 1. College Pre-Calculus & General Physics** (1 elective HS credit for each class):

Pre-requisite: Algebra 2 or being placed by STEM Admission Exam.

**Group C: 1. Advanced College Algebra & General Chemistry** (1 elective HS credit per class)

Pre-requisite: Algebra or being placed by STEM Admission Exam

**Group D: #Bossgirls Bootcamp-**

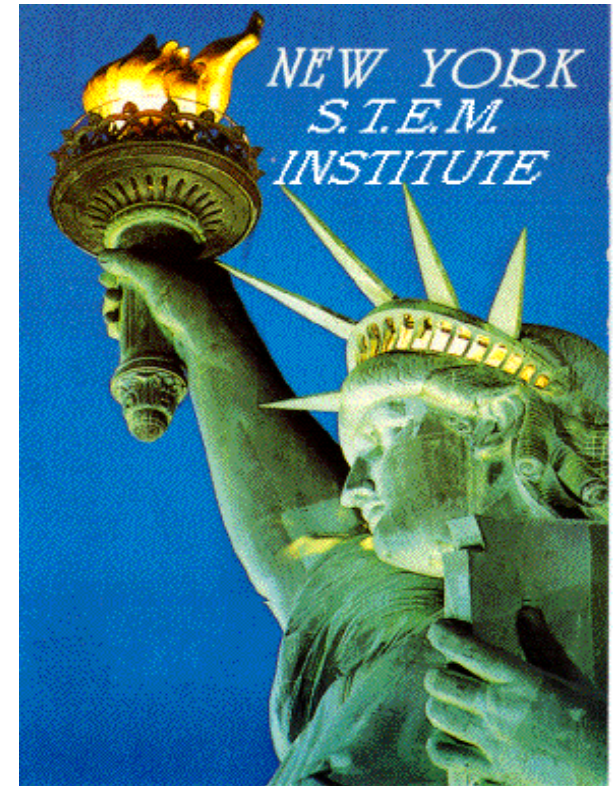
**Entrepreneurship** (Only for female – 10 – 12<sup>th</sup>)

Is designed to explore tech, coding, creating & entrepreneurship. By the end of the program, you’ll

have a **business plan and website/app!** **ZERO EXPERIENCE IS REQUIRED.** (Non-credit)

For application & more info visit us at:

<http://www.zahncenternyc.com/bossgirls-bootcamp/>



Science, Technology, Engineering & Mathematics (STEM) Institute



**EXTENDED!**  
**Application**  
**Deadline May 14,**  
**2018**

**GAIN COLLEGE RESEARCH EXPERIENCE WHILE IN HIGH SCHOOL!** and meet distinguish Professors and Engineers in a college setting.