

Spring 2024 Early Research Series at the College of Staten Island/Department of Biology

The Department of Biology at the College of Staten Island will be offering during the Spring 2024 term several exciting high-level early research opportunities for high school students to study side-by-side with our current students and distinguished faculty. All of these opportunities allow aspiring Pre-Med and Pre-Health students to conduct research early in their academic careers.

Upcoming Early Research Opportunities



BIOTECHNOLOGY – GENE CLONING AND DNA ANALYSIS

A new, cutting-edge research opportunity in Biotechnology for students to explore development of tools and current methods to manipulate DNA at the molecular level. Students will experience hands-on cutting short stretches of DNA and connecting it to a large DNA molecule—a process that is referred to as molecular cloning or gene cloning. Subsequently, students can examine, study, and analyze the resulting recombinant DNA fragments. Gene cloning is widely used in biopharmaceuticals for creation of human proteins, such as insulin synthesis; in gene therapy, and for gene analysis.

Start date: March 20

Dates: In person every Wednesday 4:30–6:30 plus two Mondays during the Spring Break. 3/20, 3/27, 4/3, 4/10, 4/17, 4/22, 4/24, 4/29, 5/1, 5/8.

Who is Eligible: High school students who have taken a year of Biology, incoming college frosh, current college students.

Number of Hours: 20

Location: Biological and Chemical Sciences Building, 6S

Application Deadline: Monday, March 18

Application Link: <https://forms.office.com/r/T01n4kPXit>

Cost: \$490.00 (discounted lab fee)

Instructors:

- Prof. Cassandra Camillo, Lecturer, Department of Biology
- Dr. Chang-Hui Shen, Chair, Department of Biology; Biochemistry and Biology Ph.D. Program, Graduate Center; Institute for Macromolecular Assemblies, CUNY

Questions? Contact:

- Holly Block, Ass't. Dir. for Recruitment • holly.block@csi.cuny.edu • Phone: 347-443-8699
- Dr. Chang-Hui Shen, Chairperson and Professor, Department of Biology • chang-hui.shen@csi.cuny.edu • Phone: 718.982.3998

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Special Research Opportunity: sponsored, and free of charge. Seats are limited and will be filled on a first-come, first-served basis.

CONSERVATION, SUSTAINABILITY AND ENVIRONMENTAL DNA

A College of Staten Island/Con Edison Partnership

A unique conservation research opportunity utilizing leading edge tool environmental DNA (eDNA) for detection of plant and animal species, especially those species which are invasive or declining.

The research is based on the premise that we as responsible humans should meet our present existential needs without causing harm to ecosystems or depleting air, water and habitat resources—thus preserving the vital services they provide for future generations as sustainable development.

Number of Hours: 20

Dates: Lecture—Wednesdays via Zoom, synchronous • May 1, 8, 15 from **4:30–7:00pm**

In person field trips: Saturday, May 4 - Conference House Park; Saturday, May 11 - New Creek Bluebelt; Sunday, May 19 - North Park @ Freshkills Park • **10:30am–2:30pm**

Location: Lecture held virtually on Wednesdays, field trips held on two Saturdays and one Sunday in person at select collection sites —easily accessible via public transportation

Application Deadline: Monday, April 29

Application Link: <https://forms.office.com/r/ndjKAGwgnm>

Who is Eligible: High school students with a year of Biology and Chemistry, incoming college frosh, current college students.

Additional information and details can be found on the Department of Biology web pages: csi.cuny.edu/biology

Recognition: Participants completing the research will receive a Certificate of Completion.

Instructor: Seth Wollney, Lecturer and Ph.D. Candidate, Dept. of Biology, College of Staten Island and CUNY Graduate Center • seth.wollney@csi.cuny.edu;

Questions? Contact:

- Dr. Chang-Hui Shen, Chairperson and Professor, Department of Biology • chang-hui.shen@csi.cuny.edu • Phone: 718.982.3998
- Seth Wollney, Lecturer and Ph.D. Candidate, Dept. of Biology, CSI; and CUNY GC • seth.wollney@csi.cuny.edu
- Holly Block, Ass't. Director for Recruitment • holly.block@csi.cuny.edu

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PRE-HEALTH IMMERSION: ANATOMY

(Virtual, synchronous)

A Unique Pre-Health Program Providing Students with a Rare Opportunity to Learn About Pre-Health Education and Explore Different Aspects of Life as a Health Care Provider

This intense, 30-hour program provides students a unique opportunity to learn about pre-health education. The program's objective is to shape the career of pre-medical and pre-dental students as well as other health care professions, such as pharmacy, physician assistant and public health.

Dates: May 14, 16, 17, 18, 19, 20, 21, 22, 23, 24 • 3:00–6:00pm

Total Number of Hours: 30

Mode of Instruction: Fully Remote Synchronous

Number of Seats: 30

Who is Eligible: High school juniors, incoming college frosh, current college students.

To Apply: Please complete the form: <https://forms.office.com/r/v05pEAu3Bs>

Application Deadline: Friday, May 10, 2024

Lab/Materials Fee: \$590.00 • Compare to similar courses that cost \$1800 and higher—Online payment process available via credit card

Recognition: Participants completing the workshop will receive a Certificate of Completion.

Instructors:

- Grozdena Yilmaz, MPAS, PA-C; Director of Pre-MD/Pre-PA Advisement, Deputy Chair grozdena.yilmaz@csi.cuny.edu
- Dr. Chang-Hui Shen, Chair, Department of Biology; Biochemistry and Biology Ph.D. Program, Graduate Center; Institute for Macromolecular Assemblies, CUNY

Questions? Contact:

- Department of Biology—Grozdena Yilmaz, MPAS, PA-C; Director of Pre-MD/Pre-PA Advisement, Deputy Chair grozdena.yilmaz@csi.cuny.edu
- Holly Block, Ass't. Dir. for Recruitment • holly.block@csi.cuny.edu or (347) 443-8699

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