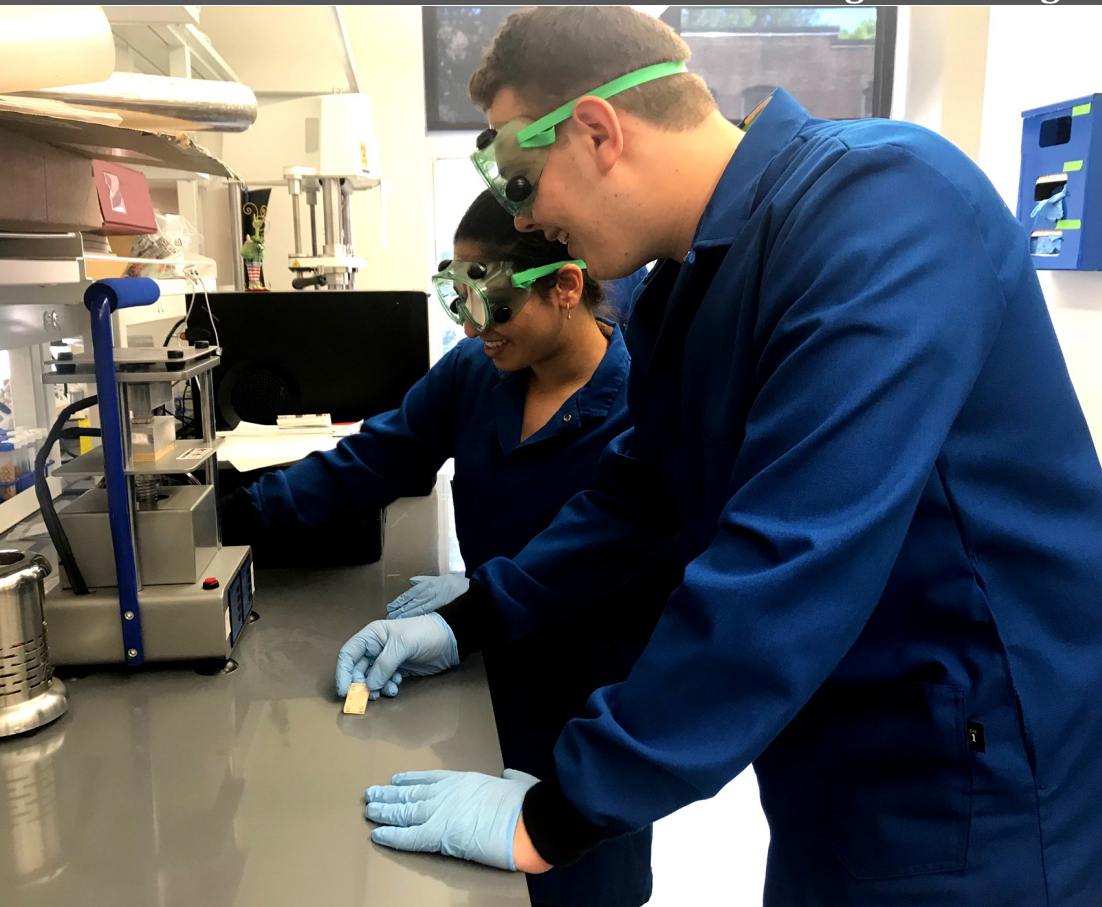


YOUNG SCHOLARS PROGRAM

A Hands-on Summer Research Program for High School Students



What is YSP?

The Young Scholars Program (YSP) offers future scientists and engineers a unique opportunity for a hands-on academic research experience while still in high school. The program is open to Boston area applicants who have completed their junior year in high school.

The program seeks to maintain a balance between academic and social components, providing students an opportunity to build relationships with university students and faculty in addition to fellow participants. Our objective is to create and support a STEM community well beyond the six-week summer experience.

Applications for the Young Scholars Program open on December 16, 2022. Visit <https://stem.northeastern.edu/summer/ysp/> for additional info.



Northeastern University
Center for STEM Education

HIGHLIGHTS

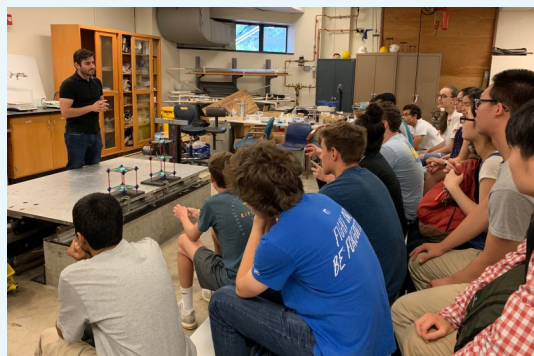
- 6000 students to date have participated in the NEU YSP program to date.
- Over 80% of our alumni are enrolled and/or have completed a bachelor's degree in a STEM field.
- YSP alumni are attending universities across the country. Large cohorts of alumni can be found at Northeastern University, Harvard, MIT, Boston University, Tufts, Yale, and UMASS Amherst.

PROGRAM DETAILS

- June 26 → Aug 3, 2023
- Program days run from 8:30am to 4:30pm

MISSION

Our mission is to provide academically gifted students from the Boston area an opportunity to experience science and engineering research at the University level, thus supplementing their classroom experience and preparing them for college and an exciting career in STEM.



2023 Young Scholars Program

"The learning process and looking back on the research we had completed was one of the most rewarding aspects. At first, I knew nothing about my project but by the end, I could explain the whole project. I just really enjoyed the whole process. Even the challenges were in a way rewarding because we sat down as a group and thought of solutions to different research problems. Also, the relationships I formed were rewarding, which might sound cheesy, but almost everyone I met was really nice. All the PhD students could have gotten annoyed at having to give up their time to teach two high school students, but instead, they taught us and told us about their research. A few times they even stayed for a few extra hours to do extra tests. I liked meeting them because they are people I aspire to be like someday."
- Participant

STRATEGIES

- **Laboratory research experiences**—working in state-of-the-art laboratories on Northeastern University campus.
- **Career/research exploration**—speak directly with Northeastern faculty about current research in science and engineering.
- **Education and career counseling**—hear from Northeastern staff, students, and YSP counselors about the various pathways available for STEM students.
- **Field trips**—discover the real-world applications of STEM by visiting local industries and organizations.
- **Experience college life**—spend your days on a year-round campus, intermingling with current Northeastern students.
- **Stipend**—earn while you learn! Students are provided a stipend to ensure that all costs during the program are covered!

RESEARCH PROJECTS*

- Biomechanical Properties of the Porcine Tricuspid Valve
- Designing Linear & Switching DC-DC Converters for Solar Phone Chargers
- Designing Electrically Charged Drugs
- Reducing Cold-Chain Inefficiencies using Acoustic-Based Subharmonic Tags
- Predicting Absorption Spectra of Flavin-Based Photo Enzymes
- Vascular Flow Effects on Endothelial Glycocalyx Expression for Brain Cells
- Communications and Signal Processing for 6G Terahertz Networks
- Electrophysiological Methods for Analyzing Enteroendocrine Cells
- Using Hypoxia as a Model for Multi Drug Resistance in Cancer Cells
- Evaluating Health Care Policy Using Data Analytics
- Modeling Synchronized Calcium Oscillations in Smooth Muscle Cells
- Applications of AI – Using a Min-Max Algorithm to Play Connect 4

**These are projects from 2022. This summer's projects are TBD.*



Northeastern University
Center for STEM Education

<https://stem.northeastern.edu/>

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