



The Summer Science Program (SSP) is one of the longest-running residential, research-based programs for high school students talented in STEM. It accelerates the social and intellectual development of these teenagers, and raises their aspirations, at a key inflection point in their lives: a few months before they apply to college.

Each program includes twelve research teams of three participants each, led by seven faculty, conducting a carefully planned, hands-on research project. Each team is assigned a target to study, collects original data, draws conclusions, and writes a final report. Living and working together continuously for 39 days, they become a supportive community.

Admissions

Applicants are evaluated through a holistic, need-blind process, with roughly 10% admitted, those excelling in the most challenging math & science courses available to them, and showing evidence of maturity and motivation, especially in the face of obstacles. SSP meets all demonstrated need with financial aid grants, and shapes each cohort to be diverse in multiple dimensions. They arrive with great potential; the experience inspires them to “realize” their potential in both senses of the word: to understand it, and to make it happen.

The Research

Participants choose research in Astrophysics or Biochemistry. Each program is hosted by one or more university partners. We continue to seek new suitable research projects and host campuses.

- For the **Astrophysics** project, each team of three participants takes a series of observations of a near-earth asteroid, applying vector calculus to predict its future path.
- In the **Biochemistry** project, each team models an enzyme from a fungal crop pathogen, then designs a molecule to bind to the enzyme and prevent infection.

The Community

These teens find challenging, collaborative research to be a refreshing and motivating contrast to high school coursework. Participants are encouraged to collaborate on everything, as long as the work they submit reflects their own understanding. They are surprised to discover that being surrounded by equally bright and interesting peers is as rewarding socially as it is intellectually. The spirit of cooperation and collaboration is reinforced by an Honor Code and an absence of exams, grades, or formal credit; their rewards are the experience itself, and the worldwide network they join, of peers and alumni.

Inspired by this intense immersion experience, most SSP alumni choose STEM majors and go on to become leaders in their chosen professions. Many cite the Program as a major influence on their life path.

The Faculty

The senior faculty on each campus includes two PhD-level scientist / educators and a Site Director. Four upperclass college students live in the dorm as Teaching Assistants and Residential Mentors, available 24/7, integrating academic and residential/social roles; many are alumni themselves.

