Fermilab’s TARGET: Science and Engineering Program is a highly competitive paid summer internship for Illinois high school sophomores and juniors who have strong interest and demonstrated aptitude for mathematics and the sciences, physics, in particular. The program’s goals are to encourage high school students to undertake college study and pursue careers grounded in physics, mathematics, engineering, and technology. Additionally, TARGET aims to grow representation of underrepresented groups (Black, Hispanic, Native American and women) in the sciences and engineering at the college level and consequently the workforce. Lastly, the program affords high school students the opportunity to interface with and learn from a cross-section of professionals with varied areas of specialization including, administration, computing, and communications, in addition to engineering, science, and technology. Students gain first-hand exposure to the world of work and also have low student – teacher ratio classroom experiences.

Duration

TARGET incorporates both classroom and work experiences five days per week for six weeks at the Fermilab campus in Batavia. The program begins on Tuesday, July 5 and ends on Friday, August 12, 2016. Students are required to participate for the entire duration of the six (6) week program. Students who have made commitments that will overlap with this program should not complete an application. There can be no exceptions!

Qualifications

- The applicant must be a sophomore or junior at the time of application.
- A 3.0/4.0 grade point average or above is required.
- Strong interest and demonstrated aptitude for mathematics and the sciences, physics, in particular.
- Applicants must have successfully completed Algebra in the ninth grade and be in the process of taking Geometry in the tenth grade.
- Applicants with advanced Information Technology knowledge and Computer Programming skills are encouraged to apply.
- Applicants must secure evaluations from BOTH their current math and science teachers.
Looking Forward

Students can look forward to a challenging six-week internship. Students will gain:

- **Work Experience** - during this period, students will report to their assigned areas to work alongside Fermilab personnel. It should be understood, that because of students' level of schooling, age, and work inexperience, restricted work areas within the Laboratory will not be appropriate for work assignment. Student work assignments support the science conducted at Fermilab and can fall within a cross-section of specializations including administration, operations, technology, computing, communications, visual media, engineering, astronomy, and physics. Students will receive formal supervisor feedback about their work performance.

- **Classroom Experience** - Students will receive instructional and laboratory time under the direction of a team of licensed teachers. These sessions are designed so that there is a low-student teacher-ratio (approximately 5 to 1), and students work on individual and group projects. This aspect of the program allows the student to be both engineer and scientist using hands-on activities. At the end of the six-week program, students are expected to complete an oral presentation.

Expectations

- To adhere to and complete assignment duties and observe established time and attendance standards.
- To be engaged, proactive, self-directed and respectful in the workplace and classroom.
- To prepare and present oral and written reports and evaluations at the end of the program.
- To adhere to Fermilab’s safety and computer policies and practices.
- To behave in a responsible and professional manner.

Earnings

The program’s design combines both work and hands-on experiential learning. Interns are at Fermilab eight hours per day, five days per week and are paid an hourly wage of approximately $12.50 for 20 hours of work per week. Summer interns receive no paid sick leave or vacation. Standard U.S. taxes are withheld, as is customary with all Fermilab employees. Each TARGET intern is required to provide evidence of identity and eligibility to work in the U.S.

Transportation

Bus service is provided to Fermilab from the CTA Blue Line Forest Park terminal. This is the only pick-up and drop-off point. Students who choose not to use this service are responsible for arranging their own transportation to and from the Lab. The Forest Park terminal is located at 711 Des Plaines Avenue, Forest Park 60130 (along the Eisenhower Expressway). The program does not provide housing.
**Application Deadline:** Friday, February 26, 2016

**2016 Complete Application Package**

must be sent electronically to Sandra Charles
Email address: scharles@fnal.gov
See TARGET Application Instructions for details

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**About Fermilab**

What are we made of? How did the universe begin? What secrets do the smallest, most elemental particles of matter hold, and how can they help us understand the intricacies of space and time?

Fermilab works to answer these and other fundamental questions to enhance our understanding of everything we see around us. As America's premier particle physics laboratory, we dig down to the smallest building blocks of matter to learn how our world is put together. We also probe the farthest reaches of the universe, seeking out the nature of dark matter and dark energy.

We use particle accelerators to understand the universe's building blocks, bringing particles to nearly the speed of light and smashing them into targets, so generating more particles for scientists to study. About 2,500 physicists from 34 countries come to Fermilab to conduct experiments using particle accelerators.

To take the field of particle physics to the next level, Fermilab also advances the science and technology of these discovery machines, working to create more powerful and efficient accelerators.

Particle accelerators do more than reveal the smallest components of matter. Industry uses accelerators to diagnose and treat disease, provide greener alternatives to traditional industrial processes and screen cargo for national security. Scientists estimate that more than 30,000 accelerators are at work worldwide to improve our society.

The Illinois Accelerator Research Center, or IARC, is a new accelerator research facility funded by the state of Illinois and currently being built at Fermilab. At IARC, scientists and engineers from Fermilab, Argonne National Laboratory and Illinois universities will work side by side with industrial partners to research and develop breakthroughs in accelerator science and translate them into applications for the nation's health, wealth and security.

Fermilab has been at the forefront of particle physics for more than 40 years. Our 1,750 employees include scientists and engineers from all around the world. Our 6,800-acre site is located in Batavia, Illinois, and is managed by the Fermi Research Alliance LLC for the U.S. Department of Energy Office of Science. FRA is a partnership of the University of Chicago and Universities Research Association Inc., a consortium of 86 research universities.