

ARCS

The ARCS Foundation provides merit-based scholarships to outstanding U.S. graduate students pursuing Ph.D. degrees in science, engineering, mathematics, technology, and medical research at participating universities. Eligibility is determined through nomination by the student's university, so students generally cannot apply directly. Each regional ARCS chapter has its own nomination process and timeline, but nominations typically occur during the spring or early fall for funding the following academic year.

Link: <https://arcsfoundation.org/>

American Fellowships

The American Association of University Women (AAUW) American Fellowships support women pursuing full-time graduate or postdoctoral study in the United States. The Dissertation Fellowship is open to women who have completed all coursework and passed qualifying exams by the application deadline. Applicants must be U.S. citizens or permanent residents. Applications typically open in August and close around November 1.

Link:

<https://www.aauw.org/resources/programs/fellowships-grants/current-opportunities/american/>

GEM Fellowships

The GEM Fellowship Program supports outstanding students from underrepresented groups in STEM who are pursuing master's or Ph.D. degrees in engineering and applied science. Applicants must be U.S. citizens or permanent residents and demonstrate strong academic achievement. The fellowship includes full tuition, a living stipend, and paid summer internships with GEM employer partners. Applications typically open on July 1, with deadlines around October 1 (early consideration) and mid-November for the final deadline.

Link: <https://www.gemfellowship.org/gem-fellowship-program/#a>

Graduate Fellowships for STEM Diversity (GFSD)

Graduate Fellowships for STEM Diversity (GFSD) provides funding to U.S. citizens pursuing graduate degrees in physical sciences, engineering, mathematics, and related STEM fields. The fellowship aims to broaden participation in STEM while supporting academic excellence through tuition, stipend support, internships, and mentoring. Applicants must be enrolled or planning to enroll at a participating institution and be eligible to complete government or industry internships. Applications typically open in late August (around August 31) and close in December.

Link: <https://stemfellowships.org/>

Hertz Fellowship

The Hertz Fellowship supports exceptional Ph.D. students pursuing research in the applied physical sciences, biology, mathematics, and engineering. Applicants must be U.S. citizens or permanent residents who are college seniors, first-year graduate students, or preparing to begin graduate school. In addition to generous financial support, the fellowship provides lifelong mentorship and networking opportunities. Applications typically open in late August and close in late October.

Link: <https://www.hertzfoundation.org/hertz-fellowship/>

DOE Computational Science Graduate Fellowship (DOE CSGF)

The DOE Computational Science Graduate Fellowship supports Ph.D. students whose research combines high-performance computing with science or engineering. Applicants must be U.S. citizens or permanent residents who are enrolled in or applying to a Ph.D. program in computational science, engineering, mathematics, or related disciplines. The fellowship provides full tuition, a generous stipend, and a required practicum at a Department of Energy national laboratory. Applications typically open in October and are due in mid-January.

Link: <https://www.krellinst.org/csgf/how-apply>

Hispanic Scholarship Fund (HSF) Scholar Program

The Hispanic Scholarship Fund provides scholarships to students of Hispanic heritage pursuing undergraduate or graduate degrees. Applicants must have at least one parent of Hispanic heritage, meet minimum GPA requirements, and plan to enroll full-time at an accredited institution. In addition to scholarship funding, HSF Scholars receive access to mentorship, career services, and leadership development opportunities. Applications typically open in January and close in mid-February.

Link: <https://www.hsf.net/scholarship>

Office of Science Graduate Student Research (SCGSR) Program

The DOE Office of Science Graduate Student Research (SCGSR) Program provides supplemental awards for Ph.D. students conducting part of their dissertation research at a Department of Energy National Laboratory. Applicants must be enrolled in a qualified Ph.D. program at a U.S. institution and have a research project aligned with DOE Office of Science priorities. The program typically offers two application cycles per year, with deadlines usually in the spring and fall.

Link: <https://science.osti.gov/wdts/scgsr>

NSF Graduate Research Fellowship Program (NSF GRFP)

The NSF Graduate Research Fellowship Program supports outstanding students pursuing research-based master's or doctoral degrees in NSF-supported STEM fields. Applicants must be U.S. citizens, nationals, or permanent residents and be early in their graduate careers (typically first- or second-year graduate students). The fellowship provides three years of financial support, including a stipend and cost-of-education allowance. Applications typically open in late July or early August, with field-specific deadlines in mid- to late October.

Link: <https://www.nsfgrfp.org/>

National Defense Science and Engineering Graduate (NDSEG) Fellowship

The NDSEG Fellowship supports U.S. citizens pursuing doctoral degrees in science and engineering disciplines relevant to the Department of Defense. The fellowship provides full tuition, a competitive stipend, and health insurance, with no military service obligation. Applicants are generally in the early stages of their Ph.D. program or applying to graduate school. Applications typically open in August and close around November 1.

Link: <https://ndseg.sysplus.com/NDSEG/Applicants/Application-Evaluation-Award>

SMART Scholarship-for-Service Program

The SMART Scholarship-for-Service Program funds undergraduate and graduate students pursuing degrees in STEM fields relevant to the Department of Defense. Applicants must be U.S. citizens, at least 18 years old, and willing to complete summer internships and post-graduation employment with a DoD facility. The scholarship covers full tuition, provides a stipend, and includes guaranteed civilian employment after graduation. Applications typically open in August and close in early December.

Link: <https://www.smartscholarship.org/smart/en>

Optica Scholarships and Fellowships

Optica offers a variety of scholarships and fellowships for undergraduate, graduate, and postdoctoral students pursuing optics, photonics, and related fields. Eligibility varies by award but generally requires enrollment in an optics- or photonics-related degree program and demonstrated academic and research excellence. Most Optica scholarship and fellowship applications open in the fall (typically September–October), with deadlines ranging from late fall through early winter, depending on the specific award.

Link: <https://www.optica.org/foundation/opportunities/scholarships/>

SPIE Optics and Photonics Education Scholarships

SPIE offers merit-based scholarships to student members at the undergraduate, master's, and Ph.D. levels who are studying optics, photonics, or closely related fields such as physics and electrical engineering. Applicants must be enrolled full-time during

the upcoming academic year, be active SPIE Student Members, and submit two letters of recommendation. Scholarships range from approximately \$3,000 to \$11,000 and are awarded based on academic achievement, research accomplishments, leadership, and potential contributions to the optics and photonics community. The application typically opens in October and closes in mid-February for funding the following academic year.

Link:

<https://spie.org/membership/student-hub/scholarships/optics-and-photonics-education-scholarships>