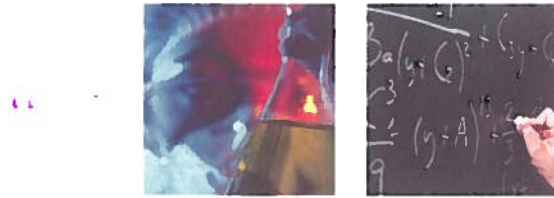


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## OUR MISSION

Since 1976, the National GEM Consortium has been addressing a critical shortfall in American engineering and scientific talent by increasing the participation of under-represented minorities at the Master's and Doctoral levels.

Our model is strategic and proven. We provide graduate Fellowships to highly qualified individuals from communities where such talent is largely untapped. Working in partnership with leading corporations, U.S. government laboratories and many of the nation's top universities and research institutes, we provide GEM Fellows with the much-needed financial support that is often the deciding factor in pursuing graduate education, as well as practical experience through high-level, paid summer Internships. GEM does more than provide financial support, however. We work to ensure student success in these competitive academic and professional environments with effective programs that increase the recruitment, retention and graduation of GEM Fellows. More than 3,000 GEM Fellows have gone on to successful careers.

## ABOUT THIS SERIES

At the National GEM Consortium our core business is providing graduate Fellowships in engineering and science to highly qualified individuals from under-represented communities. We do this to address a critical shortfall in American engineering and scientific talent by recruiting from communities that are virtually untapped.

The number and percentage of U.S. citizens receiving postgraduate degrees in science, technology, engineering, and math (STEM) has been steadily declining for over two decades. Yet the need for qualified engineers and scientists has never been greater. Rewarding careers for individuals with Master's or Ph.D. degrees are plentiful. At GEM we believe that lack of information—not lack of opportunity—is the main reason more undergraduates don't pursue advanced degrees in engineering and science.

GEM designed its Getting Ready For Advanced Degrees (GRAD Lab) symposiums for students like you.

GEM's GRAD Labs help to demystify postgraduate education in science, technology, engineering, and math. They help you understand why graduate school presents a career advantage, how to pick a graduate program, how to apply, and how to pay for it. They help you make informed decisions about this crucial phase in your life.

This publication is one of three Guides that accompany GEM's GRAD Labs. These Guides provide a helpful summary and additional resource material.

**Why Graduate School** (GRAD Lab Guide One) discusses the value of advanced degrees and what will be required of you.

**How to Apply To Graduate School** (GRAD Lab Guide Two) explores the essentials needed to apply, gain admission to, and navigate the graduate school application process.

This Guide, **How to Fund Graduate School** (GRAD Lab Guide Three), helps you understand financing options, locate financial aid resources, and assess assistantship options.

You can also find the schedule and locations of an in-person or virtual GRAD Lab or request that one be presented in your area by visiting [www.gemfellowship.org](http://www.gemfellowship.org) or calling 703-562-3646.

We hope this Guide helps make graduate school a reality for you!

## THE NATIONAL GEM CONSORTIUM

Since 1976 the National GEM Consortium has been developing a pool of African-American, Hispanic-American and Native American talent in the fields of science, technology, engineering, and math (STEM). We are proud of the top-rated universities, renowned research facilities, and leading multinational corporations that comprise GEM.

Each year we identify and recruit more than 1,000 undergraduate students, graduate students, and working professionals for admission to advanced degree programs. Through three graduate Fellowship tracks—Master of Science in Engineering, Ph.D. in

Science, and Ph.D. in Engineering—we provide financial support and practical experience through paid summer Internships.

We also work to ensure success for our Fellows in these highly competitive academic and professional environments by providing programs through Member Universities.

The GEM Alumni Association, an influential network of more than 3,000 GEM Fellows, works to promote STEM education among America's under-represented populations and bring exciting career opportunities in science and engineering to all.

## HOW TO FUND GRADUATE SCHOOL

Dr. Howard G. Adams—former executive director of GEM and an advocate for the democratization of America's graduate schools—used to tell students, “Graduate school in engineering and science is free!”

Dr. Adams was exaggerating only slightly. There are many ways to finance your graduate education in the STEM disciplines. Since Americans with advanced degrees in engineering and science are in high demand, you will find many avenues that make pursuing a graduate school education practical and affordable.

There are five primary funding options: Grants, Fellowships, research assistantships, teaching assistantships, and loans.

### Grants

A Grant is generally money given to you as a one-time offering to accomplish a specific project and generally has no strings attached. For example, you apply for a travel Grant to attend a technical conference. Assuming you receive the Grant, you would then spend the money to attend the conference and that would exhaust the funds. Sometimes, if you are given Grant money and your expenses are less than the Grant amount, you will be required to return the unused portion of the funds.

### Fellowships

A Fellowship is comparable to an undergraduate Scholarship. Fellowships are typically awarded to pursuers of graduate or doctoral degrees. Although providers don't seek repayment, they will frequently ask that students perform research work as a part of the Fellowship. It is not uncommon for stipends, in addition to tuition coverage, to be a part of a fellowship package. Fellowships are generally awarded on merit after a competitive process.

Fellowships can be particularly valuable during your first year of graduate school. The first year of a graduate program often requires the most of students, and you may feel that you are being “stretched” to the limit. A Fellowship will provide you with the maximum amount of time for study, given an assistantship is usually a minimum of 20 hours per week.

For example, the National GEM Consortium provides three types of Fellowships to assist students under-represented in postgraduate scientific and engineering programs: M.S. Engineering Fellowships, Ph.D. Engineering Fellowships, and Ph.D. Science Fellowships. The GEM Fellowships are portable. A winning student may take his or her Fellowship to any of the more than 100 University Members of

the Consortium that accepts the student's application.

**You can find more about the GEM Fellowships as well as information on a large variety of other fellowships below. What's the difference between Grants, Scholarship, and Fellowships?**

There is very little difference in practice, and the terms are sometimes used interchangeably. There are a few minor technical distinctions: Grants are the most inclusive, representing any Grant of money in exchange for a prescribed purpose. Scholarships usually refer to Grants in support of undergraduate education, and Fellowships usually refer to Grants in support of post-Baccalaureate projects, or to pre-Baccalaureate projects pursued outside the normal curriculum. All Scholarships and Fellowships are Grants.

### **Research Assistantships**

After your first year as a graduate student, you may find it beneficial to create more of a presence for yourself in your department while continuing to fund your education. Two ways to do this are by serving as a Teaching Assistant (TA) or Research Assistant (RA).

As a Research Assistant, you are paid to assist a professor on an experiment or research project. You will also probably receive a stipend for living expenses. Serving as an RA allows you to contribute original research as you continue your studies—a big part of the graduate school experience.

### **Teaching Assistantships**

As a Teaching Assistant, you are paid to teach, conduct a lab, or help grade papers and exams. TAs often are responsible for presenting the recitation or discussion section of a particular course, providing the students with solution sets to assigned homework problems, or grading midterms, finals, and homework.

Although this work is demanding, it can provide you with the benefit of concentrating on a particular topic for an entire semester. In fact, it is not unusual for advisors to recommend that students TA in a subject in which they may be weak. Ph.D. programs often contain a teaching requirement.

Teaching also allows you to assist undergraduates in your chosen field of study—an experience that is rewarding in its own right.

### **Loans**

With Fellowships and assistantships widely available, borrowing money to finance a graduate education should be considered your last resort. Loans may be useful to ease the transition for a student returning to school after years in the workforce, since stipends rarely approach the amount of a full-time salary. In any case, loans frequently can be arranged so that no repayment begins until after postgraduate education is complete.

### **Evaluating Your Options**

Your funding may vary from term to term during your tenure as a graduate student. While a Fellowship may prove best during your challenging first semesters at graduate school, taking on the additional responsibilities of a research or teaching assistant-

ship may suit your changing role and development as a graduate student.

For example, you may enjoy a Fellowship for your first year, serve as an RA in your second and third years, become a TA in your fourth year, and then serve as an RA in your final year. Make sure to research your options and take advantage of the financial assistance that is available.

The most important thing is to realize that a postgraduate degree in science, technology, engineering, or math will place you in high demand. There is a way to fund graduate school that is right for you.

## **FOR MORE INFORMATION**

The following are valuable sources of general information on financial aid for graduate education:

- ▶ [www.gemfellowship.org](http://www.gemfellowship.org)—The National GEM Consortium offers the largest number of Fellowships/Internships for under-represented students for Master's and Ph.D. degrees in engineering and science.
- ▶ [www.collegesource.org](http://www.collegesource.org)—A database with course catalogs and institutional mission statements.
- ▶ [www.gradschools.com](http://www.gradschools.com)—A comprehensive online resource of current graduate school information and listings.
- ▶ [www.petersons.com](http://www.petersons.com)—A thorough web site that includes specific campus information and standardized test information.
- ▶ [www.nsf.gov](http://www.nsf.gov)—Search for and participate in Research Experiences for Undergraduates (REU) to gain valuable research experience through the National Science Foundation.
- ▶ [www.finaid.org](http://www.finaid.org)—A comprehensive financial aid web site.
- ▶ The graduate office at your university.
- ▶ The graduate offices at universities of interest to you.
- ▶ The department in which you plan to pursue your degree.

## **THE GEM FELLOWSHIP PROGRAM**

The GEM Consortium offers three Fellowship Programs portable only to GEM Member Universities (a list of GEM Universities can be found at [www.gemfellowship.org](http://www.gemfellowship.org) > Universities > University Members). The total value of these Fellowships is between \$20,000 and \$100,000, depending on the candidate's academic status at the time of application, paid summer employment and graduate school costs.

### **Master of Science In Engineering Fellowships**

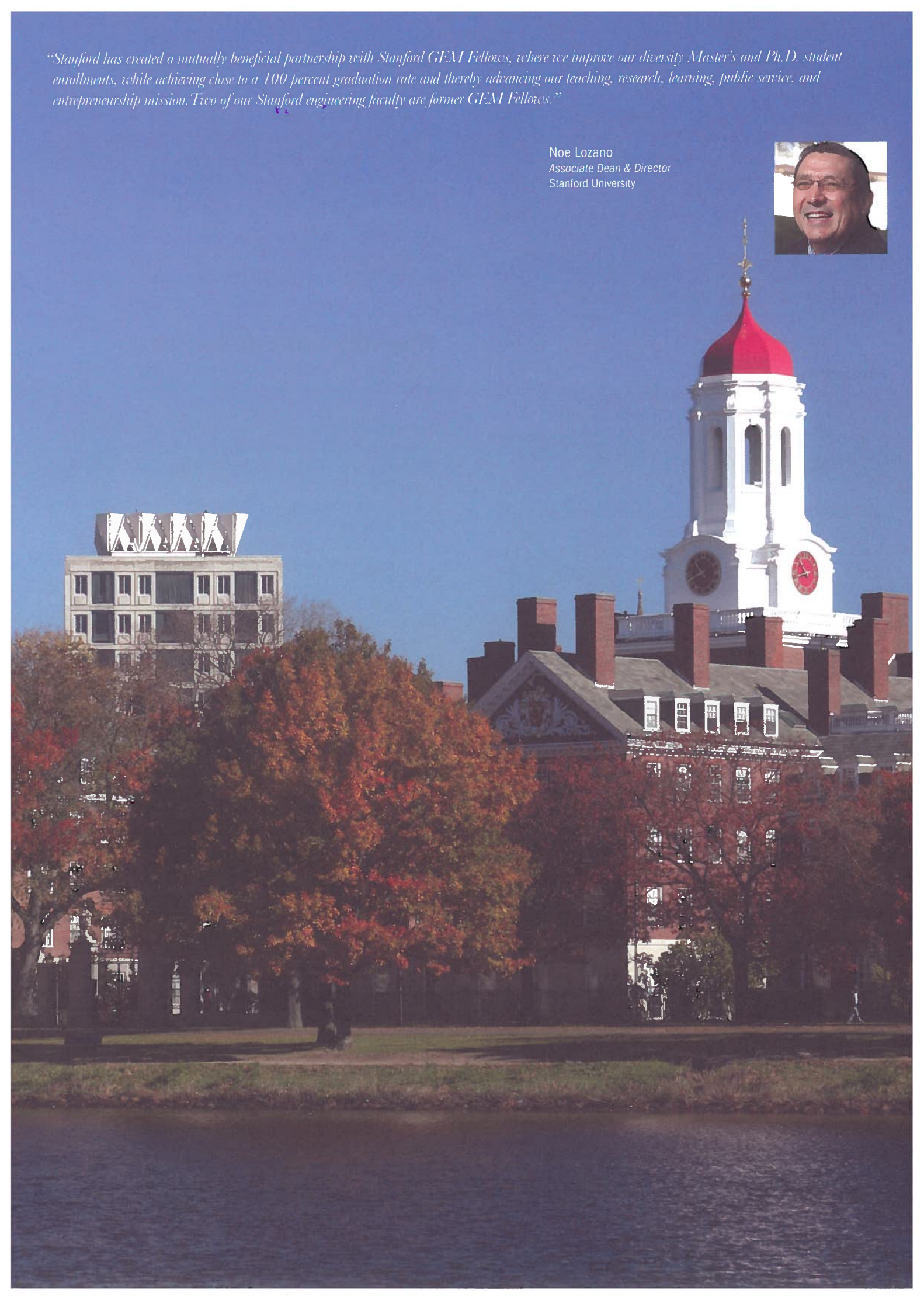
This program promotes the benefits of a Master's Degree for careers in industry. Fellows receive a living stipend, paid summer Internship(s) with a participating GEM Employer-Sponsor for practical engineering experience, and full tuition and fees at any GEM Member University where the Fellow has been admitted.

### **Ph.D. in Engineering Fellowships**

GEM offers Doctoral Fellowships to under-represented students who have either completed or are currently enrolled in a Bachelor's in Engineering program. During the first academic year following selection, the GEM Consortium pays a living stipend, tuition and fees and a Cost of Instruction Grant to the institution where

*“Stanford has created a mutually beneficial partnership with Stanford GEM Fellows, where we improve our diversity Master’s and Ph.D. student enrollments, while achieving close to a 100 percent graduation rate and thereby advancing our teaching, research, learning, public service, and entrepreneurship mission. Two of our Stanford engineering faculty are former GEM Fellows.”*

Noe Lozano  
Associate Dean & Director  
Stanford University



the Fellow is enrolled. Up to the fifth year of the Doctoral program, the total Fellowship cost is borne by the participating GEM Member University through an awards package similar to that offered to other funded graduate students in this department. Fellows are provided a practical summer work experience through the GEM Employer-Sponsor for the summer after selection. All Fellows must accept a research or teaching assistantship at his or her Member University after the first year.

### **Ph.D. in Science Fellowships**

This program seeks to increase the number of under-represented students who pursue Doctoral Degrees in the natural science disciplines, i.e. chemistry, physics, earth sciences, mathematics, biological sciences, and computer science. During the first academic year following selection, the GEM Consortium pays a living stipend, tuition and fees, and a Cost of Instruction Grant to the institution where the Fellow is enrolled. Up to the fifth year of the Doctoral program, the total Fellowship cost is borne by the participating GEM Member University through an awards package similar to that offered to other funded graduate students in this department. Fellows are provided a practical summer work experience through the GEM Employer-Sponsor for the summer after selection. All Fellows must accept a research or teaching assistantship at his or her Member University after the first year.

### Internship Requirement

GEM Fellows are required to accept approximately 12 weeks of a paid Internship with a Member Employer-Sponsor the summer immediately following selection. Fellows are paired with Employer-Sponsors who have specified their intern preferences, and accepting the assignment confirms the Fellowship. The Fellowship does not obligate the student or Employer-Sponsor to full-time employment beyond the student's completion of the program.

The employer decides the summer internship assignment and location. Every effort is made to match a student's research interests to the internship assignment.

### **Graduate School Admission**

Applicants must agree to apply to graduate school at a minimum of three GEM Member Universities. Fellows are responsible for all graduate school application expenses. Each Member University has its own admission requirements and students are accepted on their own merits. In addition, Member Universities may have additional requirements for accepting GEM Fellows; for example, obtaining in-state residency or acceptance of a teaching or research assistantship in order to receive tuition-fee support and stipend supplements. Be sure to check with the GEM representative at all graduate schools of interest. Students are strongly encouraged to apply simultaneous with application to the GEM program, but no later than the Universities' application deadlines. Applicants must be admitted into a GEM Member University graduate program before the GEM Fellowship is awarded.

See [www.gemfellowship.org](http://www.gemfellowship.org) for additional details on the GEM Fellowship Program, a list of Member Universities, a list of Member Employers, and more.

## **OTHER FELLOWSHIP PROGRAMS**

**Note:** This sort of information changes frequently. If you're interested in any of the following, we suggest you double-check the specifics on the organization's web site.

### The Agency for Healthcare Research and Quality (AHRQ)<sup>†</sup>

The Agency for Healthcare Research and Quality (AHRQ) supports training opportunities to help individuals prepare for a career in health services research. AHRQ is particularly interested in fostering the professional development of minority health services researchers.

AHRQ supports both pre-Doctoral and post-Doctoral training through the National Research Service Award (NRSA) program. AHRQ awards NRSA training Grants to institutions for pre-Doctoral and post-Doctoral training and individual NRSA Fellowships to applicants who have completed their Doctoral degrees. In addition, AHRQ supports dissertation Grants for Doctoral candidates. Minority candidates are strongly encouraged to apply for these Fellowships and Grants.

NRSA institutional training Grants assist domestic institutions in supporting pre-Doctoral and post-Doctoral academic training of qualified individuals who have demonstrated an interest in health services research. These training Grants are awarded by AHRQ to institutions, not individuals. The awards allow trainees to gain one or more years of full-time, supervised experience in applying research methods to the evaluation of health services in preparation for a career in health services research.

Candidates for pre-Doctoral training Grants must have a Baccalaureate degree and be enrolled in a Ph.D. program or a program leading to an equivalent degree. NRSA Grants may not be used to support studies leading to an M.D. Candidates for post-Doctoral training Grants must have a Ph.D., M.D., D.D.S., Dr.P.H., Sc.D., D.N.Sc., or other Doctoral degree. Tuition benefits are provided, as well as stipends to help trainees defray living expenses during the research training experience.

[www.ahrq.gov](http://www.ahrq.gov) > Funding Opportunities > Research Training > Preparing for a Career in Health Services Research

### Alfred P. Sloan Foundation Minority Ph.D. Program<sup>†</sup>

This program, managed by NACME, has two components. The Ph.D. component offers substantial Scholarship support to minority students who are beginning their Doctoral work in engineering, natural science, and mathematics. Since its establishment in 1995, the program has provided direct support to almost 900 minority Ph.D. students in these fields.

The smaller "feeder" component offers under-represented minority B.S. or M.S. students access to select faculty and departments that have demonstrated success in sending their students on to Doctoral programs.

<http://www.nacme.org> > NACME Programs > Education > Graduate

<sup>†</sup> Indicates a fellowship weighted to or specifically for at least one underrepresented minority group.

## [American Geological Institute— Minority Participation Program†](#)

The American Geological Institute has administered the Minority Participation Program Geoscience Student Scholarships since 1972. The goal for this program is to develop the professional corps of minority students in the geosciences.

Scholarship recipients are provided with small financial awards and matched with a mentor from the geoscience community to foster whole professional development of the awardee. Each award will consist of both Scholarship support as well as support for professional development experiences. Professional development experiences that qualify include field camp, professional society memberships, and/or travel and registration to a professional meeting of one of AGI's member societies.

[www.agiweb.org/mpp/](http://www.agiweb.org/mpp/)

## [The American Institute of Certified Public Accountants](#)

The primary objective of the AICPA Fellowships for Minority Doctoral Students is to enable more minorities to enter and move ahead in the accounting profession and academia. Recognizing the fact that professors serve as role models, a second objective is to increase the number of CPA role models who can positively influence the career decisions of a college student. These competitive Fellowships are available to minority candidates who have been accepted into a Doctoral accounting program. Fellowships of up to \$8,000 are awarded once a year to full-time minority accounting scholars who show significant potential to become accounting educators. Students will be considered for renewals as long as they continue to make satisfactory progress, as a full-time student, toward completion of their degree requirements, up to a total of five years.

<http://www.aicpa.org/> > Becoming a CPA/Academic Resources > Minority Initiatives > Fellowship for Minority Doctoral Students

## [ASPH/CDC/PRC Minority Fellowship†](#)

The Association of Schools of Public Health (ASPH), through a cooperative agreement with the Centers for Disease Control and Prevention (CDC) Prevention Research Centers (PRC) program, supports Fellowship positions for minority Doctoral students. The selected Fellows conduct research related to the efforts of, and within, CDC-funded Prevention Research Centers.

The overall intent of the program is to enhance the preparation of future public health professionals from ethnic and racial minorities by providing unique training opportunities in prevention research. The support offered through this program will expand minority representation in the public health prevention research workforce and provide Fellows an opportunity to gain practical, first-hand experience in prevention research.

Selected applicants have the opportunity to gain practical “hands on” experience through participation in projects under the direction of PRC's leading experts in public health and prevention research. While participating in this program, Fellows are exposed to state-of-the-art prevention research and provided with an opportunity to apply and translate knowledge to real world public health situations.

Minority students currently enrolled in Doctoral level, research-based (e.g., Ph.D., DrPH, Ed.D., ScD) training programs at accredited universities or schools of public health with CDC-funded Prevention Research Centers are eligible to apply for this program. Applicants must be granted admission to candidacy (completed coursework and passed qualifying exams) prior to the second year of the program. Applicants must be U.S. citizens or hold a visa permitting permanent residence in the U.S. (i.e., “Green Card”) to be eligible for the Fellowship program. Proposed projects must be related to PRC activities and endorsed by PRC Directors.

<https://fellowships.asph.org/> > Fellowship Programs > ASPH/CDC/PRC Minority Health Fellowship Program

## [The Commonwealth Fund/Harvard University Fellowship in Minority Health Policy†](#)

The Commonwealth Fund/Harvard University Fellowship in Minority Health Policy is designed to prepare physicians, particularly minority physicians, for leadership roles in formulating and implementing public health policy and practice on a national, state, and/or local level. Under the auspices of the Minority Faculty Development Program at Harvard Medical School, five one-year Fellowships will be awarded per year. Fellows will complete academic work leading to a Master's-level degree and, through additional program activities, gain exposure to, and understanding of, the major health issues facing minority and disadvantaged populations. It's expected that the Fellowship will support the development of a cadre of leaders in minority health, well-trained academically and professionally in public health, health policy, health management, and clinical medicine, as well as committed to pursuing careers in public service.

In addition to the academic work leading to a Master's degree in public health management, the Commonwealth Fund/Harvard University Fellowship in Minority Health Policy also incorporates training components beyond it.

- ▶ Leadership Forums
- ▶ Seminar Series
- ▶ Practicum
- ▶ Shadowing
- ▶ Journal Club
- ▶ Site Visits
- ▶ Annual Meeting

[www.commonwealthfund.org](http://www.commonwealthfund.org) > Fellowships > Minority Health Policy Fellowship

## [Fulbright Program \(U.S. Department of State\)](#)

The Fulbright Program is the largest U.S. international exchange program offering opportunities for students, scholars, and professionals to undertake international graduate study, advanced research, university teaching, and teaching in elementary and secondary schools worldwide.

It was established in 1946 by the U.S. Congress to “enable the government of the United States to increase mutual understanding between the people of the United States and the people of other countries.”

About 6,000 Grants were awarded in 2008, valued at more than \$275.4 million.

<http://us.fulbrightonline.org>



## [Ford Foundation Diversity Fellowships†](#)

Through its program of Diversity Fellowships, the Ford Foundation seeks to increase the diversity of the nation's college and university faculties by increasing their ethnic and racial diversity, to maximize the educational benefits of diversity, and to increase the number of professors who can and will use diversity as a resource for enriching the education of all students.

Eligibility to apply for a Ford Fellowship is limited to:

- All citizens or nationals of the United States regardless of race, national origin, religion, gender, age, disability, or sexual orientation,
- Individuals with evidence of superior academic achievement (such as grade point average, class rank, honors or other designations),
- Individuals committed to a career in teaching and research at the college or university level.

For information regarding level-specific eligibility requirements, stipends, and other program information for each of the three levels of the Fellowship program, please access the fact sheet for the program level of your interest, pre-Doctoral, dissertation or post-Doctoral.

[www7.nationalacademies.org/fordfellowships/](http://www7.nationalacademies.org/fordfellowships/)

## [Graduate Assistance in Areas of National Need \(U.S. Department of Education\)](#)

This program, known as GAANN, provides Fellowships through academic departments and programs of institutions of higher education to assist graduate students with excellent records who demonstrate financial need and plan to pursue the highest degree available in their course study in a field designated as an area of national need.

[www.ed.gov/programs/gaann](http://www.ed.gov/programs/gaann)

## [Hispanic Scholarship Fund†](#)

The nation's largest provider of college financial aid for Latino students has several Scholarships available for graduate study.

<http://www.hsf.net> > Scholarships > Scholarship Programs > College Students > Scholarships for Graduate Students

## [IEEE—Charles LeGeyt Fortescue Fellowship](#)

Students get approximately \$24,000 for one year of full-time Master's work in electrical engineering.

To be eligible, the student must be a permanent resident of the United States and have majored in the field of electrical engineering and have received a Bachelor's Degree from an engineering college of recognized standing. The Scholarship will be awarded to a first-year full-time graduate student only.

[www.ieee.org](http://www.ieee.org) > About the IEEE > Awards & Fellows > Fellowships > Charles LeGeyt Fortescue Scholarship

## [Marshall Sheffield Fellowships](#)

A two to three year Scholarship for U.S. citizens to study at the graduate or post-Doctoral level in the United Kingdom.

[www.marshallscholarship.org/](http://www.marshallscholarship.org/)

## [Minority Access to Research Careers \(MARC\)†](#)

The Minority Access to Research Careers (MARC) programs offer special research training support to four-year colleges and universities with substantial enrollments of minorities such as African Americans, Hispanic Americans, Native Americans/Alaska Natives who maintain tribal affiliation or community attachment, Hawaiian Natives, and natives of the U.S. Pacific Islands. This branch of the National Institute of General Medical Sciences (part of the National Institutes of Health) is dedicated to increase the number and competitiveness of under-represented minorities engaged in biomedical research by strengthening the science curricula at minority-serving institutions and increasing the research training opportunities for students and faculty at these institutions.

MARC Program Components:

- Undergraduate Student Training in Academic Research (U-STAR) Awards
- pre-Doctoral Fellowships
- Faculty Senior Fellowships
- Ancillary Training Activities

[www.nigms.nih.gov/Minority/MARC/](http://www.nigms.nih.gov/Minority/MARC/)

## [Morris K. Udall Scholarship†](#)

In 2010, the Udall Foundation expects to award 80 Scholarships of up to \$5,000 and 50 honorable mentions of \$350 to sophomore and junior-level college students committed to careers related to the environment, tribal public policy, or Native American health care.

Scholarships are offered in any of three categories:

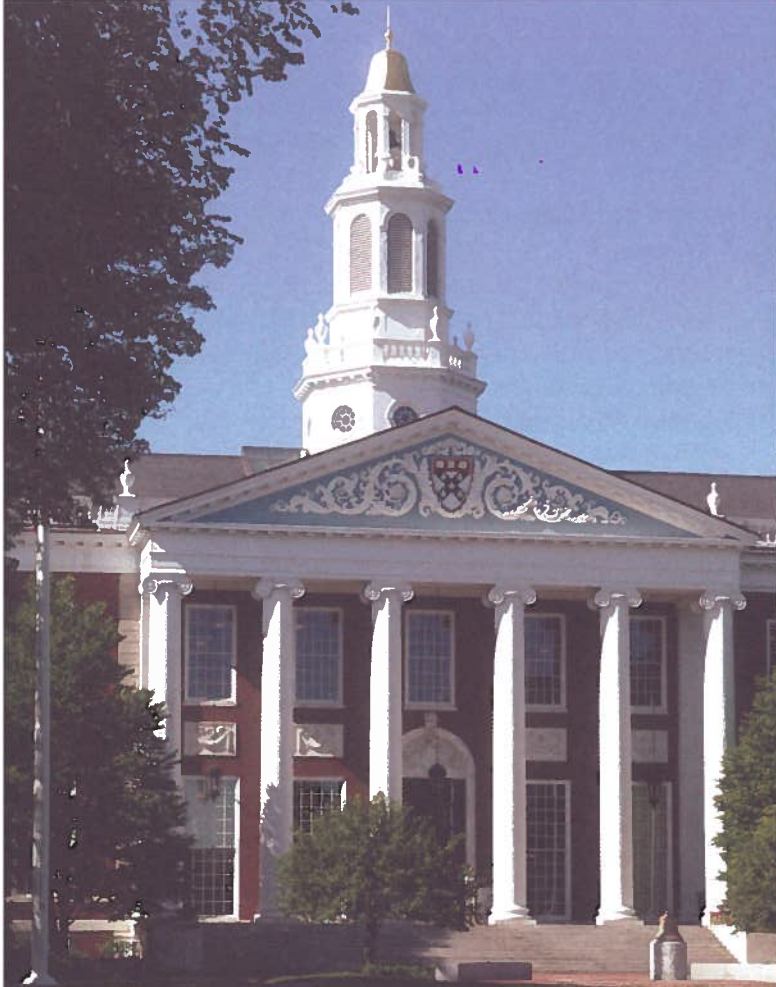
- To students who have demonstrated commitment to careers related to the environment; or
- To Native American and Alaska Native students who have demonstrated commitment to careers related to tribal public policy; or
- To Native American and Alaska Native students who have demonstrated commitment to careers related to Native health care.

The Udall Foundation seeks future leaders across a wide spectrum of environmental fields, including policy, engineering, science, education, urban planning and renewal, business, health, justice, and economics.

The Udall Foundation seeks future Native American and Alaska Native leaders in Native American health care and tribal public policy. Tribal policy includes fields related to tribal sovereignty, tribal governance, tribal law, Native American education, Native American justice, natural resource management, cultural preservation and revitalization, Native American economic development, and other areas affecting Native American communities. Native American health care includes health care administration, social work, medicine, and research into health conditions affecting Native American communities.

[www.udall.gov/](http://www.udall.gov/)

† indicates a fellowship weighted to or specifically for at least one underrepresented minority group.



*“I decided on a graduate degree because I wanted a more in-depth treatment of the materials science. Stanford’s great inter-disciplinary curriculum created opportunities to connect with students of diverse perspectives. And the additional focus on lab research allowed me to develop skills valuable in the workplace. I never let cost get in the way of a good education. Between research, teaching fellowships, off-campus Internships, and financial aid, I knew I could achieve my goal.”*

**J.C. Mauricia**  
Engineering Program Manager  
Apple Inc.



*“GEM provides Intel with high quality, diverse talent from the best schools across the U.S. This aligns with Intel’s goals of having the strongest, best trained work force possible, as well as enhances our continuing commitment to higher education and STEM talent development for the 21st century.”*

**Dr. Eric Gayles**  
Director, External Programs:  
Future Technology Research - Intel Labs  
Intel Corporation



## [NAACP Scholarships†](#)

NAACP offers several graduate-level Scholarships, some purely merit-based, others based on financial need. In some cases, the applicant must be a member of the NAACP.

[www.naacp.org](http://www.naacp.org) > Youth > Scholarships > Information

## [National Aeronautics and Space Administration \(NASA\) Graduate Student Researchers Program†](#)

The NASA Graduate Student Researchers Program (GSRP) awards Fellowships for graduate study leading to Master's or Doctoral degrees related to NASA research and development in the fields of science, mathematics, and engineering. This 12-month award includes a required Internship at the NASA center affiliated with the NASA-sponsored research. The award may be renewed annually for a maximum of three years.

The goal of NASA's GSRP is to cultivate research ties to the academic community, to increase the number of highly trained scientists and engineers in aeronautics and space-related disciplines, and to broaden the base of students pursuing advanced degrees in science, mathematics, and engineering.

Research opportunities are located at each of the nine NASA centers and the Jet Propulsion Laboratory. NASA updates research topics annually to complement its mission requirements. Research areas are in disciplines that lead to aeronautics and space careers.

The GSRP is competitive and supports graduate students who are U.S. citizens attending U.S. universities. NASA's scientists and engineers evaluate applications based upon academic transcripts, research proposals, the faculty research adviser's recommendation, and the proposed use of NASA center facilities. Mentoring and Internships at NASA centers are important aspects of the GSRP Fellowship. Usually the centers host students during the summer months to fulfill this purpose; however, the schedule may vary depending on each center's capacity. Recipients of the GSRP Training Grant must coordinate the schedule for the Internship with the appropriate center's technical adviser and the center's GSRP project manager.

[www.nasa.gov](http://www.nasa.gov) > Education > Programs > Alphabetical List of All NASA Education Projects

## [National Aeronautics and Space Administration \(NASA\) Jenkins pre-Doctoral Fellowship†](#)

The Jenkins pre-Doctoral Fellowship Project, or JPPF, seeks to increase the number of graduate degrees awarded to under-represented persons (women, minorities and persons with disabilities) in the science, technology, engineering and mathematics, or STEM, disciplines. The ultimate goal is to increase the U.S. talent pool by developing a more inclusive, multicultural, and sustainable STEM workforce.

The JPPF provides up to three years of support and includes a Mentor-Protégé Initiative, Fellows Orientation, a Technical Exchange Symposium and the competitive Mini Research Award Program. The latter project provides six weeks of hands-on research experience at a NASA center or the Jet Propulsion Labora-

tory. Up to 20 Fellows are selected annually. With stipends, travel allowances and tuition offsets included, JPPF award packages currently start at \$24,500 per year.

Sample disciplines of recent JPPF awardees:

- ▶ Aeronautics/Aerospace
- ▶ Environmental Sciences
- ▶ Astronomy
- ▶ Life Sciences
- ▶ Biology
- ▶ Material Sciences
- ▶ Chemistry
- ▶ Mathematics
- ▶ Computers/Computer Science
- ▶ Physical Science
- ▶ Earth Sciences
- ▶ Physics
- ▶ Engineering
- ▶ Robotics

[www.nasa.gov](http://www.nasa.gov) > Education > Programs > Alphabetical List of All NASA Education Projects

## [National Center For Environmental Research Fellowships \(Environmental Protection Agency\)](#)

EPA's STAR graduate Fellowship program supports Master's and Doctoral candidates in environmental studies. Each year, students in the U.S. compete for STAR Fellowships through a rigorous review process. Students can pursue degrees in traditionally recognized environmental disciplines as well as other fields such as social anthropology, urban and regional planning, and decision sciences. Since the program began in 1995, EPA has awarded approximately 1,500 STAR Fellowships to students in every state and most territories. Fellowships have helped educate new academic researchers, government scientists, science teachers, and environmental engineers.

STAR Fellowships are intended to help defray the ever-increasing costs associated with studies leading to advanced degrees in environmental sciences. The actual amount awarded per year will vary depending on the amount of tuition and fees and the number of months the stipend is needed.

Benefits of an EPA STAR Fellowship include: Up to \$37,000 per year of support, including \$12,000 per year for tuition and fees, \$20,000 per year in a monthly stipend, and an annual expense allowance of \$5,000. Master's level students can receive support for a maximum of two years. Doctoral students can be supported for a maximum of three years with funding available, under certain circumstances, over a period of four years.

[www.epa.gov/ncer/fellow](http://www.epa.gov/ncer/fellow)

## [National Institutes of Health](#)

NIH has many Fellowships available in the biological sciences. Search this site to find ones that pertain to you.

<http://grants.nih.gov/grants/oer.htm>

## [National Physical Science Consortium](#)

The NPSC's goal is to increase the number of qualified U.S.-citizen Ph.D.s in the physical sciences and related engineering fields, emphasizing recruitment of a diverse applicant pool of women and historically under-represented minorities.

† Indicates a fellowship weighted to or specifically for at least one underrepresented minority group.

In the traditional Fellowship, initial support may be for two or three years, or for a full six years, depending on the employer-sponsor. If the initial support is for the shorter period, it may be extended up to six years at the discretion of the employer. Students typically apply while seniors in college.

The Dissertation Support Program covers the period of dissertation research and defense, up to a maximum of four years.

Though the fields supported can vary annually depending on employer needs, in general NPSC covers: astronomy, chemistry, computer science, geology, materials science, mathematical sciences, physics, and their subdisciplines; and the related engineering fields: chemical, computer, electrical, environmental, mechanical.

[www.npsc.org/students/info.html](http://www.npsc.org/students/info.html)

### [National Science Foundation \(NSF\) Doctoral Dissertation Improvement Grants in the Directorate for Biological Sciences](#)

Partial support of Doctoral dissertation research to improve overall quality of research. Allowed are costs for Doctoral candidates to participate in scientific meetings, to conduct research in specialized facilities or field settings, and to expand an existing body of dissertation research.

[www.nsf.gov](http://www.nsf.gov) > Funding > Find Funding > Special Programs for Graduate Students

### [National Science Foundation \(NSF\) East Asia and Pacific Summer Institutes for U.S. Graduate Students](#)

The East Asia and Pacific Summer Institutes (EAPSI) provide U.S. graduate students in science and engineering:

1) first-hand research experiences in Australia, China, Japan, Korea, New Zealand, Singapore, or Taiwan; 2) an introduction to the science, science policy, and scientific infrastructure of the respective location; and 3) an orientation to the society, culture, and language. The primary goals of EAPSI are to introduce students to East Asia and Pacific science and engineering in the context of a research setting, and to help students initiate scientific relationships that will better enable future collaboration with foreign counterparts.

[www.nsf.gov](http://www.nsf.gov) > Funding > Find Funding > Special Programs for Graduate Students

### [National Science Foundation \(NSF\) Graduate Research Fellowship Program](#)

The National Science Foundation aims to ensure the vitality of the human resource base of science, technology, engineering, and mathematics in the U.S. and to reinforce its diversity by offering approximately 1,654 graduate Fellowships in this competition pending availability of funds. The Graduate Research Fellowship provides three years of support for graduate study leading to research-based Master's or Doctoral degrees and is intended for students who are in the early stages of their graduate study. The Graduate Research Fellowship Program (GRFP) invests in graduate education for a cadre of diverse individuals who demonstrate their potential to successfully complete graduate degree

programs in disciplines relevant to the mission of the National Science Foundation.

[www.nsfgradfellows.org/](http://www.nsfgradfellows.org/)

### [National Science Foundation \(NSF\) Integrative Graduate Education and Research Traineeship](#)

IGERT is the National Science Foundation's flagship interdisciplinary training program, educating U.S. Ph.D. scientists and engineers by building on the foundations of their disciplinary knowledge with interdisciplinary training.

Collaborative research that transcends traditional disciplinary boundaries and requires teamwork provides students with the tools to become leaders in the science and engineering of the future. Diversity among the students contributes to their preparation to solve large and complex research problems of significant scientific and societal importance at the national and international level. IGERT students obtain the personal and professional skills to succeed in the careers of the 21st century. Since 1998 the IGERT program has made 215 awards to over 100 lead universities in 41 states, the District of Columbia, and Puerto Rico. IGERT has provided funding for nearly 5,000 graduate students.

[www.igert.org/](http://www.igert.org/)

### [National Science Foundation \(NSF\) LSAMP—Bridge to the Doctorate](#)

This program emphasizes the development of broad-based regional and national alliances of academic institutions, school districts, state and local governments, and the private sector to increase the diversity and quality of the STEM workforce.

The program is aimed at increasing the quality and quantity of students successfully completing science, technology, engineering, and mathematics (STEM) Baccalaureate degree programs, and increasing the number of students interested in, academically qualified for, and matriculated into programs of graduate study. LSAMP supports sustained and comprehensive approaches that facilitate achievement of the long-term goal of increasing the number of students who earn doctorates in STEM fields, particularly those from populations under-represented in STEM fields. The program goals are accomplished through the formation of alliances.

[www.nsf.gov](http://www.nsf.gov) > Funding Opportunities > Program Areas > Division of Human Resource Development

### [National Science Foundation \(NSF\) Minority post-Doctoral Research Fellowships and Supporting Activities](#)

The Directorate for Biological Sciences (BIO) and the Directorate for Social, Behavioral and Economic Sciences (SBE) offer Minority post-Doctoral Research Fellowships and related supporting activities in an effort to increase the participation of under-represented groups in selected areas of science in the U.S. These Fellowships support training and research in STEM fields in a host institution only in the areas of biology and social, behavioral, and economic sciences within the purview of the NSF. Supporting activities are travel Grants to graduate students to visit prospective sponsors and starter research Grants for Fellows.

[www.nsf.gov](http://www.nsf.gov) > Funding Opportunities > Program Areas > Social, Behavioral and Economic Sciences

### [National Science Foundation \(NSF\) Navy Civilian Service Fellowships](#)

This program supports students at the Bachelor's, Master's, or Doctoral levels in the STEM disciplines who agree to commit to spending a year as a civilian employee at a Naval R&D Center for each year of support received. Funding will be provided for up to two years of Fellowship/Scholarship support plus a cost of education allowance.

[www.nsf.gov](http://www.nsf.gov) > Funding > Find Funding > Program Areas > Cross-cutting and NSF-wide

### [National Science Foundation \(NSF\) Robert Noyce Teacher Scholarship Program](#)

This program seeks to encourage talented STEM majors and professionals to become K-12 mathematics and science teachers. The program provides funds to institutions of higher education to support Scholarships, stipends, and academic programs for undergraduate STEM majors and post-Baccalaureate students holding STEM degrees who commit to teaching in high-need K-12 school districts. A new component of the program supports STEM professionals who enroll as NSF Teaching Fellows in Master's degree programs leading to teacher certification by providing academic courses, professional development, and salary supplements while they are fulfilling a four-year teaching commitment in a high need school district. This new component also supports the development of NSF Master Teaching Fellows by providing professional development and salary supplements for exemplary math and science teachers to become Master Teachers in high-need school districts.

[www.nsf.gov](http://www.nsf.gov) > Funding > Find Funding > Special Programs for Undergraduate Students

### [National Science Foundation \(NSF\) Scholarships in Science, Technology, Engineering and Mathematics \(S-STEM\)](#)

This program makes Grants to institutions of higher education to support Scholarships for academically talented, financially needy students, enabling them to enter the workforce following completion of an Associate; Baccalaureate; or graduate-level degree in science and engineering disciplines. Grantee institutions are responsible for selecting Scholarship recipients, reporting demographic information about student scholars, and managing the S-STEM project at the institution.

The program does not make Scholarship awards directly to students; students should contact their institution's Office of Financial Aid for this and other Scholarship opportunities.

[www.nsf.gov](http://www.nsf.gov) > Funding > Find Funding > Special Programs for Undergraduate Students

### [Paul and Daisy Soros Fellowship for New Americans](#)

The program is open to new Americans who retain loyalty and a sense of commitment to their country of origin as well as to the United States, but is intended to support individuals who will

continue to regard the U.S. as their principal residence and focus of national identity. (A new American is an individual who (1) is a resident alien, i.e., holds a Green Card; or, (2) has been naturalized as a U.S. citizen, or (3) is the child of two parents who are both naturalized citizens).

The applicant must either have a Bachelor's degree or be in her/his final year of undergraduate study. Those who have a Bachelor's degree may already be pursuing graduate study and may receive Fellowship support to continue that study. Individuals who are in the third, or subsequent, year of study in the same graduate program are not, however, eligible for this competition. Students who have received a Master's degree in a program and are continuing for a Doctoral degree in the same program are considered to have been in the same program from the time they began their work on their Master's degree.

Candidates must demonstrate the relevance of graduate education to their long-term career goals and potential in enhancing their contributions to society. Fellowships are not solely awarded on the basis of academic record. The academic record is relevant as evidence of the candidate's ability to complete successfully a graduate degree program and it strengthens the demonstration of achieving the Program's specific criteria for selection.

Each year the Fellow receives a maintenance Grant of \$20,000 and a tuition Grant of one-half the tuition cost of the U.S. graduate program attended by the Fellow (up to a maximum of \$16,000 per academic year).

[www.pdsoros.org](http://www.pdsoros.org)

### [The Ph.D. Project](#)

The Ph.D. Project provides a clearinghouse for the knowledge that potential students of business Doctoral programs will need, referring to itself as a "Ph.D. Guidance Counselor."

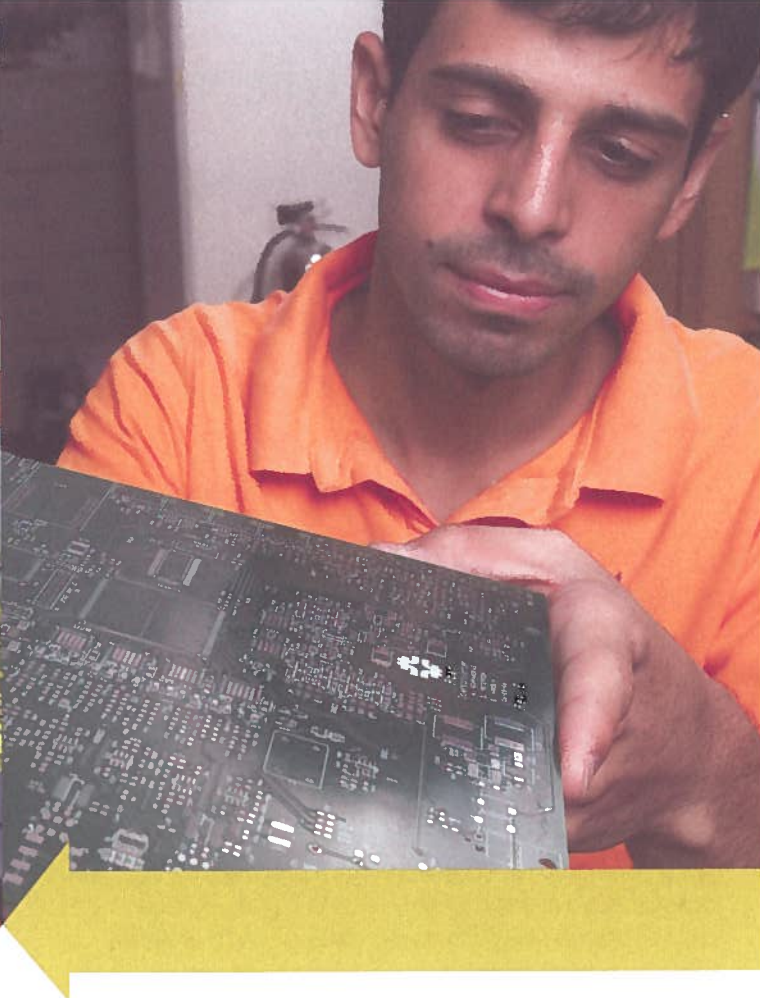
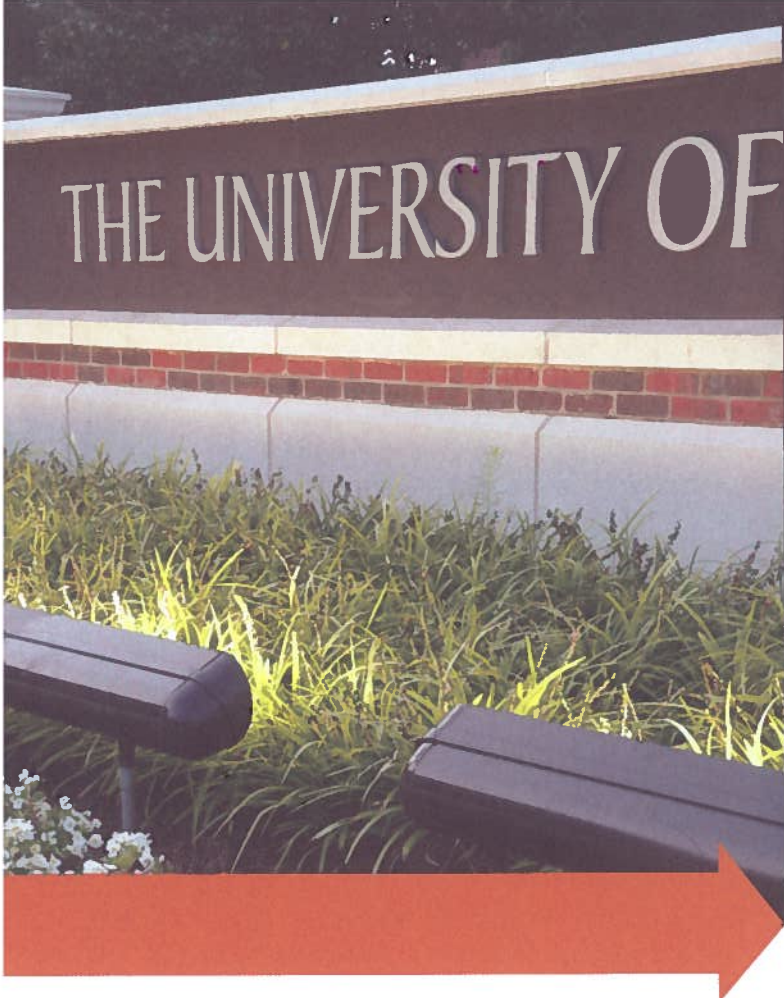
The Project welcomes interested African-Americans, Hispanic-Americans, and American Indians to learn more about its Annual Conference, which provides networking opportunities with Doctoral granting institutions and members of the business academic community.

[www.phdproject.org](http://www.phdproject.org)

### [The Political Science Association— Minority Scholar Dissertation Assistance](#)

Some funding programs specifically offer support to graduate students at the dissertation stage. At the link below are a number of such programs for minority students. This is not an exhaustive list; students will need to do some research to find the right program. Most require that students finish their dissertation during the award period.

[www.apsanet.org](http://www.apsanet.org) > Programs > Minority Programs > Minority Scholar Resources > Minority Scholar Dissertation Assistance



**Rhodes Scholarship Trust†**

This program brings students from around the world to study at Oxford University. Each year, 32 U.S. citizens are among more than 80 Rhodes Scholars worldwide who take up degree courses at Oxford University.

There are four criteria by which prospective Rhodes Scholars are selected:

- Literary and scholastic attainments;
- Energy to use one's talents to the full, as exemplified by fondness for and success in sports;
- Truth, courage, devotion to duty, sympathy for and protection of the weak, kindness, unselfishness and fellowship; and
- Moral force of character and instincts to lead, and to take an interest in one's Fellow beings.

[www.rhodes scholar.org](http://www.rhodes scholar.org)

*"I wanted to prove to myself that a first generation Hispanic college graduate could further his education. I had planned on attending a local college and staying at home. I would not have been able to afford going to Boston University without the GEM Fellowship."*

**Rudy J. Garcia**

Program Manager—Principal Member of the Technical Staff  
Sandia National Laboratory



**The Southern Regional Education Board State Doctoral Scholars Program†**

This program is part of a nationwide initiative, the Compact for Faculty Diversity, to produce more minority Ph.D.s and to encourage them to seek faculty positions.

Since its founding in 1993, the Doctoral Scholars Program has supported more than 715 scholars, at 83 institutions in 29 states. SREB states share resources, work to expand their minority applicant pool, support qualified candidates with financial assistance for up to five years of graduate study, and assist graduates and higher education institutions in identifying employment opportunities. The program has maintained a retention rate of almost 90 percent, more than 70 percent of its graduates have begun academic careers in higher education and more than 70 percent are employed in SREB states.

[www.sreb.org](http://www.sreb.org) > Doctoral Scholars

*"I wanted a more in-depth understanding of the areas in which I had the most interest within Electrical Engineering versus the 'broad-brush' approach I'd received in undergrad. Graduate studies gave me the chance to develop and gain greater clarity about my personal vision for my career in terms of my passions and true interests."*

**Cicely J. Ingram**

Technology Leader  
The Procter & Gamble Company



### UNCF Merck Science Initiative\*

The UNCF Merck Graduate Science Research Dissertation Fellowships are intended to support African-American graduate students as they complete coursework, conduct research, and prepare the dissertation required for the Doctoral degree in the bio-medically relevant life or physical sciences.

At least 12 Graduate Science Research Dissertation Fellowship awards will be made each year. Each award is up to a maximum of \$52,000 and consists of a Fellowship Stipend of up to \$42,000 for the award recipient and a research Grant of up to \$10,000. For administrative purposes, the awards will be made to the institutions with which each award recipient is affiliated. As the awards are intended to be used to support graduate student stipends and research, no part of the awards may be used for indirect costs. Awards begin no earlier than September of that year.

The Fellowship stipend of up to \$42,000 is intended to cover a minimum of 12 months up to a maximum of 24 months of Fellowship tenure. A maximum of \$25,000 may be received per 12 month period. All qualifying exams for candidacy for the degree must have been successfully completed before an award can be disbursed. Award recipients will be known as UNCF-Merck Graduate Fellows. Each Fellow will be mentored by a Merck scientist. As part of the award, each Fellow will be expected to make regular contact with his or her Merck mentors. Each Fellow is also expected to present a progress report of his or her research results in the last half of their Fellowship tenure at a Merck research facility. The cost of this visit will be underwritten by Merck & Co., Inc. A two-page summary of research results must be submitted to UNCF at the end of the Fellowship tenure. Each Fellow is expected to notify UNCF upon receipt of his or her doctorate degree.

A research Grant of up to \$10,000 will be given to each award recipient.

An applicant must be:

- African-American
- Enrolled in a full-time Ph.D. or equivalent Doctoral degree program majoring in a life or physical science. M.D./Ph.D. degree candidates are eligible
- Engaged in and within one to three years of completing dissertation research, having successfully completed all qualifying exams
- A citizen or permanent resident of the United States

<http://umsi.uncf.org/>

### USDA Public Service Leaders Scholarship Program

The U.S. Department of Agriculture's Public Service Leaders Scholarship Program provides combined Scholarship and Internship opportunities that lead to permanent employment upon completion of their degree. The program is designed to promote public service and create access to higher education.

The program includes full-tuition Scholarships, a paid Internship (minimum 640 hours) leading to at least one year of employment at the USDA for each year educational assistance was received. Students also have mentoring, career development, and leadership training.

[www.usdascholarships.com](http://www.usdascholarships.com)

### U.S. Department of Homeland Security Graduate Fellowships

This program is intended to ensure a highly talented science and technology community is available to secure the U.S. against those who seek to disrupt the American way of life. Eligible students must study a homeland security-related science, technology, engineering and mathematics field with an interest, major, or concentration directly related to:

- Explosives Detection, Mitigation and Response
- Social, Behavioral, and Economic Sciences
- Risk and Decision Sciences
- Human Factors Aspects of Technology
- Chemical Threats and Countermeasures
- Biological Threats and Countermeasures
- Food and Agriculture Security
- Transportation Security
- Border Security
- Immigration Studies
- Maritime and Port Security
- Infrastructure Protection
- Natural Disasters and Related Geophysical Studies
- Emergency Preparedness and Response
- Communications and Interoperability
- Advanced Data Analysis and Visualization

[www.orau.gov/dhsed/](http://www.orau.gov/dhsed/)

## **DON'T LET MONEY HOLD YOU BACK**

With our country facing a shortage of professionals to fill STEM positions in our corporations and universities, now is a perfect time to pursue a graduate degree in the STEM disciplines. There are more resources available today than ever that can help you go to school for free. All you need to do is a little research. Starting today you can turn your dreams of graduate school into reality.

\* Indicates a fellowship weighted to or specifically for at least one underrepresented minority group.

LINKING EXCEPTIONAL TALENT TO EXTRAORDINARY CAREERS

