



National Science Foundation
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NSF 11-013

Dear Colleague Letter: Graduate Research Diversity Supplement

November 17, 2010

Subject: FY 2011 Graduate Research Diversity Supplements (GRDS) to Current ENG Awards to Broaden Participation

This letter is to call your attention to an opportunity to broaden the participation of underrepresented students in Ph.D. programs in engineering through supplements to current research grants funded by the divisions in the Directorate for Engineering (ENG) at the National Science Foundation.

Introduction: The establishment of Graduate Research Diversity Supplements (GRDS) reflects the continuing effort by ENG to promote increased participation of new Ph.D. students in all fields of engineering research with particular emphasis on individuals from underrepresented minorities in the U.S. The long-term goal of GRDS is to increase the number of persons from underrepresented groups in advanced academic and professional careers. According to the 2008 Survey of Earned Doctorates (SED), among recipients of earned doctorates in engineering in the U.S. in 2007-2008, there were .01% American Indian, 1.4% African American, and 1.7% Hispanic, 21.5% women, and 0.7% persons with disabilities (of U.S. citizens and permanent residents - there were 0.24% American Indian, 3.7% African American, and 4.5% Hispanic). According to the NSF 2006 Survey of Doctorate Recipients (SDR), among teaching faculty in engineering, there are 10.9% women, 4.5% African American, 3.1% Hispanic, 0.8% American Indian/Alaskan Native and 6.3% persons with disabilities. With such exceedingly low levels of faculty from underrepresented groups, ENG recognizes that these underrepresented groups represent a significant untapped technical resource for the nation.

Recognizing the importance and impact of the program, the Directorate for Engineering is continuing GRDS for its Divisions of Electrical, Communications and Cyber Systems (ECCS), Chemical, Bioengineering, Environmental and Transport Systems (CBET), Civil, Mechanical and Manufacturing Innovation (CMMI), Engineering Education and Centers (EEC), and Industrial Innovation and Partnerships (IIP). It is anticipated that GRDS will help in the development of intellectual synergy between faculty and students, provide faculty with the opportunity to involve additional graduate students in on-going research programs, foster a learning and career advancement environment that supports students, and lead to greater retention of students from the underrepresented populations.

Anticipated Type of Award: Supplements to currently active Directorate for Engineering (ENG) research awards.

Eligibility:

- GRDS candidates must be United States citizens, nationals, or permanent residents of the United States.
- The graduate student must be newly enrolled in, or planning to pursue the Ph.D. degree in engineering disciplines. **"Newly enrolled student" means that the student started in the spring 2011 semester or will be starting in the fall 2011 semester.**
- Only one new Ph.D. student for GRDS may be supported under each research award. The exception is for Engineering Research Centers (ERCs) (or other center-type awards), which are multi-campus and usually multi-state awards. PIs for Center awards can request a GRDS for more than one student associated with more than one PI. The request must be submitted by the PI of the lead university and there is a limitation of **two** students per award. Each of the students must be located on two different campuses funded by the Center. Sub award budget requests should

be included for any students not located on the campus of the lead university.

- Graduate Student Researcher Mentoring Plan. *Each GRDS request must include, in the Supplementary Document section, a description of the mentoring activities that will be provided for the proposed candidate.* In no more than two pages, the mentoring plan must describe the mentoring that will be provided to the graduate student researcher supported by this supplement, irrespective of whether the student resides at the submitting organization, any subawardee organization, or at any organization participating in a simultaneously submitted collaborative project.
- Mentoring activities should include, but are not limited to: setting up a mutually agreed upon list of expectations and goals; providing timely evaluations of progress towards those goals; career counseling; training in preparation of grant proposals, publications and presentations; guidance on ways to improve teaching, leadership, and mentoring skills; guidance on how to effectively collaborate with researchers from diverse backgrounds and inter-disciplinary areas; and training in responsible professional practices. In addition, outreach activities that focus on broadening participation should be incorporated.

Preparation of GRDS Request: A request for funding of a GRDS should be made by the Principal Investigator (PI) of a currently active ENG research award. Information about requesting supplemental support is contained in Part II of the NSF Proposal and Award Policies and Procedures Guide (PAPPG) available at:

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=papp. Requests for supplemental funding should be submitted via FastLane (<http://www.fastlane.nsf.gov/fastlane.htm>) and should be prepared in accordance with the following instructions. The FastLane Frequently Asked Questions (FAQs) document provides additional information and can be found at:

https://www.fastlane.nsf.gov/NSFHelp/flashhelp/fastlane/FastLane_Help/fastlane_help.htm#welcome_to_the_fastlane_help_system.htm.

When completing the cover sheet, the proposal title should begin with "GRDS:" and follow with the title of the original award.

Follow the procedures described in the Research Experiences for Undergraduates (REU) solicitation under the sections for REU supplements for investigators holding an existing NSF research award. However, for GRDS your description of the proposed GRDS activity should have a title which starts with "GRDS:" and be placed in the "Summary of Proposed Work" (Project Summary) section of your request in the FastLane supplement module and NOT in the "Justification for Supplement" section, as is the case for the REU supplements. The REU solicitation can be found at:

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517.

In the "Summary of Proposed Work" section of the supplemental funding request, the Principal Investigator must enter a description of the proposed GRDS activity (limited to three pages) in support of broadening participation. The supplemental funding request should articulate the form and nature of the involvement of the identified graduate student majoring in an engineering discipline in the Principal Investigator's on-going research program. The Directorate for Engineering expects that the GRDS student will contribute to activities that comprise the intellectual core of the funded research effort. Since it is anticipated that GRDS will promote increased participation of underrepresented graduate students in engineering, the proposal for a GRDS should indicate the follow-up mechanism that will be used to encourage career advancement of the GRDS student beyond participation in the Ph.D. research program.

The GRDS request must include a supporting budget and a budget justification of the funds being requested.

In addition, a brief biographical sketch of the student must be included in the Supplementary Documents section of the GRDS request. The biographical sketch should incorporate the student's long-range career goals and commitment to diversity as a resource for enriching education in engineering disciplines. The GRDS is intended to increase the diversity of researchers in engineering disciplines including those from underrepresented groups, students at minority serving institutions, women, and persons with disabilities.

For a renewal for a second or third year supplement, the currently supported GRDS student must be in good academic standing. The GRDS request must include a report on the progress of the student working toward the Ph.D degree. GRDS renewals are subject to the availability of funds in the program.

For further guidance concerning the GRDS, the Principal Investigator should consult with the program director of the ENG award under which the GRDS is to be supported. Inquiries regarding possible conflict-of-interest situations and other questions should be addressed to the GRDS coordinators. (See list below)

Review Process: An award decision will be based on internal review by the managing program director of the award and availability of funds in a particular program.

Award Size and Duration: The Principal Investigator may request a GRDS for 12 months, renewable annually through additional GRDS requests. An individual student may receive a GRDS award for a maximum period of three years. GRDS awards are nontransferable. The GRDS request may only include graduate student stipend (line F1.) and cost of education support (line F4.) consistent with academic institutional practices. The cost of education may include tuition, travel (line F2.) for the student to present his/her research findings at professional meetings, and other associated costs. In addition to the participant support cost for the student, up to \$3000 may be requested for other cost categories and any associated indirect costs. Sponsored Research Offices should propose in accordance with their current disclosed accounting practices. The maximum annual amount including other cost and any associated indirect costs of a GRDS award is \$41,000.

Award Information: Anticipated funding for GRDS in FY 2011 is \$2,252,000, subject to the availability of funds and the merit of proposals received. The estimated number of supplements to be awarded will be 60-65.

Submission Deadline: The deadline for submission of a GRDS request is 5:00 p.m., submitter's local time, on January 20, 2011.

Broadening Participation: The annual and final reports must indicate the impact of the supplement award on increasing the participation of women and underrepresented groups in engineering. Quantitative measures of impact by race, gender, and disability are expected.

The Directorate for Engineering encourages its grantees to disseminate information on GRDS to students planning to pursue the Ph.D. degree in engineering disciplines who share a commitment to diversity as a resource for enriching education. ENG anticipates that GRDS will open and facilitate new avenues for increasing the participation of underrepresented students in engineering disciplines, and in turn, enhance the development of the U.S. engineering workforce in accordance with the America COMPETES Act and the Engineer of 2020 report of the National Academy of Engineering that foresees an engineering profession that remains underrepresented with respect to women and minorities in the year 2020.

CONTACTS FOR ADDITIONAL INFORMATION

For additional information and clarification concerning a GRDS request, please view the Frequently Asked Questions at: <http://www.nsf.gov/pubs/2011/nsf11014/nsf11014.pdf>.

For further guidance or questions concerning the GRDS Program, the Principal Investigator should first consult with the program director for the ENG award under which the GRDS is being requested.

Inquiries regarding the ENG Graduate Research Diversity Supplements should be directed to one of the following GRDS Coordinators:

Dr. Omnia El-Hakim
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