



U.S. NATIONAL SCIENCE FOUNDATION  
2415 EISENHOWER AVENUE  
ALEXANDRIA, VIRGINIA 22314

**NSF 24-087**

## Dear Colleague Letter: Non-Academic Research Internships for Graduate Students in Hydrogen and Fuel Cell Technologies (Hydrogen INTERN) Supplemental Funding Opportunity

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May 6, 2024

Dear Colleague:

Fostering the growth of a globally competitive and diverse research workforce and advancing the scientific and innovation skills of U.S. students are strategic objectives of the National Science Foundation (NSF). Supporting the development of a skilled workforce in energy efficiency and renewable energy is a strategic objective of the U.S. Department of Energy (DOE). The NSF and DOE's Office of Energy Efficiency and Renewable Energy (EERE) have established a partnership to support internship and training opportunities to meet these strategic objectives with a focus on hydrogen and fuel cell technologies. A new generation of skilled workforce is needed to drive research and development of hydrogen production, delivery, infrastructure, storage, fuel cells, and multiple end uses across transportation, industrial, and stationary power applications. For more information on DOE-EERE's priorities for hydrogen energy research, please see the DOE's [Hydrogen Program Areas](#) and the [U.S. National Clean Hydrogen Strategy Roadmap](#).

This Dear Colleague Letter (DCL) describes this unique partnership with DOE EERE's [Hydrogen and Fuel Cell Technologies Office](#) (HFTO) and is aligned with and conforms with the NSF INTERN opportunity described in the [Dear Colleague Letter: Non-Academic Research Internships for Graduate Students \(INTERN\) Supplemental Funding Opportunity](#). This DCL is referred to as the Hydrogen INTERN DCL.

### **SUPPLEMENTAL FUNDING OPPORTUNITY**

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NSF will consider supplemental funding requests in the broad area of hydrogen and fuel cell technologies that enable PIs (or Co-PIs) to request supplemental support of up to \$55,000 and six months for graduate students supported on active NSF grants with the following goals:

1. To provide graduate students with the opportunity to augment their research assistantships or NSF Graduate Research Fellowship Program (GRFP) fellowships with research internship activities and training opportunities that will complement their academic research training.
2. To allow graduate students to pursue new activities aimed at acquiring professional development experience that will enhance their preparation for multiple career pathways after graduation.
3. To encourage the participation of the full spectrum of diverse talent in science, technology, engineering, and mathematics (STEM).

## **DESCRIPTION OF THE ACTIVITIES SUPPORTED**

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The PI/co-PI of an active NSF award may request supplemental funding for one or more graduate students to gain knowledge, skills, training, and experiences in hydrogen and fuel cell technologies and their application areas.

Internship hosts include, but are not limited to:

- Private sector companies, laboratories, or industry research and development groups.
- Start-up businesses such as, but not limited to, those funded through the NSF's Small Business Innovation Research (SBIR) program and Small Business Technology Transfer (STTR) programs.
- Department of Energy Laboratories, other government agencies (all levels), and National Laboratories.
- Museums, science centers, and other informal learning settings that educate the public.
- Policy think-tanks.
- Non-profit organizations.

Prior to submission, PIs are encouraged to discuss possible INTERN supplements with the cognizant NSF Program Director Points of Contact listed in this DCL to ensure the proposed internship and its topic are a good fit for this DCL. It is expected that the graduate student and the PI on the NSF grant will work together to identify experiences that add the most educational value for the graduate student through activities that are not already available at the student's academic institution. Further, it is expected that the internship will be research-focused and will be on-site at the host organization unless a specific exception to this is granted by the cognizant Program Director due to extenuating circumstances.

## **ELIGIBILITY**

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To be eligible for this opportunity, graduate students must have completed at least one academic year in their graduate program (master's or doctoral) prior to commencement of the proposed INTERN activity and be making satisfactory progress toward completion of their

degree.

This opportunity is open to PIs (or Co-PIs) and the graduate students supported through any active NSF award. It also includes students participating in institutional Graduate Research Fellowship Program (GRFP) awards. The PI for the active GRFP fellowship (not the GRFP fellow) should contact GRFP ([GRFPINTERNS@nsf.gov](mailto:GRFPINTERNS@nsf.gov)) regarding specific GRFP requirements before developing and submitting a supplemental funding request on behalf of a GRFP fellow.

## **SUPPLEMENTAL FUNDING REQUEST PREPARATION INSTRUCTIONS**

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Information about requesting supplemental support is contained in the NSF [PAPPG](#)), Chapter VI.E.5. In addition to the PAPPG requirements for supplemental support, the following materials must be included.

1. The first line of the Summary of Proposed Work must include the Hydrogen NSF INTERN DCL title and NSF publication number. The Summary of Proposed Work also must include these components:
  - A. A two-page summary that describes the internship
  - B. A one-page personal statement from the graduate student describing career goals, accomplishments, and how the activity will better prepare the individual to enter the workforce.
  
2. Under supplementary documents provide the following:
  - A. A resume of the graduate student (up to 2 pages) that contains (but not limited to) the following information:
    - a. Research summary to include contribution(s) to research discipline
    - b. Educational Preparation
      - i. Institution(s)
      - ii. Major(s)
      - iii. Year of study (1st year, 2nd year, etc.)
      - iv. Completed coursework
    - c. Employment and volunteer/outreach history
    - d. Publications (accepted only)
    - e. Other information relevant to the proposed internship

Graduate students supported by funding described in this DCL are encouraged to register for an ORCID ID and for this identifier to be provided to NSF in the student's resume as well as the PI's annual project report. ORCID® (<https://orcid.org>) is an open, non-profit, community-driven effort to create and maintain a registry of unique researcher identifiers and a transparent method of linking research activities and outputs to these identifiers. An ORCID identifier

provides a unique and persistent digital identifier to distinguish individual researchers. While NSF encourages the use of an ORCID ID, submission of the ORCID ID is optional.

- B. A letter of collaboration from an authorized official at the host organization that describes the internship opportunity and mentoring the student will experience during the internship. The letter should include a statement confirming that neither the graduate student nor the PI has a financial interest in the organization hosting the internship.
- C. An endorsement letter from the PI that confirms that the student meets the eligibility requirements specified in this DCL. The letter must describe how the proposed internship activity will contribute to the student's graduate education experience and how it may impact time to degree.

- 3. The NSF recipient and Host Organization must agree in advance as to how intellectual property (IP) rights will be handled. A signed agreement on IP (including publication and patent rights) must be submitted either as a supplementary document or, via email to the cognizant Program Director after submission of the supplementary funding request and prior to the award of the supplemental funding. NSF is responsible neither for the agreement reached nor the IP information exchanged between the NSF recipient and Host Organization.
- 4. A budget and budget justification.

#### **SUPPLEMENTAL FUNDING AMOUNT**

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The total amount of funding requested must not exceed \$55,000 per student per six-month period. NSF plans to fund up to approximately 10 or more supplements in each fiscal year starting with FY 2024, depending on availability of funds.

#### **ALLOWABLE COSTS UNDER THIS DCL**

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Funds may be used to support travel, tuition and fees, health insurance, additional stipend, and temporary relocation costs for the graduate student. Additional stipends are not allowed for GRFP fellows "on tenure" (currently receiving a GRFP stipend), but a stipend will be considered for fellows "on reserve" (not currently receiving a GRFP stipend) equal to the monthly rate of the GRFP stipend. Up to \$2,500 may be used for the PI or the graduate research fellow's advisor to travel to work with the host organization in co-mentoring the student during the internship. Up to \$2,500 may be used for materials and supplies to support the student during the internship. Travel costs must be allocated in the budget request for the graduate student to travel once to Washington DC, to present the outcomes of the INTERN project at the DOE's Annual Merit Review meeting. The recipient is permitted to request

indirect costs in accordance with their approved/negotiated indirect cost rate. The total requested budget cannot exceed the limits listed under the "Supplement funding amount" section above. Note: Spousal and dependent travel are not supported.

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## PERIOD OF SUPPORT

The supplement funding will provide up to six months of support for an internship. Up to two supplemental funding requests may be submitted on a grant per student. This would allow the student up to two internship periods of up to six months each (i.e., a maximum of 12 months per student).

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## DUE DATES

Supplemental funding requests may be submitted at any time with a target date of June 15 for Fiscal Year 2024 and April 15 for future Fiscal Years.

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## SUBMISSION & REVIEW

Requests for supplemental funding must be submitted electronically via Research.gov. A PI or co-PI on an NSF award must contact his/her cognizant program director prior to submission. GRFP INTERN supplement requests are submitted by the GRFP PI, not by the GRFP fellow or the fellow's research advisor. Requests for supplemental funding submitted in response to this DCL will be reviewed internally by NSF Program Officers. All supplements are subject to (a) the availability of funds, and (b) merit review of the supplemental funding request.

For further information, please contact Program Directors:

- Dr. Prakash Balan, [pbalan@nsf.gov](mailto:pbalan@nsf.gov) - Directorate for Engineering
- Dr. Barbara Ransom, [bransom@nsf.gov](mailto:bransom@nsf.gov) - Directorate for Geosciences

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## SPECIAL AWARD CONDITION

***Intellectual Property Rights:*** Internships under this DCL are considered equivalent to traineeships. The National Science Foundation claims no rights to any inventions or writings that might result from its traineeship awards. However, trainees should be aware that NSF, another Federal agency, or some private party may acquire such rights through other support for particular research. Also, trainees should note their obligation to include an Acknowledgment and Disclaimer in any publication.

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## POLICY OR CODE ADDRESSING HARASSMENT

Recipients are required to have a policy or code of conduct that addresses sexual

harassment, other forms of harassment, and sexual assault. The recipient should work with the Host Organization to ensure that the Host Organization also has a policy or code of conduct that addresses sexual harassment, other forms of harassment, and sexual assault including reporting and complaint procedures and to confirm that such policy both covers and protects INTERN students interacting with the Host Organization. The recipient should also coordinate with the Host Organization to provide orientation to graduate students to cover expectations of behavior to ensure a safe and respectful environment, and to review the recipient and host organization's policy or code of conduct addressing sexual harassment, other forms of harassment, and sexual assault, including reporting and complaint procedures. For additional information, see the NSF policies at <https://new.nsf.gov/stopping-harassment>.

Sincerely,

Susan Marqusee, Assistant Director  
Directorate for Biological Sciences (BIO)

Dilma Da Silva, Acting Assistant Director  
Directorate for Computer and Information Science and Engineering (CISE)

James L. Moore III, Assistant Director  
Directorate for Education and Human Resources (EDU)

Susan Margulies, Assistant Director  
Directorate for Engineering (ENG)

Alexandra Isern, Assistant Director  
Directorate for Geosciences (GEO)

C. Denise Caldwell, Acting Assistant Director  
Directorate for Mathematical and Physical Sciences (MPS)

Alicia Knoedler, Office Head  
Office of Integrative Activities (OIA)

Kendra Sharp, Office Head  
Office of International Science and Engineering (OISE)

Kaye Husbands Fealing, Assistant Director  
Directorate for Social, Behavioral and Economic Sciences (SBE)

Erwin Gianchandani, Assistant Director  
Directorate for Technology, Innovation and Partnership (TIP)