



To: Distribution List

From: Monica Fishel, Faculty Research Support Officer
Office of the Vice President for Research

Subject: NSF Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE: GEOPATHS)
NSF 15-526 (GEOPATHS-IMPACT funding track only)

Date: June 5, 2015

NSF's Improving Undergraduate STEM Education (IUSE) initiative, launched in Fiscal Year 2014, supports a coherent set of investments to address immediate challenges and opportunities that are facing undergraduate STEM education, as well as those that anticipate new structures (e.g. organizational changes, new methods for certification or credentialing, course re-conception, cyberlearning, etc.) and new functions of the undergraduate learning and teaching enterprise. The NSF-wide IUSE initiative acknowledges the variety of discipline-specific challenges and opportunities facing STEM faculty as they strive to incorporate results from educational research into classroom practice and work with education research colleagues and social science learning scholars to advance our understanding of effective teaching and learning. The Directorate for Geosciences (GEO) contributes to the IUSE initiative through the Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE: GEOPATHS) funding opportunity. IUSE: GEOPATHS invites proposals that specifically address the current needs and opportunities related to undergraduate education within the geosciences community. The primary goal of the IUSE: GEOPATHS funding opportunity is to increase the number of undergraduate students interested in pursuing undergraduate degrees and/or post-graduate degrees in geoscience through the design and testing of novel approaches for engaging students in authentic, career-relevant experiences in geoscience. In order to broaden participation in the geosciences, engaging undergraduate students from traditionally underrepresented groups or from non-geoscience degree programs is a priority. The IUSE: GEOPATHS solicitation features two funding Tracks: (1) Engaging students in the geosciences through extra-curricular experiences and training activities (GEOPATHS-EXTRA), and (2) Improving pathways into the geosciences through institutional collaborations and transfer (GEOPATHS-IMPACT).

GEOPATHS-IMPACT projects are expected to establish new, or strengthen existing, institutional partnerships and collaborations that provide sustainable pathways and support mechanisms for facilitating transitions of undergraduate students at critical junctions: between high school and undergraduate geoscience programs; between two-year undergraduate institutions and four-year institution geoscience degree programs; between baccalaureate degrees in geoscience and the geoscience workforce; or, between baccalaureate degrees (in any field) and post-baccalaureate geoscience programs. GEOPATHS-IMPACT projects are expected to focus less on the engagement of individual students in the geosciences and focus more on implementing systemic and sustainable approaches that can increase access to geoscience education and research opportunities and open doors to education and career pathways over time. The emphasis is on using NSF funding to establish programs, structures, and collaborations that can have lasting impact. For example, formal articulation agreements, e.g., between four-year and two-year institutions, can ease student transfers into geoscience Bachelor's degree programs. Education and research collaborations between institutions may also help first and second year students, who might otherwise not encounter geoscience before deciding on a major, explore the possibilities within the field. Providing reliable and current information about career paths and opportunities, as well as sustained mentoring, networking, and professional development, are also important strategies, especially in helping students make the transition from undergraduate to graduate study and beyond.

The NSF expects to make 20 awards across the two tracks. The maximum total award size will be \$500,000 in funding, with the average total award size expected to be in the \$300,000 to \$350,000 range. The duration of awards for both tracks will be up to 36 months. Estimated program budget, number of awards and average award size/duration are subject to the availability of funds. More details can be found at <http://www.nsf.gov/pubs/2015/nsf15526/nsf15526.htm>. The deadline for the required letter of intent is August 14, 2015. The deadline for full proposals to the NSF is October 5, 2015.

This is a limited competition; an organization may serve as sole submitting institution or as lead institution of a collaborative project on only one (1) submission per competition, regardless of track, but may serve as the non-lead institution of a collaborative project more than once per competition. This limited competition pertains only to the *GEOPATHS-IMPACT* track. As per the eligibility criteria, UNM may *only* submit proposals as the non-lead institution of a collaborative *GEOPATHS-EXTRA* proposal.

Please submit your 3-page preproposal (plus budget and CV; all documents in a SINGLE PDF file, 11 point font) by NOON on Wednesday, June 24, 2015 to limited@unm.edu with the subject line indicating: NSF-15-526 - your name. No late submissions will be considered. The pre-proposal should address the major points that will be included in the proposal narrative (describe the project design and activities to be undertaken, any participating organizations' commitment to the activity, and the anticipated outcomes of the activities for the participating students, geoscience professionals, and collaborating institutions. An implementation plan should be provided. The number and demographics of students participating in or affected by these activities should be described. Describe the strategies for documenting the impact of the proposed activities on student engagement and attainment in the geosciences and whether the anticipated project outcomes have been achieved.) The 3-page narrative should be accompanied by a **draft budget overview** and an **abbreviated PI CV**. The scoring will be weighted as follows: proposal narrative (70%), draft budget overview (15%), and abbreviated PI CV (15%).

Should you have any questions please feel free to contact Monica Fishel (mlfishel@unm.edu or 277-8114).