NDSU Only Announcement

ND EPSCoR State Office Announcement for Participating Campuses

The ND EPSCoR State Office's mission is to support efforts of participating institutions of higher education across the state that result in increased STEM faculty capacity and competitiveness and a stronger STEM pathway that produces our next generation workforce, educators, and researchers.

Thus, the NDSU campus of ND EPSCoR is accepting proposals to fund STEM activities in the following areas:

A. **Proposal Categories**
    1. <u>Educational/Instructional Equipment</u>. Proposals will be accepted for pieces of instructional equipment (up to $35,000) that help advance STEM education. We are not seeking proposals for research equipment in this RFP. Preference will be given to proposals that: 1) show collaborative use across programs/departments; 2) request equipment not currently available in a campus classroom or replace equipment that is obsolete; and 3) engage a large number of undergraduate STEM students in the classroom setting. Proposals must contain: 1) introduction, justification, and description of the equipment to be purchased; 2) degree program(s) that will use the equipment, including the specific courses; 3) an approximate number of students who would be trained per year; and, 4) letter of confirmation by department chair or chairs that the equipment is needed and a statement regarding the availability of match funding. An allowable budget does not include non-capitalized equipment (<$5,000) or consumable supplies (even if they are required for the operation of the equipment).

    2. <u>Equipment repair</u>. Researchers are often limited in performing certain experiments/analyses due to faulty/broken equipment. Many times, small investments in the repair of equipment is all that is needed. Proposals will be accepted from faculty researchers for the repair of equipment (up to $5,000) currently located in research laboratories. Preference will be given to proposals that demonstrate a high usage rate of the piece of equipment to be repaired. Proposals must contain: 1) introduction, 2) justification, and description of the equipment to be repaired; 3) users (i.e., institutions, colleges, departments, etc.) of the equipment including an approximate number of students who would be trained per year if the equipment worked; and 4) discussion of how this equipment would lead to more proposals to external funding agencies.

    3. <u>Undergraduate research</u>. Data show that engaging undergraduate students in research leads to better retention and success of the student. The proposal must contain: 1) a short introduction (and significance of) to the research topic, 2) goals and objectives of the specific proposed research, 3) innovation of the research, 4) approach/methods, and 5) references. The student's faculty advisor/mentor must submit a letter supporting the research and certifying that he/she will be providing space/resources and mentoring to the student during the course of the research. Awards up to $5,000 will be provided. The faculty member must be the PI on the proposal [and submit the proposal]. Students hired under this award are required to complete responsible conduct of research (RCR) training in their first pay cycle. Undergraduate student

must be identified to ND EPSCoR by October 1, 2020.

4. <u>Seed awards for faculty to collect preliminary data for the preparation of *federal* STEM proposals</u>. Funding will be provided to researchers for the specific purpose of gathering preliminary data needed for proposal preparation and submission to a federal agency. Funds may be used for materials and supplies, student support (undergraduate and graduate), operating services (e.g., recharge center fees), travel within North Dakota to collect samples, publishing and lab technician support. Proposals must contain: 1) an introduction and justification for the research, 2) description of the research and data to be collected, 3) the specific federal agency RFP to which a proposal will be submitted, and 4) a short biosketch (2 page) for all participating researchers. Priority will be given to collaborative, interdisciplinary teams/research. Awards of up to $15,000 will be provided. Funding may not be used to support faculty salary (unless at a MCU, PUI, or TCU), postdocs, visiting scholars, or non-support personnel (i.e.: researchers) serving in the lab technician role. Students hired under this award are required to complete responsible conduct of research (RCR) training in their first pay cycle.

5. <u>External proposal review for large, collaborative, and interdisciplinary STEM efforts</u>. The competition for federal research dollars has grown substantially over the past decade. In addition, federal agencies are placing a significant focus on interdisciplinary, cross-cutting efforts. Funds for external peer review will be provided to large, interdisciplinary teams/efforts to help position researchers for even greater success in receiving federal awards. Proposals must contain: 1) list of researchers/affiliations; 2) title of proposal; 3) executive summary of proposal; 4) funding amount; 5) federal agency/program and proposal due date; and, 6) short biosketch (2 page) of all participating researchers. Requests must be received <u>at least four months in advance of the proposal due date</u> so reviewers/review entity can be arranged. Most reviews take approximately one month once the review entity receives the proposal. Awards up to $5,000 will be made. ND EPSCoR will contract directly with the external review entity for this service.

6. <u>Seed awards for faculty and students to engage K-12 in STEM outreach activities</u>. Strengthening and broadening the STEM pipeline is a core goal of ND EPSCoR. Proposals will be accepted that focus on activities that build stronger partnerships with K-12 STEM education in the state. Of particular interest are activities that engage underrepresented/ underserved students and result in an increased awareness and interest in STEM careers. Proposals must contain: 1) introduction and justification for the activity (i.e., is it grounded in a best practice); 2) description of the activity; 3) description of the K-12 partner entity; 4) a statement whether this is a new or existing activity with this partner; 5) target audience (i.e., grade level, student demographics, etc.); 6) is this a formal or informal activity program; and 7) short biosketch (2 page) of each participating faculty. If an IRB will be needed, proof of an exemption and/or active IRB number will be needed prior to releasing funds. Awards up to $6,000 will be made. Of particular interest will be the development of virtual/online activities. Students hired under this award are required to complete responsible conduct of research (RCR) and IRB (if required) training in their first pay cycle.

7. <u>Development of online/virtual modules for STEM courses.</u>
The COVID-19 pandemic illuminated the need to increase our online/virtual presence with respect to training STEM students in a variety of learning settings (classroom, laboratory, etc.). Students are not always able to participate in practical activities that connect practice to theory. Proposals will be accepted that focus on the development of virtual hands-on STEM classroom and laboratory experiences (up to $6,000) to replace and/or enhance the face-to-face STEM classroom or laboratory experience. Proposals must contain: 1) introduction and justification for the activity (course title and number), 2) description of the classroom or laboratory exercise that

will result from the award, and 3) description of the dataset that will be created and provided to students as part of the online STEM classroom or laboratory exercise (and analysis, interpretation, and reporting requirements of the students). Students hired under this award are required to complete responsible conduct of research (RCR) training in their first pay cycle.

NDSU EPSCoR is particularly interested in proposals that continue to build capacity for the online/virtual implementation of activities to better position ND for the ongoing COVID pandemic and future crises.

8. <u>Seed award for community-based STEM research</u>.
   Under this category, campus PIs will engage members of ND communities that are traditionally underrepresented and underserved in STEM. These community-based participatory research (CBPR) projects must focus on STEM-based issues/needs impacting their local communities. Proposals must contain: 1) introduction and justification for the CBPR research (i.e., STEM-based community issue/need); 2) description of the CBPR research; 3) targeted community demographics; and 4) a short biosketch (2 page) of each participating faculty. If an IRB will be needed, proof of an exemption and/or active IRB number will be needed prior to releasing funds. Awards up to $15,000 will be made. Students hired under this award are required to complete responsible conduct of research (RCR) and IRB (if required) training in their first pay cycle.

9. <u>Electronic STEM data sets</u>.
   Rapid changes in technology and faculty/researcher time constraints mean that throughout our participating institutions, STEM research data sets remain in written format or in file formats that have become obsolete. This category provides funding (up to $5,000) to convert STEM data sets that are important to North Dakota into an electronic format; a precursor to larger data mining/manipulation efforts. Proposals must contain: 1) introduction and justification for the conversion of the STEM data set(s) to an electronic format; 2) description of the size, timespan, and current format of the STEM data set(s); 3) a statement regarding the importance of the data set; and 4) a short biosketch (2 page) of each participating faculty.

B. **Eligibility**
   All faculty (tenure-track, tenured, professors of practice, and research professors) are eligible to apply. Applicants with overdue final reports on other current NDSU EPSCoR- or ND EPSCoR-awarded projects are not eligible to compete.

C. **Priority**
   The intent of this funding is to build research infrastructure and capacity across the state. In addition, funding priority will be to applicants who did not receive an EPSCoR award in the same category in 2019, 2020, or 2021.

D. **Proposal Submission Deadline**
   Proposals are due to the ND EPSCoR office no later than noon on September 30, 2021. Proposals for external review of large collaborative and interdisciplinary efforts follow the submission guideline given under section A, item #5.

NDSU EPSCoR has a limited amount of funds to disburse; thus, the submission of a proposal does not automatically guarantee funding.

E. **Funding Availability**
It is anticipated that funds will be released by October 16, 2021 and may be used through May 31, 2022.

F. **Proposal Preparation Guidance**
The proposal narrative should be no longer than <u>four</u> pages. In addition to the category specific information noted for each category in section A, the narrative must also contain a section on ***how the research/activity fits into the strategies outlined in the North Dakota Science and Technology Plan (the July 1, 2018 version).*** This section must include references to specific strategies. The current ND Science and Technology Plan can be found at: https://www.ndepscor.ndus.edu/fileadmin/ndus/ndepscor/documents/NDSTPlanFINALJune2018.pdf

Each proposal must contain a cover page and budget (and justification).
- Cover page is at:
https://www.ndepscor.ndus.edu/fileadmin/ndus/ndepscor/STEM/CovSheetNDSUSTEM2021.pdf
- Budget form is at:
https://www.ndepscor.ndus.edu/fileadmin/ndus/ndepscor/STEM/2020NDSUEPSCoRStandardBudgetForm.xlsx

G. **Proposal Submission**
Your proposal requires the signatures of the Department Chair/Dean. Once you have those signatures, you will submit your proposal straight to the NDSU EPSCoR office.

Please submit your proposal electronically as a single, searchable PDF to ndepscor@ndus.edu with the subject heading of "2021 NDSU-STEM RFP."

If you have any questions, please contact Kelly A. Rusch kelly.rusch@ndsu.edu or Jean Ostrom-Blonigen jean.ostrom@ndus.edu.

H. **Proposal Evaluation**
Proposals will be evaluated for fit with the ND EPSCoR's mission, the ND S&T Plan, and national priorities related to broadening participation in the STEM ecosystem.

I. **Award Requirements**
All awards require: 1) an end of award report submitted to NDSU EPSCoR within 30 days of the award expiration date; 2) acknowledgement of the ND EPSCoR as the funder; and, 3) presentation of the activity/results at the ND EPSCoR Annual State conference (this is for proposal funded in categories 3, 4, 6, 7, and 8).