



Established Program to
Stimulate Competitive Research

NDSU EPSCoR Request for Proposals STEM Research and Education

*Issued: August 14, 2020
Deadline: Noon, September 25, 2020*

NDSU Only Announcement

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. **Equipment.** Proposals will be accepted for small pieces of equipment (up to \$35,000) that help advance scientific inquiry and R&D. Preference will be given to proposals that: 1) show collaborative use across multiple colleges and departments; 2) request equipment not currently available on campus; and, 3) engage a large number of undergraduate and graduate students in research and learning. Proposals must contain: 1) introduction, justification, and description of the equipment to be purchased; 2) users [i.e., colleges, departments, etc. of the equipment including an approximate number of students who would be trained per year]; 3) statement of whether this equipment is redundant with other pieces of equipment on campus; and, 4) discussion of how this equipment would lead to more proposals to external funding agencies. The budget may not include consumable supplies, even if they are required for the operation of the equipment.
2. **Equipment Repair.** Oftentimes, researchers are limited in their ability to perform 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 provide a minimum of 25% match to the total repair cost. Proposals must contain: 1) introduction; 2) justification and description of the equipment in need of repair; 3) users of the equipment (departments/colleges); 4) type of research for which the equipment is needed, including an approximate number of students who would be trained per year if the equipment worked;; 5) discussion of how this equipment would lead to more proposals to external funding agencies; 6) the estimate of the repair cost; and, 7) the amount and source of match.
3. **Undergraduate research.** 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.

4. Seed awards for faculty to collect preliminary data for the preparation of **federal** STEM proposals. 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), and 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 \$10,000 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. External proposal review for large, collaborative and interdisciplinary STEM efforts. 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 at least four months in advance of the proposal due date 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. NDSU campus of ND EPSCoR will contract directly with the external review entity for this service.
6. Seed awards for faculty and students to engage K-12 in STEM outreach activities. Strengthening and broadening the STEM pathway is a core goal of ND EPSCoR. Proposals will be accepted that focus on activities that build stronger partnerships with K12 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) whether this is a new or existing activity with this partner; 5) target audience (i.e., grade level, student demographics, etc.); 6) whether this is 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) training in their first pay cycle.
7. Development of online/virtual modules for STEM laboratory courses. The current COVID-19 pandemic has illuminated the need to an increased online/virtual presence with respect to training students in the laboratory setting. With the move to online courses, many students were not able to participate in practical activities that connected practice to theory. Proposals will be accepted that focus on the development of virtual hands-on laboratory experiences (up to \$6,000) to replace and/or enhance the face-to-face laboratory

experience. Proposals must contain: 1) introduction and justification for the activity (course title and number), 2) description of the 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 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.

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

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 STEM research infrastructure and capacity across the campus. In addition, funding priority will be to applicants who did not receive an EPSCoR award in 2019.

D. Proposal Submission Deadline

Proposals are due to the NDSU EPSCoR office no later than noon on September 25, 2020. Proposals for external review of large collaborative and interdisciplinary efforts follow the submission guideline given under section A, item #5.

The NDSU campus of ND 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 22, 2020 and may be used through May 31, 2021.

F. Proposal Preparation Guidance

The proposal narrative should be no longer than four 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)***. Proposals that do not include this section will not be reviewed. 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/SeedAwards/CovSheetNDSUSTEM2020.pdf>

www.ndepscor.ndus.edu

Dept. 4200 | P.O. Box 6050 | Fargo, ND 58108-6050 | 701-231-8400 | ndepscor@ndsu.edu

- Budget form is at
- <https://www.ndepscor.ndsu.edu/fileadmin/ndus/ndepscor/SeedAwards/2020NDEPSCoRStandardBudgetForm.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 ND EPSCoR office. **Your proposal should not be routed through NDSU SPA.**

Please submit your proposal electronically as a single, searchable PDF to Jean Ostrom-Blonigen (jean.ostrom@ndsu.edu) with a copy to Janelle Smith (janelle.smith@ndsu.edu).

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

H. Proposal Evaluation

Proposals will be evaluated for fit with 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 ND EPSCoR within 30 days of the award expiration date; 2) acknowledgement of ND EPSCoR as the funder; and, 3) presentation of the activity/results at the annual EPSCoR conference (this is for proposal funded in categories 3, 4, 6, and 7).