NAU NORTHERN ARIZONA UNIVERSITY

Office of Undergraduate Research and Creative Activity

OURCA Faculty CURE Development Grant

Apply at bit.ly/curedevgrant

Objective:

The OURCA Faculty Course-based Undergraduate Research Experience (CURE) Development Grant is designed to increase the institution's capacity to offer research experiences to all students through the integration of research in the curriculum.

Overview of the Program:

The OURCA Faculty CURE Development Grant provides initial incentives and training to support faculty in designing CUREs that embed research experiences within existing courses. Leveraging resources from the Council on Undergraduate Research, we aim to offer faculty professional development opportunities and course redesign support for faculty.

CUREs are defined by inclusion of characteristics such as iterative work that builds on the work of others to address problems with unknown answers, collaboration and communication, and discoveries of interest to a community beyond the university (Auchincloss et al., 2015; Dolan, 2017; Govindan et al., 2019; Shortlidge et al., 2017). They can be implemented as independent CUREs by individual faculty or as part of one of many broad network CUREs across multiple institutions (Shortlidge et al., 2017). CUREs have been shown to have similar positive student outcomes as those observed in independent research experiences while making it feasible to scale-up student exposure to research as part of their required coursework.

The Office of Undergraduate Research and Creative Activity (OURCA) aims to increase the number and quality of CUREs being offered at NAU. Each year, faculty proposals will be accepted to pilot a redesign of an existing course that incorporates the key elements of a CURE. Approximately fifteen proposals will be accepted annually, contingent on funding availability. An additional fifteen proposals for courses that fulfill General Studies requirements will be funded through the Helios CURE Development Grant. Grant recipients will receive $7,000 to support the development and implementation of the CURE pilot.

Eligibility:

- Instructors or teams of instructors at any level, including faculty, post-docs, research scientists, graduate students, and staff, may apply.
- Priority will be offered to instructors who intend to augment an existing course with CUREs that is aimed at first- or second-year students and has demonstrated robust historical enrollments.

Schedule: The program will run as follows:

Semester	Call for Proposals	Proposal Deadline	Award Notification	Term
Spring 2027	12/15/26	2/15/27	3/15/27	July 1, 2027 - May 15, 2028

References: Auchincloss, L.C., Laursen,S.L., Branchaw, J.L., Eagan,K., Graham,M., Hanauer, D.I., Lawrie,G., McLinn, C.M., Pelaez, N., Rowland, S., Towns,M., Trautmann, N.M., Varma-Nelson, P., Weston, T.J., and Dolan, E.L. (2019). Assessment of course-bsed undergraduate research experiences: A meeting report. *CBE—Life Sciences Education*, *13* (1), 29-40. Dolan (2017). Course-based undergraduate research experiences: Current knowledge and future directions. Govindan, B., Pickett, S., & Riggs, B. (2020). Fear of the CURE: a beginner's guide to overcoming barriers in creating a course-based undergraduate research experience. *Journal of microbiology & biology education*, *21*(2), 50.Shortlidge, E. E., Bangera, G., & Brownell, S. E. (2017). Each to their own CURE: faculty who teach course-based undergraduate research experiences report why you too should teach a CURE. *Journal of Microbiology & Biology Education*, *18*(2), 18-2.

Proposal Preparation and Submission Instructions:

Proposals will be submitted via the online application portal. The proposal should include the following components:

1) Project description

A PDF of the project description must be uploaded into the online portal. The project description should be no more than 3 pages (not including the budget, CV, or existing syllabus). Successful proposals will need to address the following elements:

1. What is your motivation for applying for the CURE Development Grant?
2. Description of the CURE course that allows those outside of the discipline to understand the research project to be incorporated and intended learning outcomes.
    a. If proposing to implement a CURE in a 300-level or 400-level course, please include information in your proposal on why this course is well-suited as an introduction to research for upper division students in your department/college.
3. How do you envision this CURE course will enable students to make discoveries about a real-world issue relevant to stakeholders?
4. How will this experience help students develop career competencies (identified in section 5)?
5. Tentative outline of the course and a narrative of how the identified course supports student learning in General Studies or specific degree plans.
6. What are your plans for long-term sustainability of embedding research into the course?

2) Budget

A PDF or Excel budget must be uploaded as a separate document into the online portal. The budget should clearly indicate how the funds will be used to support the project. This may include but is not limited to receiving summer salary; using funds for a course reassignment to allow time to pilot the CURE; hiring an undergraduate or graduate assistant for CURE implementation; or purchasing materials to support the development and implementation of the CURE. The budget should not exceed $7,000.

3) CV

A PDF of the applicant's current CV must be uploaded as a separate document. If a team submission, CVs for all members of the team must be uploaded as one PDF document.

4) Copy of the current syllabus used for the course (if applicable)

5) Additional Application Questions

Seven additional questions will need to be addressed to complete the proposal submission.

1. Career competencies you expect students to develop (select all that apply). See NACE Career Competencies for full descriptions
    - Career and Self-development
    - Communication
    - Critical thinking
    - Equity and inclusion
    - Leadership
    - Professionalism
    - Teamwork
    - Technology
2. Will this be a revision to an existing course or a new course?
3. Number of course units
4. Mode of course delivery (in-person, online, hybrid)
5. Historical enrollments in the course over the past three years
6. Which semester will the CURE be implemented?

7. Does this course fulfill General Studies requirements? If so, mark all that apply.
    - American Institutions
    - Arts & Humanities
    - Scientific Literacy & Methods
    - Social & Political Worlds
    - Global Perspectives
    - Indigenous Peoples Perspectives
    - U.S. Ethnic Perspectives

Application Review Criteria:

Completed applications will be sent to the department chair and dean for endorsement. Graduate student applicants will additionally be sent to a faculty mentor or advisor for approval. A review panel convened by the Office of Undergraduate Research and Creative Activity will evaluate all proposals. They will be scored based on the:

- Applicant's demonstrated interest in and knowledge of engaging students in undergraduate research experiences
- Extent to which authentic research is embedded in course
- Extent to which the CURE design addresses key learning outcomes and career competencies
- Feasibility of successful implementation of a pilot by spring 2028
- Potential for impact on a large number and diverse group of students
- Potential to increase engagement between undergraduate students and the local, regional, or statewide community through the incorporation of stakeholders beyond the university
- Potential sustainability of research in the course

Priority will be given to proposals that:

- Outline redesigning an existing course in a way that does not require approval through the formal curriculum review process
- Will have an impact on a large number and diverse group of undergraduates
- Incorporate community engagement by including stakeholders beyond the university

Award Information:

Grant recipients will receive up to $7,000 to support the development and implementation of the CURE. Funds will be made available on July 1 of the award year and will be accessible for up to one year. OURCA will coordinate the purchase/payment of approved expenditures following award notification.

An additional $1,500 will be available to pay an undergraduate student to continue independent research with the grant recipient once all grant expectations have been met.

Grant Recipient Expectations:

OURCA Faculty CURE Development Grants will be selected through a competitive process. Recipients will be required to:

- Actively participate in a two and a half day intensive training in May 2027.
- Attend no less than two 1-hr meetings over the course of the year with the learning community.
- Submit a draft syllabus to OURCA by September 1.
- Pilot the CURE course by the spring semester following the award year.
- Complete post-assessment surveys, allow for a member of the program team to observe the implementation of the pilot, and provide a final outcomes report in May.
- Publicly present the outcomes of your CURE pilot at a symposium hosted by OURCA in fall 2028.