

Call for Consultants

CUR Transformations Project

The Council on Undergraduate Research (CUR), with funding from the National Science Foundation, has released a national Request for Proposals for colleges and universities to participate in a four-year project to create cohesive, research-based curricula in four science disciplines: biology, chemistry, physics, and psychology. To download and review the complete “Request for Institutional Proposals” click here: [http://www.cur.org/assets/1/7/Request for Proposals-final version - 1 3 17.pdf](http://www.cur.org/assets/1/7/Request_for_Proposals-final_version_-_1_3_17.pdf).

CUR invites applications from individuals with deep interest and expertise to participate in this project as departmental/institutional consultants.

Undergraduate research is a high-impact practice that benefits students across all demographic groups and disciplines, and it provides even greater gains for students traditionally underserved by higher education. Undergraduate research is a compelling way to meld the interests of faculty to engage in scholarly work with the needs of students for challenging experiences that lead to substantial impacts on their cognitive and affective development.

Yet, with all the progress that has been made, undergraduate research opportunities—including the broader vision of ubiquitous discovery-based curricula—are still often optional and highly selective, missing the very students who could benefit most. Some reasons for this are the high cost of traditional one-on-one and small group apprenticeship models, especially in terms of faculty workload; persistent beliefs that not all undergraduate students are suited for conducting research; and enduring teaching and research cultural constructs that are barriers to change.

To provide *all students* with more equitable access to the benefits of undergraduate research, we will work intensively with 12 institutions and two departments/disciplines from each institution over a sustained four-year period to achieve departmental transformations in both student learning and the overall learning environment at the selected institutions. The CUR Transformations project will assist the selected institutions and departments to integrate research-based curricula into student and faculty cultures as well as into faculty workload and reward systems and to develop expanded undergraduate research assessments.

Over the past two decades, CUR’s work with over 600 institutions has led participating institutional teams to generate action plans outlining strategic goals to institutionalize undergraduate research. Significant and large-scale gains in building undergraduate research-supportive practices have been achieved at many institutions, state systems, and public and private consortia. However, it has become clear that many of the goals included within institutional action plans have been easier to achieve than others. Almost without exception, one key goal described in each campus plan has been to create a more research-rich, connected, and scaffolded curriculum. However, institutional teams invariably discover that curricular reform requires a long time arc and poses significant challenges, including such barriers as gaining an understanding of the different disciplinary cultures among STEM departments and programs; rethinking faculty workload and reward systems for both tenure-line and non-tenure-line faculty; developing sustainable faculty leadership structures, particularly against a backdrop of administrative/faculty turnover; establishing strong partnerships among faculty, students, and administrators; expanding student participation; scaffolding curricular elements linked to student learning outcomes; and partnering with students to fundamentally change the learning process.

Through participation in this CUR Transformations project, the selected institutions and departments will directly tackle these challenges within their own institutional and departmental contexts.

Participants will also directly engage in novel research to study the student, faculty, departmental, and disciplinary influences on the process of integrating and scaffolding undergraduate research experiences throughout the curriculum. In particular, we will study two fundamental and interconnected research questions about the effects of integrating the elements of undergraduate research into the curriculum on (a) the student learning experience and (b) departmental culture/change (see side bar).

By engaging in this research, institutions and departmental teams will gain formative feedback for their own work on curricular transformation; develop a better understanding of their student, faculty, and disciplinary cultures; and build the infrastructure needed to sustain their transformative gains over the long-term and to continue building their capacity and mindset for such efforts.

Research Questions Driving the CUR Transformations Project

1) What effect do student characteristics (e.g., preexisting academic preparation) have on scaffolded integration of undergraduate research into the curriculum and student learning outcomes?

- To what extent are students receptive to a research-based curriculum emphasizing discovery, inquiry, and analysis? Does receptivity vary with student characteristics? Do all students value this approach?
- How do student-learning experiences and outcomes in the scaffolded undergraduate research curriculum vary by student characteristics? Do all students benefit equally from this approach?
- What is the relationship between students' experiences in an inquiry-driven curriculum and the extent to which departments have integrated the components and outcomes of high-quality undergraduate research?

2) How do different disciplines/departments effectively integrate the components and outcomes of high-quality undergraduate research to reach more students?

- What aspects of different STEM cultures and disciplines/departments support the integration of undergraduate research elements into the undergraduate curriculum? What are the most effective strategies to catalyze a more rapid and enduring transformative change process?
- What are the best approaches to research-based curricular redesign and faculty support for creating an inclusive change process, particularly for departments that include both tenure/tenure-track and non-tenure track faculty?
- How do faculty members teaching in a scaffolded research-based curriculum monitor the impact of the transformation on student learning?

Consultant Role and Scope

Based on each department's custom needs—as reflected in their detailed, reflective self-studies and benchmarked environmental scan—the CUR Transformations project PIs will assign two consultants to work with each department over the entire project period. This careful matching will be driven by such factors as the size/type of department; the current state of the department's curricula; and how the department/institution describes its culture, leadership, and political landscape.

After selection of the participating institutions/departments and consultant assignments have been made, the CUR Transformations project PIs will hold a **planning meeting** with all consultants in *early September 2017*.

The consultants and departmental teams will begin their sustained work together at an initial **kick-off meeting** in *October 2017* for all participating departments and consultants. Following the kickoff meeting, the consultants will make **annual, on-site visits** to the campuses for four consecutive years (2017-2018, 2018-2019, 2019-2020, 2020-2021). Each departmental site visit will have a two- to three-day duration, and, when possible, we will schedule the two departmental visits for a given institution to occur at the same time in order to achieve maximum synergy. The agendas for each site visit will be developed collaboratively by the consultants, departmental leadership team and institutional dean, and the CUR Transformations project PIs.

Following each site visit, the consultants will prepare **progress reports** to be shared with the departmental leadership teams, deans, and provosts of the institutions, as well as the CUR Transformations project PIs. The departmental faculty and leadership team will move forward with their work, guided by their action plans and milestone schedules. Progress made by the teams during the site visit, academic year, and summer following each site visit—with **ongoing mentoring, guidance, feedback, and directives** from the consultants—will inform the activities of the subsequent all-institution/all-consultant **annual collaboration meeting** and the next year's site visit to the particular campus.

Timeline for Consultant Selection

February 2017 – Call for Consultants released

February 10, 2017 – Webinar for institutions interested in submitting a proposal to participate in the project (prospective consultants may find this webinar informative as well - If you were unable to participate please view the [webinar recording](#) or view the [webinar slides](#).)

April 10, 2017 – Deadline extended for submitting consultant application

April 20, 2017 – Invitation to be included in pool of potential consultants

June 8, 2017 – Selection of consultants finalized.

Twenty-four consultants will be competitively selected for the CUR Transformations project. Final consultant selection will be based on a match between institutions and departments selected for the project and their custom needs and consultant expertise.

Each selected consultant will be matched to two departmental teams, one team at two different institutions.

Consultants will receive an annual stipend, and all of their reasonable travel expenses for each component of the project will be covered.

Consultant Application Requirements – Due April 10, 2017 – Deadline Extended

Applicants should submit her/his proposal electronically (with all elements combined into a single PDF file) by **5:00 pm, Monday, April 10, 2017** to

https://members.cur.org/members_online/submissions/substart.asp?action=welcome&cid=214.

Applicants must be individual members of CUR at the time of selection as a consultant. Complete applications include three elements: 1) an *online form* with background information, (2) a *narrative proposal*, and 3) a *current CV*.

The *narrative proposal* should range from 3-6 pages in length (single spaced, 1" margins, no smaller than 11 pt font size), and it should include the following:

- 1) The academic discipline(s) with which you have expertise to serve: biology, chemistry, physics, psychology. STEM undergraduate education (e.g., undergraduate curricular reform, higher education change, scholarship of teaching and learning, etc).
- 2) An indication of your commitment to participate in the full, four-year length of this project as summarized above.
- 3) A description of your overall experience in undergraduate research.
- 4) A list/description of:
 - Your leadership experience (institutional and professional).
 - Your consultation/facilitation experience.
 - The major change initiatives that you have been involved in and/or led.
 - Curricular reform initiatives that you have been involved in and/or led.
 - Faculty leadership and faculty workload initiatives that you have been involved in and/or led.
 - Assessment initiatives that you have been involved in and/or led.
- 5) A description of your approach to facilitating conflict-resolution.

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