

**SOLICITATION BC-21124-M**  
**EXTERNAL EVALUATOR SERVICES**  
**December 4, 2018**

**SCOPE OF SERVICES**

**DESCRIPTION:** The University of Maryland, Baltimore County (UMBC) seeks proposals from qualified consultants to provide external evaluation services for a National Science Foundation (NSF) Improving Undergraduate Science Education (IUSE) grant.

**UMBC BACKGROUND:** Established in 1966, the University of Maryland, Baltimore County (UMBC) is one of twelve universities that along with two regional centers and one system office constitute the University System of Maryland. The campus houses over 4.7 million gross square feet (GSF) of built space on 512 acres.

UMBC is a dynamic public research university integrating teaching, research and service to benefit the citizens of Maryland. As an Honors University, the campus offers academically talented students a strong undergraduate liberal arts foundation that prepares them for graduate and professional study, entry into the workforce, and community service and leadership. UMBC emphasizes science, engineering, information technology, human services and public policy at the graduate level. UMBC contributes to the economic development of the State and the region through entrepreneurial initiatives, workforce training, K-16 partnerships, and technology commercialization in collaboration with public agencies and the corporate community. UMBC is dedicated to cultural and ethnic diversity, social responsibility and lifelong learning.

**GRANT OVERVIEW AND OBJECTIVES:**

In 2018, UMBC and our community college collaborators were awarded a grant through NSF's Division of Undergraduate Education's (DUE) Improving Undergraduate Science Education (IUSE) Program. The community college collaborators on this initiative include UMBC's top sending institutions for transfer students: Anne Arundel Community College (AACC), Community College of Baltimore County (CCBC), Howard Community College (HCC), and Montgomery College (MC). The five institutions participating in this initiative are collectively known as the NIQB IUSE Consortium. The project leverages the partnership between these institutions that was established under previous projects and initiatives. The timeline under the grant is October 1, 2018 – September 30, 2023.

The project involves the establishment of three scholarly communities, where membership will consist of faculty and stakeholders from the NIQB IUSE Consortium. The communities and specific objectives include:

1. *The Curricular Alignment Team:* faculty from each institution (up to 4 biology and 1 math) will comprehensively review curricula within the introductory core biology sequence (Introductory Biology I: Cells and Molecules; Introductory Biology II: Ecology and Evolution; Genetics; and Cell Biology). This team will identify areas for action across the core sequence, with emphasis on transfer student progression from the 2-year to 4-year institution. This team will also identify

barriers to content mastery within biology, with particular emphasis on quantitative reasoning (QR) skills, and determine content areas for the development of active learning QR modules in biology.

2. *Nexus Institute in Quantitative Biology (NIQB)*: faculty from each institution will work collaboratively to develop/revise, implement, assess and disseminate (DRIAD process) quantitative reasoning modules related to content in the 4-course core biology sequence. As part of this community, a 3-day summer NIQB institute will be held (location rotates among the five institutions involved), with work continuing during the academic year on the DRIAD process during regular meetings. The day prior to the 3-day institute, the annual IUSE Symposium will take place. This symposium will be a venue to showcase to members of the NIQB IUSE community the developed and assessed QR modules as well as the impact of the QR modules on student success in biology across the consortium.
3. *Faculty Development Community (FDC)*: faculty/professional development leads at each of the NIQB IUSE Consortium institutions will develop and assess an inter-institutional certificate program that focuses on evidence-based pedagogical approaches, to include the QR modules developed as part of the NIQB community, within biology. The certificate program will include academic year workshops, peer observations, feedback opportunities, and administration recognition.

Given these communities and specific aims, the overarching research questions are:

1. Is the proposed, multi-pronged, inter-institutional model of creating the scholarly communities outlined above an effective way to promote change? Specifically, does this model promote curricular awareness between institutions and result in development of QR modules that are widely adapted/adopted and successfully implemented across participating institutions?
2. Will adding modules to corresponding biology courses at the community college collaborators increase gains in QR skills and decrease the achievement gap previously documented in introductory biology curricula between direct entry and transfer students?
3. To what extent can increasing the amount of QR in biology courses enhance students' abilities to use quantitative skills to address biological problems? Does the amount of experience with quantitative biology modules in early coursework positively impact student retention and success in advanced coursework?

**WORK TO BE PERFORMED:** The work to be performed under this solicitation shall consist of the following:

#### PROJECT EVALUATION

Assessment data on effectiveness of programming and modules (such as students' performance and associated summative and formative assessments) will be compiled and analyzed internally by the institutions. This work will complement the work of the external evaluator, who will focus on the effectiveness and impact of the consortium with two primary components:

1. A formative realm to assess implementation of proposed activities across the three scholarly communities and satisfaction amongst participants throughout the consortium.
2. A summative realm to assess consortium's outcomes.

The formative realm of the external evaluation will provide ongoing consortium development and implementation data to the project staff so that adjustments can be made, as needed. Data will be collected in two ways:

1. Surveys will be administered on regularly scheduled intervals to gather data on member's (three scholarly community) satisfaction with consortium leadership, decision-making, organizational structure, communication, and roles and responsibilities. The surveys will also assess individuals' commitment, participation, and satisfaction with the consortium and scholarly community activities, and perceived effectiveness and progress of the consortium. Survey results will be shared with the consortium after each administration of the survey and when appropriate, shared at the annual IUSE Symposium.
2. Interviews will be conducted with consortium (and scholarly community) members at the end of each project year to gather more in-depth data on the progress and impact of the consortium. Interview data will be analyzed at the end of each project year and the results will be submitted to the leadership to allow them to use the data to make any changes needed to improve the consortium.

The summative realm of the external evaluation will include multiple data collection methods that will assess activities from the three scholarly communities. The external evaluation team will work with the project staff to develop reporting templates and processes to be able to streamline data collection.

1. *Curricular Alignment Team*: The surveys and interviews described above will include questions regarding the progress of the consortium on aligning the curricula among the 2- and 4- year institutions, the accomplishments of the consortium, the perceived impact of the consortium on transfer student success and the extent to which the consortium is leading to inter- and intra-institutional change. Further, the external evaluation will review documents (i.e., reports, meeting summaries, course syllabi, etc.) to evaluate accomplishments made towards the curricular alignment process.
2. *NIQB*: The external evaluation will review documents to evaluate consortium accomplishments towards module implementation and assessment activities and dissemination of modules. Results of assessments measuring the impact of the modules on students' competencies in QR within biological contexts will be reviewed. These results will provide insight into how the consortium's approach to curricular alignment impacts the success of transfer students using QR and their success at UMBC.
3. *Faculty Development Community*: In collaboration with project staff, specifically faculty development leads, the external evaluation will investigate faculty involvement in and perceptions of the scholarly communities, institutes and symposia, and certificate program. Further, changes faculty make as a result of the proposed work, such as pedagogical changes or implementation of the QR modules, will be assessed through interviews, surveys, and/or document review.

## ACTIVITIES OF EXTERNAL EVALUATOR

It is expected that the external evaluator is to conduct the following activities throughout the term of the contract:

- Surveys (4 per year, 100 individuals per survey)
  - Design survey in collaboration with project staff
  - Administer survey electronically
  - Analyze survey responses/data
- Focus groups/interviews (2 rounds per year, with a random sampling of 50 individuals total per round)
  - Conduct focus groups (estimated 5-10 individuals per focus group)
  - Transcribe audio recordings
  - Analyze transcripts, looking for salient themes
- Document review
  - Course syllabi (4 courses, 5 institutions, multiple sections per semester)
  - Meeting summaries
    - Monthly curricular alignment meetings (40 meetings per year)
    - Leadership team meetings (12 meetings per year)
    - Faculty development lead meetings (9 meetings per year)
  - Review and analyze documents looking for progress and evidence of stated goals.
- Travel (all locations will be in the greater DC/Baltimore area)
  - Attend (either in-person or remotely) monthly leadership team meetings
  - Attend the annual NIQB workshops and annual symposium during the summer
  - Attend annual external advisory board meeting
  - Attend two project evaluation meetings each year
  - Travel associated with conducting focus groups/interviews
- Preparation and dissemination of two reports each year highlighting evaluation results to project leads
- Project guidance – advise the project staff on internal evaluation activities
  - Data collection methods
  - Data organization

All work to be performed by the external evaluator shall be performed as work to hire and the University shall retain the intellectual property rights for this work.

**CONTRACT TERM:** Contract is to be issued for a period of five (5) years from date of award. The selected firm will be required to sign a standard UMBC consulting agreement that may be subject to the terms of the grant.

**AWARD:** It is the University's intent to award a single contract. This work is to be performed for a fixed rate fee. UMBC will not pay in advance for any services, however, progress payments will be made as milestones are met and deliverables are approved by UMBC.

## **FIRM'S RESPONSE REQUIREMENTS**

Firms shall submit the following information:

1. A cover letter signed by an officer or member authorized to bind the firm to the proposed fees, rates, and terms. The cover letter shall include the name, address, phone number, and email address for the contact for the solicitation.
2. Summary of the qualifications and experience of the firm. Provide brief narrative describing your firm's experience providing external evaluation services. Provide information for work on at least three (3) projects that have been performed with a similar scope. Describe the scope of work that was performed, the dates of the work, and the services that were provided. Provide contact information for each of these projects including the name of the Institution, contact name, contact phone number, and contact email address. References may be contacted at any time during this process to determine an offeror's responsibility. Higher consideration will be given to any projects that were NSF funded.
3. Lead consultant/Key staff. Provide a resume for the lead consultant and, if applicable, any other key staff proposed, detailing qualifications and experience suitable for the project and describing how the Offeror's team will interface with UMBC.
4. Workplan/Timeline. Provide information regarding the preliminary approach that the firm will take and the tools to be utilized to perform the scope of work. Provide a recommended schedule/level of effort for the engagement. The schedule/level of effort should be resource loaded so that UMBC is able to understand the anticipated level of effort for each member of the Offeror's team, as well as the required level of effort for UMBC staff. Include a timeline to accomplish the work as well as narrative indicating whether the timeframe in the proposed UMBC schedule is a sufficient amount of time for this project.
5. Subconsultants/Partners. There may be areas for use of subconsultants or partners in this Project. UMBC encourages the use of small businesses and MBE firm whenever possible. If a firm is utilizing a subconsultant or partner, the firm shall list the subconsultant/partner, the area of expertise of the subconsultant/partner, and all other applicable information regarding key personnel for that firm.
6. Sample surveys. Provide a sample survey demonstrating your firm's experience with this type of work. This sample may be for one of the projects described in the qualifications section.

All responses shall be provided electronically by January 3, 2019 by 11:59 pm Eastern Time to: [Technic.n837aag9hg4z8coz@u.box.com](mailto:Technic.n837aag9hg4z8coz@u.box.com). Proposers should receive an automatically generated verification from Box when the file has successfully uploaded. Proposers that do not receive verification should immediately contact the Procurement office to confirm that their response has been received.

## **EVALUATION PROCESS**

Firms shall be shortlisted based on their proposal responses. Shortlisted firms may be required to attend an interview either in person or via Skype. These sessions are anticipated to be held on January 25, 2019. The Lead Consultant and Key Personnel are to set aside this date on their calendar to avoid conflicts.

Additionally, shortlisted firms shall provide a price proposal on February 5, 2019. This shall be a fixed fee for the engagement. There are no reimbursables under the resulting contract. The fee and hourly billing rate are to include all costs, including domestic travel, for the engagement.

If you have any questions regarding this solicitation, please contact Elizabeth Moss, Executive Director of Procurement and Strategic Sourcing at [emoss@umbc.edu](mailto:emoss@umbc.edu). It is preferable that questions be provided in writing via email for ease of distribution within UMBC. Responses shall be provided to all other proposers, but without identification of the inquiring firm. All questions shall be submitted by December 18, 2018 to allow for sufficient time to respond before the University closes for winter break. To maintain the integrity of the procurement, Elizabeth Moss shall be the sole point of contact for this solicitation.