

Needs statement

The evaluator we are trying to hire will compete the following tasks.

Overview

The National Radio Observatory (NRAO) intends to secure a contract for the development and implementation of an evaluation study to assess the creation, implementation, and outcome of the Broader Impacts (BI) components of the National Radio Dynamic Zone (NRDZ) project. These components include high school curriculum, an undergraduate course, and a citizen science project. The work for this project would start on July 1, 2022, the work should be complete by August 1, 2023.

Statement of Work

Through this RFP, NRAO will select a consultant to collaborate with the Curriculum Specialist to develop and implement an evaluation plan for the BI components of the NRDZ project.

- **High school curriculum.** This component consists of nine inquiry-based lessons that were written at the high school level. We are not interested in the content knowledge generated by these lessons. Rather proposals should focus on ways to determine if student's understanding of the uses of the EM spectrum has increased. In addition, we are interested in if students felt culturally included in the lesson or lessons they participated in. Formal educators will be trained on implementing these lessons through asynchronous training videos. The educators will then select the lesson or lessons which are most appropriate for their students. We are interested in if the training provides the knowledge and skills the educators need to implement the lessons in their classrooms.
- **Undergraduate course.** This component consists of ~ six undergraduate modules. Each of these modules focuses on one aspect of the EM spectrum and is taught by a different person. Each module will end with some sort of assessment. A post-secondary institution may use the modules together as a 3-credit course or each module may be used separately as part of an existing course. The evaluator should focus on the effectiveness of the pedagogies used in each module. In addition, the proposals should address how student interest in the EM spectrum was affected by the course.
- **Citizen science project.** This component consists of a technical manual and several activities that instruct the average person in how to intercept radio frequencies in his or her area. The evaluator should determine if users feel comfortable using the provided materials in the intended manner.

The evaluation plan should include an analysis and summary of the creation process of each component, the implementation of each component, and the outcome of the HS curriculum and the undergraduate course. All evaluation techniques included in the proposal should be carried out remotely as no in-person visits will be possible with this project.

Deliverables

1. Descriptive evaluation plan, approved by NRAO staff
2. Data collected from all three project components. This data should be a combination of quantitative and qualitative.
3. Final report - A summary report incorporating findings from all three project components

Time line

July 1, 2022 – Evaluator begins developing plan.

July 8, 2022 – Draft of evaluation plan

July 15, 2022 – Final Evaluation plan

Conduct data collection.

June 1, 2023 - Analysis of data

July 1, 2023 - Draft evaluation report

August 1, 2023 - Final evaluation report