

### **3.2 Objective 1– INTREPID: INTegrating REsearch Projects Into Disciplines**

Some of the existing CUREs have been developed around a common experimental platform or technology, such as the Genome Consortium for Active Teaching (GCAT; [Campbell et al. 2007, Walker et al. 2008]) and the related GCAT-SEEK [Buonaccorsi et al. 2014, Buonaccorsi et al. 2011]. These support faculty and students in addressing their own research questions using a common technology. We seek to emulate this model at a smaller, institutional scale, by developing INTREPID—a discipline-neutral collaborative template for research project implementation. As part of the faculty development experience, faculty will learn how to implement INTREPID in their courses to create engaging and replicable “research in the classroom” experiences.

During the second half of Summer 2024, the PI and co-PI will collaborate with the five faculty members who are participating in the course redesign program to provide suggestions on how to refine the INTREPID research project management template and develop a common design that can be applied to multiple disciplines. Items included are: a timeline, objectives to be reached in chronological order, ideas for personalizing content in every module, suggestions for selecting appropriate statistical analyses for different types of projects, instructions for conducting those analyses in Excel or SPSS, a scientific research poster template, and introductory “hooking” materials showing KCC students previously engaged in CUREs and UREs presenting their work at various conferences in the US and abroad together with, in some cases, contact info for these students and encouragement to reach out to them with questions. These and additional resources will be presented as text, visual material, and videos on the CUNY Academic Commons internet platform. The materials will be freely accessible to faculty and the general public.

The PI has spent the last five years conceptualizing INTREPID based on best practices reported in the literature and testing these materials in her teaching and mentorship, further refining them based on student feedback. As mentioned in the previous section, INTREPID intentionally incorporated features that are known to make CUREs effective [Dolan 2016], such as technically and conceptually simple steps for users; compatibility with flexible scheduling; multiple milestones; structure enabling students to work in parallel; checks for data quality; a repository for sharing data; and assessments that resemble the work of scientists [Fukami 2013, Hatfull et al. 2006, Kloser et al. 2013]. For the current proposal, each CURE will be associated with a specific template and simple steps to follow.

Faculty from two different disciplines have collaboratively piloted this INTREPID template in a CURE that engaged students from two courses, Speech and Statistics, to work jointly on a research project in which the Speech majors measured various aspects of people’s voices and the Statistics students conducted statistical analyses using their peers’ data. Speech students were given mean values across different groups and descriptive graphs which they incorporated to their group presentations.