

32 percent of students in the presurvey to 70 percent in the postsurvey ($n = 152$). Comments on the surveys indicated the students were excited to be a part of a worldwide movement and to potentially find a new antibiotic that could save countless lives.

In fall 2018 and fall 2019, NWTC and the Tiny Earth Initiative, as well as several colleges and universities in Wisconsin, teamed up with the Green Bay Packers to have a poster symposium of student work at the Packers' Lambeau Field. The NWTC students were required to involve the community in their soil acquisition, comparing two sites for antibiotic-producing bacteria. This was done not only to potentially discover new antibiotics but also to raise awareness and educate the community on the problem of antibiotic resistance. Over the two fall semesters, 250 allied health NWTC students—most in their third term of college—produced 140 high-quality posters for the Tiny Earth in Titledown annual symposium, which many community members attended.

At NWTC, many students are unable to commit to full-time science internships, as they have other commitments. To address this situation, a SURE was created in which students commit to an internship in virology research of 8 hours a week for 10 weeks (the minimum required for science programming at NWTC). Students were able to agree to this time frame and, after training, were quickly executing their own experiments and troubleshooting results. For the past three summers, students have progressively moved research forward and have learned how cellular restriction factors restrict viral infectivity.

These CUREs and SUREs have been so successful that the college had started a new initiative to spread these models into other disciplines at the college. A committee has been created to oversee the process of interested instructors proposing UREs and the provision of college resources to support them. In time, it is expected that these UREs will result in greater student success across the college.

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Accessibility in Undergraduate Research Experiences: A Novel CURE

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Course-based undergraduate research experiences (CUREs) can have profound and lasting impacts on students. CURE participants often show gains in content knowledge, self-confidence, and enculturation into their field of study. Exciting is the recent momentum in providing CUREs at the two-year degree level (Hensel 2018; Patton and Hause 2020). However, the impacts of CUREs on students with disabilities—particularly those at the associate degree level—are not yet fully understood.

CURE courses were developed for Deaf and Hard-of-Hearing (D/HH) students in the Laboratory Science Technology (LST) program (Lynn et al. 2020) at the National Technical Institute for the Deaf (NTID) of Rochester Institute of Technology (RIT). Notably, the developed CUREs enrolled all D/HH students and also fulfilled a requirement for the two-year degree program. Attending to accessibility, the courses were taught in American Sign Language and focused on best practices for working with D/HH students in the laboratory. Best practices included using different modalities/guidelines for clear communication, optimizing visibility in the laboratory, and seeking continual feedback from participants (Smith, Ross, and Pagano 2016).

The educational benefits of CURE-type instruction were clear as early as 2005 when the first CURE course for D/HH LST students was taught at RIT/NTID. The CURE focused on the isolation and analysis of isoeugenol from nutmeg and served as a capstone course for the program that was interdisciplinary (as it had chemistry and biology components). Chemical extractions, instrumental analyses (spectroscopy and chromatography), bacterial inhibition testing, and general laboratory techniques were used in the research. The level of research and scientific details of this earlier CURE offering can be found in the publication of Pagano and colleagues (2016). Although this effort predated the structured assessment movement for CUREs, strong student learning and technical skill development were evident. Due to scheduling and program logistics, the course was not taught again for some time.

In 2020, RIT/NTID offered a newly designed LST CURE. Similar to its predecessor, the course involved the use of laboratory analytical techniques—this time through the analysis of honey. In this iteration, CURE-enrolled students were given precourse and postcourse surveys to self-assess aspects of their experience (Grinnell College 2020). All students who completed the survey ($n = 11$) either agreed or strongly agreed that the CURE “. . . was a good way of learning about the subject matter,” and most ($n = 9$) students also agreed or strongly agreed that the CURE was a good way of “learning about the process of scientific research.” The student responses demonstrated that the significant benefits of the CURE included “becoming part of a learning community,” “learning lab techniques,” “skill in the interpretation of results,” and the “ability to analyze data and other information” (all students identified these items as areas in which they believed that they experienced a moderate to very large gain). The demonstrated learning outcomes from the redesigned CURE are encouraging, and the course is expected to continue as a program fixture.

Graduates of the LST program either enter the workforce (often as laboratory technicians) or matriculate into baccalaureate degree programs. Students’ reactions to the CURE indicate that it provides them with vital skills that can assist in their transitions to the workplace or baccalaureate, graduate, and professional education. Given that the students are undertaking authentic research projects using the scientific method, they are inherently confronted with critical thinking and problem-solving scenarios that can build their skills for future academic and professional careers. After experiencing CUREs, D/HH participants may also be more likely to continue in faculty-mentored research projects—a positive development, as D/HH students frequently have fewer research opportunities compared to their hearing peers (Pagano, Smith, and Ross 2015). In addition to providing students with a strong experiential curriculum, this initiative can bring a much-needed focus on the D/HH experience in science programs

and demonstrate the advantages of providing students with inclusive CUREs.

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For the Benefit of All: Faculty-Led Undergraduate Research in the Humanities at LaGuardia Community College, CUNY

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Although undergraduate research at community colleges is gaining more attention, the opportunities for faculty-student collaboration within the humanities in these institutions is still neglected. Given the assumption that humanities research is “necessarily more individualistic than research in the social or natural sciences,” requiring years of training and immersion (Schantz 2008, 27), it is often not given much attention at two-year institutions that have a limited time to develop strong, discipline-specific, student-faculty connections. Yet students and faculty alike have much to gain from such work. This case study highlights