

Organization Name: Food Processing Center, Department of Food Science and Technology, University of Nebraska – Lincoln

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Grant Period: January 1st, 2024 – June 30th, 2025

Final Report: When possible, we posted goals (in black) directly from our original approved grant proposal and then explained in red how we addressed those goals and timelines.

Project Purpose and Goal: Continue to offer and build on educational opportunities in brewing and fermentation science at the University of Nebraska-Lincoln

The University of Nebraska system is uniquely positioned to educate talented individuals to staff the craft brewing industry in Nebraska and keep those individuals in state. To date, however, brewing-specific education has barely been addressed by the state's largest university. It is our intention to continue to fill this gap in craft brewing-related education. This project would be a continuation of a multiple year process started two years ago to bring brewing-related careers to the fore at UNL. Almost two years ago, with the help of the Nebraska Craft Brewery Board, we designed and implemented an academic minor in Fermentation Sciences and hosted a day-long workshop on brewing-related careers in craft brewing in Nebraska. Last year, we built a modular brewing-related curricula and offered the first brewing course at UNL. The course was well-attended and well-received. Please see last year's final report for a detailed description of the beer course and the outcomes. One of the most significant outcomes of this effort is that students who took course created an official student club, the Big Red Brew Club, the first UNL club dedicated to beer brewing interest among UNL students, faculty, and staff. Because of our initiative in the last couple years, brewing and fermentation sciences have established a foothold in the UNL community.

Specifically, the purpose of our project is to continue to push forward using the momentum related to brewing and fermentation science we have already built up with the goal of continuing to offer regular curricular options related to beer brewing. Current university financial budget constraints have put offering the brewing course in jeopardy this academic year. We are requesting funds from the NCBF to allow us to offer the beer brewing course this pre-spring semester (January 2nd, 2025 - January 17th, 2025). Having the financial support from NCBF will not only allow us to offer the course one more time but will also demonstrate a continued interest and support from the industry on this topic. This will strengthen our requests for funds from UNL for upcoming years. NCBF funds would cover supplies related to offering the course like brewing and sensory analysis supplies and compensation for the instructor, Dr. Andrew Rasmussen, who developed the course, taught it last year, but is not regular faculty at the University. A proposed budget is outlined below and is based off of last year's final expenses. We thank you for this out-of-cycle consideration of our proposal and your continued support of fermentation science and brewing education at UNL.

Actions/deliverables timeline:

January 2nd – 17th, 2025- FDST 492: Special Topics – Fundamentals of Beer Brewing and Analysis was taught on UNL Innovation campus. Ten students participated in the second offering of the class which was made up of a mix of graduate and undergraduate UNL students. Highlights of the course included brewing on the 1

gallon and 3.5 BBL scales, a guest brewmaster speaker, a trip to a local brewery for tour of their production facility, and sensory evaluation of over 30 beers. A copy of course materials including a course syllabus are available upon request.

April 2025 - With the approval of the NCBB, we used surplus funds to provide a hands-on brewing experience for undergraduate and graduate students enrolled in the Fermented Foods course (FDST 455/855). Students brewed on the 3.5 BBL UNL Food Pilot Plant brewhouse from grain to glass and received sensory evaluation education from a guest brewer.

Spring 2023 and beyond – Post-course assessment. Student assessments were collected and analyzed. Student assessments were very positive. On a five point scale where a 5 is “strongly agree” and a 1 would be “strongly disagree,” the course was rated an average score of 5.00 on “Course activities effectively promote my learning and interest in the subject,” a 5.00 on “The learning tools (e.g. course texts, notes, slides, videos, exams, projects, etc.) support my learning,” a 5.00 on “I am invited to be an active participant in my learning (either face to face or online),” a 5.00 on “I have opportunities to learn with and from other students in this course”, a 5.00 on “The feedback I receive on my work is useful to me for making changes and improvements,” a 5.00 on “I know where to go for help in this course if, and when, I need it, “ and a 5.00 on “I find communication with the instructor (e.g. office hours, email, Canvas, etc.) effectively supports my learning.” Students wrote in positive comments like “We are invited to actively participated in every class. This is such a fun class where we are able to experiment with several different things,” and “I really enjoyed all of the hands-on stuff in this class. We were able to try a lot of things and brew at small and medium sized scales.” Although given the opportunity, students did not write in any negative comments. A full copy of student course evaluations is available upon request. Because of the ongoing support of the NCBB and FDST department we are offering FDST 492 this Fall as a 15-week standard course with 28 students already enrolled!

Proposed budget

Type	Nebraska Craft Brewery Board Funds	Applicant Contributions	Total	Purpose
Personnel	\$7,500	\$0	\$7,500	\$2,500 per credit hour for 3 credit hours to be taught by A. Rasmussen
Course supplies and Benefits	\$2,500	\$0	\$2,500	Brewery and Laboratory supplies for the course
Total	\$10,000	\$0	\$10,000	

Final Expenses

Type	Nebraska Craft Brewery Board Funds	Applicant Contributions	Total	Purpose
Personnel	\$7,500	\$0	\$7,500	\$2,500 per credit hour for 3 credit hours taught by A. Rasmussen
Course supplies and Benefits	\$2,046.21	\$0	\$2,046.21	Brewery and Laboratory supplies for the course
Total	\$9,546.21	\$0	\$9,546.21	