Annual Academic Assessment Report
(MS/FOOD SCIENCE)
(May 11, 2023)

1. Results of analysis of assessment of Student Learning Outcome (SLO)

The Student Learning Outcomes provided below are those related to Research and Scientific Enquiry Skills.

SLO 1: Demonstrate scientific enquiry skills through the research performed

1. SLO 1 was assessed in Summer 2022, Fall 2022, and Spring 2023 by each student's graduate committee during the defense for all in FDSC MS students (n=4). Student knowledge will be assessed by the graduate committee during the presentation. A determination by the committee is made individually based on information presented by students and through questions posed to the student. Graduate committees will design a line of questioning allowing the determination the depth of knowledge of the student in their specialty area.

   Acceptable and **Ideal Targets**
   - Acceptable Target: No students in the novice category for any on the rubric sub-categories (1, 2, 4, and 5), 60% of students in the Advanced or above category and at least 20% of students in the Expert category.
   - Ideal Target: 100% at or above the Advanced level for all rubric sub-categories.

2. Key Findings for SLO 1:

	Novice	Intermediate	Advanced	Expert
Topic Selection	0	2	0	2
Design Process	0	0	2	2
Conclusions	0	2	0	2
Limitations and Implications	0	2	0	2

3. Interpretation of key findings in connection to student learning:
   - The acceptable target was not met since 60% of the students were not in the Advanced category or above. For the acceptable target to have been reached, at least 3 out of 4 students would need to be at the advanced level.
   - The ideal target was not met with 50% of the students not in Advanced or Expert category.
   - More MS students are achieving the Expert level compared to the 2021-2022 assessment. However, with more students being below advanced in several areas, there is room for improvement in the MS program.

4. Description of anticipated actions for improvement of teaching and learning based on key findings:
    - Fifty percent of our students are expert in the categories evaluated. There are areas to improve, but it is small sample size and MS program is shorter.
    - Because each student is evaluated by their customized graduate committee, there also exists differences across each faculty member with respect to their interpretation of each outcome and competency level. We will continue look at the data to determine if there are any faculty who consistently score higher or lower compared the rest of the committee.

SLO 2: Demonstrate problem quantitative skills through the analysis of research data.

1. SLO 2 was assessed in Summer 2022, Fall 2022, and Spring 2023 by each student's graduate committee during the defense for all in FDSC MS students (n=4). Student abilities will be assessed by the graduate committee during the presentation. A determination by the committee is made individually based on information presented by students and through questions posed to the students by the committee. Graduate committees use the dissertation and the slide presentation for the oral defense to make a determination of the student quantitative skills including experimental design and analysis competencies.

    Acceptable and **Ideal Targets**
    - Acceptable Target: No students in the novice category for the rubric sub-category 3, 50% of students in the Advanced or above category and at least 20% of students in the Expert category.
    - Ideal Target: 100% at or above the advanced for the rubric sub-category.

2. Key Findings for SLO 2:

	Novice	Intermediate	Advanced	Expert
Quantitative Skills	0	1	1	2

3. Interpretation of key findings in connection to student learning:
    - The acceptable target and ideal target were met.
    - The results provide an indication that our MS program is providing a sufficient skillset in quantitative skills. Data indicate our MS students are mostly meeting the program expectations. This shows that the MS program in FDSC provides a solid foundation for our students.

4. Description of anticipated actions for improvement of teaching and learning based on key findings:
    - The ideal and acceptable target was met, but it is a limited sample size. Half of our students were not considered experts in this SLO. From the loss of faculty to

retirement and other positions, we are working to develop and/or revise old courses with the new hires. It is challenging to achieve expert levels within the time constraints of a MS program.

2. **Any changes to degree/certificate planned or made on the basis of the assessment and analysis**

   No changes to the degree program have been planned nor were made on the basis of the assessment and analysis. However, as indicated in our interpretation of each SLO, we are indeed actively working on updating graduate course offerings for our MS students.

3. **Any changes to the assessment process made or planned.**

   No changes to the assessment process have been made or planned.