

NECHE INVENTORY OF EDUCATIONAL EFFECTIVENESS INDICATORS
GRADUATE PROGRAMS
(M.S. CONCENTRATION IN FOOD AND NUTRITION WITH A SPECIALIZATION IN FOOD SCIENCE
AND NUTRITION SCIENCE - 2018-19)

DEGREE GRANTING PROGRAM NAME	(1) List ONLY the program learning objective(s) assessed during the current reporting period	(2) For each learning objective listed in column (1), other than GPA, what data/evidence was used to determine that graduates have achieved the stated objectives? (e.g., capstone assignment, portfolio review, licensure examination)	(3) What were the results/outcomes/findings/conclusion(s) of the assessment? Explain results/findings/conclusions for each program learning objective listed in column (1)	(4) Who interprets the evidence? Describe the process (e.g. annually by the curriculum committee).	(5) What changes/improvements have been made as a result of using the data/evidence (3)? Link discussion in this column with a learning objective (1) and the results of assessing that objective (3)	(6) Date of most recent program review
M.S. Concentration in Food and Nutrition with a Specialization in Food Science and Nutrition Science	<p>PLO1: Demonstrate knowledge of fundamental concepts in functional foods</p> <p>PLO2: Evaluate and analyze realistic situations in the food industry.</p>	<p>PLO1: For students in the thesis option of the program, the MS thesis and thesis defense in FDSC 960 are used. For students in the non-thesis option, the comprehensive exam is used.</p> <p>PLO2: For students in the thesis option of the program, the MS thesis and thesis defense in FDSC 960 are used. For students in the non-</p>	<p>Students in the MS thesis option of the program demonstrate a satisfactory to excellent knowledge of fundamental concepts in functional foods. The topic of their MS thesis is an in-depth evaluation of a functional food. The students' MS thesis is evaluated using attached rubric. The results of the thesis evaluations are attached in a separate file. Aggregated data for seven students completing the thesis option between 2014 and 2019 show that the students meet the expectations of the program. An additional demonstration of</p>	<p>Sarah Pilkenton and Emmanouil Apostolidis interpret the evidence.</p> <p>Due to the small size of the program, SP and EA collect artifacts when available. The artifacts are assessed as they are collected.</p>	<p>Due to the small size of the program, it has taken five years to collect enough artifacts to assess. The assessment plan needs to be revised to incorporate the following:</p> <p>PLO1 needs to be modified. Although students in the thesis option focus on functional foods,</p>	<p>The Department of Chemistry and Food Science, which houses the program, conducted a self-study during the Spring 2016 semester. This document was submitted to</p>

	<p>PLO3: Produce high quality written reports and present their contents effectively</p> <p>PLO4: Demonstrate the ability to thoroughly review scientific literature</p> <p>PLO5: Perform high quality research in specific areas relevant to functional foods</p>	<p>thesis option, the comprehensive exam is used.</p> <p>PLO3: For students in the thesis option of the program, the MS thesis and thesis defense in FDSC 960 are used. For students in the non-thesis option, there is no mechanism for collecting artifacts to assess.</p> <p>PLO4: For students in the thesis option of the program, the MS thesis and thesis defense in FDSC 960 are used. For students in the non-thesis option, there is no mechanism for collecting artifacts to assess.</p> <p>PLO5: For students in the thesis option of the program, the MS thesis and thesis defense in FDSC 960 are used. For</p>	<p>the achievement of the program learning objectives of the students in the thesis option are seven publications of student work in peer reviewed food science journals, seven poster presentations by students at national conferences, and four students in the thesis option have received awards or scholarships from the food science community. These items are not requirements of the program, but they are evidence that PLO1, 3, 4, and 5 are achieved at a satisfactory level.</p> <p>A flaw in the current assessment plan is that there is no formal mechanism for assessment the program leaning outcomes for students participating in the non-thesis option of the program. During the five year time period that is covered in this assessment report, three of ten students participated in the non-thesis option of the program. This issue needs to be addressed in a revised version of the assessment plan for the program.</p>		<p>students in the non-thesis option do not.</p> <p>Students in both the thesis and non-thesis options take an oral comprehensive exam at the end of the program. For students in the thesis option, this is carried out in the format of a thesis defense. The following need to be collected and/or developed to better assess the MS thesis program: slides from the thesis defense need to be collected, and a rubric for assessing the program learning objectives using the thesis defense needs to be developed.</p> <p>Students in the non-thesis option,</p>	<p>the Dean of Science, Technology, Engineering, and Technology in September 2016.</p>
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		students in the non-thesis option, there is no mechanism for collecting artifacts to assess.			must participate in a food industrial practicum (industrial internship). The comprehensive final exam centers on the students' internship experience. In order to assess the learning objectives of the program with respect to students in the non-thesis option, a written report from the internship experience needs to be collected, and a rubric for assessing the written report needs to be developed. A more formalized criteria for the comprehensive exam needs to be established, and a rubric to assess the program learning objectives via this exam needs to be	
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					<p>developed.</p> <p>One hallmark of our program is that students who have graduated with an MS often participate in a mentoring program with undergraduate students majoring in Food Science. The close connection between the undergraduate and graduate programs and the willingness of the graduate students to mentor undergraduate students should be highlighted.</p> <p>Another accomplishment of the program is that student work has resulted in seven peer reviewed publications and in numerous presentations at</p>	
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					national conferences. A list of publication is attached.	
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Insert URL of the program web page where Program Learning Objectives for this program are published (NECHE requires this as part of being transparent to stakeholders): <https://www.framingham.edu/academics/graduate-studies/graduate-degree-programs/master-of-science-food-and-nutrition/learning-outcomes>