

**NECHE INVENTORY OF EDUCATIONAL EFFECTIVENESS INDICATORS
GRADUATE PROGRAMS
(PSM IN BIOTECHNOLOGY - 2019-20)**

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
PSM in Biotechnology	Communication and Team Work (Program Learning Objective, PLO #4)	Data from a Directed case study was collected over this period from (1) student capstone experience and (2) Technical Writing course & (3) Bioethical course to support conclusion on this PLO. They also have included (1) student training set of attributes important for the PLO using AACU Values Rubric analyses, (2) capstone projects competence review with faculty	1) Using two Intellectual and Practical Skills rubrics from AACU as the guide, students were evaluated on their foundation in the understanding of Communication & Team Work while attending the Technical Communication course, Bioethics course and Capstone Internship course. Based on the case study's scoring with the AACU rubric scheme, the following observation is obtained. With the AACU classification; 1 student is below the benchmark (score of below 25), 3 students meet milestone of acceptance (score between 25 and 50), 2students meet milestone of high acceptance (score between	(a) Program Director (Dr. Sunny Tam) and Faculty members (Dr. Simon Fricker & Dr. Stefan Doerre) have discussed on the progress of the students, and the chosen value attributes to examine on all PLOs including communication and team work. (b) For capstone internship projects, both the Program	For future assessment and report, we would like to incorporate more direct testing & measurement to better assess the selected PLOs. A committee of faculty members and the program director will meet and design on the direct case studies. We will continue to utilize the current AACU values rubric to assess development under each PLO.	2019

		<p>members, and (3) faculty confirmations of student performance on PLO.</p>	<p>50 and 75), and finally the remaining students of 14 meet the highest capstone level (score between 75 and 100). Out of the 20 students, 5% of students did not reach the acceptance level. 15% of students have passed the acceptance level. 10% of students have exceeded the high acceptance level. 70% of the remaining students have exceeded our expectation of their communication and team work in the highest capstone level. For future program progress, we hope that every student can exceed the high acceptance level by meeting all the rubrics for milestone achievement (score of higher than 50). (2) For the 4 students who have completed the 400 hours Capstone internship study over this period, careful directed evaluation of their progress based on the selected attributes were completed. Based on the capstone project evaluations and direct case study, good communication and team concepts among the students were all in the high capstone level (score between 75 and 100). This is an encouraging finding over many months of hard work incorporating</p>	<p>Director and project mentors interacted regularly to discuss on the student progress and reviewed all the final reports before and after the capstone internship studies.</p>	<p>For future capstone internship projects, we will continue to hold honest discussion and evaluation before and after the study with the students, faculty members and industry mentors. If any student has completed national professional license examination, we will also include the result as part of our annual program report.</p>	
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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/Assets/uploads/about-fsu/office-of-assessment/_documents/assessment-plan-professional-science-masters.pdf