



**University of Puerto Rico  
Mayagüez Campus  
Office of Continuous Improvement and Assessment  
Mayagüez, Puerto Rico**



**Student Learning Assessment Report  
Program of Food Science and Technology  
August 2006-May 2007  
Prepared by: Lynette E. Orellana, PhD**

**SECTION I: Mission and Student Learning Outcomes (Graduating Student Profile)  
Mission**


The development of educated, cultured citizens, capable of critical thinking, and professionally qualified in the field of Food Science and Technology. Our alumni integrates the disciplines of chemistry, microbiology, engineering, technology and nutrition to solve problems relevant to the processing and manufacturing of foods from agricultural commodities, conducts creative food-related research that contributes to the competitiveness and profitability of the food manufacturing industry and to the well being of the public.

**Student Learning Outcomes**

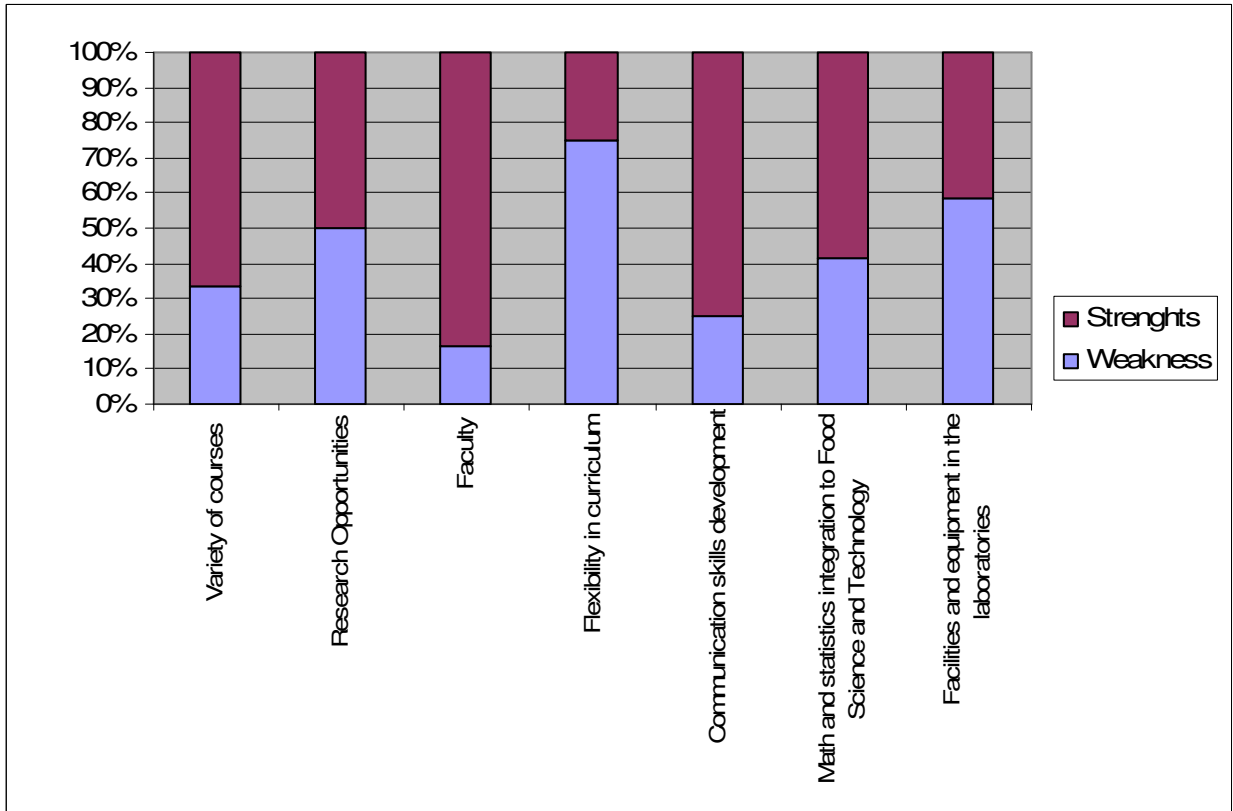
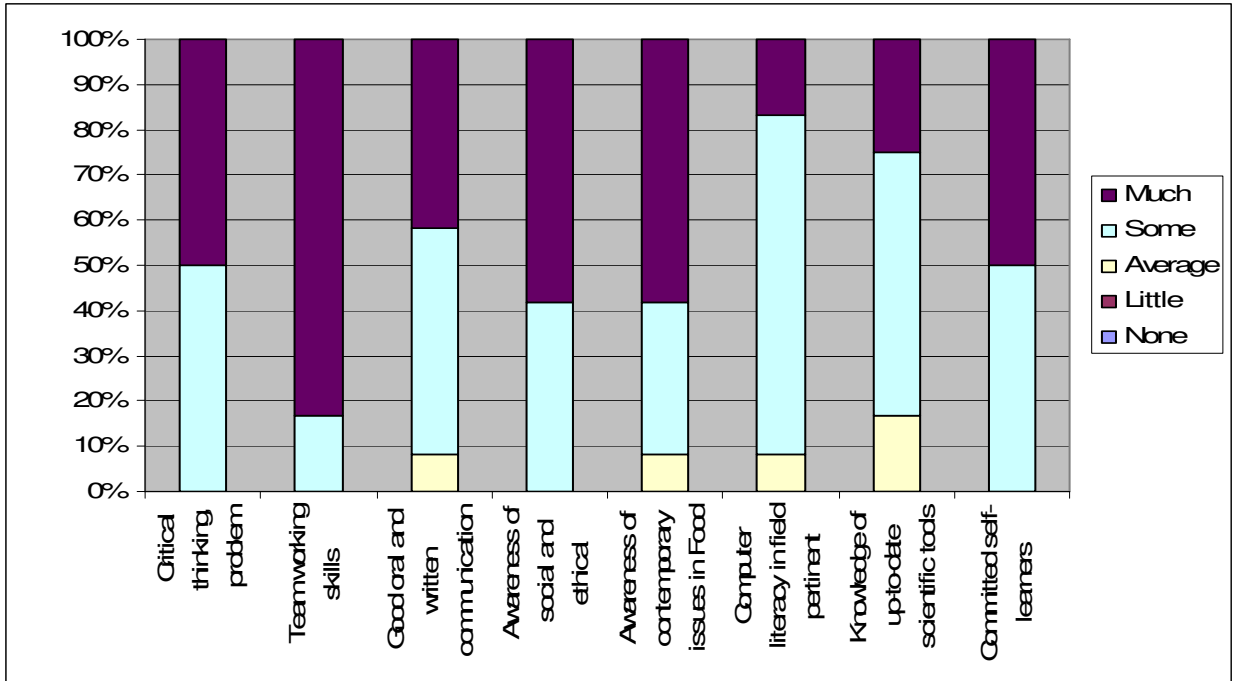
1. Critical thinking, problem recognition and solving skills through the scientific method
2. Team working skills
3. Good oral and written communication skills
4. Awareness of social and ethical implications in science
5. Awareness of contemporary issues in Food Science and Technology
6. Computer literacy in field pertinent programs
7. Knowledge of up-to-date scientific tools and techniques
8. Committed self-learners

**SECTION II: Student Learning Assessment Results  
Activity 1**

Sub-section	Content
<b><i>Focus of Assessment Project</i></b>	CURRICULLUM ASSESSMENT OF SKILLS and KNOWLEDGE
<b><i>Justification (data-based)</i></b>	The larger purpose of the assessment process is to provide current, relevant data of the Program and facilitate data-driven decision making and continuous improvement. As part of the efforts for the Middle States Accreditation Self-Study, surveys of Food Science and Technology students will be conducted to determine student satisfaction with their academic experiences. The academic experiences survey includes several questions about students' experiences in their academic courses, as well as

		opinions about the faculty of the department.
<b>POPULATION</b> <i>Student Faculty</i>		Twelve students
<b>Assessment Cycle</b>	<b>Pre- intervention</b>	The larger purpose of the assessment process is to provide current, relevant data of the Program and facilitate data-driven decision making and continuous improvement. As part of the efforts for the Middle States Accreditation Self-Study, surveys of Food Science and Technology students will be conducted to determine student satisfaction with their academic experiences. The academic experiences survey includes several questions about students' experiences in their academic courses, as well as opinions about the faculty of the department.
	<b>Intervention</b>	Welcome meeting (orientation) with students. Introduction and importance of <b>CURRICULLUM ASSESSMENT</b>
	<b>Post- intervention</b>	November 16, 2006 P-208 10:45-12:00 
<b>Results</b>		See below
<b>Dissemination of Results</b>		1. Agricultural Science Faculty Meeting 2. November 30, 2006 1:00-3:00 pm Student and Professor meeting Food Safety Institute of Las Américas 3. Program of Food Science and Technology website 4. Bulletin Board Program of Food Science and Technology
<b>Possible Reasons or Hypotheses</b>		The results of this survey reveals that the majority of students express satisfaction with their academic experiences and the courses are implementing the student learning outcomes.
<b>Course of Action</b>		Identified strategies that could be developed with the aim of continuous improvement. Increase faculty participation in assessment activities and re-focus counseling activities in the Program <ul style="list-style-type: none"> <li>■ Creation and availability of new courses</li> <li>■ Increasing external funding for research projects</li> <li>■ More participation in activities like, conventions, workshop and scientific meetings</li> </ul>
<b>Next Assessment Priority</b>		<b>Evaluate COURSE AND LABORATORY ASSESSMENT OF SKILLS AND KNOWLEDGE*through student learning outcomes</b>
<b>Appendix</b>		See below

## Results



*Questionnaire for students*



**Program of Food Science and Technology**  
**CURRICULLUM ASSESSMENT OF SKILLS and KNOWLEDGE**

\*

1. Your BS is in:      a. Biology      b. Food Engineering      c. Nutrition      d. Microbiology  
    e. Other
2. Year of Study: a. 1 year    b. 2 year      c. 3 year      d. 4 year      e. +5 year

This assessment will help the department revise the curriculum to meet Food Science and Technology Program graduating student profile.

***PART I: Using the scale below, please evaluate your perception of the mastery of skills and knowledge you have developed in this curriculum and specified the course (s). (The skills and content here presented are those approved by the Food Science and Technology faculty as pertinent).***

**A: none    B: little    C: average    D: some    E: much**

SKILL/VALUE	A	B	C	D	E	Course
3. Critical thinking, problem recognition and solving skills through the scientific method						
4. Team working skills						
5. Good oral and written communication skills						
6. Awareness of social and ethical implications in science						
7. Awareness of contemporary issues in Food Science and Technology						
8. Computer literacy in field pertinent program						
9. Knowledge of up-to-date scientific tools and techniques						
10. Committed self-learners						

**Evaluate strengths (A) and weakness (B) of our curriculum:**


<b>CRITERIA</b>	<b>WEAKNESS A</b>	<b>STRENGTHS B</b>
11. Variety of courses		
12. Research Opportunities		
13. Faculty		
14. Flexibility in curriculum		
15. Communication skills development		
16. Math and statistics integration to Food Science and Technology		
17. Facilities and equipment in the laboratories		

Suggestions for improving the curriculum for it to meet the graduating student profile:

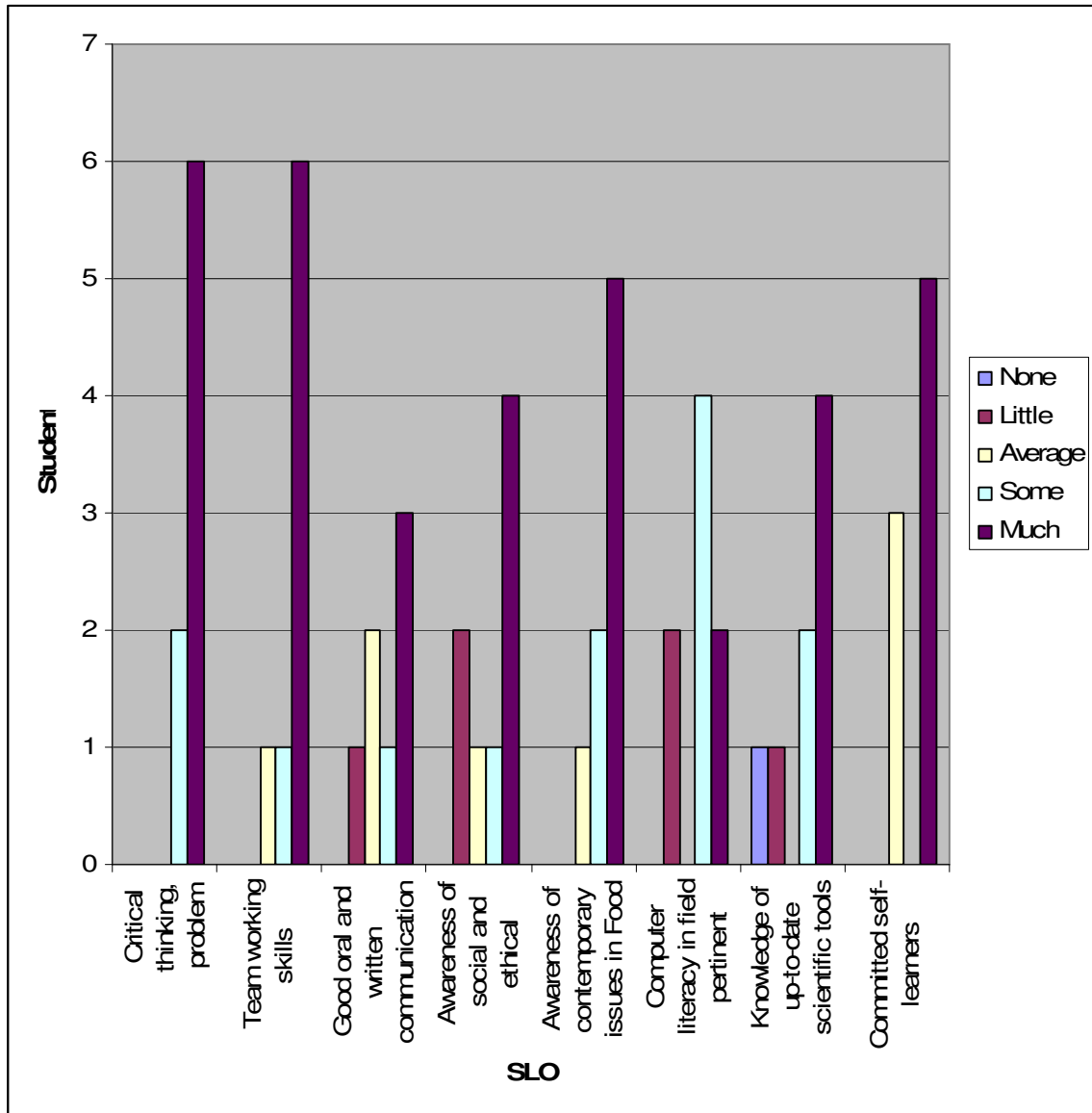
Comments on the laboratories of our courses: \_\_\_\_\_

- Adapted from SEED (Civil Engineering Department – UPR-RUM)

## Activity 2

<b>Sub-section</b>		<b>Content</b>
<b>Focus of Assessment Project</b>		COURSE AND LABORATORY ASSESSMENT OF SKILLS AND KNOWLEDGE*
<b>Justification (data-based)</b>		The larger purpose of the assessment process is to provide current, relevant data of the Program and facilitate data-driven decision making and continuous improvement. Student survey at the Program of Food Science and Technology students will be conducted to determine student knowledge and implementation of the student learning outcomes through out our curricular courses.
<b>POPULATION Student Faculty</b>		Eight students CITA 6615
<b>Assessment Cycle</b>	<b>Pre-intervention</b>	The larger purpose of the assessment process is to provide current, relevant data of the Program and facilitate data-driven decision making and continuous improvement. Student survey at the Program of Food Science and Technology students will be conducted to determine student knowledge and implementation of the student learning outcomes through out our curricular courses.
	<b>Intervention</b>	Welcome meeting (orientation) with students. Presentation <b>STUDENT LEARNING OUTCOMES</b>
	<b>Post-intervention</b>	April 17, 2007 TMAG 5:15-5:45 PM 
<b>Results</b>		See below
<b>Dissemination of Results</b>		1. May 3, 2007 10:45-12:00 pm Agricultural Science Faculty Meeting 2. Program of Food Science Faculty meeting 3. Program of Food Science and Technology website 4. Bulletin Board Program of Food Science and Technology 5. Gift tag with the student learning outcomes
<b>Possible Reasons or Hypotheses</b>		The results of this survey reveals that the course CITA6615 implement the student learning outcomes in their curricular design
<b>Course of Action</b>		Identified strategies that could be developed with the aim of continuous improvement and achieve the student learning outcomes using our curriculum. Increase faculty participation in assessment activities that could generate better understanding of the implications of the student learning outcomes
<b>Next Assessment Priority</b>		<b>UNDER FACULTY DISCUSSION</b>
<b>Appendix</b>		See below

## Results





## Questionnaire for students

### Program of Food Science and Technology

#### COURSE AND LABORATORY ASSESSMENT OF SKILLS AND KNOWLEDGE\*

##### Instructions:

Write the course and laboratory name and number in the computer answering sheet but ***do not*** write your name.

Course: \_\_\_\_\_

##### 1. Does this course include a lab?

- a. yes      b. no

If yes, please evaluate both experiences (course and lab) in this form:.

This assessment will provide the instructor a useful tool for designing an improved course agenda.

##### **PART I: GENERAL OBJECTIVES AND SKILLS**

Using the scale below, please assess the expertise you have developed through this course and laboratory in the areas specified. If not applicable to the course please indicate N/A.

**A: none    B: little    C. average    D: some    E: much    F. N/A**

SKILL/VALUE	A	B	C	D	E	F
2. Critical thinking, problem recognition and solving skills through the scientific method						
3. Team working skills						
4. Good oral and written communication skills						
5. Awareness of social and ethical implications in science						
6. Awareness of contemporary issues in Food Science and Technology						

7. Computer literacy in field pertinent program						
8. Knowledge of up-to-date scientific tools and techniques						
9. Committed self-learners						

**Would you recommend this course to other students?**

**Explain** \_\_\_\_\_

**Suggestions for improving the course:**

*Your overall rating of the course: \_\_\_\_\_ /10.*

\* Adapted from SEED (Civil Engineering Department – UPR-RUM)