

NTID
Laboratory Science Technology Program Outcomes Assessment
Plan and Report for AY 2005-2006

Program Goal: To provide graduates with laboratory analytical testing knowledge and skills, for entry level positions, with scientific organizations.

Critical Outcomes for all Students		Assessment of Outcomes		Timeline		Results	
Domain/Task/ Capability	Performance Criteria/ Benchmarks	Instrument/ Opportunity	Assessment of Performance	Develop	Collect	Summarization of Results	Use of Results
1. General Skills and Professional Competence (Technical) [Eighty percent (80 %)] of all students will understand, use, and document appropriate laboratory skills related to safety, quality control, technical communication, and professional readiness.	<p>a. Students will understand and apply safety regulations and protocols and correctly utilize safety equipment.</p> <p>b. Students will appropriately follow quality control procedures.</p> <p>c. Students will demonstrate effective technical communication of results.</p> <p>d. Students will develop a resume that is accurate, complete, and professional.</p>	Portfolio review. To occur at the end of Laboratory Applications course (0879-206).	a.-d. Score of at least "2" ("acceptable/meets entry level professional standards") on all related items on the Laboratory Science Technology portfolio rating sheet.	AY 2004-2005	AY 2005-2006	<p>8 graduating students were evaluated in academic year 2005-2006.</p> <p>100% of students performed at or above the benchmark for all General Skills and Professional Competence sections.</p>	<p>We are a relatively new and small program. Inasmuch as only 8 graduating students have been assessed, our first concern will be to continue to collect data over the next few years.</p> <p>Although students were assessed in a positive manner related to their skills in this category, the program will continue to emphasize general laboratory skills and professional competence in an effort to ensure that our graduates are technically prepared. The item for understanding safety regulations yielded an average score of 2.125 (on a 0-3 scale). Though this was passable score, we would like to improve on this crucial topic of safety.</p>
2. Instrumentation (Technical) [Eighty percent (80 %)] of all students will produce laboratory reports that demonstrate an understanding of the use of analytical instrumentation including: electroanalytical, spectroscopy, and chromatography instruments.	<p>a. Students will demonstrate an understanding of how to set-up, run, and maintain selected electroanalytical probes/meters.</p> <p>b. Students will demonstrate an understanding of how to set-up, run, and maintain selected molecular spectrophotometers.</p> <p>c. Students will</p>	Portfolio review. To occur at the end of Laboratory Applications course (0879-206).	a.-e. Score of at least "2" ("acceptable/meets entry level professional standards") on all related items on the Laboratory Science Technology portfolio rating sheet.	AY 2004-2005	AY 2005-2006	<p>8 graduating students were evaluated in academic year 2005-2006.</p> <p>88% of students performed at or above the benchmark for all Instrumentation sections.</p>	<p>We are a relatively new and small program. Inasmuch as only 8 graduating students have been assessed, our first concern will be to continue to collect data over the next few years.</p>

	<p>demonstrate an understanding of how to set-up, run, and maintain selected atomic spectrophotometers.</p> <p>d. Students will demonstrate an understanding of how to set-up, run, and maintain High Performance Liquid Chromatographers.</p> <p>e. Students will demonstrate an understanding of how to set-up, run, and maintain Gas Chromatographers/Gas Chromatographer – Mass Spectrometers.</p>						<p>Although students were assessed in a positive manor related to their skills in this category, the program will continue to emphasize instrumentation knowledge and skills in an effort to ensure that our graduates are technically competent.</p>
<p>3. Volumetric and Gravimetric Analysis (Technical) [Eighty percent (80 %)] of all students will produce laboratory reports that demonstrate an understanding of the processes involved in volumetric and gravimetric analyses including: sample preparation, titrations, and gravimetric techniques.</p>	<p>a. Students can perform sample preparation procedures and the corresponding calculations. b. Students can perform gravimetric procedures and the corresponding calculations. c. Students can perform acid/base titrations and the corresponding calculations.</p>	<p>Portfolio review. To occur at the end of Laboratory Applications course (0879-206).</p>	<p>a.-c. Score of at least “2” (“acceptable/meets entry level professional standards”) on all related items on the Laboratory Science Technology portfolio rating sheet.</p>	<p>AY 2004-2005</p>	<p>AY 2005-2006</p>	<p>8 graduating students were evaluated in academic year 2005-2006.</p> <p>88% of students performed at or above the benchmark for all Volumetric and Gravimetric Analysis sections.</p>	<p>We are a relatively new and small program. Inasmuch as only 8 graduating students have been assessed, our first concern will be to continue to collect data over the next few years.</p> <p>Although students were assessed in a positive manor related to their skills in this category, the program will continue to emphasize volumetric and gravimetric knowledge and skills in an effort to ensure that our graduates are technically competent.</p>
<p>4. Biological and Microbiological Techniques (Technical) [Eighty percent (80 %)] of all students will produce laboratory reports that demonstrate an understanding of biological and microbiological techniques including: tasks involving sterile technique and the identification/classification/evaluation of microorganisms.</p>	<p>a. Students can identify/classify/evaluate microorganisms. b. Students can prepare media using sterile technique.</p>	<p>Portfolio review. To occur at the end of Laboratory Applications course (0879-206).</p>	<p>a.-b. Score of at least “2” (“acceptable/meets entry level professional standards”) on all related items on the Laboratory Science Technology portfolio rating sheet.</p>	<p>AY 2004-2005</p>	<p>AY 2005-2006</p>	<p>8 graduating students were evaluated in academic year 2005-2006.</p> <p>88% of students performed at or above the benchmark for all Biological/Microbiological Techniques sections.</p>	<p>Although students were assessed in a positive manor related to their skills in this category, the program will continue to emphasize biological and microbiological knowledge and skills in an effort to ensure that our graduates are technically competent. This category</p>

							yielded some of the lowest average scores. We plan to investigate the individual items in this category in order to develop a plan for the improvement of microbiological techniques.
Co-op Work experience	Having completed a job search process, a student will complete at 10-week co-op work experience.	Assessment will occur prior to graduation by a Co-op supervisor.	80% of the students will successfully complete a 10-week program-related work experience and receive a score of 3 or above (5 point scale) on overall Co-op performance.	TBD	TBD		
Job Placement	Students will gain entry-level employment in the LST field	NCE Data	90% of graduates will be employed in the field.	TBD	TBD		
80 % of graduating students will indicate overall satisfaction with the program and the courses.	Graduating students will indicate overall satisfaction with program and courses.	Student Satisfaction Survey	Students will indicate they <i>Strongly Agree</i> or <i>More Agree than Disagree</i> (4-point scale) when asked to give an overall rating on two global items, one related to the program in general and the other related to the courses in the major.	AY 2004-2005	AY 2005-2006	8 graduating students were surveyed in academic year 2005-2006. 100% indicated overall satisfaction with the program. 100% indicated overall satisfaction with the courses in their major.	We are a relatively new and small program. Inasmuch as only 8 graduating students have been surveyed, our first concern will be to continue to collect data over the next few years. Although students indicated overall satisfaction with their courses, we would like to look at the results from the assessment of individual courses and begin to see if there are places to make changes in the program's courses. We will make an attempt to indicate in marketing and recruitment materials that students express a high degree of satisfaction with the

Comments:

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