



ALAMO
COLLEGES

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**AS Pre-Nursing Concentration
Natural Sciences Degrees**

#1	Apply the Scientific Method to the processes of learning and problem solving.
	Assessment Measure for this Outcome Assessment of this measure is obtained from the completion of the Unknown Project in Biology 2420, Microbiology and Pathology, a sophomore level capstone course for pre-nursing majors. The Unknown Project assesses a student's ability to identify two unknown microbes. Students are expected to use their knowledge of the characteristics of microbes and the laboratory skills they followed in the identification process. Students submit a written report detailing the process and identity of the microbe. A matrix is used to evaluate.
	Courses in the degree plan that address this outcome BIOL 2420
	Achievement Target for this Measure 70% success
	Findings: Outcomes exceed the benchmark target as indicated in the attached chart: Unknown Project Performance.
	Related Action Plans Re-examine and modify design of the project using peer and student input
#2	Correlate Scientific Principles with life experiences, including Science Professions.
	Courses in the degree plan that address this outcome BIOL 2420
	Assessment Measure for this Outcome Assessment of this goal is obtained from a written and oral presentation of a Case Study or Report or Scientific Journal Article in Biology 2420, Microbiology and Pathology, a sophomore level capstone course for pre-nursing majors. Students are assigned case studies and articles from scientific journals on specific diseases and their causative microbes. This exercise is designed to help students integrate classroom learning with their personal or professional experiences with these diseases and to help them recognize the contributions of research science professionals to the current understanding of the microbe and/or disease process. Written reports/summaries and oral presentations are evaluated using matrices.
	Achievement Target for this Measure 70 % success
	Findings: Four articles and one PowerPoint disease case study were assigned. Outcomes exceed the benchmark target as indicated for the PowerPoint exercise; however, benchmark was not met for the Article Summaries portion.
	Related Action Plans Re-examine and modify design of this learning activity using peer and student input More vigilance on the part of the instructor to encourage students to submit article summaries; offer to review and edit first article prior to student submission; help student see connection of concepts learned in the classroom to real-world applications.
#3	Correlate laboratory techniques and technology with Science concepts.



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	Courses in the degree plan that address this outcome BIOL 2420
	Assessment Measure for this Outcome Assessment of this goal is obtained from the completion of laboratory exercises in Biology 2420, Microbiology and Pathology course, a sophomore level capstone course for pre-nursing majors. The completion of selected essential laboratory exercises provides students an opportunity to demonstrate their skill in using the microscope and their ability to apply the aseptic technique , a critical process required in any laboratory or clinical setting in a health related profession. Evaluation is accomplished through hands-on demonstration of microscope use and the performance of a streak plate free of contaminants.
	Achievement Target for this Measure 100%
	Findings: 100% was achieved for the microscope and aseptic technique methods as indicated in the attached chart: Microscope and Streak Plate (aseptic technique).
	Related Action Plans Re-examine and modify time and the type of exercises assigned to these skills.

Outcomes for Natural Sciences Degrees
AS Pre-Nursing Concentration
Raw Data

Name of Student	Outcomes								
	Article Summary					Power-Point	Unknown Project	Microscope	Streak Plate
	1	2	3	4	Avg				
Booher, Jacob	7.5	6	6	6.5	6.5	100	101	√	√
Brewer, Cody	8.5	7	8.5	6.5	7.6	100	84	√	√
Carroll, Matthew	10	9	9	9	9.3	100	100	√	√
Cisneros, Roberto	8	8.5	7.5	7.5	7.9	100	95	√	√
De Los Santos, Justine	8.5	6.5	9	10	8.5	100	96	√	√
Dillard, Traci	8	9.5	7.5	9	8.5	100	100.9	√	√
Garrett, Kelly	9	8	9.5	8.5	8.8	100	95.8	√	√
Hernandez, Kimberly	7	7.5	5.5	6.5	6.6	0	62	√	√
Hernandez, Lillian	7	6	8.5	7	7.1	100	87.8	√	√
Lopez, Olga	5	0	6	6	5	100	56	√	√
Lozano, Maria	0	0	8.5	8.5	4.3	100	100.9	√	√



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Martinez, Melissa	8	9.5	7.5	8	8.3	100	80.5	√	√
Nguyen, Thunong	6	5.5	7	8.5	6.8	100	79	√	√
Ramos, Laura	8	6	8	6.5	7.1	100	73	√	√
Reeves, Melissa	5.5	8.5	9.5	7.5	8.3	100	77.5	√	√
Silva, Monica	7	8	9.5	9.5	8.5	100	90	√	√
Trevino, Vanessa	7.5	7	5.5	9	7.3	100	100	√	√
Zuniga, Crystal, Rose	0	6	5.5	8.5	6.67	100	90	√	√

Outcomes for Natural Sciences Degrees
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Data Summary

Outcome	N Population	Target Benchmark	Results	Met, Exceed or Did not Meet Benchmark	Relation Action Plan
Article Summary	18	70%	66% (6 of 18 students achieved a less than 70% average for the four article	Benchmark Not Met	Help student to see the link between concepts learned in the classroom to real-world applications; offer to read first summary before due date to help guide students through the



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			summaries)		process.
Unknown Project	18	70%	88.8% (16 students achieved a 70% or above)	Exceeded	
PowerPoint	18	70%	94% Only one student did not submit a PowerPoint Presentation	Exceeded	
Microscope	18	100%	100%	Met	
Streak Plate	18	100%	100%	Met	