

<b>Academic Program Name:</b>	General Education: Competency B
<b>Academic Program Assessment Coordinator:</b>	General Education Committee
<b>Submission Date of This Report:</b>	August 29, 2008

**PROGRAM GOAL:** Provide a means of acquiring life skills that allows students to complete successfully any undergraduate program of study and to be intellectually prepared for the challenges of modern life.

**COMPETENCY B:** Acquire quantitative reasoning skills

The skills associated with college-level competency in quantitative reasoning are:

- solving arithmetic problems with some complications
- simplifying algebraic expressions
- drawing conclusions from algebraic equations and inequalities.
- interpreting a trend represented in a graph, or choosing a graph that reflects a trend
- solving problems involving sets

<b>Assessment Instrument and Frequency of Assessment</b>	<b>Expected Outcome</b>	<b>Summary of Data Collected</b>	<b>Review of Results and Actions Taken</b>
Lander Competency Assessment ( <a href="#">Competency B Sub-Test</a> ): Administration Schedule – each Spring Semester beginning Spring 2008	<ul style="list-style-type: none"> <li>• <u>Met</u>: The average scores of both Junior and Senior students are at least 50%.</li> <li>• <u>Partially Met</u>: The average score of either the Junior or the Senior students is below 50%.</li> <li>• <u>Not Met</u>: The average score of both Junior and Senior students are below 50%.</li> </ul>	Scores were as follows: <ul style="list-style-type: none"> <li>• Junior (n = 186): 30.1%</li> <li>• Senior (n =147): 32.2%</li> </ul>	Expected Outcome Not Met.  Students scored above 50% on items dealing with correlations and interpreting graphical data; however, overall scores were low on the majority of the items.  The General Education Committee supports the supposition that the instrument identified potential areas for improvement. Data has been shared with the faculty teaching courses within this competency in order to

			<p>determine a method to strengthen the skills in this Competency.</p> <p>The General Education Committee has charged faculty with 1) reviewing the items used on this sub-test to ensure the appropriateness of each item, and 2) developing a common rubric to assess quantitative reasoning skills across the curriculum.</p>
<p><a href="#">Measure of Academic Proficiency and Progress</a> (MAPP): Administered every Fall to Freshmen and every Fall and Spring to Seniors in major program capstone courses</p>	<p>Seniors classified as “Proficient” and “Marginally Proficient” as follows:</p> <ul style="list-style-type: none"> <li>• <b>Level 1:</b> <u>Met</u>: at least 90%; <u>Partially Met</u>: 75% - 89%; <u>Not Met</u>: less than 75%</li> <li>• <b>Level 2:</b> <u>Met</u>: at least 50%; <u>Partially Met</u>: 40% - 49%; <u>Not Met</u>: less than 40%</li> <li>• <b>Level 3:</b> <u>Met</u>: at least 30%; • <u>Partially Met</u>: 20% - 29%; • <u>Not Met</u>: less than 20%</li> </ul>	<p>Percentage of Seniors classified as “Proficient” or “Marginally Proficient”:</p> <ul style="list-style-type: none"> <li>• <b>Level 1</b> = 76%</li> <li>• <b>Level 2</b> = 45%</li> <li>• <b>Level 3</b> = 15%</li> </ul>	<p>Overall Expected Outcome Partially Met.</p> <ul style="list-style-type: none"> <li>• <b>Level 1:</b> Expected Outcome Partially Met</li> <li>• <b>Level 2:</b> Expected Outcome Partially Met</li> <li>• <b>Level 3:</b> Expected Outcome Not Met.</li> </ul> <p>The General Education Committee provided this data to faculty for use in examining current course content and to make revisions to strengthen performance on Level 1 and Level 2 skills.</p> <p>This data is similar to that collected using other data (placement tests, course grades and SAT scores). In</p>

			<p>response, the University has implemented a broad program to improve student learning in this competency, including, specific tutoring opportunities that focus on identified skills, creative scheduling of mathematics classes which provide additional time to complete course requirements and the establishment of non-credit, continuing education mathematics courses.</p>
<p><a href="#">National Survey of Student Engagement</a> (NSSE): Administered every three years (Spring 2007 and Spring 2010)</p>	<ul style="list-style-type: none"> <li>• <u>Met</u> = Benchmark comparison for Lander seniors is above all of the following - Selected Peers, Carnegie Peers and NSSE participants for the year;</li> <li>• <u>Partially Met</u> = Benchmark comparison for Lander seniors is above only one or two of the following - Selected Peers, Carnegie Peers and NSSE participants for the year;</li> <li>• <u>Not Met</u> = Benchmark comparison for Lander seniors is above none of the following - Selected Peers, Carnegie Peers and NSSE participants for the year.</li> </ul>	<p>Data are provided on the NSSE summary data page.</p>	<p>Expected Outcome Met.</p> <p>Continue use of NSSE.</p> <p>Student perceptions appear to parallel Level 1 skill acquisition as measured by the MAPP. This data reinforced the idea that poor performance in mathematics courses is tied to student preparation prior to enrollment at Lander. Seniors perceive that their Lander education has enhanced their ability to analyze quantitative problems at a level that is significantly greater than all three of the comparison groups. In response, the University has implemented a broad program to improve student learning in this</p>

			competency as mentioned above (MAPP). This program emphasizes prerequisite skills needed for success in this competency.
<p><a href="#">Student Opinion Survey:</a> Administered every second and third Spring Semester (Spring 2008 and Spring 2009)</p>	<ul style="list-style-type: none"> <li>• <u>Met</u> = Responses to all Items indicate that 70% or more of the students Strongly Agree or Agree</li> <li>• <u>Partially Met</u> = Responses to only two Items indicate that 70% or more of the students Strongly Agree or Agree</li> <li>• <u>Not Met</u> = Responses to no more than one Item indicates that 70% or more of the students Strongly Agree or Agree</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Item 5:</u> 77.9%</li> <li>• <u>Item 6:</u> 73.5%</li> <li>• <u>Item 7:</u> 75.5%</li> </ul>	<p>Expected Outcome Met</p> <p>Students believe that this skill is necessary for a complete college education.</p> <p>Students perceive that they have acquired basic quantitative reasoning skills. This supports data collected in the MAPP instrument relative to Level 1 skills.</p> <p>Recommend continuation of this measure.</p>
<p><a href="#">PRAXIS I</a>, administered multiple times throughout the year; data aggregated annually for assessment purposes</p>	<ul style="list-style-type: none"> <li>• <u>Met:</u> The average percentage correct is greater than or equal to both the national and the state average percentage correct.</li> <li>• <u>Partially Met:</u> The average percentage correct is greater than or equal to either the national or the state average percentage correct.</li> <li>• <u>Not Met:</u> The average percentage correct is less than both the national and the state average percentage correct.</li> </ul>	<p>2006-2007 n=50</p> <p>Test category I: Conceptual knowledge and procedural knowledge Institutional=53 State=52 National=60</p> <p>Test category II: Representations of Quantitative Information Institutional=56 State=58 National=65</p>	<p>Overall Expected Outcome: Not Met</p> <p>Test category I: Partially Met</p> <p>Test category II: Not Met</p> <p>Test category III: Not Met</p> <p>The scores of Lander students completing PRAXIS I in 2006-2007 were lower than those in any testing period since 2003-2004. This is also true state-</p>

		<p>Test Category III: Measurement and Informal Geometry, Formal Mathematical Reasoning</p> <p>Institutional=52 State=53 National=61</p>	<p>wide.</p> <p>Faculty members have reported that students seem less well prepared for general education mathematics courses than in previous years.</p> <p>As previously noted, the University has implemented a broad program to improve student learning in this competency, including, specific tutoring opportunities that focus on identified skills, creative scheduling of mathematics classes which provide additional time to complete course requirements and the establishment of a non-credit, continuing education mathematics course.</p>
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