## Unit Assessment Report - Four Column

## Eastern Oregon University GEC - Mathematics

GEC Outcomes	Means of Assessment & Benchmark / Tasks	Data Analysis	Closing the Loop & Follow-Up
GEC - Mathematics - Communication - Read, write, and communicate taking into consideration purpose, audience, and occasion.  Year(s) to be Assessed: 2012-2013  Start Date: 07/01/2011  Outcome Status: Active	Description of Assessment: MATH 211 - Assessed 12-13 Assessment Type: Writing Assignment	11/28/2012 - 15 out of 20 (75%) students reached the level of adequate or proficient overall. This is below the benchmark of 85% at adequate or proficient. Comments: 1) Several students were not clear on the meaning of the term "counterexample", which prevented them from answering some questions correctly. 2) Students did well on the computational aspects of the assignment, but sometimes interpreted their findings incorrectly or did not state their conclusions precisely. 3) 11 of 20 achieved adequate or proficient status in the area of "presents convincing evidence". That was the weakest result. The best areas were "focus and organization" and "tables and graphics" where 19 out of 20 reached adequate or proficient status. Benchmark Met:  No Reporting Year: 2012-2013	03/19/2013 - The students overall performed under the benchmark (75% versus 85%). Students performed fairly well on the first two criteria, but just 55% reached the adequate or proficient level in providing evidence.  In the future, I would change the assessment in these ways:  1) The prerequisite for Math 211 is Math 095, and many of these students have not been exposed to the ways in which we ``know'' mathematical statements to be true. More exploration of this might improve the results of the assessment.
		Related Documents:  Developing Assignment  Adequate Assignment  Proficient Assignment  Rubric	2) Give more assignments similar to the assessment before the one that is evaluated to help students understand expectations and standards.
		Data Tools- Math 211	3) Make the assignment a longer- term project, with students submitting a draft for feedback, with the final product being turned in later after revision.
			4) Having students write a short essay might be a better format than solving a series of problems for an assignment designed to evaluate

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	Description of Assessment: MATH 211 online - Assessed 12-13	O3/24/2013 - In Math 211, Foundations Elementary Math I, there were 24 students received a letter grade. Each student was required to start a thread in Blackboard?s discussion board each week by either presenting a problem or asking a question from textbook?s set of exercise problems and post at least one follow-up post to reflect his/her work. Also each student was required to post one response to classmate?s thread. 50% of students performed at proficient and 38% of students at adequate totaling 88% meeting adequate/proficient level in ?focus on communication.? Students were evaluated for presenting their work to targeted audience. 54% of students performed at proficient and 41% of students at adequate totaling 96% meeting adequate/proficient level in ?evaluation of evidence?. Here the students were evaluated for providing work and/or justification using various mathematical properties. 67% of students performed at proficient and 25% of students at adequate totaling 92% meeting adequate/proficient level in ?editing?. 100% of students performed at adequate level for employing graphics. I did not place anyone in proficient level because students should to learn how to insert mathematical symbols and expressions but we faced some technical challenges in Blackboard. Overall students met institutional benchmark in all of the traits; however, performance in ?focus on communication? was below my expectation. There were some resistances to presenting their work in non-regular homework style many students were accustomed to.	03/24/2013 - My impression of students' overall performances was at the adequate level. I became aware of students' lack of mathematical writing skills and resistance to participate and engage in discussions. Their previous math courses were more likely algebra courses where students mostly submit their homework to their teachers to be graded.  Communicating mathematically in writing to different audience (not teachers) was an unfamiliar and uncomfortable practice.  For the following term (since the course is offered each term) I have rewritten the instructions of the assignment with more explicit expectations and created a video of how to include mathematical symbols and equations to improve their mathematical writing skills. I have edited the grading rubric to reflect the emphasis of discussion engagement and mathematical writing skills.

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		Most students coming into the course are used to submit work to teachers, but had little experience shifting their audience to peers. Students who were at the developing level in ?focus on communication? wanted to treat posting as submitting ?homework? problems as they had done in the previous math courses. They provided little justification and would not engage on discussions in their thread or in response to others. Lack of mathematical skills and inadequate understanding of the material may be one of the factors for their lack of motivations to engage themselves.  Students who are at the adequate/proficient level had better understanding of the material and therefore felt comfortable presenting the problem/ideas with justifications.  There was some confusion on what expected on the discussion board participation at the beginning of the term. Students were needed much clear and explicit instructions with specific examples of not only the nature of assignment itself but also how to use Blackboard effectively. It includes how to insert math symbols and expressions/equations using the equation editor. Also students needed the instructions and reminders on accessing the grading rubric after each week?s submission. I had been writing feedback on their posts, but some had been unaware of the existence of the rubric with written feedback of their performances.	
		Benchmark Met: Yes Reporting Year: 2012-2013 Related Documents: Data Tools - Math 211 online	

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