Assessment of Program Student Learning Objectives (SLOs)
SLO Survey of Degree Applicants
Mathematics AS-T Degree
Summer 2012 – Spring 2014

Program SLO Statements

		# of Respondents	Agree Strongly	Agree	Disagree	Disagree Strongly	Mean Score
1.	Demonstrate analytical thinking by: Breaking complex problems into manageable smaller problems	6	66.7%	33.3%	0.0%	0.0%	3.67
2.	Demonstrate analytical thinking by: Identifying the relationships among verbal, symbolic, graphical and numerical representations within the same problem	6	83.3%	0.0%	16.7%	0.0%	3.67
3.	Demonstrate analytical thinking by: Identifying what a problem is really asking	6	50.0%	50.0%	0.0%	0.0%	3.50
4.	Demonstrate analytical thinking by: Solving non-algorithmic problems	6	50.0%	50.0%	0.0%	0.0%	3.50
5.	Demonstrate resourcefulness in problem solving by: Choosing appropriate methods	6	66.7%	16.7%	16.7%	0.0%	3.50
6.	Demonstrate resourcefulness in problem solving by: Recognizing and explaining source of errors and impossible solutions	6	83.3%	16.7%	0.0%	0.0%	3.83
7.	Demonstrate resourcefulness in problem solving by: Synthesizing appropriate strategies, techniques or information from prerequisite courses	6	50.0%	50.0%	0.0%	0.0%	3.50
8.	Demonstrate resourcefulness in problem solving by: Using alternative representations of mathematical ideas	6	66.7%	16.7%	16.7%	0.0%	3.50
9.	Employ mathematical strategies with confidence	6	83.3%	16.7%	0.0%	0.0%	3.83
10.	Synthesize ideas expressed in mathematical language by: Communicating arguments clearly	5	40.0%	40.0%	20.0%	0.0%	3.20
11.	Synthesize ideas expressed in mathematical language by: Demonstrating a basic understanding of proof	6	50.0%	50.0%	0.0%	0.0%	3.50
12.	Synthesize ideas expressed in mathematical language by: Demonstrating the ability to collaborate in problem solving (i.e. study groups, group projects)	5	40.0%	60.0%	0.0%	0.0%	3.40
13.	Synthesize ideas expressed in mathematical language by: Demonstrating the ability to understand both written and spoken mathematics	6	83.3%	16.7%	0.0%	0.0%	3.83

Note: "Mean Score" is derived by assigning numeric values to each response (where 1="Disagree Strongly", 2="Disagree", 3="Agree", and 4="Agree Strongly") and calculating the mean of all responses for a given question item.

NOTE: The data presented here are derived from an online survey sent to all CSM degree applicants, Summer 2012-Spring 2014. Award earners are asked to indicate the extent to which they agreed with statements regarding student learning outcomes associated with their program.

Assessment of Program Student Learning Objectives (SLOs)
SLO Survey of Degree Applicants
Mathematics AS Degree
Summer 2012 – Spring 2014

CSM

Program SLO Statements

	# of Respondents	Agree Strongly	Agree	Disagree	Disagree Strongly	Mean Score
1. Demonstrate analytical thinking by: Breaking complex problems into manageable smaller problems	11	81.8%	9.1%	9.1%	0.0%	3.73
2. Demonstrate analytical thinking by: Identifying the relationships among verbal, symbolic, graphical and numerical representations within the same problem	11	81.8%	18.2%	0.0%	0.0%	3.82
3. Demonstrate analytical thinking by: Identifying what a problem is really asking	11	90.9%	9.1%	0.0%	0.0%	3.91
4. Demonstrate analytical thinking by: Solving non-algorithmic problems	11	72.7%	27.3%	0.0%	0.0%	3.73
5. Demonstrate resourcefulness in problem solving by: Choosing appropriate methods	11	72.7%	27.3%	0.0%	0.0%	3.73
6. Demonstrate resourcefulness in problem solving by: Recognizing and explaining source of errors and impossible solutions	11	72.7%	27.3%	0.0%	0.0%	3.73
7. Demonstrate resourcefulness in problem solving by: Synthesizing appropriate strategies, techniques or information from prerequisite courses	10	70.0%	30.0%	0.0%	0.0%	3.70
8. Demonstrate resourcefulness in problem solving by: Using alternative representations of mathematical ideas	11	81.8%	9.1%	9.1%	0.0%	3.73
9. Employ mathematical strategies with confidence	11	81.8%	9.1%	9.1%	0.0%	3.73
10. Synthesize ideas expressed in mathematical language by: Communicating arguments clearly	11	81.8%	18.2%	0.0%	0.0%	3.82
11. Synthesize ideas expressed in mathematical language by: Demonstrating a basic understanding of proof	11	81.8%	18.2%	0.0%	0.0%	3.82
12. Synthesize ideas expressed in mathematical language by: Demonstrating the ability to collaborate in problem solving (i.e. study groups, group projects)	10	60.0%	30.0%	10.0%	0.0%	3.50
13. Synthesize ideas expressed in mathematical language by: Demonstrating the ability to understand both written and spoken mathematics	11	81.8%	18.2%	0.0%	0.0%	3.82

Note: "Mean Score" is derived by assigning numeric values to each response (where 1="Disagree Strongly", 2="Disagree", 3="Agree", and 4="Agree Strongly") and calculating the mean of all responses for a given question item.

NOTE: The data presented here are derived from an online survey sent to all CSM degree applicants, Summer 2012-Spring 2014. Award earners are asked to indicate the extent to which they agreed with statements regarding student learning outcomes associated with their program.