Mathematical Sciences
Institutional (ILO), Program (PLO), and Course (SLO) Alignment

Use the checklists provided to evaluate your SLO statements. Please add or revise PLO and SLO statements directly on this form.
Or, if you prefer to make changes on the electronic version contact your Facilitator Junko Forbes, or Angie Snider in your Division Office, to have the grid emailed to you. When SLO, PLO and ILO alignment changes are made, please make changes in red.
Return the completed grid to your Facilitator by Friday, Nov 8th.

Program: Math for Prospective Elementary School Teachers	Number of Courses: 4	Date Updated	Submitted by Judy Kasabian Ext: 3310

ILO Rating Rubric

4 - A major focus of the course. Direct instruction is provided. Students are evaluated multiple times (and possibly in various ways) throughout the course.

3 - An important part of the course. Some direct instruction is provided and students are evaluated on the concepts once or twice within the course.

2- Only a minor focus of the course. Some instruction is given in the area but students are not formally evaluated on the concepts.

1- May be tangentially part of the class, but is not directly taught or evaluated or is not part of the course at all.

Institutional Learning Outcomes (ILOs	I. Content Knowledge	II. Critical, Creative, and Analytical Thinking	III. Communication and Comprehension	IV. Professional and Personal Growth	V. Community and Collaboration	VI. Information and Technology Literacy
Overall Program Rating Rate each from 1-4 based on above rubric	4	4	3	2	3	1

Program Level SLOs A minimum of 3 and maximum of 6 PLOS. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive PLO statements that reflect the program mission and covers the major components and the overarching goals of the program, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the PLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations. *Include PLO #, Short Title, and PLO statement. Example: PLO #2 Ethics and Professionalism*	ILOs to PLOs Alignment (Rate 1-4)					
	I	II	III	IV	V	VI
PLO #1 Solving Application Problems Students will be able to determine an appropriate strategy to solve an application problem, complete the solution of the problem, describe the procedures used to solve the problem, and explain the underlying mathematical concepts using written and oral means.	4	4	3	2	3	1
PLO #2 Explaining Mathematical Concepts Students will be able to demonstrate and explain mathematical concepts using a variety of methods.	4	4	3	2	3	1
PLO #3 Analyze mathematical problems and their solutions Students will be able to analyze a solution to a mathematics problem, determine the appropriateness of the solution, and if errors are made, explain the misconceptions or errors made and how to solve the problem correctly using written and oral means.	4	4	3	2	3	1

Course Level SLOs A minimum of 3 and maximum of 6 SLOs. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive SLO statements that cover the major components and the overarching goals of the course, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the SLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations. *Include SLO #, Short Title, and SLO Statement Example: Math 170 SLO #3 Vectors and Complex Numbers.*	Course to PLO Alignment *Mark with an X if you will use the course when assessing your PLO.*			ILOs to Course SLOs Alignment (Rate 1-4)					
	P1	**P2**	**P3**	**I**	**II**	**III**	**IV**	**V**	**VI**
Mathematics 110 Structures and Concepts in Mathematics: SLO #1 Perform and Interpret Basic Operations Students will be able to demonstrate/perform the four basic operations with real numbers and interpret the results.	X	X	X	4	4	3	2	3	1
Mathematics 110 Structures and Concepts in Mathematics: SLO #2 Explain Mathematical Concepts Students will be able to explain the underlying mathematical concepts of the binary operations using written and oral means.	X	X		4	4	3	2	3	1
Mathematics 110 Structures and Concepts in Mathematics: SLO #3 Solve Application Problems Students will be able to solve an application problem and design an application when parameters are given.	X		X	4	4	3	2	3	1
Mathematics 111 Mathematics for Elementary School Teachers – Geometry, Probability, and Statistics SLO #1 Compute Probability Students will be able to compute the probability of an event.	X	X	X	4	4	3	2	3	1
Mathematics 111 Mathematics for Elementary School Teachers – Geometry, Probability, and Statistics SLO #2 Analyze Statistical Graphs Students will be able to draw and interpret statistical graphs.	X	X	X	4	4	3	2	3	1
Mathematics 111 Mathematics for Elementary School Teachers – Geometry, Probability, and Statistics SLO #3 Central Tendency and Dispersion Students will be able to compute and interpret measures of central tendency and dispersion.	X	X	X	4	4	3	2	3	1
Mathematics 111 Mathematics for Elementary School Teachers – Geometry, Probability, and Statistics SLO #4. Students will be able to solve problems involving congruence and similarity of geometric figures.	X	X	X	4	4	3	2	3	1
Mathematics 111 Mathematics for Elementary School Teachers – Geometry, Probability, and Statistics SLO #5. Students will be able to convert between American and metric units of measurement.	X	X	X	4	4	3	2	3	1

Course Level SLOs Minimum of 3 and maximum of 6 SLOs. *Include SLO #, Short Title, and SLO Statement* *Example: Math 170 SLO #3 Vectors and Complex Numbers*	Course to Program SLO Alignment *Mark with an X if you will use the course when assessing your PLO.*			ILOs to Course SLOs Alignment (Rate 1-4)					
	P1	P2	P3	I	II	III	IV	V	VI
Mathematics 115 Probability and Statistics for Prospective Elementary School Teachers: SLO #1 Research Study Students will be able to design a research study, develop an appropriate assessment instrument, collect and analyze data using appropriate methods, and draw statistical inferences from the data in written form	X	X		4	4	3	2	3	1
Mathematics 115 Probability and Statistics for Prospective Elementary School Teachers: SLO #2 Analyze Statistical Procedure Given a particular set of data, students will be able to determine the appropriate statistical procedures to analyze and display the data, complete the statistical methods, and explain the mathematical concepts in written and oral forms.	X	X	X	4	4	3	2	3	1
Mathematics 115 Probability and Statistics for Prospective Elementary School Teachers: SLO #3. Given a particular set of data, Students will be a le to explain statistics and probability concepts and use appropriate methodologies for elementary or middle school teachers.	X	X	X	4	4	3	2	3	1
Mathematics 115 Probability and Statistics for Prospective Elementary School Teachers: SLO #4 Solve and Interpret Experimental and Mathematical Probability Students will be able to solve, explain, and interpret informal, experimental, and mathematical probability concepts and application problems both in written and oral forms.	X	X	X	4	4	3	2	3	1
Mathematics 116 Geometry and Measurement for Prospective Elementary School Teachers: SLO #1 Identify Geometric Shapes Students will identify two- and three-dimensional geometric shapes, explain their attributes and discuss the relationships among the geometric shapes.		X		4	4	3	2	3	1
Mathematics 116 Geometry and Measurement for Prospective Elementary School Teachers: SLO #2 Use Geometric Tools Students will use geometric tools (compass, protractor, straightedge, and dynamic geometry software) to construct geometric figures.	X			4	4	3	2	3	1
Mathematics 116 Geometry and Measurement for Prospective Elementary School Teachers: SLO #3 Solve and Interpret Geometric Application Problems Students will use the concepts of measurement to solve geometric application problems, determine the appropriateness of a solution, and if errors are made, explain the misconceptions or errors made and how to solve the problem correctly using written or oral means			X	4	4	3	2	3	1
Mathematics 116 Geometry and Measurement for Prospective Elementary School Teachers: SLO #4 Explain Geometric Formulas Students will use words and diagrams to explain the derivation of geometric formulas.	X	X	X	4	4	3	2	3	1