

Course Outcome Guide (COG)

Course:	Math 277 Mathematic for Elementary Teachers	Credits:	4	Instructor:	Lance Olson
Course Description:	A mathematics content course for prospective elementary school teachers. Topics include problem solving, numeration systems, real numbers, and elementary number theory. Calculators, computers, and manipulatives are used in the course. Pre-requisite: Math 103 or higher				
Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Inst
<ul style="list-style-type: none"> *Problem solving *Sets and Numeration *Operations and properties *Computation- Mental, electronic, and written *Number theory *Fractions *Decimals, ratio, proportion, and percent *Integers *Rational and real numbers *Statistics and probability *Geometric shapes *Measurement *Geometry 	<ul style="list-style-type: none"> *Demonstrate conceptual understanding of Basic K-8 mathematics through the use of Algorithms, manipulatives, graphic representations, and verbal explanations. *Use traditional and alternative algorithms to solve mathematical problems. *Use Polya's problem solving strategies to set up and solve a variety of mathematical problems. 	<ul style="list-style-type: none"> *Participate in class discussions and activities demonstrating knowledge of subject matter. *Complete examinations demonstrating acceptable skill level of concept and process. *Complete textbook readings, questions and problems (both individually and collaboratively) demonstrating acceptable skill levels of concept and process. *Use writing as a tool to assess student understanding of math concepts and to assist in instruction. *Teach a age level appropriate mathematics lesson to a group of children. 	<ul style="list-style-type: none"> *Use a variety of strategies to reinforce and assess basic mathematics concepts. *Gain empathy for the emotional stress that many students feel as they study mathematics. *Students will work effectively within a collaborative group to achieve a distinct result. *Students will integrate learning theory with laboratory performance. 	<p>Students will use reasoning skills to analyze and solve problems.</p>	<p>Students will use reasoning skills to analyze and solve problems.</p>