The North Carolina Elementary Mathematics Add-On License (NC EMAoL) program focuses on the mathematical knowledge needed for successfully teaching mathematics at the elementary level (grades K through 5). Currently, elementary school teachers are considered generalists because the majority complete only one or two mathematics courses as part of their teacher preparation programs; therefore, they need additional coursework to build an essential understanding of mathematics, the process of learning mathematics, and children’s mathematical thinking, thus giving them the knowledge and skills to be strong mathematics teachers. The NC EMAoL program includes six graduate courses; each focused on a high-leverage teaching practice (HLTP), a primary area of mathematical content that provides the context for exemplifying the HLTP, and a secondary area of mathematics that provides the context for demonstrating the transfer of the HLTP to other content strands. Content includes number systems and operations, number theory and rational numbers, measurement, algebraic reasoning, spatial orientation and visualization, and mathematical modeling. Each course also identifies the profound understandings of fundamental mathematics teachers will develop and demonstrate through the program of study. (Received September 11, 2012)