The Augsburg College Mathematics Department is working to improve the mathematical preparation of K-6 teachers through restructure and revision of mathematics content courses for pre-service teachers. An internal study revealed that preservice students/alumni (i) did not see the relevance of breadth and depth of mathematics content knowledge to the practice of K-6 teaching, (ii) were not cognizant of the mathematics curriculum used in K-6 classrooms, and (iii) resisted learning mathematics beyond the level that they perceived as necessary for K-6 teaching. In addition, these students were contextual, hands-on learners who did not necessarily respond to the teaching and learning styles traditionally found in mathematics discipline-based courses. The presentation will be an overview of rationale for and revision of the mathematics courses with specific illustration(s) of unique features and pedagogical interactions with pre-service students that inform/enhance the teaching of the courses. (Received September 27, 2004)