

# MATHEMATICS FOR TEACHERS (MTCH)

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## Mathematics for Teachers Undergraduate Courses

### **MTCH 2000 MATHEMATICS FOR ELEMENTARY TEACHERS I (3 credits)**

This course builds the conceptual underpinnings behind the arithmetical reasoning typically taught in school curriculum. Topics include addition, subtraction, and multiplication of whole numbers and of rational numbers. The course aims to help students understand not just how to solve mathematical problems from a variety of approaches, but to understand the reasoning that make the approaches valid. The course is particularly useful for students who are planning on teaching mathematics at the K-6 level.

**Prerequisite(s):** At least C in MATH 1120 or MATH 1300 (or equivalent, or higher) and in either TED 2100 (EDUC 2020) or TED 2200 (EDUC 2030); OR at least C in MATH 1120 or MATH 1220 (or equivalent, or higher) and has attempted the Praxis I - Core exam.

### **MTCH 2010 MATHEMATICS FOR ELEMENTARY TEACHERS II (3 credits)**

This course builds the conceptual underpinnings behind the arithmetical reasoning and reasoning with data typically taught in school curriculum. Topics include division of whole numbers and of rational numbers, elementary study of number properties, measurement, probability and statistics. The course also teaches students how to use the Habits of Mind framework to improve mathematical problem-solving ability. The course aims to help students understand not just how to solve mathematical problems from a variety of approaches, but to understand the reasoning that make the approaches valid. The course is particularly useful for students who are planning on teaching mathematics at the K-6 level.

**Prerequisite(s):** MTCH 2000 with a grade of C or better.

### **MTCH 2020 NUMBER SENSE, ALGEBRA, AND GEOMETRY FOR MIDDLE SCHOOL EDUCATION (3 credits)**

The course covers the following major concepts: standard algorithms for Arithmetic with rational numbers, proportional reasoning, number theory topics in K-8, beginning Algebra concepts, and beginning Geometry.

**Prerequisite(s):** TED 2100 (EDUC 2020) or TED 2200 (EDUC 2030) each with a C or better and College of Education major and MATH 1950 with a C or better. Not open to non-degree graduate students.