MATHEMATICS FOR TEACHERS (MTCH)

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): Prerequisite(s): A grade of C or better in one of TED 2060, TED 2100, TED 2200, or TED 2250, and one of the following: A grade of C or better in MATH/STAT 1100 or above, ACT Math Sub-Score at least 23, or SAT Math Sub-Score at least 570.

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.

MTCH 3000 MATHEMATICS FOR ELEMENTARY TEACHERS II (3 credits)

This course develops the numerical, geometric, and algebraic reasoning taught in K-6 curriculum for future teachers. The course develops students' understanding mathematics concepts from multiple representations including place value representations, base-ten models, area models, number line models, and set models. The course also expands students' understanding of connections between these representations, the meaning of the whole numbers, rational numbers, and integer; and the common operations' algorithms and properties. The course also makes connections to early algebraic reasoning, number theory, and problem solving.

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