

Here's where we are so far in our path toward semesters.

"service" courses for CEHS education majors:

merge early childhood year-long sequence MTH143/243/244 (4 quarter hours each) into 2 courses (4 semester hours each)

merge middle childhood 6 course sequence (MTH343, 344, 345, 348, 446; STT342) into 4 courses (4 semester hours each)

AYA program:

Susann presented a draft she's shared with you and we made some comments/suggestions for revision

MST program:

Ann is looking into what needs to be changed in this program

***Suggested semester BS in Math with concentration in math ed
(Hours noted in parentheses)***

Calculus I, II , III (5, 4, 5)

Mathematical Modeling (3)

Differential Equations (3)

Introduction to Math Proof (3)

Foundations of Geometry (3) Properties of axiomatic systems are illustrated with finite geometries and applied in a synthetic examination of Euclid's original postulates, well-known Euclidean theorems, and non-Euclidean geometries. Euclidean, similarity, and affine transformations are studied analytically. These transformations are generalized to obtain results in projective geometry or used to generate fractals in an exploration of fractal geometry. Dynamic geometry software and hands-on labs are used to explore both the transformations and properties of these geometries. (St. Olaf's College)

Linear Algebra (3)

Abstract Algebra (3)

$\left(\begin{array}{l} \text{Graph Theory (3)} \\ \text{Combinatorics (3)} \end{array} \right)$ possibly combined into one 4-hour course in Discrete Mathematics

Elementary Real Analysis (3) Students encounter the theory of calculus and develop tools for communicating mathematical ideas with technical accuracy and sophistication. The goal is mastery of the concepts (e.g., limit, continuity, derivatives, and integrals) necessary to verify such important results as the Fundamental Theorem of Calculus, the continuity of the uniform limit of continuous functions, and the Bolzano-Weierstrass Theorem (from St Olaf's College)

Numerical Analysis (3)

History of Mathematics (3)

Statistics I & II (6)

Mathematics Education Math capstone courses that connect higher level material to the mathematics that students will teach (6)

Related Course Requirements

STT 342 (4)

Engineering 101 (4)

Technology course for mathematics classrooms (3)

Education class 1 & 2: 2 courses in which master teachers introduce students to examples of high-quality inquiry-based lessons and model the pedagogical concepts to which they are being introduced. During the first semester course, students prepare and teach 4 lessons in elementary classrooms. During the second semester, students prepare and teach 3 lessons in middle school classrooms. (From UTeach at UT Austin)

Education class 3: 1 class in Knowing and Learning: Expands the prospective teacher's understanding of current theories of learning and conceptual development. Students examine their own assumptions about learning. They critically examine the needs of a diverse student population in the classroom. (From UTeach at UT Austin)

Schedule of Courses (Semester hours)

Year	Fall Semester	Spring Semester
Freshman	Calculus I (5) Engineering 101* (4 or 5) Education Course 1(3)	Calculus II (4) Mathematical Modeling (3) Education Course 2 (3)
Sophomore	Calculus III (5) Introduction to Mathematical Proof (3) STT 342 (4) Education Course 3 (3)	Differential Equations History of Mathematics Technology Course (3)
Junior	Graph Theory (3) Statistics and Probability I (3) Linear Algebra (3)	Combinatorics (3) Statistics and Probability II (3) Abstract Algebra (3)
Senior	Real Analysis (3) Mathematics Education Capstone (3)	Numerical Analysis (3) Mathematics Education Capstone (3)

* Classes in green are related course requirements

** Classes in red are education courses