

## MATHEMATICS EDUCATION PROGRAM GUIDELINES BACHELOR OF SCIENCE IN EDUCATION (MATH2 BS)

These guidelines summarize the requirements for a Bachelor of Science and partial completion of Connecticut certification requirements in mathematics education (Grades 4-12) for students following the 2025-2026 requirements.

1. Complete the COMMON CURRICULUM REQUIREMENTS listed in the Academic Regulations of the University of Connecticut Undergraduate Catalog 2025-2026, which include **Topic of Inquiry (TOI) Requirements**: At least one course (3 credits) in each of the 6 different TOIs; 6 different subject areas; one laboratory science (TOI-6L); minimum of 21 TOI credits; TOI Focus area (3 courses in 1 TOI) or Theme (3 pre-determined courses); and meet **Competency Requirements**: two W courses, two Q courses, and second language through elementary level 2. In addition to the Common Curriculum requirements, students must take a course in U.S. History (HIST 1501 or 1502) and PSYC 1100.
2. Complete a SUBJECT AREA MAJOR in Mathematics consisting of a minimum of 36 credits in mathematics and related areas, with at least 30 credits at the 2000 level or higher. Required courses include: MATH 1131Q, 1132Q, 2110Q, 2210Q, 2360Q, 2410Q, 2710, 2720W, 3160, 3240, 3710, STAT 1000Q/1100Q, and STAT 2215Q.

Related Requirement (3 credits): To best prepare for interdisciplinary teaching, particularly within STEM areas, students are required to take 3 credits, and encouraged to take 6 credits, in a suitable related area such as the following: Computer Science, Environmental Science, Physics, Engineering, Philosophy (Logic), Statistics, or Combinatorics. Note that these credits can overlap with General Education courses.

3. Complete the following PROFESSIONAL EDUCATION REQUIREMENTS:

EDCI 3100/W – Multicultural Education, Equity and Social Justice	3 credits
EPSY 3010 – Educational Psychology	3 credits
EGEN 3100 – Seminar/Clinic: The Student as Learner	3 credits
EPSY 3110 – Exceptionality	2 credits
EDCI 3212 – Introduction to Secondary Methods and Clinic - Mathematics	3 credits
EDCI 4010 – Teaching Reading and Writing in the Content Areas	2 credits
EDCI 4210W – Instruction and Curriculum in the Secondary School	3 credits
EPSY 3125 – Classroom and Behavior Management	3 credits
EGEN 4100 – Seminar/Clinic: Methods of Teaching	3 credits
EPSY 4010 – Assessment of Learning	2 credits
EDCI 4250 – Directed Student Teaching	9 credits
EGEN 4110 – Seminar/Clinic: Analysis of Teaching	3 credits

Students must earn at least 120 credits.

### MASTER OF ARTS IN CURRICULUM AND INSTRUCTION

To earn the University of Connecticut's institutional recommendation for teacher certification, students must additionally successfully complete the requirements for the Master of Arts in Curriculum and Instruction including a minimum of thirty (30) credits (two full-time semesters) of graduate-level course work. Requirements are anticipated to include at least:

Content Pedagogy: EDCI 5450 – Teaching and Learning Mathematics in the Secondary School (3 credits)

Curriculum Electives and/or Graduate Liberal Arts: (6 credits)

Language and Cultural Diversity in Education: (3 credits): *Choose one*: EDCI 5006 – Comparative and International Education, EDCI 5715 – Bilingualism and Second Language Acquisition, EDCI 5740 – Latinos and U.S. Education, EDCI 5742 – Sheltered English Instruction for English Language Learners, EDCI 5750 – Language Diversity and Literacy, EDCI 5875 – Multicultural Education, EDCI 5885 – Introduction to Critical Pedagogy, EDCI 5890 – Educational Linguistics, GERM/ALDS/CLCS 5324 – Teaching for Intercultural Citizenship & Human Rights, GERM/ALDS/CLCS 5325 – Teaching for Intercultural Citizenship and Human Rights II

Leadership: EDLR 5015 – Teacher Leadership and Organizations (3 credits)

Practicum: EDCI 5092 (3 credits fall) and EDCI 5093 (4 credits spring)

Seminar: EDCI 5094 (3 credits fall) and EDCI 5095 (3 credits spring)

Research: EPSY 5195 (1 credit fall and 1 credit spring)

Technology: EPSY 5221 – Wise Integration of Technology into Teaching and Learning Environments (1 credit)

# MATHEMATICS EDUCATION

## SAMPLE SEMESTER SEQUENCE

*This is a **SAMPLE** sequence. \*\* Upper division math courses can be taken in any order (if offered). Pay attention to mathematics courses only offered in the fall and courses that are prerequisites for others. Requests for substitutions of required mathematics courses may be considered with compelling reasons.*

### **SEMESTER 1**

ENGL 1010 or 1011	4
MATH 1131Q – Calculus I	4
TOI-1 Creativity: Design, Expression, Innovation	3
PSYC 1100 – Psychology (Also fulfills TOI-6)	3

### **SUMMER**

*FOREIGN LANGUAGE	8
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### **SEMESTER 3**

TOI-3 Diversity, Equity, and Social Justice	3
MATH 2110Q – Multivariable Calculus	4
MATH 2210Q – Applied Linear Algebra	3
STAT 1000Q or 1100Q – Statistics	4
EPSY 3010** – Educational Psychology	3

### **SEMESTER 5**

TOI Focus Area or Theme	3
EDCI 3100/W – Multicultural Education, Equity & SJ	3
EPSY 3110 – Exceptionality (fall or spring junior year)	2
EGEN 3100 – Seminar/Clinic	3
MATH 2720/W – History of Mathematics	3
MATH 3710 – Introduction to Mathematical Modeling	3

### **SEMESTER 7**

EPSY 3125 – Classroom and Behavior Management	3
EDCI 4210W – Instruction & Curric. in Secondary School	3
EGEN 4100 – Seminar/Clinic	3
MATH 3160 – Probability	3
MATH 3240 – Introduction to Number Theory	3

### **SEMESTER 2**

MATH 1132Q – Calculus II	4
MATH 2360Q – Geometry	3
TOI-6 Lab (suggested STEM Related)	4
TOI-2 Cultural Dimensions of Human Experiences	3

### **SEMESTER 4**

HIST 1501 or 1502 – US History (Also fulfills TOI-5)	3
TOI-4 Environmental Literacy	3
MATH 2410Q – Elementary Differential Equations	3
MATH 2710 – Transition to Advanced Mathematics	3
MATH – STEM Related Course (or related dual degree course)	3

### **SEMESTER 6**

EDCI 3212 – Intro. to Secondary Methods & Clinic	3
EPSY 3110 – Exceptionality (fall or spring junior year)	2
EDCI 4010 – Teaching Reading & Writing in the Content Areas	2
STAT 2215Q – Introduction to Statistics II	3
MATH – STEM Related Course	3

### **SEMESTER 8**

EPSY 4010 – Assessment of Learning	2
EDCI 4250 – Directed Student Teaching	9
EGEN 4110 – Seminar/Clinic	3

\*If the student completed less than three (3) years of a single foreign language in high school.

\*\*Students should take EPSY 3010 prior to semester 5, if possible, but no later than semester 6. The course is available fall, spring, summer and online.

### **SEMESTER 9 (Master's)**

EDCI 5092 - Practicum	3
EDCI 5094 – Seminar	3
EPSY 5195 – Research course	1
EPSY 5221 – Wise Technology (either semester)	1
Diversity course (either semester)	3
EDLR 5015 – Leadership (either semester)	3
Elective	3-6

### **SEMESTER 10 (Master's)**

EDCI 5093 – Practicum	4
EDCI 5095 – Seminar	3
EPSY 5195 – Research Course	1
EPSY 5221 – Wise Technology (either semester)	1
Diversity course (either semester)	3
EDLR 5015 – Leadership (either semester)	3
Elective	3-6
EDCI 5450 – Teaching & Learning of Math in Secondary School	3