

CHEMISTRY EDUCATION PROGRAM GUIDELINES BACHELOR OF SCIENCE IN EDUCATION (CHEM2 BS)

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

DEGREE 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 Chemistry consisting of a minimum of thirty-six (36) credits in natural sciences courses at the 2000's level or above. This includes a minimum of twenty-four (24) credits of 2000's level or above courses completed in chemistry and closely related subject areas. Up to twelve (12) credits may be completed in related areas. Six (6) credits taken at the 1000's level may be included with permission of the science education advisor.

An adequate background in mathematics is also required.

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 3213 – Introduction to Secondary Methods and Clinic - Science	3 credits
EDCI 4010 – Teaching Reading and Writing in the Content Areas	2 credits
EPSY 3125 – Classroom and Behavior Management	3 credits
EDCI 4210W – Instruction and Curriculum in the Secondary School	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 5500 – Teaching Science in the Middle & 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)

CHEMISTRY EDUCATION

SAMPLE SEMESTER SEQUENCE

SEMESTER 1

BIOL 1107 – Prin. of Biology	4
CHEM 1127Q – General Chemistry	4
MATH 1131Q – Calculus I	4
ENGL 1007 or 1010 or 1011 or 2011	4

SUMMER SESSION

*FOREIGN LANGUAGE	8
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SEMESTER 3

PHYS 1401Q – General Physics	4
CHEM 2443 – Organic Chemistry	3
MATH 2110Q – Multivariable Calculus	4
PSYC 1100 (Also fulfills TOI-6) - Psychology	3
TOI-2 Cultural Dimen. of Human Experiences	3

SEMESTER 5

EPSY 3110 – Exceptionality (fall or spring jr. yr.)	2
EDCI 3100/W – Multicultural Ed., Equity & SJ	3
EGEN 3100 – Seminar/Clinic	3
CHEM 3210 – Descriptive Inorganic Chemistry	2
MCB 2000 – Introduction to Biochemistry	4
TOI-1 Creativity: Design, Expression, Innovation	3

SEMESTER 7

EPSY 3125 – Classroom & Behavior Management	3
EDCI 4210W – Inst. & Curric. in Sec. Schools	3
EGEN 4100 – Seminar/Clinic	3
CHEM 3563 – Physical Chemistry	3
CHEM 3334 – Instrumental Analysis I	4

SEMESTER 2

BIOL 1108 (Also fulfills TOI-6L) – Principles of Biology	4
CHEM 1128Q – General Chemistry	4
MATH 1132Q – Calculus II	4
HIST 1501 or 1502 (Also fulfills TOI-5)	3
TOI-4 Environmental Literacy	3

SEMESTER 4

PHYS 1402Q – General Physics	4
CHEM 2444 – Organic Chemistry	3
CHEM 2445 – Organic Chemistry Laboratory	3
TOI-3 Diversity, Equity and Social Justice	3
**EPSY 3010 – Educational Psychology	3

SEMESTER 6

EPSY 3110 – Exceptionality (fall or spring junior year)	2
EDCI 3213 – Intro. to Secondary Methods & Clinic	3
EDCI 4010 – Teaching Reading/Writing in Content Areas	2
TOI Focus Area or Theme	3
CHEM 3214 – Intermediate Inorganic Chemistry	3
CHEM 3332 – Quantitative Analytical Chemistry	4

SEMESTER 8

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

*Required of all students not meeting the University requirements of three 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 5500 – Teaching Science in Middle & High School	3