Chemistry (CHE)

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Programs Offered
Master of Science in Chemistry (M.S.), Master of Science in Chemistry Education (M.S.C.E.), and Master of Chemistry Education (M.C.E.).

Master of Science in Chemistry Program Requirements
The program is broad-based, and allows students to specialize in any of the sub-disciplines (physical, organic, inorganic, analytical, biochemistry, or chemical education), although coursework is required in at least four sub-disciplines. The Master of Science in Chemistry (M.S.) is a thesis-based M.S. degree requiring 31 credit hours including: Four hours each in CHE 490 (Research) and CHE 499 (Master’s Thesis) are required as part of the 31-hour program, although most students will register for more than the total of eight required hours while pursuing the degree. Students select a research advisor and work closely with that faculty member to complete a thesis based upon original research. Upon completion of a written thesis, a final oral examination/thesis defense is required.

In general, students admitted to the Master of Science in Chemistry program should have completed coursework in science and math equivalent to that required for a B.S. degree in Chemistry at Illinois State University or have received an American Chemical Society-certified B.S. degree from another school. If a student will be admitted to the Master’s degree program with deficiencies (though no student will be admitted with 12 or more credit hours of deficiencies in Chemistry coursework), the deficiencies will be identified as specific courses and students will have to complete those courses as early as possible in order to bring their background coursework to the required level. All deficiencies should be completed by the end of the third semester in the program. In general, credit earned for completion of deficiencies does not apply toward M.S. degree requirements unless the student petitions the Department and receives approval to count specific courses (up to a maximum of six credit hours) for graduate credit in the student’s plan of study, and only courses listed as approved for graduate credit on Course Finder may be counted. This 31-hour degree requires:
- 21 hours of 400 and/or 300-level courses including a minimum of 12 credit hours of courses at the 400 level in 3 sub-disciplines (analytical, inorganic, organic, physical, biochemistry, and chemical education)
- 2 hours: 1 hour each CHE 492 and CHE 494
- 8 hours: 4 hours each in CHE 490 and CHE 499
- Successful completion of a thesis based upon original research and oral examination/thesis defense

Graduate coursework in related disciplines may be substituted with consent of the Chemistry Department. All master’s degree programs require a minimum of 50 percent of the non-thesis credit hours applied to the degree to be 400-level courses or above.

Master of Science in Chemistry Education Program Requirements
The Master of Science in Chemistry Education (M.S.C.E.) is a professional degree designed to improve the content and pedagogical knowledge of teachers of chemistry who already possess a bachelor’s degree in Chemistry. The 33-credit hour degree requires coursework in two areas: Chemistry Content and Chemistry Education or Foundational Science Education. It also requires a two-semester capstone classroom project. By the time of final degree awarding, a candidate must have completed three years of full-time teaching.

Chemistry Content:
- 12 credit hours from the following: CHE 315, 318, 344, 350, 362, or any 380 or 400-level course in Inorganic, Organic, Analytical, Physical, or Biochemistry for which the student has appropriate prerequisites. No credit will be granted for an Illinois State University course if a student has already taken an equivalent course elsewhere

Chemistry Education and Science Education:
- 15 credit hours from the following: CHE 401, 402, 403; TCH 401, 450, 451, 453

Capstone Project:
- 6 credit hour sequence: CHE 481 and 482; or TCH 481 and 482; or SED 406 and 407; or CHE 490 and/or 498

Master of Chemistry Education Program Requirements
The Master of Chemistry Education (M.C.E.) is a professional degree designed to improve the content and pedagogical knowledge of teachers of chemistry who do not possess a bachelor’s degree in Chemistry. The degree requires 33 credit hours of coursework in
two areas: Chemistry Content and Chemistry Education or Foundational Science Education. It also requires a two-semester capstone project. By the time of final degree awarding, a candidate must have completed three years of full-time teaching.

Chemistry Content:
- 9 credit hours from the following: CHE 315, 318, 344, 350, 362, or any 380 or 400 level course in Inorganic, Organic, Analytical, Physical, or Biochemistry for which the student has appropriate prerequisites. No credit will be granted for an Illinois State University course if a student has already taken an equivalent course elsewhere.

Chemistry Education and Science Education:
- 18 credit hours from the following: CHE 401, 402, 403; TCH 401, 450, 451, 453

Capstone Project:
- 6 credit hour sequence: CHE 481 and 482, TCH 481 and 482, SED 406 and 407, or CHE 490 and/or 498.

Chemistry Courses
Only 300-level chemistry courses listed as approved for graduate credit on Course Finder may be used on the degree audit. Other 300-level chemistry courses are available for undergraduate credit only and may not be used in the degree audit for the graduate degrees in chemistry.

Chemistry Courses: coursefinder.illinoisstate.edu/directory/che/
All Courses: coursefinder.illinoisstate.edu/directory/