

**EDUCATION MAJOR: CHEMISTRY**  
**ST OLAF COLLEGE EDUCATION DEPARTMENT**  
*(For Students Entering the Teacher Education Program Fall 2022 and After)*

**Chemistry Teacher Candidates Must:**

1. Meet all Professional Educator Licensing and Standards Board (PELSB) Pedagogy and Content Standards.
2. Pass the Minnesota Teacher Licensure Exam (MTLE) competency exams in their Content Area(s) and in Pedagogy before licensure.
3. Have a major in Chemistry.

**PROFESSIONAL EDUCATION REQUIREMENTS**

	<b><u>Course Credit</u></b>
___ Education 231: Understanding Substance Abuse	0.00
___ Education 295: Foundation of Education	1.00
___ Education 330: Planning, Instruction, and Assessment	1.00
___ Education 330 Lab	0.00
___ Education 340: Differentiating Instruction	1.00
___ Education 381: Senior Seminar	0.50
___ Education 382: Human Relations Component	0.00
___ Education 389: Student Teaching	3.00
<b>One</b> Interim	1.00
___ Education 378: Multicultural Education in Hawaii (Offered in even years)(OEP, PAR)	
___ Education 379: Urban Education Practicum and Seminar (OEP, PAR)	
___ <b>One</b> additional <b>PAR</b> course to meet licensure standards	1.00

**CHEMISTRY (9-12) CONTENT AREA LICENSURE REQUIREMENTS**

___ Education 364: Teaching of Science 5-12* (Spring)	1.00
___ Education 374: Reading in the Content Area*	0.50
___ Chemistry 247*: Organic Chemistry I/CHEM 253 Synthesis Laboratory*	1.25
___ Chemistry 248*: Organic Chemistry II/CHEM 254 Synthesis Laboratory*	1.25
___ Chemistry 255: Analytical Chemistry/CHEM 256: Analytical Laboratory	1.25
___ Chemistry 371: Physical Chemistry/CHEM 357: Physical Laboratory	1.25
___ Chemistry 379*: Biochemistry I	1.00
___ Research Component	

<b>One</b> of the following*:	1.00
___ Chemistry 122: Introductory Chemistry (NTS)	
___ Chemistry 125: Structural Chemistry and Equilibrium (NTS)	
___ CHBI 125: Chemical Concepts with Biological Applications (NTS)	

<b>One</b> of the following*:	
___ Chemistry 126: Energies and Rates of Chemical Reactions (NTS)	1.00
___ CHBI 126: Thermodynamics and Kinetics with Biological Relevance	

**ADDITIONAL COURSES FOR THE CHEMISTRY MAJOR**

___ Two semesters of Physics (124/125) (NTS)	2.00
___ Math through Calculus II (QCR)	0-2.00

This document is intended to serve as an advising tool and is subject to change. It is important for students to meet with Education Faculty regularly to verify that they are satisfying all requirements for licensure and with content faculty to ensure that major requirements are being met. All course substitutions must be documented on a Course Substitution Form and approved by the Director of Licensure.

*\* Indicates content courses in which Professional Educator Licensing and Standards Board (PELSB) Standards are embedded.*