

CHEMISTRY

Endorsement Name	Chemistry
Department	Chemistry
License area [State of Iowa]	5 – 12 Chemistry
Required Education Minor	Secondary Education Minor
Updated	4/6/2023

OPTION ONE: The student completes Chemistry major at Luther College to include the following requirements.

	<u>One of the following:</u> CHEM 151: Chemical Principles I AND CHEM 152: Chemical Principles II OR CHEM 201: Advanced Chemical Principles	4
	CHEM 202: Analytical Chemistry	4
	CHEM 241: Organic Chemistry I	4
	CHEM 242: Organic Chemistry II	4
	CHEM 361: Physical Chemistry	4
	CHEM 365: Instrumental Methods Laboratory	2
	CHEM 490: Senior Project	2
	<u>One of the following:</u> CHEM 344: Spectroscopy CHEM 345: Separations	2
	<u>4 credits from the following:</u> CHEM 301: Biochemistry CHEM 371: Polymer Chemistry CHEM 372: Inorganic Chemistry CHEM 373: Solid State Chemistry	(4) (2) (2) (2)
	An advanced lab, can include approved summer research OR one of the following: CHEM 349: Biochemistry Laboratory CHEM 366: Physical Chemistry Laboratory CHEM 379: Inorganic Synthesis Laboratory	2
	<u>Additional Requirements:</u> MATH 150: Calculus in Context * AND MATH 152: Calculus II	4 4

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PHYS 151: General Physics I AND PHYS 152: General Physics II OR PHYS 181: Classical Physics I AND PHYS 182: Classical Physics II	8
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*This course will be reviewed by the State of Iowa at the beginning of the Fall 2023 semester.

OPTION TWO: This is for a student with a major in a different field, planning to teach Chemistry, in the State of Iowa, under the second teaching area provision. This student must complete the Secondary Education Minor.

CHEM 151: Chemical Principles I	4
CHEM 152: Chemical Principles II	4
CHEM 241: Organic Chemistry I/Advanced Chemical Principles	4
CHEM 201: Analytical Chemistry	4
Four additional hours in Chemistry numbered above 300	4
Elective: Four additional hours in Chemistry	4