

Student's Name: _____

Email Address: _____

CSU ID Number: _____

**SCIENCE EDUCATION – Chemistry Concentration
Curriculum Check-sheet
121 Credits**

Note to the Student: This check-sheet describes the curricular requirements for both the Bachelor of Science in Natural Sciences with a concentration in Chemistry Education and for the teacher licensing program in science. The courses listed are courses in both areas. All curricular requirements on this check-sheet, along with other programmatic requirements, must be met in order to receive the institutional recommendation for the teaching endorsement. A minimum of 42 credits must be completed in upper-division coursework. **The Teacher Licensing Program is a non-degree program; bachelor degrees in education are not awarded.**

Professional Education Courses – 33 credits

____ EDUC 275* Schooling in the US	3	
____ EDUC 340 Literacy & the Learner	3	
____ EDUC 350 Instruction I	3	
____ EDUC 386 Practicum-Instruction I	1	
____ EDUC 461A ^Ω Science Methods I	3	
____ EDUC 450 Instruction II	4	
____ EDUC 486E Practicum-Instruction II	1	
____ EDUC 461B ^Ξ Science Methods II	3	
____ EDUC 485B Student Teaching-Secondary	11	
____ EDUC 493A Seminar: Prof Relations	1	

All University Core Curriculum – 18 credits

____ Written Communication (1A)	3	____ CO150
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Mathematics**

____ MATH 155* Calculus-Bio Sci I (1B)	4	
____ -OR-		
____ MATH160* Calculus-Physical Sci I (1B)	4	
____ Advanced Writing (2B)	3	

Biological/Physical Sciences (3A)

____ LIFE 102* Attributes of Living Systems	4	
____ -AND-		
____ CHEM 111* General Chemistry I	4	
____ -AND-		
____ CHEM 112* General Chemistry I Lab	1	

____ Arts and Humanities (3B)	3	
____ Add'l Arts and Humanities (3B)	3	
____ Social/Behavioral Sciences (3C)	3	____ EDUC275
____ Historical Perspectives (3D)	3	
____ Global & Cultural Awareness (3E)	3	

Depth & Integration (4A, 4B, 4C)

____ EDUC 485B Student Teaching-Sec	11	
____ EDUC 493A Seminar: Prof Relations	1	

**Prerequisites for calculus could account for 5 additional credits.

*Offered Summer Semester

^ΩOffered only Fall Semester

^ΞOffered only Spring Semester

See the back of this check-sheet for important course requirements and advising reminders. → → →

General Science Content Courses – 34 credits

____ AA 100* Intro to Astronomy	3	
____ AA101* Astronomy Laboratory	1	
____ -OR-		
____ GEOL 120* Physical Geology	3	
____ GEOL 121* Physical Geology Lab	1	
____ LIFE 102* Attributes of Living Systems	4	
____ LIFE 103* Bio Organisms-Animal/Plant	4	
____ CHEM 111* General Chemistry I	4	
____ CHEM 112* General Chemistry I Lab	1	
____ CHEM 113* General Chemistry II	3	
____ CHEM 114* General Chemistry II Lab	1	
____ PH 121* General Physics I	5	
____ PH 122 General Physics II	5	
____ -OR-		
____ PH141* Physics for Sci & Eng I	5	
____ PH 142 Physics for Sci & Eng II	5	
____ STAT 301* Intro to Statistical Methods	3	

Chemistry Concentration Content Courses – 36 credits

____ CHEM 232 ^Ξ Analytical Chemistry Lab	2	
____ CHEM 241 ^Ω Organic Chemistry	4	
____ CHEM 242 ^Ω Organic Chemistry Lab	1	
____ CHEM 263 ^Ξ Inorganic Chemistry	4	
____ CHEM 264 ^Ξ Inorganic Chemistry Lab	1	
____ CHEM 321 ^Ξ Chemical Biology	4	
____ CHEM 322 ^Ξ Chemical Biology Lab	1	
____ CHEM 371 ^Ω Physical Chemistry	4	
____ CHEM 372 ^Ω Physical Chemistry Lab	1	
____ MATH 155* Calculus-Biological Sci I	4	
____ MATH 271 ^Ω Applied Math for Chemists I	4	
____ -OR-		
____ MATH 160* Calculus-Physical Sci I	4	
____ MATH 161* Calculus-Physical Sci II	4	

Need 6 credits of general science/mathematics electives:

____ Science Electives _____

Important Coursework Requirements:

- 1) To enroll in EDUC 275 and EDUC 340, students must have completed 30 credits of post-secondary coursework and plan to pursue completion of the Licensure Program at CSU.
- 2) Students must be admitted to the Licensure Program to enroll in Phase II courses, EDUC 350, EDUC 386 and EDUC461A.
- 3) Because the coursework content and field experiences build upon previous courses, the phases cannot be taken concurrently or out of sequence.
- 4) Grades in ALL education courses and teaching content courses must be C or above.
- 5) Students cannot advance to the next phase of the program with incomplete grades or grades of C- or below in professional education courses.

**Coursework Model of the Teacher Licensure Program – Secondary and K-12 Endorsements (Revised for Fall 2020)
Colorado State University**

PHASE I		PHASE II		PHASE III	PHASE IV
<p><u>EDUC 275</u> <i>Schooling in the United States</i> 3 credits (Course includes field experiences in the P-12 school system)</p> <p><u>EDUC 340</u> <i>Literacy and the Learner</i> 3 credits (Course includes field experiences in the school system)</p>	<p>Admission Required to Enroll in PHASE II EDUC Courses</p>	<p><u>EDUC 350</u> <i>Instruction I: Individualization and Management</i> 3 credits (Course is a Professional Development School (PDS) at the public middle schools)</p> <p><u>EDUC 386</u> <i>Practicum: Instruction I</i> 1 credit (Course includes field experiences aligned with EDUC 350)</p> <p><u>EDUC 461A</u> <i>Methods & Materials in Teaching Science I</i> 3 credits (Course is a Fall only class)</p>	<p>Passing Score on PRAXIS II (5435) Exam Required to Begin Student Teaching</p>	<p><u>EDUC 450</u> <i>Instruction II: Standards and Assessment</i> 4 credits (Course is a Professional Development School (PDS) at the public high schools)</p> <p><u>EDUC 486E</u> <i>Practicum II: Instruction II</i> 1 credit (Course includes field experiences aligned with EDUC 450)</p> <p><u>EDUC 461B</u> <i>Methods & Materials in Teaching Science II</i> 3 credits (Course is a Spring only class)</p>	<p><u>EDUC 485B</u> <i>Student Teaching</i> 11 credits (Course entails 15-16 weeks of full-time experience at a cooperating school site)</p> <p><u>EDUC 493A</u> <i>Seminar: Professional Relations</i> 1 credit (Course is taken concurrently with EDUC 485B)</p> <p>Successful completion of program coursework, field experiences and other requirements leads to an:</p> <p align="center"> Institutional Recommendation for a Colorado Initial Educator License in Secondary Science </p>

Substitution Approval:

Student _____ Date _____ BSNS Advisor _____ Date _____ Director, Teacher Preparation Program _____ Date _____

Mission of the Teacher Licensure Program

To teach and model best educational practice in order to prepare emerging professionals to facilitate student success.

Professional Program Accreditation

The Program is accredited by the Teacher Education Accreditation Council, the Colorado Commission on Higher Education, and the Colorado Department of Education.



It is recommended that students take the required courses in the following sequence in order to avoid time conflicts. In some cases, the section number that will work is noted or the time that a class is offered if there is only one section.

Freshman Fall Semester (16 credits)

CHEM 111 & CHEM 112
CO 150
LIFE 102
MATH 155 or MATH 160

Freshman Spring Semester (16 credits)

Arts & Humanities (AUCC 3B)
CHEM 113 & CHEM 114
LIFE 103
PH 121 or PH 141

Sophomore Fall Semester (14 credits)

CHEM 241 (MWRF 11 – 11:50 a.m.) & CHEM 242
MATH 271 (9 – 9:50 a.m. – Fall ONLY) or
MATH 161
PH 122 or PH 142

Sophomore Spring Semester (16 credits)

CHEM 232 (section 2 – Spring ONLY)
CHEM 263 (MWRF 3 – 3:50 p.m.) &
CHEM 264 (M 12 – 2:50 p.m.) – Spring ONLY
EDUC 275 (AUCC 3C)
EDUC 340
Historical Perspectives (AUCC 3D)

Junior Fall Semester (17 credits)

AA 100 & AA 101 or GEOL 120 & GEOL 121
Advanced Writing (AUCC 2)
EDUC 350 & EDUC 386
EDUC 461A (MW 9 – 10:40 a.m. – Fall ONLY)
STAT 301

Junior Spring Semester (16 credits)

Arts & Humanities (AUCC 3B)
CHEM 321 (TR 12 – 1:15 p.m. & W 12 – 12:50 p.m.)
& CHEM 322 (T 3 – 5:50 p.m.) – Spring ONLY
*EDUC 450 & EDUC 486 (TR 8 – 11:50 a.m.)
EDUC 461B (MW 10 – 11:40 a.m. – Spring ONLY)

Senior Fall Semester (14 credits)

CHEM 371 (MWRF 9 – 9:50 a.m.) & CHEM 372 –
Fall ONLY
Diversity & Global Awareness (AUCC 3E)
Science/Math Elective (6 credits)

Senior Spring Semester (12 credits)

EDUC 485B
EDUC 493A

*For the Chemistry Ed concentration, students will only take EDUC450/486 in their Junior Spring Semester instead of the semester immediately preceding their student teaching semester due to the time conflict with CHEM371/CHEM372. If CHEM 371/372 is taken at a different time, then EDUC450/486 must be taken the semester right before student teaching.