

Student's Name: \_\_\_\_\_

Email Address: \_\_\_\_\_

CSU ID Number: \_\_\_\_\_

**SCIENCE EDUCATION – Chemistry Concentration  
Curriculum Check-sheet  
120 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 <sup>Ω</sup> Science Methods I  | 3  |  |
| ____ EDUC 450 Instruction II                   | 4  |  |
| ____ EDUC 486E Practicum-Instruction II        | 1  |  |
| ____ EDUC 461B <sup>Ξ</sup> 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   |
| Mathematics**                               |    |              |
| ____ Calculus I (1B)                        | 4  | _____        |
| ____ Diversity, Equity & Inclusion (1C)     | 3  | _____        |
| ____ Advanced Writing (2)                   | 3  | _____        |
| Biological/Physical Sciences (3A)           |    |              |
| ____ LIFE 102* Attributes of Living Systems | 4  | _____        |
| -AND-                                       |    |              |
| ____ CHEM 120* Fdns in Modern Chemistry     | 4  | _____        |
| -AND-                                       |    |              |
| ____ CHEM 121* Modern Chemistry Lab         | 1  | _____        |
| ____ Arts & Humanities (3B)                 | 3  | _____        |
| ____ Arts & Humanities (3B)                 | 3  | _____        |
| ____ Social & Behavioral Sciences (3C)      | 3  | ____ EDUC275 |
| ____ Historical Perspectives (3D)           | 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  
<sup>Ω</sup>Offered only Fall Semester  
<sup>Ξ</sup>Offered only Spring Semester

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

**General Science Content Courses – 35 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 120 Fdns in Modern Chemistry      | 4 | _____ |
| ____ CHEM 121 Modern Chemistry Lab          | 1 | _____ |
| ____ CHEM 231 Fdns of Analytical Chemistry  | 3 | _____ |
| ____ CHEM 232 Analytical Chemistry Lab      | 2 | _____ |
| ____ 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 – 34 credits**

|  |   |       |
|--|---|-------|
| ____ CHEM 241 <sup>Ξ</sup> Organic Chemistry       | 4 | _____ |
| ____ CHEM 242 <sup>Ξ</sup> Organic Chemistry Lab   | 1 | _____ |
| ____ CHEM 263 <sup>Ξ</sup> Inorganic Chemistry     | 4 | _____ |
| ____ CHEM 264 <sup>Ξ</sup> Inorganic Chemistry Lab | 1 | _____ |
| ____ CHEM 321 <sup>Ξ</sup> Chemical Biology        | 4 | _____ |
| ____ CHEM 322 <sup>Ξ</sup> Chemical Biology Lab    | 1 | _____ |
| ____ CHEM 371 <sup>Ω</sup> Physical Chemistry      | 4 | _____ |
| ____ CHEM 372 <sup>Ω</sup> Physical Chemistry Lab  | 1 | _____ |
| ____ MATH 155* Calculus-Biological Sci I           | 4 |       |
| ____ MATH 271 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 \_\_\_\_\_  
\_\_\_\_ Science Electives \_\_\_\_\_

**Important Coursework Requirements:**

- 1) Students must be admitted to the Licensure Program to enroll in Phase II courses, EDUC 350, EDUC 386 and EDUC461A.
- 2) Students must have a 2.75 or higher GPA to graduate with this degree.
- 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 a 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 2023)  
Colorado State University**

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