

**CURRICULUM GUIDE**  
**Chemistry, B.S. (Chemistry Teaching Concentration)**  
**2021-2022**

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The schedule below is an **EXAMPLE** of how you can arrange your class schedule. Please consult your advisor for specific changes that may need to be made.

|                       | Fall Semester   | Spring Semester                         |                                 |             |
|-----------------------|---|---|---------------------------------|-------------|
| <b>Freshman Year</b>  | SCO 100C  | 1                                       | EDF 203                         | 3           |
|                       | CHE 111   | 3                                       | CED 100                         | 0           |
|                       | CHE 111L  | 1                                       | Ⓔ SED 104 (fulfills Gen. Ed. 6) | 3           |
|                       | Ⓔ MAT 234 (fulfills Gen. Ed. 2)                             | 4                                       | CHE 112                         | 3           |
|                       | Ⓔ BIO 111 <i>or</i> 112 (fulfills Gen. Ed. 4)               | 4                                       | CHE 112L                        | 1           |
|                       | Ⓔ Gen. Ed. 1A (ENG 101)                                     | 3                                       | Ⓔ Gen. Ed. 1B (ENG 102)         | 3           |
|                       |   | Ⓔ Gen. Ed. 1C (Oral Comm.)              | 3                               |             |
|                       | <b>TOTAL</b>  | <b>16</b>                               | <b>TOTAL</b>                    | <b>16</b>   |
| <b>Sophomore Year</b> | EDF 219   | 3                                       | EDC 300                         | 3           |
|                       | CED 200   | 0                                       | EDF 204                         | 2           |
|                       | CHE 250   | 2                                       | EMS 300W                        | 3           |
|                       | CHE 361   | 3                                       | CED 300                         | 0.5         |
|                       | CHE 361L  | 1                                       | GLY 109                         | 3           |
|                       | Ⓔ PHY 131 <i>or</i> 201 (fulfills Gen. Ed. 4)               | 5                                       | PHY 132 <i>or</i> 202           | 5           |
|                       | ⚡ 30 hrs complete + apply to professional education program |   |                                 |             |
|                       | <b>TOTAL</b>  | <b>14</b>                               | <b>TOTAL</b>                    | <b>16.5</b> |
| <b>Junior Year</b>    | CHE 325   | 3                                       | EDF 413                         | 3           |
|                       | CHE 325L  | 2                                       | EMS 490                         | 3           |
|                       | CHE 362   | 3                                       | CED 400                         | 0.5         |
|                       | CHE 362L  | 1                                       | CHE 430                         | 3           |
|                       | Gen. Ed. 5A (History)                                       | 3                                       | CHE 570                         | 4           |
|                       | Gen. Ed. 6 (Diversity)                                      | 3                                       | CHE 400/500 Electives           | 2           |
|                       | <b>TOTAL</b>  | <b>15</b>                               | <b>TOTAL</b>                    | <b>15.5</b> |
| <b>Senior Year</b>    | ESE 561 (fall only)   | 3                                       | CED 499 (ACCT)                  | 9           |
|                       | CED 450 (fall only)   | 1                                       | EMS 474                         | 3           |
|                       | † CHE/ FOR (400/500 level) elective                         | 2                                       |                                 |             |
|                       | Gen. Ed. 3A (Arts)  | 3                                       |                                 |             |
|                       | Gen. Ed. 3B (Humanities)                                    | 3                                       |                                 |             |
|                       | Gen. Ed. 5B (Soc. & Behav. Sci.)                            | 3                                       |                                 |             |
|                       | <b>APPLY FOR STUDENT TEACHING</b>                           |   |                                 |             |
|                       | <b>TOTAL</b>  | <b>15</b>                               | <b>TOTAL</b>                    | <b>12</b>   |
|                       |   | <b>TOTAL HOURS TO DEGREE COMPLETION</b> | <b>120</b>                      |             |

★ **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division CHE courses. MAT 107 or higher.  
 ⚡ Student must have completed 30 hours by the end of the second semester and apply for admission to Professional Education Program.  
 Ⓔ Must be completed before enrolling in CED 300 and applying to the Teacher Ed. program.

| Course Number  | Course Name                                      |
|--|--|
| <b>GENERAL EDUCATION &amp; UNIVERSITY REQUIREMENTS (37)</b>  |  |
| SCO 100C   | Student Success Seminar for Chemistry (1)        |
| <b>CORE COURSE REQUIREMENTS (26)</b>   |  |
| [CHE 111   | General Chemistry I (3)                          |
| [CHE 111L  | General Chemistry Lab I (1)                      |
| [CHE 112   | General Chemistry II (3)                         |
| [CHE 112L  | General Chemistry Lab II (1)                     |
| CHE 250  | Descriptive Inorganic Chemistry (2)              |
| [CHE 325   | Analytical Chemistry (3)                         |
| [CHE 325L  | Analytical Chemistry Lab (2)                     |
| [CHE 361   | Organic Chemistry I (3)                          |
| [CHE 361L  | Organic Chemistry Lab I (1)                      |
| [CHE 362   | Organic Chemistry II (3)                         |
| [CHE 362L  | Organic Chemistry Lab II (1)                     |
| CHE 430  | Biochemistry of Macromolecules (3)               |
| Bracketed items must be taken concurrently.  |  |
| <b>CHEMISTRY TEACHING CONCENTRATION REQUIREMENTS (8)</b>   |  |
| CHE 570  | Biophysical Chemistry (4)                        |
| † PLUS FOUR (4) HOURS from either 400 or 500 level CHE or FOR courses. (If CHE 495 is taken, only 3 hours can be applied to the major).                            |  |
| <b>CHEMISTRY TEACHING CONCENTRATION SUPPORTING COURSE REQUIREMENTS (12)</b>  |  |
| Ⓔ BIO 111 <i>or</i>  | Cell and Molecular Biology (4)                   |
| Ⓔ BIO 112  | Ecology and Evolution (4)                        |
| GLY 109  | Great Moments in Earth History (3)               |
| Ⓔ MAT 234  | Calculus I (4)                                   |
| Ⓔ PHY 131 <i>or</i>  | University Physics I (5)                         |
| Ⓔ PHY 201  | College Physics I (5)                            |
| PHY 132 <i>or</i>  | University Physics II (5)                        |
| PHY 202  | College Physics II (5)                           |
| <b>PROFESSIONAL EDUCATION REQUIREMENTS (37)</b>  |  |
| EDC 300  | Differentiation Inclusive Classrooms (3)         |
| EDF 203  | Educational Foundations (3)                      |
| EDF 204  | Emerging Instructional Technologies (2)          |
| EDF 219  | Human Development and Learning (3)               |
| EDF 413  | Assessment in Education (3)                      |
| EMS 300W   | Curriculum & Instructional Design (3)            |
| EMS 474  | Disciplinary Literacy (3)                        |
| EMS 490  | Classroom & Behavior Management in P-12 (1-3)    |
| ESE 561  | Teaching Science in the Secondary Schools (3)    |
| Ⓔ SED 104  | Special Education Introduction (3)               |
| <b>PLUS ELEVEN (11) HOURS of Clinical Experiences to include:</b>  |  |
| CED 100  | Clinical I: Intro to the Education Prof. (0)     |
| CED 200  | Clinical II: Understanding the Learner (0)       |
| CED 300  | Clinical III: Curriculum and Instruct. Des. (.5) |
| CED 400  | Clinical IV: Diagnosis & Perception (.5)         |
| CED 450  | Clinical V: Practicing Teaching (1)              |
| CED 499  | Supervised Student Teaching P-12 (9)             |
| (Following this curriculum and passing the appropriate standardized teacher exams will lead to certification to teach chemistry at the secondary education level.) |  |

Ⓔ Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.

**Upper division courses:** All students are required to have a minimum of 42 hrs. upper division (300 level or above) courses distributed throughout Major/Supporting/Gen Ed/Free Electives categories.

Refer to the University Catalog at <http://www.catalogs.eku.edu/> regarding University and General Education requirements. All baccalaureate degree seeking students who enter the University are required to successfully complete one writing intensive course following completion of the ENG 102, ENG 105, or HON 102/103. Writing intensive courses are designated with the suffix "W" following the course prefix and number (e.g. HUM 300W).

**Applied Critical & Creative Thinking (ACCT) Requirement:** Chemistry majors in this concentration will fulfill ACCT with CED 499. (Credit hours are incorporated into program requirements.)