

**DEGREE WORKSHEET FOR:**

**BS Chemistry, Pre-Health Emphasis**

**2022-2023 Catalog**

**Degree Requirements – 120 credits**

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| **YEAR 1 - FALL (15 credits)** | **YEAR 1 - SPRING (15 credits)** |
| CHEM 111/111L Principles of Chemistry I (LAS1; LASL\*) |  4/1 credits | CHEM 112/112L Principles of Chemistry II  | 4/1 credits |
| ENG 122 College Composition (LAW1\*) | 3 credits | MATH 1312 Calculus I (LAX1\*) | 4 credits |
| BIO 110 Biology: Atoms to Cells (LAS1; LASL\*) | 4 credits | Liberal Arts Curriculum1 (choose one LAB1, LAB2 or LAB3 that is also a LAMS or LAIS **and** LAH1\*) | 6 credits |
| Liberal Arts Curriculum1 (choose one LAA1, LAA2, LAA3, LAA4 that is also a LAMS or LAIS\*) | 3 credits |  |  |
| **YEAR 2 - FALL (16 credits)** | **YEAR 2 - SPRING (16 credits)** |
| CHEM 331/331L Organic Chemistry I | 4/1 credits | CHEM 332/332L Organic Chemistry II  | 4/1 credits |
| PHYS 220 Introductory Physics l (LAS1; LASL\*) | 5 credits | PHYS 221 Introductory Physics II  | 5 credits |
| BIO 210 Cell Biology | 3 credits | Mathematics Elective3 | 3 credits |
| Liberal Arts Curriculum1 (LAA1, LAA2, LAA3, LAA4) | 3 credits | Liberal Arts Curriculum1 (choose one additional LAA, LAH or LAB\*) | 3 credits |
| **YEAR 3 - FALL (14 credits)** | **YEAR 3 - SPRING (14 credits)** |
| CHEM 321 Chemical Analysis (F) | 4 credits | CHEM 450/450L Survey of Physical Chemistry (S) | 3/1 credits |
| CHEM 481/481L General Biochemistry I (F) | 3/1 credits | CHEM 482/482L General Biochemistry II (S) | 3/1 credits |
| CHEM 441 Inorganic Chemistry I (F) | 3 credits | Electives | 6 credits |
| SCI 2915 Scientific Writing (LAW2\*) | 3 credits |  |  |
| **YEAR 4 - FALL (14 credits)** | **YEAR 4 - SPRING (16 credits)** |
| Biology Elective4 | 4 credits | Biology Elective4 | 4 credits |
| Electives | 10 credits | Electives | 12 credits |
|  |  | Chemistry Assessment Exam6 | 0 credits |

**\*See the** [**Liberal Arts Curriculum**](https://www.unco.edu/registrar/current-students/lac.aspx) **webpage for more information**

This worksheet is a recommended schedule to complete your bachelor’s degree in 4 years. Every UNC student must meet the following requirements in order to graduate with a bachelor’s degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; have at least 31 credit hours in courses designated as Liberal Arts Curriculum; meet all degree requirements in the student’s major field of study. Each major and/or emphasis may have additional requirements necessary for graduation. **Students must consult with their major advisor to receive information on any additional graduation requirements.**

**Admission Requirement –** No separate admission requirement.

**Minor Required –** No minor required.

**Contact Information –** Department of Chemistry & Biochemistry

 Ross Hall Room 3480, 970-351-2559

 Department Web Page: <http://www.unco.edu/nhs/chemistry-biochemistry/>

**Notes -** See page 2

**Notes**

1. A total of 15 credits are required in Arts & Humanities (2 courses, minimum 3 credits each), History (1 course, minimum 3 credits), Social & Behavioral Sciences (1 course, minimum 3 credits), one additional course (minimum 3 credits) in Arts & Humanities or History or Social & Behavioral Sciences. You must also have U.S. Multicultural Studies (1 course, minimum 3 credits), International Studies (1 course, minimum 3 credits). Six total credits must be double counted.
2. Students who lack sufficient preparation in mathematics may need to start in MATH 124 College Algebra (4), MATH 125 Plane Trigonometry (3), or MATH 127 Elementary Functions (4). MATH 171 may be substituted for MATH 131. Consult your advisor.
3. Students are required to take a CS or STAT course (3 credits). Consult advisor for computer science (CS) or statistics (STAT) courses to fulfill mathematics elective.
4. Students are required to take 7-8 hours of biology electives.

Biology Electives –Select two of the following:

 BIO 341 Human Anatomy (4)

 BIO 350 Human Physiology (4)

 BIO 351 Microbiology (4)

1. It is highly recommended that students substitute ENG 123 with SCI 291 (3)—Scientific Writing.
2. All students must take a chemistry major assessment exam prior to graduation.

Pre-Medical, Pre-Dental, Pre-Optometry, Pre-Veterinary, Pre-Podiatry and Pre-Pharmacy coursework

This program offers training in chemistry, mathematics and physics with a broad base in biological sciences and biochemistry. It provides a solid foundation in chemistry and biological sciences for those students planning to pursue professional studies in dentistry, medicine, optometry, podiatry, pharmacy or veterinary medicine.

Students completing this degree emphasis should verify that the elective courses taken satisfy the requirements or recommendations of the particular professional school they wish to attend. Acceptance into these schools is competitive. All pre-health students should seek assistance from an advisor to confirm their course plans. Students considering graduate study in chemistry or biochemistry may be required to complete additional course work in chemistry and/or mathematics depending on the entrance requirements of the specific graduate school.

A. The four-year plan described on the other side of this sheet is a suggested track for completing this major. You must meet with your advisor each semester to determine an appropriate plan.

B. Upper-level courses are generally taught only one semester per year and are marked on the sheet as F (Fall) or S (Spring). In this plan courses are listed in order of required prerequisites first.

C. Some upper-level courses are separate from laboratory; e.g., CHEM 481/CHEM 481L General Biochemistry I and Experimental Biochemistry I and CHEM 482/CHEM 482L General Biochemistry II and Experimental Biochemistry II. In these cases, CHEM 481/481L are taught in the Fall and CHEM 482/482L are taught in the Spring.

D. Graduate level CHEM courses are recommended for juniors and seniors. Other recommended electives include MATH 132, MATH 221, MATH 335, STAT 150, PHYS 321, and PHYS 343.

E. Students majoring in chemistry must earn a grade of “C” or better (C- is not acceptable) in all courses having a CHEM prefix which count toward the major.

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| **\*Liberal Arts Curriculum Course Indicators** |
| LAA1 | Arts & Humanities: Arts & Expression | LAIS | International Studies |
| LAA2 | Arts & Humanities: Literature & Humanities | LAMS | U.S. Multicultural Studies |
| LAA3 | Arts & Humanities: Ways of Thinking | LAS1 | Natural & Physical Sciences |
| LAA4 | Arts & Humanities: World Languages | LASL | Natural & Physical Sciences LAB |
| LAB1 | Social & Behavior Sciences: Economic or Political Systems | LAW1 | Introductory Written Communication |
| LAB2 | Social & Behavior Sciences: Geography | LAW2 | Intermediate Written Communication |
| LAB3 | Social & Behavior Sciences: Human Behavior, Culture or Social Frameworks | LAW3 | Advanced Written Communication |
| LAH1 | History | LAX1 | Mathematics |