



PIKES PEAK  
COMMUNITY  
COLLEGE



UNIVERSITY OF  
NORTHERN  
COLORADO

## Pikes Peak Community College /UNC Transfer Guide\*

### BS Chemistry, Industrial Chemistry Emphasis

2021-2022 Catalog

Degree Requirements – 120 credits

\*Guide for students transferring to the University of Northern Colorado for the purpose of completing a bachelor's degree. Courses marked as (**\*bold**) are UNC equivalent courses (if applicable) upon transfer to UNC. UNC Liberal Arts Curriculum (LAC) is waived with completion of AA/AS degree which is **not** completed as part of this plan. (Note: The four-year plan below is a recommended schedule and not reflective of every student's individual academic context. We encourage each student to consult with their respective academic advisor for course sequence guidance.)

PIKES PEAK COMMUNITY COLLEGE – 30 Credits			
YEAR 1 – FALL: 16 credits		YEAR 1 – SPRING: 14 credits	
CHE 111 Gen Coll Chem I w/ Lab <b>CHEM 111/111L Prin of Chemistry I (LAC Natural &amp; Physical Sci.)</b>	5 credits	CHE 112 Gen Coll Chem II w/ Lab <b>CHEM 112/112L Principles of Chemistry II</b>	5 credits
ENG 121 English Composition I <b>ENG 122 College Composition (LAC Written Comm.-Recommended)</b>	3 credits	ECO 201 Principles of Macroeconomics <b>ECON 203 Prin. of Macroeconomics (LAC Social &amp; Behavioral Sciences)</b>	3 credits
MAT 201 Calculus I <sup>2</sup> <b>MATH 131 Calculus I (LAC Mathematics)</b>	5 credits	Liberal Arts Curriculum	6 credits
Liberal Arts Curriculum <sup>1</sup>	3 credits		
UNIVERSITY OF NORTHERN COLORADO – 90 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 I (LAC Natural & Physical Sci.)	5 credits	PHYS 221 Introductory Physics II	5 credits
SCI 291 Scientific Writing <sup>3</sup> (LAC Written Comm.)	3 credits	Minor Course	3 credits
Liberal Arts Curriculum	3 credits	Liberal Arts Curriculum	3 credits
YEAR 3 – FALL: 16 credits		YEAR 3 – SPRING: 13 credits	
CHEM 321 Chemical Analysis (F)	4 credits	CHEM 360 or ENST 235 Chemistry and the Environment <sup>4</sup>	2 credits
CHEM 441 Inorganic Chemistry I (F)	3 credits	CHEM 421 Instrumental Analysis (S)	4 credits
Minor Course	9 credits	CHEM 450/450L Survey of Phys. Chemistry (S)	3/1 credits
		Minor Course	3 credits
YEAR 4 – FALL: 15 credits		YEAR 4 – SPRING: 14 credits	
Electives	12 credits	Electives	14 credits
Minor Course	3 credits	Chemistry Assessment Exam <sup>5</sup>	0 credits

This four-year plan 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; 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.**

### **Program Admission Requirements –**

No separate admission requirement.

### **Minor Required –**

A minor is required. Some example minors include business or economics for students interested in management, biology for students leaning toward biotechnology, or English for students considering technical writing.

### **Contact Information –**

Department of Chemistry & Biochemistry  
Ross Hall Room 3480, 970-351-2559  
<http://www.unco.edu/nhs/chemistry-biochemistry/>

### **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. With advisor approval, students can substitute ENG 123 (3) for SCI 291 Scientific Writing (3).
4. ENST 235 is offered in the Spring semester.
5. All students must take a chemistry major assessment exam prior to graduation.

## Notes –

This emphasis offers training in chemistry, mathematics, physics and a minor area selected by the student. The course of study provides a solid foundation in chemistry and specific background knowledge about the chemical industry.

Students completing this emphasis can pursue a career in the chemical, medical, pharmaceutical or biotechnology industries; or in related government agencies. Career options include supervision, process evaluation, quality control, pilot scale operation, management and sales. Students considering graduate study in chemistry 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), 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 331/CHEM 331L Organic Chemistry I and Organic Chemistry I Lab and CHEM 332/CHEM 332L Organic Chemistry II and Organic Chemistry II Lab. In these cases, the two are taken concurrently.
- 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.