

FOR TRANSFER STUDENTS

PROGRAM OVERVIEW

A Chemistry degree can prepare you for a meaningful career in: developing renewable energy solutions for climate change; ensuring safe and pure air and drinking water; discovering materials for new devices using nanotechnology; analyzing medical samples to detect rare and dangerous diseases; contributing to Colorado's and America's mining and petroleum industries; and contributing to Colorado's emerging natural products and pharmaceuticals industries.

A BS in Chemistry also stands out as a premiere accomplishment in applications for professional degree programs, including pharmacy, medicine, nursing, dentistry, medical technology, and many others. Previous BS Chemistry graduates from CU-Denver have gone on to medical, dental, and pharmacy schools; to Ph.D. programs in chemistry and biomedical sciences; and to productive careers in the biotech, pharmaceutical, and medical technology industries.

ACADEMIC ADVISING

The College of Liberal Arts and Sciences (CLAS) supports students to graduation using a shared advising system. CLAS students have two academic advisors with whom they should meet regularly to discuss academic and degree progress: a CLAS Academic Advisor and a major/faculty advisor.

*For questions related to CU Denver Core Curriculum, CLAS, general graduation requirements, university/college academic policies, or campus resources contact:*

*For questions related to major requirements, major course prerequisites, or evaluation of transfer coursework in your major contact:*

*For questions about admission requirements, transfer policies, applying, and the transfer process contact:*

CLAS Academic Advising

[clas\\_advising@ucdenver.edu](mailto:clas_advising@ucdenver.edu)

Visit the CLAS Advising website [here](#)

North Classroom (NC) 1030

303-315-7100

Chemistry Major Advising

[CLAS Major Advisor Contact Information](#)

Visit the department website [here](#)

Science Building (SI) 3071

303-315-7650

Office of Admissions

[admissions@ucdenver.edu](mailto:admissions@ucdenver.edu)

Visit the Admissions website [here](#)

Student Commons Building (SCB) 1005

303-315-2601

GENERAL GRADUATION REQUIREMENTS & POLICIES

*All CU Denver CLAS students are required to complete the following minimum general graduation requirements to be eligible to apply for graduation:*

1. Complete a minimum of 120 credit hours
2. Achieve a minimum 2.0 CU cumulative grade point average (GPA)
3. Complete a minimum of 45 upper-division (3000- to 4000-level) credit hours
4. Complete all CU Denver Core, CLAS, and major requirements
5. Complete a minimum of 30 CLAS credit hours with letter grade at CU Denver

*The following are **maximum** credit hours that can apply toward the minimum 120 hours required for graduation:*

- 16 credit hours Pass/Fail
- 12 credit hours of Independent Study/Directed Research
- 12 credit hours of internship credit
- 8 credit hours of physical education credit

PROGRAM REQUIREMENTS & POLICIES

**The following program requirements are based on degree requirements for the current Catalog year at CU Denver and are subject to change. Students are responsible for completing degree requirements based on the Catalog year for which they are admitted.**

Students are responsible for meeting with the major advisor to confirm major requirements. Students completing the Chemistry B.S. Degree are required to complete the following minimum program requirements:

1. Students must complete a minimum of 66 credit hours, including a minimum of 44 CHEM credit hours.
2. Students must complete a minimum of 16 upper-division level (3000-level and above) CHEM credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements. **Note: students completing the American Chemical Society (ACS) Certified degree must earn a minimum grade of C (2.0) in all major courses taken at CU Denver.**
4. Students must complete a minimum of 14 CHEM credit hours with CU Denver faculty, including CHEM 4128 Instrumental Analysis Laboratory, 4518 Physical Chemistry Laboratory: Reaction Analysis, or 4538 Physical Chemistry Laboratory: Molecular Structure.
5. A student who has declared a Chemistry major at CU Denver may not take additional chemistry courses outside of the Department for the purpose of applying those credits toward meeting the requirements of the major without prior written approval of the undergraduate Chemistry/Biochemistry advisor. No more than three additional hours of such pre-approved transfer credits will be allowed.
6. All courses applied to the chemistry major need to be taken within ten years of the graduation date with the exception of General Chemistry I and II Lecture and Lab: CHEM 2031 General Chemistry I, CHEM 2081 Honors General Chemistry I, CHEM 2038 General Chemistry Laboratory I; CHEM 2039 Majors General Chemistry I Laboratory, CHEM 2088 Honors General Chemistry Laboratory I, CHEM 2061 General Chemistry II, CHEM 2091 Honors General Chemistry II Lecture, CHEM 2068 General Chemistry Laboratory II, CHEM 2069 Majors General Chemistry II Laboratory, and CHEM 2098 Honors General Chemistry II Laboratory. In the event that the student would like to apply for expired credit for CHEM 3481 Majors Organic Chemistry I, the student will need to test at the 50th percentile on the ACS Standardized Exam for Organic Chemistry I.
7. PHYS 2321 Intro Experimental Physics Lab I and PHYS 2341 Intro Experimental Physics Lab II are specifically designed for students in non-Physics majors and can be paired with either PHYS 2010 College Physics I and PHYS 2020 College Physics II or PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based lectures. Students pursuing a second major in Physics should complete PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based and PHYS 2351 Applied Physics Lab I and PHYS 2361 Applied Physics Lab II.
8. Students may double major in Biochemistry and Chemistry. Students can apply the requirements for both majors if respective courses are a major requirement for both the Chemistry and Biochemistry major. A course cannot fulfill more than two requirement/elective areas in a student's degree.

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COURSEWORK THAT CAN BE COMPLETED AT PREVIOUS INSTITUTION

The following is a “bucket” of requirements students can complete prior to transferring to CU Denver, including equivalent Colorado Community College System (CCCS) courses. To determine the equivalencies of courses to be completed at non-CU Denver institutions, students can visit [www.transferology.com](http://www.transferology.com). It is critical students connect with a CU Denver academic advisor to ensure planned courses will transfer *and* apply to CU Denver degree requirements. All non-CU Denver coursework must be completed with a C- or better to be eligible for transfer.

Students interested in completing an Associate (A.A. or A.S.) Degree or a [Colorado Statewide Transfer Articulation Agreement or Degree with Designation \(DWD\)](#) must work with their community/junior college academic advisor to create an academic plan that accounts for all degree or transfer articulation agreement requirements. Colorado Community College Students may also explore the option to complete [Reverse Transfer](#) at CU Denver.

Requirements	CU Denver Credits	CCCS Equivalent Courses & Notes	CCCS Credits
<b>CU Denver Core Curriculum Requirements</b>	<b>34 - 40</b>		
ENGL 1020 – Core Composition I	3	ENG 1021	
ENGL 2030 – Core Composition II	3	ENG 1022	
Mathematics	3 - 4	MAT 2410 <i>recommended</i> or GT-MA1	
Arts	3	GT-AH	
Humanities	3	GT-AH or GT-HI	
Behavioral Sciences	3 - 4	GT-SS	
Social Sciences	3 - 4	GT-SS or GT-HI*	
Natural/Physical Science with lab	4 - 5	CHE 1111 or GT-SC1	
Natural/Physical Science without lab or Math	3 - 5	CHE 1112 or GT-SC2 or GT-MA1 ( <i>except the course used for Core Math</i> ) or GT-SC1	
International Perspectives	3	Additional GT-AH, HI, SS* ( <i>see note below</i> )	
Cultural Diversity	3	<i>To be completed at CU Denver. This requirement must be completed with an upper-division course and CCCS courses will not apply.</i>	---
<b>CLAS Graduation Requirements</b>	<b>15 - 29</b>		
CLAS Communicative Skills	3	COM 1150 or PHI 1013	
CLAS Second Language	0 - 10	(e.g.) SPA 1012 or ASL 1122 <b><i>Students have several options to fulfill this requirement. Please consult a CU Denver CLAS Academic Advisor.</i></b>	
CLAS Humanities	3	Any transferrable LIT, HIS, HUM, or PHI course	
CLAS Behavioral Sciences	3 - 4	Any transferrable ANT, COM, or PSY course ( <i>except GT-SC courses</i> )	
CLAS Social Sciences	3 - 4	Any transferrable ECO, ETH, GEO, PSC, or SOC course ( <i>except GT-SC courses</i> )	
CLAS Natural/Physical Science with lab	3 - 5	CHE 2111 or GT-SC1 <b><i>If you completed only one science course with a lab for the CU Denver Core Curriculum, this course must have an associated lab.</i></b>	
<b>CHEM Major Courses</b>	<b>37</b>		
CHEM 2031 & 2038 General Chemistry I with Lab	4	CHE 1111 <i>Course can fulfill CU Denver Core Natural/Physical Science with lab</i>	
CHEM 2061 & 2068 General Chemistry II with Lab	5	CHE 1112 <i>Course can fulfill CU Denver Core Natural/Physical Science with lab</i>	
CHEM 3411 & 3418 Organic Chemistry I with lab	5	CHE 2111 <i>To apply as CHEM 3481 &amp; 3488 if completed prior to transfer-See CU Denver CHEM Advisor</i> *Note: CCCS courses are counted as lower-division credits at CU Denver	
CHEM 3421 & 3428 Organic Chemistry II with lab	5	CHE 2112 <i>To apply as CHEM 3491 if completed prior to transfer-See CU Denver CHEM Advisor</i> *Note: CCCS courses are counted as lower-division credits at CU Denver	
PHYS 2311 & 2321 General Physics I with Lab <i>and</i> PHYS 2331 & 2341 General Physics II with Lab <i>or</i> PHYS 2010 & 2321 College Physics I with Lab <i>and</i> PHYS 2020 & 2341 College Physics II with Lab	10	PHY 2111 <i>and</i> PHY 2112 ( <i>for General Physics</i> ) <i>or</i> PHY 1111 <i>and</i> PHY 1112 ( <i>for College Physics</i> ) <i>Courses can fulfill CU Denver Core Natural/Physical Science with lab</i>	
MATH 1401 Calculus I	4	MAT 2410 <i>Course can fulfill CU Denver Core Mathematics</i>	
MATH 2411 Calculus II	4	MAT 2420 <i>Course can fulfill CU Denver Core Mathematics</i>	
<b>Minimum Applicable Transfer Credits Recommended:</b>	<b>60</b>	<i>Students completing less than 60 applicable transfer credits will have additional credits to complete at CU Denver. Students needing general elective credits should consult a CU Denver CLAS Academic Advisor.</i>	

\*The applicability of Guaranteed Transfer (GT Pathways) courses to specific CU Denver Core Curriculum requirements requires completion of a block of five courses: two GT-AH courses; one GT-HI course; one GT-SS course; and one additional GT-AH, GT-HI, or GT-SS course.

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**SAMPLE PLAN – COURSEWORK TO BE COMPLETED AT CU DENVER**

Based on successful completion of 60 applicable transfer credits and the complete “bucket” of requirements outlined above, students would have the following remaining to complete at CU Denver. At CU Denver, students must tailor this plan based on the evaluation of previously completed college coursework (e.g., AP, IB, CLEP, dual/concurrent enrollment, and transfer credit), course availability, individual preferences related to course load, summer term courses, part-time or full-time student status, or add-on programs such as minors or double-majors.

**Note: this plan assumes students have completed the CLAS Second Language proficiency requirement.** Students must demonstrate second language proficiency through a 2<sup>nd</sup> semester college-level course equivalent (e.g., SPA 1012 or ASL 1122) with a C- or higher, satisfactory proficiency testing (CU Denver Department of Modern Languages Placement Testing, BYU FLATS, CLEP), or submitting their high school transcript demonstrating completion of a 2<sup>nd</sup> year (Level II) high school course with a minimum grade of “C-” (1.7) in the 2<sup>nd</sup> semester of the 2<sup>nd</sup> year or later. Students may have additional options to fulfill this requirement and should consult a CU Denver CLAS Academic Advisor. **Students who have not fulfilled this requirement must work with a CU Denver CLAS Academic Advisor to modify this plan.**

<b>Year Three</b>	<b>Fall</b>	CRS
	CHEM 3111 <sup>PE</sup> & 3118 <sup>PE</sup>	5
	CHEM 4500 <sup>PE</sup>	3
	CHEM 3498 <sup>PE</sup>	2
	Upper-Division General Elective	3
	<b>Total Credit Hours</b>	<b>13</b>

<b>Spring</b>	CRS
CHEM 4511 & 4518 <sup>PE</sup>	5
Upper-Division General Elective	3
CU Denver Core Cultural Diversity	3
Upper-Division General Elective	3
Upper-Division General Elective	3
<b>Total Credit Hours</b>	<b>17</b>

<b>Year Four</b>	<b>Fall</b>	CRS
	CHEM 4521 & 4538 <sup>PE</sup>	5
	Upper-Division General Elective	3
	Upper-Division General Elective	3
	Upper-Division General Elective	3
	<b>Total Credit Hours</b>	<b>17</b>

<b>Spring</b>	CRS
CHEM 3011 <sup>PE</sup> & 3018 <sup>PE</sup>	5
CHEM 4121 & 4128 <sup>PE</sup>	5
CHEM 3810 <sup>PE</sup> or CHEM 4810 <sup>PE</sup>	3-4
Upper-Division General Elective	3
<b>Total Credit Hours</b>	<b>16-17</b>

<sup>M</sup> Major Course Available    <sup>C</sup> CU Denver Core Course    <sup>PE</sup> Prerequisite Enforced    <sup>PR</sup> Prerequisite Recommended