CHEMISTRY



FOR TRANSFER STUDENTS

PROGRAM OVERVIEW

Chemistry is the study of matter and its transformations, from the smallest scale – atoms and subatomic particles – to the macromolecules that provide structure and function to living organisms. Chemistry is often called the "central science" because it touches on other STEM disciplines including physics, biology, medicine, environmental science, geology, mathematics, materials science, technology, and many others. A degree in Chemistry can prepare you for a wide range of meaningful careers discovering and applying scientific knowledge, critical thinking, and problem-solving skills. Modern chemistry combines computer modeling and experimental observation using procedures that are much safer and more environment-friendly than in past generations.

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:

CLAS Academic Advising

clas advising@ucdenver.edu
Visit the CLAS Advising website here
North Classroom (NC) Building 1030
303-315-7100

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

Marta Maroń

marta.maron@ucdenver.edu
Visit the department website here
Science Building (SI) 3071 C
303-315-7637

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

Office of Admissions

admissions@ucdenver.edu
Visit the Admissions website here
Student Commons 1007
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 semester 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) semester hours
- 4. Complete all CU Denver Core, CLAS, and major requirements
- 5. Complete a minimum of 30 hours in CLAS at CU Denver

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

- 56 semester hours in major department/prefix courses
- 16 semester hours Pass/Fail
- 12 semester hours of Independent Study/Directed Research
- 12 semester hours of internship credit
- 8 semester 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/faculty advisor in the department 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 67 credit hours, including a minimum of 45 CHEM credit hours and a minimum of 22 credit hours in ancillary (supporting math and science) coursework.
- 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 major courses taken at CU Denver 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. Students cannot complete major or ancillary course requirements as pass/fail. 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, 4518 or 4538.
- 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 3 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.
- 7. Intro Experimental Physics labs I and II (PHYS 2321 and PHYS 2341) are specifically designed for students in non-Physics majors and can be paired with either College Physics (PHYS 2010 and PHYS 2020) or General Physics (PHYS 2311 and PHYS 2331) lectures. Students pursuing a second major in Physics should complete General Physics lectures (PHYS 2311 and PHYS 2331) and Applied Physics Labs (PHYS 2351 and PHYS 2361).

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COURESWORK 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. 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
CU Denver Core Curriculum Requirements	34 - 40		
ENGL 1020 – Core Composition I	3	ENG 121	
ENGL 2030 – Core Composition II	3	ENG 122	
Mathematics	3 - 4	MAT 201 recommended 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 111 or GT-SC1	
Natural/Physical Science without lab or Math	3 - 5	CHE 112 or GT-SC2 or GT-MA1 (except the course used for Core Math) or GT-SC1	
International Perspectives	3	Additional GT-AH, HI, SS* (see note below)	
Cultural Diversity	3	To be completed at CU Denver. This requirement must be completed with an upper-division course and CCCS courses will not apply.	
CLAS Graduation Requirements	15 - 29		
CLAS Communicative Skills	3	COM 115 or PHI 113	1
CLAS Foreign Language	0 - 10	(e.g.) SPA 112 or ASL 122 Students have several options to fulfill this requirement. Please consult a CU Denver CLAS Academic Advisor.	
CLAS Humanities	3	Any transferrable LIT, HIS, HUM, or PHI course	
CLAS Behavioral Sciences	3 - 4	Any transferrable ANT, COM, or PSY course (except GT-SC courses)	
CLAS Social Sciences	3 - 4	Any transferrable ECO, ETH, GEO, POS, or SOC course (except GT-SC courses)	
CLAS Biological/Physical Science with lab	3 - 5	CHE 211 or GT-SC1 If you completed only one science course with a lab for the CU Denver Core Curriculum, this course must have an associated lab.	
CHEM Major Courses	37	,	
CHEM 2031 & 2038 General Chemistry I with Lab	4	CHE 111 Course can fulfill CU Denver Core Natural/Physical Science with lab	
CHEM 2061 & 2068 General Chemistry II with Lab	5	CHE 112 Course can fulfill CU Denver Core Natural/Physical Science with lab	
CHEM 3411 & 3418 Organic Chemistry I with lab	5	CHE 211 Course can fulfill CLAS Biological/Physical Science with lab *Note: CCCS courses are counted as lower-division credits at CU Denver	
CHEM 3421 & 3428 Organic Chemistry II with lab	5	CHE 212 *Note: CCCS courses are counted as lower-division credits at CU Denver	
PHYS 2311 & 2321 General Physics I with Lab and PHYS 2331 & 2341 General Physics II with Lab or PHYS 2010 & 2321 College Physics I with Lab and PHYS 2020 & 2341 College Physics II with Lab	10	PHY 211 and PHY 212 (for General Physics) or PHY 111 and PHY 112 (for College Physics) Courses can fulfill CU Denver Core Natural/Physical Science with lab	
MATH 1401 Calculus I	4	MAT 201 Course can fulfill CU Denver Core Mathematics	
MATH 2411 Calculus II	4	MAT 202 Course can fulfill CU Denver Core Mathematics	
Minimum Applicable Transfer Credits Recommended:	60	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.	

*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 – COURESWORK TO BE COMPLETED AT CU DENVER

Based on successful completion of 60 applicable transfer credits <u>and</u> 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 Foreign Language proficiency requirement. Students must demonstrate foreign language proficiency through a 2nd semester college-level course equivalent (e.g., SPA 112 or ASL 122), proficiency testing through CU Denver's Department of Modern Languages, or submitting their high school transcript demonstrating completion of a 2nd year (Level II) high school course with a minimum grade of "C-" (1.7) in the 2nd semester of the 2nd year. Students who have not fulfilled this requirement must work with a CU Denver CLAS Academic Advisor to modify this plan.

Students must not exceed 56 hours in their major.

Year Three	Fall	CRS
	CHEM 3111 PE & 3118 PE	5
	MATH 3511 PE or 2421 PE (see CHEM advisor)	4
	CHEM 3498 PE	2
	Upper-Division General Elective	3
	Total Credit Hours	14

Spring	
CHEM 4511 & 4518 PE	
CU Denver Core Cultural Diversity	
Upper-Division General Elective	
Upper-Division General Elective	
Upper-Division General Elective	
Total Credit Hours	

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

Spring	
CHEM 3011 PE	
CHEM 4121 & 4128 PE	
CHEM 3018 PE or CHEM 4828 PE	
Upper-Division General Elective	
Total Credit Hours	13

^M Major Course Available CU Denver Core Course PE Prerequisite Enforced PR Prerequisite Recommended