

# SCIENCE (6-12) LICENSE, BA

## Introduction

Please click here (<http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/school-education-human-development/>) to see School of Education & Human Development information.

The Education and Human Development major with a Secondary Science license focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their teaching and research in secondary science education. They will provide you with a robust knowledge base and relevant learning experiences in transforming deep content knowledge into learning experiences for learners across multiple cultural contexts as it relates to teaching youth in grades 6 through 12. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnering with schools to prepare teachers.

The secondary science program ensures that you will develop deep content knowledge across a number of disciplines important to become a successful science teacher with courses in physics, biology, chemistry and Earth sciences. You will also be prepared with the methods and foundations coursework that will make you a highly effective, innovative and compassionate secondary science teacher skilled in improving student performance and reaching the needs of today's diverse learners in a variety of school settings. You will have the skills to be a teacher leader. CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

## Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

## Declaring This Major

- Click here (<http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/school-education-human-development/#policiestext>) to go to information about declaring a major.

## General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (<http://catalog.ucdenver.edu/cu-denver/undergraduate/graduation/>)
- CU Denver Core Curriculum (<http://catalog.ucdenver.edu/cu-denver/undergraduate/graduation-undergraduate-core-requirements/>)
- School of Education and Human Development Graduation Requirements (<http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/school-education-human-development/#graduationrequirementstext>)
- Click here (<http://catalog.ucdenver.edu/cu-denver/undergraduate/academic-policies-procedures/>) for information about Academic Policies

## Program Requirements

- Students must complete a minimum total of 126 semester hours for the EDHD Secondary Science Education Track.
- Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see the SEHD website.)
- A minimum of C- is required for all Science content courses.
- A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD - Secondary Science Education requirements unless otherwise specified.
- Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
- Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
<b>Major Courses</b>		
CLDE 2000	CLDE Foundations <sup>1</sup>	3
EDFN 1000	Equality, Rights & Education	3
	or LCRT 2000 Rebels, Villains, & Superheroes: How Children's Literature Shapes Our Identities	
	or LCRT 3815 Once Upon a Time: Family Literacies in Culturally Diverse Communities	
HDFR 1010	Life Span Development in Ecological Settings	3
	or HDFR 2110 Child Ecology	
	or HDFR 3050 Children's Thinking and Assessment	
SCED 4340	Equity & Culture in Science Education: Local/Global	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education <sup>1</sup>	3
CLDE 4020	Responsive Classroom Communities <sup>1</sup>	3
EDHD 1930	Community Based Field Experience & Seminar <sup>1</sup>	3
EDHD 2930	Learning & Development Field Experience & Seminar <sup>1</sup>	3
EDHD 3930	Diverse Learners Field Experience & Seminar <sup>1</sup>	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms <sup>1</sup>	3
<b>Content Courses</b>		
A minimum grade of C- or higher is required in each course.		
MATH 1110	College Algebra (or higher)	4
BIOL 2010	Organisms to Ecosystems (Gen Bio)	3
BIOL 2020	Molecules to Cells (Gen Bio)	3
CHEM 2031	General Chemistry I	3
CHEM 2061	General Chemistry II	3
GEOL 1073	Physical Geology: Surface Processes	3
GEOL 1074	Physical Geology: Surface Processes Laboratory	1
PHYS 2010	College Physics I	4
	or PHYS 2311 General Physics I: Calculus-Based	

PHYS 2020	College Physics II	4
or PHYS 2331	General Physics II: Calculus-Based	

**Tracks**

Select all courses in one of the following tracks: 8-11

Biology Track (p. 2)

Chemistry Track (p. 2)

Environmental Sciences/Geology Track (p. 2)

Physics Track (p. )

**Professional Year Courses**

A minimum grade of B- is required in each course.

SPED 4400	Universal Design for Learning (UDL)	3
LCRT 4100	Secondary Literacy Instruction and Assessment	3
STME 4020	Learning and Assessment in STEM: Embracing Design Thinking	3
STME 4030	Exploring Approaches to STEM Education: Making Student Learning Visible	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6

**General Electives**

Additional General Electives hours may be needed to reach the required 126 hours for the BA.

**Total Hours** 94-97

<sup>1</sup> Courses require a grade of B- or better; all other courses require a grade of C or better.

**Biology Track**

Code	Title	Hours
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	1
BIOL 2021	Molecules to Cells Lab (Gen Bio)	1
CHEM 2038	General Chemistry Laboratory I	1
CHEM 2068	General Chemistry Laboratory II	2
Select two additional upper-division (3000-level or above) BIOL courses (minimum of 6 credits)		6
<b>Total Hours</b>		<b>11</b>

**Chemistry Track**

Code	Title	Hours
CHEM 2038	General Chemistry Laboratory I	1
CHEM 2068	General Chemistry Laboratory II	2
Select two additional upper-division (3000-level or above) CHEM courses (minimum of 6 credits)		6
<b>Total Hours</b>		<b>9</b>

**Environmental Sciences/Geology Track**

Code	Title	Hours
BIOL 2021	Molecules to Cells Lab (Gen Bio)	1
or CHEM 2038	General Chemistry Laboratory I	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	1
or CHEM 2068	General Chemistry Laboratory II	

Select two additional upper-division (3000-level or above) ENVS or GEOL courses (minimum of 6 credits)

**Total Hours** 8

**Physics Track**

Code	Title	Hours
PHYS 2321	Intro Experimental Phys Lab I	1
PHYS 2341	Intro Experimental Phys Lab II	1
Select two additional upper-division (3000-level or above) PHYS courses (minimum of 6 credits)		6
<b>Total Hours</b>		<b>8</b>

To review the Degree Map for this program, please visit our website (<https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/>).