

ANATOMICAL SCIENCES EDUCATION (CERTIFICATE)

Overview

The anatomical sciences are an essential portion of education for health science professional programs; however, recent studies have shown a decrease in anatomy educators qualified and trained to teach anatomy in the United States. The Anatomical Sciences Education Certificate in the **Modern Human Anatomy Program** (<http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/modern-human-anatomy-ms/>) provides formalized coursework and instruction, which ensures that students graduating from the Modern Human Anatomy program (<http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/modern-human-anatomy-ms/>) with the certificate have the level of competence necessary to become university instructors or community college professors.

The Certificate in Anatomical Sciences Education within the Master of Science in Modern Human Anatomy (<http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/modern-human-anatomy-ms/>) curriculum provides students with the pedagogical foundations, mentoring, and practice necessary to become effective educators in the anatomical sciences. While the certificate curriculum and the Modern Human Anatomy Master of Science (<http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/modern-human-anatomy-ms/>) (parent program) share a common 1st year curriculum, the curricular differences occur in the 18# credit 2nd year required coursework. Certificate students must follow a 2nd year curriculum dedicated to the study, practice, and scholarship of anatomical education, including an 8-credit capstone project with an educational component. This focused certificate curriculum provides a direct pathway for students to become educators at the community college, university, and professional school levels.

Admissions Requirements

The Certificate in Anatomical Sciences Education is offered only to degree-seeking students in the Master of Science in Modern Human Anatomy (MHA) program. MHA students are required to apply to the certificate program.

Those interested in applying for the Certificate in Anatomical Sciences Education must complete the following requirements:

- Take and pass ANAT 6412 Foundations of Teaching (1) and at least 8 credits out of the following Fall semester courses: ANAT 6205 Imaging and Modeling (4), ANAT 6310 Neuroanatomy (4), ANAT 6321 Human Histology (4).
- Take and pass ANAT 6111 Human Gross Anatomy, and ANAT 6330 Human Embryology, in the Spring Semester. Please Note: decisions of admittance to the teaching certificate are usually made before the Spring Semester courses have been completed. Matriculation into the teaching certificate will be contingent on spring course performance.
- Complete the online application, which will be sent out by the Directors of the Certificate in Anatomical Sciences Education during the Spring Semester. The application consists of short essays detailing the student's motivation for pursuing the certificate and

how participation in the certificate will contribute to the student's education and career goals.

Meeting the above requirements does not guarantee admission into the Teaching Certificate.

Certificate Requirements

Please note: Year 1 Summer, Year 2 Fall, and Year 2 Spring are flexible, and courses can be taken in many orders and combinations.

First Year

Year 1		
Fall		Hours
ANAT 6412	Foundations of Teaching	1
Hours		1
Spring		
N/A		
Hours		0
Summer		
ANAT 6950	MSMHA Capstone Project	2
Hours		2
Total Hours		3

Second Year

Year 2		
Fall		Hours
ANAT 6600	Experimental Design and Research Methods	1
ANAT 6911	Advanced Teaching Practicum	3
ANAT 6950	MSMHA Capstone Project	3
Hours		7
Spring		
ANAT 6490	Advanced Teaching in Anatomical Sciences	3
ANAT 6950	MSMHA Capstone Project	3
Certificate Approved Elective		3
Hours		9
Total Hours		16

Learning Objectives

The Anatomical Sciences Education Certificate trains graduate students to be capable and skilled educators who are successfully able to:

- 1) Understand and apply research-based pedagogical theory in the anatomical sciences
 - a. Discuss and analyze research-based pedagogy literature.
 - b. Understand frameworks for making curricular decisions.
 - c. Develop content-based instructional materials using pedagogical theory.
- 2) Teach anatomical sciences at a professional level
 - a. Develop content-based instructional and pedagogical skills.
 - b. Implement active learning techniques and investigate the impact of teaching for diversity in health science programs.

c. Apply pedagogical theories to practice in a professional program.

3) Develop professionally through structured mentorship by Academy of Medical Educators faculty

- a. Incorporate faculty feedback in teaching methods.
- b. Incorporate faculty feedback in educational materials.

Courses

ANAT 6412 - Foundations of Teaching (1 Credit)

This course will provide students with training, practice, and constructive feedback in effective teaching skills in order to be successful in the biomedical professions. Topics include learning objectives, the neurobiology of learning, assessments, and effective communication within and outside the classroom.

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Fall.

ANAT 6490 - Advanced Teaching in Anatomical Sciences (3 Credits)

This course offers a hands-on, supervised experience as an anatomical sciences educator. Readings and discussions will enhance your understanding of educational pedagogy. You will apply these skills as you develop and deliver lecture and lab content in a classroom setting. Instructor consent required.

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Fall, Spring.

ANAT 6600 - Experimental Design and Research Methods (1 Credit)

In this course, students will foster and apply strategies that enable critical evaluation of any published research (including basic, clinical, and educational), as well as develop the skills necessary to conduct and appropriately analyze their own research data.

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Fall, Summer.

ANAT 6911 - Advanced Teaching Practicum (1-4 Credits)

Hands-on teaching course in which students apply pedagogical theories to practice in a professional program as a teaching assistant, lecturer or other instructional position. Pre-requisite: ANAT degree-seeking student; ANAT 6412

Grading Basis: Letter Grade

Repeatable. Max Credits: 4.

A-GRAD Restricted to graduate students only.

Typically Offered: Fall, Spring, Summer.

ANAT 6950 - MSMHA Capstone Project (1-12 Credits)

The Capstone project is a scholarly and/or research-based pursuit of knowledge and content development in the area of anatomical sciences, modern imaging and modeling technologies, and educational science completed as part of the MS in Modern Human Anatomy. Prerequisite: Must be ANAT degree-seeking student.

Grading Basis: Letter Grade with IP

Repeatable. Max Credits: 12.

Additional Information: Report as Full Time.

Typically Offered: Fall, Spring, Summer.

Contact Us

Chelsea Lohman, PhD

Assistant Professor, Department of Cell and Developmental Biology
Chair, Certificate in Anatomical Sciences Education

chelsea.lohman@cuanschutz.edu

(chelsea.lohmanbonfiglio@cuanschutz.edu)

303-724-0837

Jennifer Thurston, MPA

Academic Services Program Director

Jennifer.thurston@cuanschutz.edu

303-724-5902

Policies

Please refer to the Graduate School Policies page (<http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/#policiestext>).