Course Syllabus

Course Syllabus & Schedule

Course Director

Lisa MJ Lee, PhD

Email*: **Lisa.L.Lee@cuanschutz.edu*** **(mailto:Lisa.L.Lee@cuanschutz.edu)**

On-Campus Office: Fitzsimmons Building N5207C

Virtual Office: **https://ucdenver.zoom.us/j/4745456212** **(https://ucdenver.zoom.us/j/4745456212)**

Office Hours: Email for an appointment

Best way to make an appointment:

- *Email a list of your available time slots for 2-3 days to Dr. Lee*.
- "I am available any time I am not in class" is not helpful for scheduling appointments.
- *Dr. Lee will send an outlook invitation as a way of scheduling a meeting.*

  Please make sure the MS outlook on your computer, laptop, digital devices are set to MST!

  Unless specifically requested, each appointment will be for 30 minutes.

- Here's an email template for your convenience:

"Dear Dr. Lee, I would like to schedule an appointment to discuss _____. My availabilities are as follows:

9/10: Noon-2pm; 4-5pm

9/11: 11am-12pm; 4-5pm

9/12: 3-5pm

9/13: 11am-2pm

Thank you,

SoAndSo"

Embryology Curriculum & COVID-19 Cautions

Welcome to embryology!

The course will be remote for the first unit of the course from 1/25 to 2/22.
The class zoom link: **https://ucdenver.zoom.us/j/98778487948 (https://ucdenver.zoom.us/j/98778487948)** **(https://ucdenver.zoom.us/j/4745456212)** The course may resume on campus starting from 2/24, in which case, each individual to abide by the campus COVID-19 policies and guidelines (**https://www.cuanschutz.edu/coronavirus** **(https://www.cuanschutz.edu/coronavirus)**).

Teaching Assistants

2nd year MHA student will serve as Teaching Assistant. They will run optional and mandatory review sessions and may be available for extra assistance. Please contact them directly for assistance outside of scheduled class time. As part of their professional development, you will be asked to evaluate TAs once at mid-term and once before the final. Providing detailed, thoughtful, and constructive feedback will be mutually beneficial for TAs and students.

1. Ben Rajic: **benjamin.rajic@cuanschutz.edu (mailto:benjamin.rajic@cuanschutz.edu)** ("full-time")
2. Megan James: **megan.james@cuanschutz.edu (mailto:megan.james@cuanschutz.edu)** ("part-time")

Student Educators

Two 2nd year MHA students will each deliver a lecture and an active review session (during Lab, Review, Integration) as a part of the ANAT 6490 – Advanced Teaching in Anatomical Sciences elective. They are supervised by the course director and other faculty in developing their contributions to this course. You will be asked to evaluate each student educator, as part of their professional development. Thank you in advance for providing detailed, thoughtful, constructive feedback to your peers.

1. Ben Rajic: **benjamin.rajic@cuanschutz.edu (mailto:benjamin.rajic@cuanschutz.edu)**
2. Megan James: **megan.james@cuanschutz.edu (mailto:megan.james@cuanschutz.edu)**

About Anatomy 6330 (Human Embryology):

Welcome to Anatomy 6330. This is a graduate-level introductory human embryology course designed for students with basic training in cell/molecular biology, physiology and human histology. The main goal of the course is to provide basic fundamental embryology concepts upon which to build broader and deeper knowledge and appreciation for anatomical sciences, as students progress in their respective academic careers.
This course is designed for mature, self-driven, and proactive professional adult learners.

Educational Goals & Learning Objectives

By the end of the course, students will be able to

- Evaluate and assess the developmental process of human embryonic and fetal periods.
- Analyze congenital abnormalities to deduce the aberrant developmental process(es) that may have led to the clinical features and phenotypes.
- Integrate histology and apply embryology to adult human gross anatomy.
- Appraise current embryology educational resources and formulate a better/novel resource or presentation.

** More detailed learning objectives, goals, and study guides are available for each lecture – they are posted in Canvas.*

Location

All **virtual classes** for the first unit of the course (1/25-2/17) will be held in Zoom: **https://ucdenver.zoom.us/j/98778487948 (https://ucdenver.zoom.us/j/98778487948)**

(https://ucdenver.zoom.us/j/98778487948) All **on-campus** classes will be held in **Ed2 North Room 1107** on Anschutz Medical Campus.

Unit 2 and final exams are administered on-campus in the computer lab in **Ed2 North, 2201ABDE** on Anschutz Medical Campus.

Credits

This is a 3 credit hour course, with most of the synchronous class times utilizing active learning to promote content mastery, long-term retention, and synthesis. Successful completion of ANAT 6330 fulfills a core requirement of the MS Modern Human Anatomy program.

Prerequisites and Enrollment Restrictions

Students must be enrolled in the Masters of Science in Modern Human Anatomy program, or have special permission from the course director. While undergraduate cell/molecular biology, physiology, histology, and gross anatomy are not prerequisites, having had some exposure to these subjects prior to Anatomy 6330 will be advantageous.

Learning Management System

All course materials and announcements will be posted on Canvas; it is the students' responsibility to regularly monitor Canvas notifications (at least once/day).

Course Organization & Learning Strategies

The course is divided into 3 Exam Blocks, each block contains approximately six major embryonic concepts. Because this course runs simultaneously with the Human Gross Anatomy course, efforts have been made to correlate and reinforce topics covered in the two courses to promote the integration of the anatomical sciences subjects.

Generally, class time will be spent on reinforcing key concepts through retrieval, mini-lectures, small-group problem-solving sessions, and structured Q&As.

Although the classes will be recorded, note that most of the class time will be spent on activities rather than didactic lectures, therefore the "substance" of the recordings will be minimal.

Because successful performance in this course requires students' active engagement, it is EXTREMELY IMPORTANT to complete prework assignments (watching assigned tutorial videos and/or reading the assigned textbook chapters) before coming to class.

Not all textbook and/or video tutorial materials may be covered during the allotted class time. It is the students' responsibility to adequately master all embryology concepts specified in the learning objectives.

Students' Responsibilities

Students taking this course are professional or pre-professional adult learners and as such, they are expected to take responsibility for their own learning by engaging in active learning, peer teaching, class discussion, and problem-solving activities, as well as helping to create a suitable atmosphere for learning.

Students are expected to:

- Attend and be present in all scheduled virtual and on-campus classes, and TA-led review sessions
- Arrive on time. Classes will start promptly at 9:00 am. If late to the on-campus class, the student should enter quietly through the back door and take care to minimize disturbance to his or her classmates.
- If late to the class, the student should wait until a break to ask content-related questions in class, in case the same question may have already been discussed beforehand.
- Silence cell phones. For an urgent call, the student should step outside of the classroom quietly.
- Read the textbook material or prework tutorial BEFORE each class.
- Report any activities in or outside of class that are perceived as a violation of student honor code and/or professionalism (particularly those disruptive to learning) to the course-director or the TA immediately
- Seek help immediately. It is extremely important that students seek help from the instructor as soon as they realize they may be struggling with the course.

Please do not hesitate to contact any member of the teaching team for help with the content, tips on how to study in the most efficient and effective way

- Provide constructive feedback on the course and its teaching team.

Schedule:

Class begins **Tuesday, January 25th, 2022** and ends with the Final Exam on **Thursday, May 19th, 2022**. The course meets weekly, **on most T (9 am to 11 am)** and **Th (9 am to 10 am/11 am)**. A detailed schedule is provided at the end of this syllabus and will be posted in Canvas; ***please pay close attention to the schedule on Canvas, as meeting days, times, and locations may change***.

Required & Recommended Course Materials

The items outlined below may be available at the CU-AMC Bookstore, or can easily be purchased online or from the 2nd year class. All the required materials should be acquired before the beginning of the class and no later than the 2nd day of class.

Learning Materials

Students are required to read the assigned sections or chapters of the required textbook and/or watch the assigned tutorial videos before each lecture; the assigned materials should be your **primary** reference source for course content; students should complete the prework advance of the lecture, and refer to them again as needed.

Required Text

1. **Langman's Medical Embryology, 14th LWW.** Previous editions are suitable, but course materials will reference pagination or chapters in the 14th Edition.

Recommended Text

1. ***The Developing Human***, Moore and Persaud, 8th or 9th Saunders
2. **Larsen's Human Embryology**, 4th Elsevier

** The Course Director, MHA program, and AMC-Health Sciences library have copies available to help you determine which style fits you best.*

Required technology for quizzes

1. **Personal laptop, tablet** or **desktop computer** with **webcam** and **microphone**
2. **Chrome** and **Proctorio extension installed**

All quizzes will be administered in Canvas on personal laptops, tablets, or desktop computers and require an online proctoring app called Proctorio, a Chrome extension. Proctorio records the student's computer screen, the student, and its surroundings from the start of the quiz until the quiz is submitted. The software flags any suspicious activities to the instructor.

Students understand that this remote recording device (webcam & microphone) is purchased and controlled by the student and that recordings from any private residence must be done with the permission of any person residing in the residence. To avoid any concerns in this regard, students should select private spaces for the testing. The University library and other academic sites at the University offer secure private settings for recordings and students with concerns may discuss the location of an appropriate space for the recordings with their instructor or advisor. Students must ensure that any recordings do not invade any third party privacy rights and accept all responsibility and liability for violations of any third party privacy concerns.

Proctorio setup instruction: **https://ucdenver.instructure.com/courses/380079/pages/getting-started-with-proctorio-student-guide**

Examination and Grading Policy

Student progress in the course is assessed based on 3 written exams and 11 quizzes.

	Exam Block 1	Exam Block 2	Exam Block 3*	Quizzes	Total Scores
Written exam	100	100	100	100	**400**

***Exam 3 is Comprehensive (30% from exam block 3 and 70% from previous blocks)**

Each Witten Exam: 100 Points

- 80 multiple-choice questions (each question = 1pt)
- 2 essay questions (students will be given 4 essay questions from which to choose 3 to answer, each answer is worth 10pts)
- 2 hours are allotted (9:00 am – 11:00 am)

Quizzes: 10 Points each

- There will be 10-item (10-point) quizzes almost every week throughout the semester administered via Canvas (See required technology for quizzes section above)
- At the end of the semester, 1 quiz with the lowest score will be dropped from the final grade calculation

Exams 1 and 2 will cover only the material studied within the block. However, since the mastery of embryology often depends upon the retention and utilization of the previously learned material, there will be constant reinforcement. Your retention of the previously covered material may be reexamined whenever there is relevance. The final exam (Exam 3) will be comprehensive with 30% of the questions from block 3 and the rest from the previous 2 blocks.

Scores from the exams will be made available to you as soon as possible, but it may take up to one week. The results of examinations, course grades, etc. are never given out on an individual basis prior to the time that they can be distributed to all students.

You can review your exam for 1 week after the grade is posted. During this time, students may discuss discrepant concepts (supported by the most current alternate textbooks and/or literature citations) to the TAs for compilation. The teaching team will make final decisions on the compiled list and the team's decision is final. Modifications to grades will not be discussed beyond this timeframe. No form of copying the exam or quiz materials (photo, screen capture, even taking notes) is allowed - such actions are a violation of the Student Academic Honor & Conduct Code.

Any discussions about the exam or grades must occur between the student and the instructor in a one-on-one meeting. It is a violation of FERPA for the teaching team to discuss any students' grades with anyone other than the student involved. NO adjustments to the examination will be made after the administration of the next scheduled examination; nor will students be able to review their examinations after the next scheduled exam has been administered.

Final Grade

At the end of the course, a final letter grade will be assigned according to the MHA program scale. As per program policy, a minimum grade of B- is required for the successful completion of the course.

Please be advised that the 'final grade' in Canvas does not reflect the true final course grade, as it does not account for the lowest dropped quiz score

A	93-100%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%

D+	67-69%
D	63-66
D-	60-62
F	59% and below

Make-Up Exams

In the event of a student being unable to attend the scheduled exam, he or she must contact the Course Director as soon as possible prior to the exam date.

A make-up exam is offered only for unforeseen events such as sudden and severe illness, death in the family, or any other unplanned catastrophic event (as defined by the University rules). It is the student's responsibility to let the course director know as soon as possible so that accommodation can be made. Makeup exam should be scheduled as soon as realistically possible, at a time that is mutually agreed upon between the Course Director and student. Be advised that the make-up exam format may be different from the standard exam format.
** Pre-planned vacation is not a valid reason to request a make-up exam.
** No make-up exams will be offered for failing to show up for an exam and having no valid excuse.

Code of Conduct Policy & Professionalism

Students are expected to abide by the Graduate School's Student Academic Honor & Conduct Code, as well as policies outlined in the MHA Student Handbook. Students are expected to act in a professional manner. Academic dishonesty, including cheating and sharing exam details, will not be tolerated.

Religious Holiday Accommodations

It is your responsibility to notify the Course Director by the end of the 2nd week of the semester if you anticipate a conflict between your observance of a religious holiday(s) and the requirements for this course.

Disability Services

Students with documented disabilities should inform the Course Director and have the Office of Disability Resources and Services send a letter specifying the necessary accommodations to the course director as soon as possible.

The contact information for the Office of Disability Resources and Services is as follows:

- Sherry Holden (**holden@ucdenver.edu (mailto:sherry.holden@ucdenver.edu)**)

- Selim Ozi (**ozi@ucdenver.edu (mailto:selim.ozi@ucdenver.edu)**)

Incomplete Policy

Incomplete (I) grades are not granted for low academic performance. To be eligible for an “I“ grade, you must:

- Successfully complete a minimum of 75% of the course
- Have special circumstances beyond your control that prevent you from attending class and/or completing coursework. Note that verification of special circumstances is required.
- Make arrangements to complete missing coursework with the original instructor
- If the missing coursework is not completed within 1 year from the end of the semester in which the original course was scheduled, the “I” grade will convert to an “F” grade on your official transcript.

Withdrawal Policy

The deadline for which a student may withdraw from a course is approximately one month before the finals week (April 15th for Spring 2022). Withdrawal from the course after the Add/Drop date specified by the Graduate School will result in no tuition refund and “W” will appear in the transcript.

Remediation Policy

Students who fail the course (receiving less than B-) but whose final course scores fall within the standard of deviation for the whole class will be offered an opportunity to take a remediation exam to pass the course with a grade of B-. The remediation exam format will be determined by the course director and will be comprehensive in nature.

Resolution of Conflicts

Good faith efforts will be made by students, faculty, and program and university administration to settle all appeals, complaints, and grievances on an informal basis. Such efforts include conferences between the persons directly involved and others who may help solve the problems. Formal conflict resolution policies are detailed in the policies and procedures of the Graduate School, University of Colorado Denver.

Course Schedule

* Subject to change at course director’s discretion

WEEK 1	1/25	T	9am-11am	Intro, Orientation, Anatomy Overview

	1/27	Th	9am-10am	Fertilization & Week 1
	2/1	T	9am-11am	Week 2 & 3 Development
Week 2	2/3	Th	9am-11am	Week 3 & 4 Development
	2/8	T	10am-11am	Embryonic Anatomy @ 28 DPF
Week 3	2/10	Th	9am-11am	Somites & limb development
	2/15	T	9am-11am	Somites & limb development
Week 4	2/17	Th	9am-11am	No class [gross exam 1 on Fri]
	2/22	T	9am-11am	**Exam 1**
Week 5	2/24	Th	9am-11am	Nervous System
	3/1	T	9am-11am	Pharyngeal apparatus
Week 6	3/3	Th	9am-11am	Face & Oral Cavity
Week 7	3/8	T	9am-11am	Eye & Ear

	3/10	Th	9am-11am	Eye & Ear wrap up
	3/15	T	9am-10am	Respiratory system
Week 8				
	3/17	Th	9am-11am	Body cavities & diaphragm
Week 9	3/22	T	9am-11am	No Class
Spring Break	3/24	Th	9am-11am	No Class Spring Break
	3/29	T	9am-11am	No Class [gross exam 2]
Week 10				
	3/31	Th	9am-11am	Cardiovascular I
	4/5	T	9am-11am	**No Class**
Week 11				
	4/7	Th	9am-11am	Cardiovascular II
	4/12	T	9am-11am	Review
Week 12				
	4/14	Th	9am-11am	**Exam 2**
Week 13	4/19	T	9am-11am	Gut tube

	4/21	Th	9am-11am	Liver, Pancreas, Gall Bladder
	4/26	T	9am-11am	Urinary System
Week 14				
	4/28	Th	9am-11am	Urinary system wrap up
	5/3	T	9am-11am	Reproductive system 1
Week 15				
	5/5	Th	9am-11am	Reproductive system 2
	5/10	T	9am-11am	Wrap up
Week 16				
	5/12	Th	9am-11am	Review
Week 17	5/19	Th	9:00-11:00	Embryology Final Exam