

Course Syllabus & Schedule

Course Director

Lisa MJ Lee, PhD

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Office Hours: open door, or 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 when I am not in class” is not helpful for making an appointment.

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. 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, you 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 lectures and virtual lab/review/integration sessions will be held Anschutz Medical Campus; see listing in Canvas

***Please note: class location will change throughout the semester – it is the students’ responsibility to check Canvas and come to class on time.

Credits

This is a 2 credit hour course, with lecture and virtual lab components. 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 and gross anatomy are not prerequisite, 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 your responsibility to monitor your Canvas notifications.

Course Organization & Learning Strategies

The course is divided into 3 Exam Blocks, each block containing approximately six major embryological concepts. Because this course runs simultaneous with the Human Histology course (Anatomy 6321), efforts have been made to correlate topics covered in the two courses to promote integration of the anatomical sciences subjects.

Course Organization & Learning Strategies Continued

Generally, class time will be spent on key concept reinforcement through didactic lectures, small group problem solving sessions and structured Q&As.

During the histology (ANAT 6321) Lab, Review and Integration sessions some embryology content maybe introduced for review and to help integrate embryology with histology.

Because successful performance in this course requires students' active engagement, it is EXTREMELY IMPORTANT to read the assigned textbook chapters before coming to class.

Not all textbook materials maybe covered during the allotted class time. It is the students' responsibility to adequately master all embryology concepts in the reading assignment.

Students' Responsibilities

Students taking this course are professional or pre-professional adult learners and as such, they are expected to take responsibility of 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.

- You are expected to attend all didactic lectures, TA-led lab, review and integration sessions (while this is for histology, students are encouraged to integrate embryology and ask embryology-related questions).
- Arrive on time. Classes will start promptly at 9:00am. If you are late, please enter quietly and take care to minimize disturbance to your classmates. If you are late, please wait until a break to ask content related questions – this is in case the same question may have already been discussed before your arrival.
- Silence cell phones. If you must take an urgent call, please step outside of the classroom quietly.
- Students are required to read the text book BEFORE each class.
- Report any activities in or outside of class that are perceived as violation of student honor code and/or professionalism (particularly those disruptive to your learning) to the course-director 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 ways.
- Provide constructive feedback on the course and its teaching team.

Schedule:

Class begins **Tuesday, September 1st 2015** and ends with the Final Exam on **Thursday, Dec 17th 2015**.

The course meets weekly most **T (9am to 11am) and Th (9am to 10am)**. 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. ***Please ensure that you have all the required materials before the beginning of the class and no later than the 2nd day of class.***

Textbooks

Students are required to read the assigned sections or chapters of the required textbook before each lecture; the text should be your **primary** reference source for course content; you should read the assigned pages in advance of lecture, and refer to them again as needed.

Required Text

1. **Langman's Medical Embryology, 13th Ed. LWW.** Previous editions are suitable, but course materials will reference pagination or chapters in the 13th Edition.

Recommended Text

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

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

Examination and Grading Policy

Student progress in the course is assessed based on 1 written exam and 1 lab practical exam per Block.

	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 Written 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 (9:00am – 11:00am)

Quizzes: 10 Points each

- There will be eleven, 10-item (10-point) quizzes throughout the semester administered via Canvas
- At the end of the semester, 1 quiz with the lowest score will be dropped from the final grade calculation

Examination and Grading Policy Continued

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 in the Course Director's office for 1 week after the grade is posted. During this time, please discuss any perceived errors in your grade with the Course Director. Modifications to grades will not be discussed beyond this timeframe. You may not keep your written exam, or a copy of the exam. It is an academic violation to copy or share the exam in any way.

Any questions or disputes about scores, validity of questions/answers, or any other aspect of grading or the examination must be brought to the attention of the Course Director as quickly as possible. Any discussions about the exam or grades must occur between the student and the instructor in one-on-one meeting. It is violation of FERPA for the instructor to discuss any students' grades with anyone other than the student involved. NO adjustments of the examination will be made after administration of the next scheduled examination; nor will students be able to review their examinations after the next scheduled exam has been administered.

Students are encouraged to look over their exam after each test (prior to the next scheduled exam) to discuss errors or to reinforce concepts.

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 successful completion of the course.

The Graduate School does not allow remediation therefore any grade below B- will require the student to retake the course in the following year without exception.

A	93-100%	C	73-76%
A-	90-92%	C-	70-72%
B+	87-89%	D+	67-69%
B	83-86%	D	63-66
B-	80-82%	D-	60-62
C+	77-79%	F	59% and below

Make-Up Exams

If you foresee being unable to attend of the scheduled assessments, you must contact the Course Director as soon as possible prior to the assessment date.

No make-up exams will be offered for students who fail to show up for one of the scheduled exams. No make-up lab practical exams will be given under any circumstances.

In the case of a severe illness, funeral of a close family member, personal life event or unplanned catastrophic event (as defined by University rules), a make-up written exam may be scheduled with the Course Director. The exam will be scheduled as soon as realistically possible at a time that is mutually agreed upon by the Course Director and student. The Course Director will provide advanced notice of the make-up exam format. If you also missed a lab practical exam, the make-up written exam will be weighted accordingly to compensate.

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 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 to 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 (sherry.holden@ucdenver.edu)
- Selim Ozi (selim.oz@ucdenver.edu)

Incomplete Policy

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

- 1) Successfully complete a minimum of 75% of the course
- 2) Have special circumstances beyond your control that prevents you from attending class and/or completing coursework. Note that verification of special circumstances is required.
- 3) Make arrangements to complete missing coursework with the original instructor
- 4) 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

Deadline for which a student may withdraw from a course is approximately one month before the finals week (Nov 18th for Fall 2016). 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.

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	8/30	T	9am-11am	Intro, Orientation, Anatomy Overview
	9/1	Th	9am-10am	Fertilization & Week 1
Week 2	9/6	T	9am-11am	Week 1 & 2 Development
	9/8	Th	9am-10am	Week 3 Development
Week 3	9/13	T	9am-11am	Neurulation & Folding
	9/15	Th	9am-10am	Mesodermal fate map
Week 4	9/20	T	9am-11am	Body cavities & diaphragm
	9/22	Th	No Class	
Week 5	9/27	T	9am-11am	Somites & limb development
	9/29	Th	9am-10am	Review
Week 6	10/4	T	9am-11am	Exam 1
	10/6	Th	9am-10am	Nervous System
Week 7	10/11	T	9am-11am	Cardiovascular I
	10/13	Th	9am-10am	Cardiovascular II
Week 8	10/18	T	9am-11am	Face & Oral Cavity
	10/20	Th	9am-10am	Respiratory system
Week 9	10/25	T	9am-11am	Pharyngeal apparatus
	10/27	Th	9am-10am	Gut tube
Week 10	11/1	T	9am-11am	Liver, Pancreas, Gall Bladder
	11/3	Th	9am-11am	Review
Week 11	11/8	T	9am-11am	Exam 2
	11/10	Th	No Class	

Week 12	11/15	T	9am-11am	Urinary System
	11/17	Th	9am-10am	Urinary system wrap up

Week 13	11/22	T	No Class	
	11/24	Th	Thanksgiving Holiday – no class	

Week 14	11/29	T	9am-11am	Reproductive system 1
	12/1	Th	9am-10am	Reproductive system 2

Week 15	12/6	T	9am-11am	Eye & Ear
	12/8	Th	9am-10am	Review

Week 16	12/15	Th	9:00-11:00	Embryology Final Exam
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