Human Embryology (ANG6930) Syllabus – Fall 2020

Meeting Times:	Tuesday 10:40am-12:35pm (4 period)		
	Thursday 11:45am-12:35pm (4-5 period)		
	Synchronous Virtual Meetings (links posted on Canvas)		
Instructor:	Dr. Valerie Burke DeLeon		
	Department of Anthropology		
	University of Florida		
Email:	<u>vdeleon@ufl.edu</u>		
Virtual Office Hours:	Wed 9:00am-12:00pm (links posted on Canvas)		

Welcome to Human Embryology! This will be the first time that this course is presented in a virtual environment, but I'm confident we will make this work to our advantage. I am planning to hold synchronous virtual meetings on Zoom during our normally scheduled time. Our discussions will usually be casual, so you should plan to find a comfortable, moderately quiet place to participate. Pets are particularly welcome to join us. Random people in the background will also join us from time to time, from my home and possibly yours, so don't take this too seriously. Disruptions will happen. My goal is to make this a fun and informative deep dive into the origins of biological variation. I hope you will come to love this topic as much as I do!

Course Description: This course combines self-directed study of human anatomy with lectures on human embryology and review of literature on comparative embryology. Prior knowledge of human or mammalian anatomy is useful but not required. Our study of embryology will depend on anatomical vocabulary and a general understanding of spatial relationships. The primary goal of this course is to develop an intuitive understanding of embryological processes using humans as a model system. We will focus on embryology (tissue level processes), with less emphasis on developmental biology (molecular processes). We will adopt a systemic approach to the body, and for each system will discuss a paper addressing that system in a comparative or clinical context. Students will take turns each week presenting assigned journal articles for discussion. Grades are based on weekly quizzes, two written exams, and submission and presentation of a literature review paper.

Course Objectives:

- 1) You will become fluent in the terminology and vocabulary used to describe human embryology.
- 2) You will be able to trace the origin and destination of specific cells and tissues from the zygote to definitive organ structures.
- 3) You will be able to describe the spatial relationships of important embryological structures and recognize them in 2D and 3D images.
- 4) You will apply your knowledge of embryology to describe sources of phenotypic variation (in both phylogenetic and clinical contexts).

Course Materials:

Required text: Schoenwolf GC, et al (2014) Larsen's Human Embryology, 5th ed. Elsevier/Churchill Livingstone.

This is the textbook that will provide the basis for instruction. If you can get access to an earlier edition of the text (e.g., 4th edition), that would be sufficient. Reading assignments *in preparation for* each Tuesday lecture are noted in the Course Schedule below. Boxes in the text provide interesting information and context, but are not required reading unless specified. Additional journal articles will be assigned for reading each week and provided through library links or available for download through Canvas (our course management system).

<u>Self-directed study of Anatomy</u>: Prior to each Tuesday lecture, students should review the anatomical study material presented in Canvas for that week (no anatomic material in preparation for Week 1). Competency is demonstrated by achieving a perfect score on the weekly Online Quizzes. Quizzes are available in Canvas. Quizzes should be completed without referencing any study materials. Quizzes can be repeated multiple times, and feedback will be provided, until a score of 100% is achieved.

Journal articles for discussion: Each Thursday, one student will present a journal article for discussion. Students may present the suggested article, or may propose a different article for discussion (with prior approval). The sign-up sheet and format for presenting articles will be discussed on the first day of class.

<u>Literature review project</u>: All students will choose an embryology-related topic of their choice (subject to approval by Dr. DeLeon) and conduct a literature review on the topic. Each student will prepare and present a 15-20 minute Powerpoint presentation to share the highlights of their literature review with the class. Presentations will be shared with the class on the last full week of class. Parameters and expectations for the presentations will be discussed in class. These are intended to be fun and informative, so please talk to Dr. DeLeon in advance if you have any concerns about this requirement.

Grading: Grades are based on **midterm (20%)** and **final (30%)** exams. Thirty-six percent (**33%**) is based on completion of the online quizzes (11 x 3%), and seventeen percent (**17%**) of your grade is based on presentation of the literature review project. **Exams** will be a combination of objective (true/false and multiple choice) and subjective (short answer and essay) questions. Content includes information discussed in class (derived from the text and from assigned articles). Daily objectives will be distributed to help direct your studying. The final exam is cumulative. Make-up exams <u>may</u> be allowed under extraordinary circumstances.

<u>Communication</u>: Canvas email is the best way to reach Dr. DeLeon about the course.

Attendance: Our learning environment depends heavily on discussion, and each student has a responsibility to attend and contribute to the class. Attendance is required. If you anticipate any disruption to your attendance in synchronous virtual meetings, please contact Dr. DeLeon to discuss solutions. If you have to miss a class, please make arrangements in advance. Repeated, unexcused absences will each result in a grade deduction of five (5) percentage points.

<u>Statement Regarding Course Recording</u>: Our class sessions may be audio visually recorded for students in the class to refer back to and for use of enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or

image recorded. If you are unwilling to consent to have your profile or video image recorded, keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded. If you are unwilling to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

<u>Accommodation for Student with Disabilities</u>: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. This class supports the needs of different learners; it is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester.

<u>Course Evaluations</u>: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available from the Gatorevals website (https://gatorevals.aa.ufl.edu/students/). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via the evaluation system (https://ufl.bluera.com/ufl/so-eng.htm) Summaries of course evaluation results are available to students at the public results website (https://gatorevals.aa.ufl.edu/public-results/).

Honor Pledge: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (sccr.dso.ufl.edu/process/student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Course Schedule:

Date		Торіс	Reading	Quiz
September 1		Introduction to the course	skim Intro and Ch1	
	3	Introduction to Embryology	Ch 2-3; skim Ch 4	
	8	Extraembryonic tissues	review Ch 2	Quiz 1
	10	Issue: Homology	TBD	
	15	Heart and vascular system	Ch 12; skim Ch 13	Quiz 2
	17	Issue: Heart septation defects	TBD	
	22	GI/Respiratory systems	Ch 11, 14	Quiz 3
	24	Issue: Situs inversus	TBD	
	29	Urogenital system	Ch 15-16	Quiz 4
October	1	Issue: Indeterminate sex	TBD	
	6	Musculoskeletal system	Ch 8	Quiz 5
	8	Issue: Muscle homology	TBD	
	13	Review		
	15	Midterm		
	20	Limbs	Ch 20	Quiz 6
	22	Issue: Limb proportions	TBD	
	27	Nervous system	Ch 9; skim Ch 10	Quiz 7
	29	Issue: Encephalization	TBD	
November	3	Bone Growth		Quiz 8
	5	Issue: Craniosynostosis		
	10	Skull and Teeth		Quiz 9
	12	Issue: Comparative skulls		
	17	Pharyngeal arches	Ch 17	Quiz 10
	19	Issue: Cleft palate	TBD	
	24	Special senses	Ch 18-19	Quiz 11
	26	Thanksgiving	NO CLASS	
	1	present papers		
	3	present papers		
December	8	Review		
	18	FINAL EXAM	10:00am-12:00pm	