

Human Anatomy and Embryology (ANT 4930)

Syllabus – Spring 2022

Lectures: Tuesday 10:40am – 12:35pm (4-5 period) – TUR 2813
Thursday 11:45am – 12:35pm (5 period) – TUR 2813

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Office hours: TUR B374; Thursday 9:30-11:30am and by appointment

Course Description: This course is an introduction to human anatomy and embryology, covering all areas of the human body in sufficient detail to create a vocabulary and foundation of knowledge for further study. We will take a regional approach to learning the structure and function of human anatomy. The course uses embryology, evolution, and function to create a framework for understanding the complexity of human anatomy. For this course, we will cover the body in three separate units: 1) Thorax, Abdomen, Pelvis & Perineum; 2) Limbs and Body Wall; and 3) Head & Neck. The course is designed to be challenging and requires persistent effort. Success in this course requires a major commitment of time for studying outside of class. DO NOT FALL BEHIND. Dr. DeLeon is committed to supporting you in learning the material.

Course Objectives:

- 1) You will become fluent in the terminology and vocabulary used to describe the human body.
- 2) You will become fluent in the terminology used to describe the embryological origin and development of adult anatomical structures.
- 3) You will be able to identify specific structures on photos, clinical imaging (e.g., radiographs, CT, MR), 2D and 3D schematic images of the body.
- 4) You will be able to describe the spatial relationships of important anatomical structures.
- 5) You will apply your knowledge of organ structure and function to explain the normal workings of the body and mechanisms of specific clinical cases.

Course Materials:

Required text: Moore KL, Agur AM, Dalley AF. (2019) ***Essential Clinical Anatomy, 6th ed.*** Wolters Kluwer. This is the text for all required readings in the course. You are not *required* to read sections on surface anatomy (yellow boxes), medical imaging (green boxes), or clinical cases (blue boxes), unless directed to do so. Reading assignments *in preparation for* each day are indicated in the syllabus, below.

Recommended atlas: Netter (2018) ***Atlas of Human Anatomy 7th ed.*** Elsevier.

This atlas illustrates all of the adult anatomic structures that we will learn in this course. This (or any other atlas) is an invaluable resource and *strongly* recommended.

Recommended embryology text: Schoenwolf et al. (2015) **Larsen's Human Embryology, 5th ed.** Elsevier. You are *strongly* encouraged to obtain an embryology text as a reference for the large amount of embryology content in this course. All required content will be provided in lecture and homework assignments, but these complex topics are reinforced by the readings and additional images available in this text.

Class Participation: We will be using Socrative (a free, online class participation platform) to allow active participation of students in each lecture: <http://www.socrative.com>. Directions will be provided in class. Questions and discussion in lecture are strongly encouraged. Asking questions and contributing to discussion boards on the Canvas site also count as class participation.

Online Lab Component: A lab component and the ability to *explore* the body is an integral part of the anatomy learning experience. We will take advantage of excellent 3D virtual reconstructions of human anatomy available online. You will receive regular assignments to complete using online resources, all of which are free, but may require a subscription (which you can complete as part of Lab Assignment #1). You are allowed to work in parallel with classmates, but each individual must independently complete each part of each assignment. Lab assignments are submitted via the course Canvas site (<http://ufl.instructure.com>). Unexcused, late submissions of assignments are not permitted, but one lab grade can be dropped (i.e., the highest 20 lab scores count toward your final grade).

Grading: Grades are based primarily on exams for each of the three units in the course: 1) Thorax, Abdomen, Pelvis & Perineum (**20%**); 2) Limbs and Body Wall (**20%**); 3) Head & Neck (**20%**). Thirty-five percent (**35%**) of your grade is based on submission of online lab assignments (see above). The final five percent (**5%**) is based on class participation (see above) and is *entirely* at the discretion of the instructor. **Exams** will be a combination of objective (true/false and multiple choice) and subjective (short answer and essay) questions. The exams are NOT cumulative. Make-up exams will be allowed under extraordinary circumstances, including excused absences documented through the Dean of Students Office (<http://www.dso.ufl.edu>).

Study Groups: You are strongly encouraged to work in study groups (3-4 people is a good number). Although it is possible to successfully learn Anatomy on your own, peer interaction and repeatedly testing each other can aid significantly in helping you to assimilate the material. Teaching Anatomy is the best way to learn it, so you are encouraged to include classmates with different levels of prior knowledge. We will use the discussion boards on Canvas to help students sort themselves into groups. If you want to be part of a study group, but are having trouble finding one, please don't hesitate to contact the instructor.

Communication: Email is the best way to reach Dr. DeLeon (vdeleon@ufl.edu). Please use "Human Anatomy" in the subject line.

Course Evaluations: You are encouraged to share your opinions at any time with Dr. DeLeon in person or by email. In addition, students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

University Policy on Accommodating Students with Disabilities: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

University Policy on Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

Schedule:

<u>Date</u>	<u>Topic</u>	<u>Lab DUE</u>
Unit 1:	Thorax, Abdomen, Pelvis & Perineum	
Th, Jan 6	Introduction to course; Anatomical terminology <i>Read</i> pp. 1-5, 40-45 [green]; <i>skim</i> pp. 6-40	
Tu, Jan 11	Early embryology <i>Optional</i> Larsen Ch 2-4	
Th, Jan 13	Heart and circulatory system <i>Read</i> pp. 21-27, 217-250	
Tu, Jan 18	Heart embryology <i>Optional</i> Larsen Ch. 12	1
Th, Jan 20	Thorax and respiratory system <i>Read</i> pp. 183-217	2
Tu, Jan 25	Abdominal organs <i>Read</i> pp. 272-327; <i>skim</i> 253-272, 327-334	3
Th, Jan 27	Gastrointestinal embryology <i>Optional</i> Larsen Ch. 11, 14	4
Tu, Feb 1 **	Pelvis and perineum <i>Read</i> pp. 339-405	5
Th, Feb 3	Urogenital embryology <i>Optional</i> Larsen Ch. 15,16	6
Tu, Feb 8	EXAM #1: Thorax, Abdomen, Pelvis & Perineum	7
Unit 2:	Limbs and Body Wall	
Th, Feb 10	Body wall and back <i>Read</i> pp. 45-90; <i>review</i> pp. 184-201, 255-272	
Tu, Feb 15	Peripheral Nerves and Referred Pain <i>Read</i> pp. 30-40	
Th, Feb 17	Embryology of musculoskeletal system <i>Optional</i> Larsen Ch. 8 and pp 99-107	8
Tu, Feb 22	Upper limb <i>Read</i> pp. 91-183; including blue boxes	9

Th, Feb 24	Brachial plexus and function <i>Review</i> pp. 106-111	10
Tu, Mar 1	Lower limb <i>Read</i> pp. 409-497; including blue boxes	11
Th, Mar 3	Lumbosacral plexus and gait <i>Review</i> pp. 429-432, 470-472	12
	SPRING BREAK	
Tu, Mar 15	Limb embryology <i>Optional</i> Larsen Ch. 20	13
Th, Mar 17	EXAM #2: Limbs and Body Wall	14
Unit 3:	Head & Neck	
Tu, Mar 22	Introduction to head and neck <i>Read</i> pp. 499-521	
Th, Mar 24 **	Cranial nerves part 1 <i>Read</i> pp. 641-670	
Tu, Mar 29	Cranial nerves part 2; Orbit and eye <i>Read</i> pp. 531-551; <i>review</i> 641-670	15
Th, Mar 31 **	Face and temporal region <i>Read</i> pp. 521-530, 551-556	16
Tu, Apr 5 **	Nasal cavity, sinuses, and mouth <i>Read</i> pp. 557-579	17
Th, Apr 7	Embryology of the head and neck <i>Optional</i> Larsen Ch. 17, 18, 19	18
Tu, Apr 12	Ear, pharynx, and larynx <i>Read</i> pp. 580-589, 618-635	19
Th, Apr 14	Embryology of the special senses <i>Optional</i> Larsen Ch. 18-19	20
Tu, Apr 19	EXAM #3: Head and Neck	21