

UNIVERSITY OF FLORIDA
College of Health & Human Performance
Department of Applied Physiology & Kinesiology
ATR 6124 – Spring 2019

Course Title: CLINICAL ANATOMY FOR THE EXERCISE SCIENCES (3-CR)

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Course Description: This course will involve primarily human cadaver dissection. Dissection will be supplemented with required readings. The course is designed for graduate students to learn basic and advanced dissection skills along with developing a deep appreciation of human gross anatomy from a whole systems approach with the intent of practical application. Emphasis will be placed on the musculoskeletal, articular, and neurovascular systems of the human body. The role of anatomical structures as they relate to athletic injury mechanisms, evaluation, and rehabilitation will be emphasized. As is the case in any dissection course, each student should expect to spend several additional hours each week in the laboratory over and above those scheduled as class lecture time.

Course Objectives: At the completion of the course the student will be able to:

- Develop skills and proficiency related to human cadaver dissection.
- Be able to locate on the cadaver structures of the musculoskeletal, articular, neurovascular, and associated systems.
- Demonstrate the ability to identify and apply anatomical knowledge to clinical problems.
- Understand the role of these anatomical structures as they relate to athletic injury mechanism, evaluation, and rehabilitation.

Prerequisites: Human Anatomy or equivalent

Class Meeting: When: M & W 10:40am – 1:00pm

Where: Dissection – COMM Anatomy Laboratory (CG 002)

Textbooks and Other Course Materials:

The Dissector's Guide – Claudette Finley
Lecture Notes on UF/e-Learning (Canvas) System

Course Requirements: Attendance is mandatory

Quizzes: 95% of final grade; There will be weekly quizzes from the assigned readings and lectures posted to Canvas.

Professionalism: 5% of final grade, professionalism, including preparation and active participation is expected in this class. Lack of professionalism and/or failure to prepare and participate will result in **loss** of credit.

Grading:

A	= \geq 90	C+	= 76-79	F	= <60
B+	= 86-89	C	= 70-75		
B	= 80-85	D	= 60-69		

Additional information on UF grading policies can be found on the undergraduate catalog web page: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html> or <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

POLICIES AND PROCEDURES:

1. Students requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.
2. **Attendance and make-up exams/quizzes:** Attendance and punctuality is expected and mandatory. Make every effort to attend class. Attendance will directly affect your grade. No makeup examinations or quizzes will be given without a serious and/or compelling reason. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.
3. **Course evaluation:** Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online 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.
4. **Academic misconduct:** Any student found guilty of academic misconduct will receive an "E" grade for this course. Academic misconduct includes cheating on exams, using notes, copying another's work, etc. There will be no deviation from this policy.
5. **The Honor Code Pledge:** We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty 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 (<https://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 obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class.
6. The phone number and contact site for university counseling services and mental health services: 392-1575, <https://counseling.ufl.edu/>. University Police Department: 392-1111 or 9-1-1 for emergencies.

Laboratory Materials: Gloves will be provided. Each student must purchase a white laboratory coat and/or surgical scrubs. These items may be purchased at the Health Science Center Bookstore.

General Guidelines:

- A. **Instructional Procedures** – Prior to laboratory dissection every student MUST read and sign the **Pledge of Respect** form. Also, you will be expected to review the laboratory procedures

and cadaver care instructions available on-line at <http://www.medinfo.ufl.edu/year1/ha/labpros.shtml> and <http://www.medinfo.ufl.edu/year1/ha/cadavers.shtml>. The laboratory dissection will comprise the majority of the time. In addition to dissection of the cadavers, students will be responsible for learning the bony landmarks on the skeletons and bones available in the laboratory. It will be imperative that each student review the material from the preceding lectures and completes the assigned readings prior to dissection.

- B. Cadavers – We are extremely fortunate to have access to cadavers and the anatomy laboratory. In most cases, the cadavers are faithfully willed to the medical school for the purpose of enhancing medical training and knowledge. The cadavers must be treated with your utmost care and respect at all times.
- C. Cadaver Care – Cadavers are subject to mold and drying. At the beginning of each lab session the cadavers should be thoroughly observed for mold; it can best be dealt with if treated before it is widespread.
1. Exposed areas should be lightly sprayed and wrapped with moist towels at the end of each lab session.
 2. Body bags should be zipped at the conclusion of all lab sessions to avoid exposure to air.
 3. No tools should be left attached to the cadaver when they are not being used.
 4. Toe tags must remain on the cadavers at all times.
- D. Dissecting Guidelines:
1. Students will be free to dissect as they need to in order to thoroughly observe and study all components of each body region.
 2. **Each group is required to have a dissector's guide open at all times.**
 3. The opportunity to dissect should be available equally to all students. One person should read from the dissector's guide as the other dissects. Students should rotate jobs every other class.
 4. Know what you are looking for and what you intend to cut before dissecting.
 5. Know origin, insertion, action, vascular supply and innervation of each muscle before it is cut. Do not remove any structures unless instructed to do so. In most cases, you will reflect superficial structures so that you can access deep structures. Those structures that are reflected should be replaced at the end of each laboratory session. The goal of dissection is to reveal and preserve all possible detail.
- E. Facilities & Additional Information: We are very fortunate to have access to the anatomy laboratory. This is a privilege. However, it is our responsibility to keep the room clean and to comply with the OSHA (Occupational Safety and Health Administration) standards.
1. Each group will be responsible for the upkeep of their general area. There should not be any debris remaining on the floor or dissecting table – **THIS INCLUDES BODY TISSUE**. However, once a week the laboratory must be mopped and wiped down with a disinfectant cleaning solution. This job will be rotated by dissection groups.
 2. Three types of waste containers will be available in the lab. It is imperative that these items are used appropriately: a) **standard garbage can** – used for paper towels, gloves, etc.; b) **biohazardous waste can** – used only for tissue & cadaver

- parts (NO METAL SUCH AS BLADES); c) **sharps container** – used for blades (BLADES MUST NOT BE EXPOSED FROM TOP OF CONTAINER)
3. Eating and/or drinking are not permitted in the laboratory.
 4. Wearing a white lab coat (or surgical scrubs) and gloves while dissecting is required.
 5. Securing long hair away from the face is recommended.
 6. Wearing protective eye goggles while using the cast saw is required.

COURSE OUTLINE

Section I – Back and Upper Extremity

Position: prone

<u>Area</u>	<u>Pages</u>
Superficial back and posterior axilla	1-3
Posterior surface of the arm	3
Deep back and posterior neck	3-4
Sub-occipital region	4-5

Section II – Posterior Lower Extremity

Position: prone

<u>Area</u>	<u>Pages</u>
Posterior hip	5-7
Posterior thigh	7-8
Posterior leg and popliteal fossa	8-9
Sole (plantar surface of foot)	9-11

Section IV – Neck, Chest and Upper Extremity

Position: supine

<u>Area</u>	<u>Pages</u>
Lateral neck	11-13
Pectoral region	13-15
Anterior surface of the arm	15-16
Flexor surface of the forearm	17-19
Postero-lateral surface of forearm	19-21
Flexor surface of the hand	21-24
Dorsum of the hand	24

Section V – Trunk

Position: supine

<u>Area</u>	<u>Pages</u>
Anterior abdominal wall	25-26

Section VI – Anterior Lower Extremity

Position: supine

<u>Area</u>	<u>Pages</u>
Anterior thigh – adductor thigh	26-29
Anterior leg – lateral leg	29-30
Dorsum of the foot	30-32

Section VII – Joints of the Upper Extremity

Position: supine

<u>Area</u>	<u>Pages</u>
Sterno-clavicular joint	32
Acromio-clavicular joint	32
Glenohumeral joint	33
Elbow and proximal radio-ulnar joint	33-34
Distal radio-ulnar, wrist (radio-carpal) and intercarpal joints	34
Metacarpo-phalangeal and interphalangeal joints	34

Section VIII – Joints of the Lower Extremity

Position: supine

<u>Area</u>	<u>Pages</u>
Hip joint	35
Knee and proximal tibio-fibular	35-36
Ankle and distal tibio-fibular joints	36-37
Inter-tarsal joints	37
Joints of the foot and phalanges	37

Section IX – Intra-Abdominal and Thoracic Regions

Position: supine

<u>Area</u>	<u>Pages</u>
Lumbar plexus	38-39
Lungs	39-41
Heart	41-44
Abdominal contents	44-49

Section X – Head and Neck

Position: supine

<u>Area</u>	<u>Pages</u>
Cranium	49-50
Face	50-52
TMJ	52-53
Anterior neck	54-55

Section III – Spinal Column and Spinal Cord

Position: prone

Area
Cervical, thoracic and lumbar spine

Pages
61 – 62
