

**Western Kentucky University
Department of Allied Health
Doctor of Physical Therapy Program**

<u>Course Number:</u>	DPT 721
<u>Course Title:</u>	Gross Human Anatomy I Lab
<u>Credit Hours:</u>	1
<u>Lab Hours:</u>	9 hours/week (5 week session)
<u>Weekly Schedule:</u>	M, Tu, Th 3-5 PM; Friday 9-12 PM
<u>Office Hours:</u>	Tu, Th 12-1 PM
<u>Location:</u>	MCHC, Room 3349
<u>Instructor:</u>	Beth Norris, PT, PhD, OCS

Course Description:

Gross human anatomy cadaver lab with supervised dissection and exploration of muscle, tendon, ligament, and nerve innervation of the upper and lower extremities. Prerequisites: Open only to DPT students in good standing. Co-requisites: DPT 720

Course Objectives:

At the completion of the course content, the student will be able to:

1. Demonstrate appropriate behavior and respect during the use of the human cadaver. (CC-5.11)
2. Explain anatomical relationships using appropriate terminology during class, laboratory, and on exams.
3. Identify epithelial, connective, muscle, and nervous tissues.
4. Identify skeletal system characteristics, landmarks, and locations.
5. Identify muscles of the upper and lower extremities, including origin, insertion, innervation, and blood supply.
6. Identify the major vascular systems supplying the upper and lower extremities.
7. Diagram and identify the brachial plexus and its terminal branches.
8. Discuss the relationship of the terminal branches of the brachial plexus with muscle innervation and functional movement.
9. Identify and explain the components of the typical spinal nerve, spinal cord structure and its coverings.
10. Identify joint morphology, classification and supportive structures including ligament, tendon, capsule, cartilage, and bursa.

Course Structure:

This Laboratory course involves the study of gross human cadaver prosections with emphasis on three dimensional location and identification of anatomical structures.

Evaluation Methods:

1. **Attendance.** Attendance and promptness to class will be monitored. Students must sign in at the beginning of each lecture/presentation and document the time of arrival. One percentage point will be deducted each occurrence of tardiness and 2 percentage points will be deducted for each unexcused absence.
2. **Practical exams:** There will be one midterm laboratory practical, and one final lab practical. All exams will be comprehensive over the total material of the course and all students must take all exams. If a student does not or cannot take the final due to an emergency, then plans must be made at the discretion of the professor to complete all course work within a specified time period.

A practical exam can only be made up in the event of serious illness or death of family; in all other cases, a student must take a zero for the missed practical exam.

3. Grading:

Course Grading

The final course grade is a letter grade. The course grade will be based on the following:

Mid-Term Practical	50 points
Final Practical	<u>50 points</u>

100 points

b. Numeric and Letter Grade Translation

A	90-100
B	80-89
C	70-79
F	<70

Instructional Practices:

1. Teaching Methods

- a. Lecture
- b. Laboratory
- c. Student self-study

2. Teaching Aides

- a. White board
- b. Video
- c. PowerPoint
- d. Anatomical models, Anatomage, SynDaver, Anatomical 3D-Software
- e. Prosected human cadaver
- f. Study identification and location of human anatomy on all cadavers

DPT 721 Laboratory will consist of cadaver prosection, model utilization, anatomage table, SynDaver, 3D software and 3 dimensional identification. There will be a prosection review and outline information presented on dry erase boards or overhead screens.

Course Policies

1. Refer to WKU DPT Student Manual for the following items:

- a. Student Responsibilities
- b. Student Disability Services
- c. Copyright
- d. Academic Misconduct
- e. Religious Holidays Notification
- f. WKU Writing Center
- g. Missed Class(es)/Student
- h. Professional Behaviors

The instructor reserves the right to make changes in the course schedule as needed to accommodate guest lecturers or to alter course content.

Required Text:

1. Detton AJ. (2017) *Grants Dissector*. (16th ed.) Philadelphia. Wolters Kluwer/Lippincott, Williams & Wilkins. ISBN: 97814496313805
2. Hansen JT. (2014). *Netter's Anatomy Coloring Book*. (2nd Ed).

Recommended Text:

3. Netter, FH. (2014). *Atlas of Human Anatomy: Including Student Consult*. (6th Ed).

Anatomy Lab Policies and Procedures

Access to human cadavers is a **privilege**, which is given to each physical therapy student for his/her professional growth. It is the responsibility of every student within the lab to maintain a professional attitude and appreciate the significance of the gift each person has provided for them. All bodies will be utilized for testing, therefore care must be taken when studying them.

RULES

The following rules are set forth for all students in Gross Anatomy DPT 721/723. Failure to observe the following rules, either during class time or during self-study time may result in barring students from access to the laboratory or laboratory materials or possible dismissal from the Physical Therapy Program.

1. **Visitors are not allowed in the dissecting room at any time.**
2. In the event that a professional colleague requests permission to view the dissecting room, **permission must be obtained and the colleague must be accompanied by one of the Physical Therapy Faculty.**
3. **No photographs of the cadavers may be taken at any time.**
4. Anatomical materials must **never** be removed from the laboratory. Other than dentures, no dental work, appliances, crowns, teeth, etc. are to be removed from the cadaver.
5. Each team of students is responsible for the condition of the cadaver and must take all precautions to prevent its deterioration.
6. Return all dissected parts to their relative anatomical positions when not in use.

7. Wrap the cadaver at the end of each laboratory session with saturated towels and close bags appropriately.
8. **Smoking, eating, and drinking are not permitted within the laboratory.**
9. Radios and cameras should not be brought into the laboratory at any time.
10. The laboratory should be maintained in the neatest possible order at all times. Each student is responsible for cleaning his or her area and maintaining a safe work environment. **All spills must be cleaned immediately to prevent slips or falls.**
11. Dissection materials or any item that has contacted the cadavers must be disposed of in the waste receptacles marked **BIOHAZARDOUS MATERIALS**.
12. The doors to the Anatomy Laboratory must remain closed at all times.

SAFETY PROCEDURES IN LABORATORY:

1. The preserving fluids used to embalm the cadavers can irritate the mucous membranes and can be absorbed through the skin. While in the Cadaver lab, the following precautions should be observed:
 - a. Wear appropriate gloves, pants, lab coats, scrubs and shoes to prevent excessive skin contact.
 - b. Wash hands thoroughly after lab.
 - c. It is strongly suggested that you avoid wearing soft contact lenses in the laboratory since they are mostly water and the lenses themselves can absorb and hold formaldehyde, thus irritating the eyes.
 - d. Keep plastic covers over cadaver parts not being worked on directly in order to minimize cadavers from drying out.
2. If fluid or anatomical items should accidentally end up in your eye, immediately flush the eye using the eye wash for at least one minute.
3. Should you accidentally cut your skin, seek immediate attention from the course instructor.
4. If you ever feel lightheaded or dizzy while in the laboratory, exit the room and reenter when feeling better.

LAB PROCEDURES

The cadaver lab is small and confined. Please bring in only the materials you need for successful completion of lab. Leave bags and purses in your locker. Four to five people will be assigned to each cadaver. You will divide up into teams. Keeping the cadavers moist throughout the course of the semester is critical. Expose only the parts of the cadaver you are working on for that lab period. Use spray bottles to moisten body parts being dissected during class time.

Before Leaving Lab:

At the end of each lab session use a bottle of preserving fluid to soak the cadaver. Cover the exposed areas with soaked towels, clean the entire dissecting area, and close cadaver box. Empty fluid buckets into **BIOHAZARDOUS MATERIALS** liquid drum. Discard all materials that have contacted the cadaver in receptacles marked **BIOHAZARDOUS MATERIALS**. Wash hands thoroughly.

Choose lab clothing wisely. You will probably never wear these items again. Also be kind to your lab partners and wash them throughout the semester.

USE OF CADAVERIC SPECIMENS POLICY

Periodically throughout the semester, we will be using cadaveric specimens provided to us from the Wright State University Body Donation Program. Cadavers are donated to Wright State University following specific state and national regulations. Individuals who bequeathed their bodies to that program do so without receiving any financial compensation. Therefore, the use of these specimens for educational purposes is a privilege and should be respectful and professional. Inappropriate or disrespectful behavior will not be tolerated and the student will be asked to leave the classroom.

Preservation

Low concentrations of formaldehyde and phenol (or other chemicals with similar properties) are typically used to preserve cadavers for dissection. Formaldehyde is classified as a carcinogen; therefore, the doors to the laboratory must remain closed during cadaveric examination so that the ventilation system can properly maintain air flow and reduce your exposure to chemical particulates. Cadaver specimens are also treated with a formaldehyde neutralizer to help reduce formaldehyde vapors. However, if you are pregnant or have a respiratory condition that may be exacerbated by exposure to such chemicals, you may wish to reconsider your participation in this course.

Regulations

Failure to comply with the following regulations will result in immediate dismissal from the class.

1. The cadaver lab is a restricted area. You may not take photographs or videos at any time when cadaver specimens are being used for educational purposes. Cell phones and other technological devices with cameras are not allowed in the laboratory at any time. No exceptions.
2. No body parts or tissues may be removed from the cadaver laboratory.
3. Only those students enrolled in this course are allowed to view cadaver specimens and participate in laboratory activities. Do not bring friends or other classmates into the cadaver area as this is strictly prohibited.
4. Cadaver specimens must be locked in a secure and restricted area at all times. During classroom cadaver activities, the doors to the lab must be closed and locked.
5. Any accidents or allergic reactions must be reported to the instructor immediately.
6. Cadaver specimens are stored in specific containers with specific identifiers. Do not remove any identifying tags or security monitoring devices from the specimens at any time. This ensures that the cadaver parts from a particular donor are kept together and returned to the correct family for cremation at the end of laboratory use.

Bio-Hazard Safety Level 2 Guidelines (BSL-2)

The following guidelines must be followed to ensure your safety and the safety of your classmates during dissection.

1. Absolutely no food or drinks are allowed in the lab during cadaveric exploration.
2. Gloves must be worn at all times when handling cadaver specimens. Wash hands thoroughly prior to leaving the lab.
3. Only closed-toed shoes may be worn in the lab. Because dissecting fluids can leak onto the floor during laboratory activities, it is suggested that you designate an old pair of tennis shoes to the lab that can be discarded at the end of the course. You can also purchase disposable shoe covers if you wish to wear your regular closed-toed shoes.
4. You must wear long pants or scrubs to cover and protect your legs. Do not wear pants that drag

the ground, for this is a hazard all on its own. It is recommended that you designate an old pair of pants/t-shirt to wear during this course that can be thrown away at the end of the semester. Lab coats can also be purchased at local scrub shops or online to help protect clothing. Long hair and/or long bangs should be secured in an elastic band or with hair pins, etc.

5. It is not recommended that contact lenses be worn during laboratories involving cadaver dissection. Formaldehyde and other chemical preservatives can produce vapors that may be absorbed by the lenses. Glasses, therefore, should be worn in the place of contacts. Safety goggles are recommended to prevent splashing fluids in the eyes.
6. Each student is responsible for keeping the work area clean. All specimens must be stored in their original container prior to the end of class and all desk tops must be cleaned using the cleaning solutions provided by the instructor.
7. Tissue desiccation is always a concern when working with cadaveric specimens. Please make sure that you spray the cadaver tissue thoroughly with the solution provided to prevent drying of the tissue.

Communicable Diseases

Although the cadaver has been tested and determined to be non-reactive for Hepatitis B antigen, Hepatitis C antibody, and HIV I and II, there is no guarantee that the specimens are completely free from communicable diseases. Take care when handling the cadaver.

Participation, Preparation and Professionalism:

- a. **Expectations:** All students will be prepared for each class and participation is mandatory. Failure to participate (including non-clinical use of your phone during class) will result in an overall point loss of 1% of your grade, per occurrence. The professor reserves the right to ask you to leave class if you or your phone use becomes a disruption.
- b. **Classroom and Laboratory Housekeeping:** In accordance with the Student Manual you are responsible for maintaining and cleaning up the classroom and lab spaces. The Cadaver Lab has specific procedures posted in the lab and will be provided to you during initial lab orientation.
- c. **Communication with Professor**
If you have any questions regarding course goals, tasks, or activities, you should contact the professor to discuss them. You should be polite, professional, and courteous in all communications. Replies to your email will be within 24 hours Monday-Friday and within 48 hours over the weekend. As DPT students, you should maintain professionalism and politeness with all forms of communication. Failure to do so could trigger a Student Professionalism Concern Report (see below).

Student Professionalism Concern Report

1) Professional Responsibilities and Relationships

As a doctor of physical (DPT) student and future physical therapist, you have chosen to pursue a profession which requires personal integrity, compassion, and a constant awareness of the commitment made. Exhibiting personal behaviors consistent with a respect for this profession and having pride in your work are central tenets of professionalism. You are expected to incorporate them into your daily life. To demonstrate commitment to these responsibilities while enrolled in this course, you will be held to the professional standards listed in the Student Manual and you are expected to:

- a. Seek and accept feedback and constructive instruction from teachers, peers, and faculty in order to continually improve your educational experience, knowledge, and clinical skills.
- b. Commit to the highest standards of competence.
- c. Be mindful of your demeanor, language, and appearance in the classroom.
- d. Be accountable to all members of the WKU community, including fellow students, faculty, and support staff.
- e. Admit and assume responsibility for mistakes in a mature and honest manner and develop productive strategies for correcting them.
- f. Be considerate and respectful of others' (teachers, peers, and faculty) time, rights, values, religious, ethnic and socioeconomic backgrounds, lifestyles, opinions, and choices, even when they differ from your own.
- g. Meet the expectations for participation and timeliness.
- h. Recognize limitations and seek help when expertise, knowledge, or level of experience is inadequate to handle a situation in the classroom, hospital, or research setting.
- i. Maintain appropriate relationships with peers and faculty.
- j. Treat all members of the WKU community with respect, compassion, and dignity.
- k. Be mindful to avoid intentionally embarrassing or disparaging others.
- l. Provide feedback to others (both colleagues and superiors) in a constructive manner, with the goal of helping them to improve.
- m. Treat those who participate in the education process (e.g., standardized patients) with dignity and respect.
- n. Actively work to create an atmosphere in classrooms, clinical settings, and in laboratories that is conducive to optimal, interactive learning.

2) Professionalism Concern Process

Violation of the classroom professionalism policy may simply result in providing the student with feedback on his or her behavior. However, if the breach is significant enough, the student will be asked to leave the classroom. This will result in an unexcused absence and a 2% reduction in the student's overall grade. The professor will also complete the **Student Professionalism Concern Report Form**. Once the form is completed, the student will meet individually with the Professor to discuss the situation.

STUDENT PROFESSIONALISM CONCERN REPORT FORM

Student: _____

Professor: _____

Which of the following unprofessional behaviors has the student exhibited? Check all that apply.

- ☐ Professional Responsibilities
 - ☐ Fails to accept and internalize criticism and feedback
 - ☐ Has inappropriate demeanor or appearance in the classroom
- ☐ Professional Relationships
 - ☐ Acts disrespectfully toward others
 - ☐ Engages in disruptive behavior in class
- ☐ Professional Ethic
 - ☐ Behaves in a dishonest manner, including falsifying documentation
- ☐ Other: _____

1. Describe in detail the incident which prompted the completion of this form (attach additional pages if needed).

2. Describe previous feedback and remediation which took place prior to the completion of this form (attach additional pages if needed).

3. Student Signature: _____ Date: _____

I acknowledge that I have reviewed this evaluation with the course professor and have the following additional comments:

4. Professor Signature: _____ Date: _____

Course Policies

1. Refer to WKU DPT Student Manual for the following items:

- a. Student Responsibilities (p. 40)
- b. Student Disability Services (p. 48)
- c. Copyright (p. 42)
- d. Academic Misconduct (p. 27)
- e. Religious Holidays Notification (p. 35)
- f. WKU Writing Center (p. 48)
- g. Missed Class(es)/Student (p. 34)
- h. Professional Behaviors (p. 22)

Title IX WKU Policy

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at

<https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf>

and

Discrimination and Harassment Policy (#0.2040) at

https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf.

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.

Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and **MUST** report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.

WKU Student Accessibility Policy

"In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a Faculty Notification Letter (FNL) from The Student Accessibility Resource Center."

ADA Accommodation Statement

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Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu . Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

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DPT 721
Gross Human Anatomy I Lab

DPT 720
Gross Human Anatomy I

Content Outline

Week 1	Introduction; superficial back; scapula, shoulder, axilla, brachial plexus, and pectoral regions.
Week 2	Brachial plexus; brachium, arm, forearm, hand
Week 3	Forearm, hand, upper extremity joints, Practical Exam I Gluteal and thigh regions
Week 4	Gluteal, thigh, knee, leg regions
Week 5	Leg, foot, lower extremity joints Final Practical Exam