

FUNCTIONAL ANATOMY II
SPRING SEMESTER 2014
PHT 6188
Sections: 8713, 8721

DEPARTMENT OF PHYSICAL THERAPY
DOCTORATE of PHYSICAL THERAPY PROGRAM

COLLEGE OF PUBLIC HEALTH and HEALTH PROFESSIONS

UNIVERSITY OF FLORIDA

GAINESVILLE, FL

INSTRUCTORS:

Claudia Senesac, PT, PhD, PCS

Mark Bishop, PT, PhD

2014 Claudia Senesac, Gainesville, Florida

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FUNCTIONAL ANATOMY II
SPRING SEMESTER 2014
Credit hours: 5

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TEACHING ASSISTANTS: “dissection lab” [Insert new TA’s](#)

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COURSE DESCRIPTION: -Continuation of fall semester -
The dissection portion of this course involves the study employing lecture and laboratory sessions involving regional cadaveric dissection under the supervision of instructors. Emphasis is on the neuromuscular and musculoskeletal anatomy. Application of the basic anatomical foundations is then applied in lecture and lab with emphasis on biomechanics, joint function, muscle and boney palpation, soft tissue and joint techniques, and introduction to gait.
Course Prerequisite: Course participation is limited to entry-level DPT student in their first year of the UF program.

CLASS SCHEDULE:

| | | |
|---|-----------|--------------------------------------|
| Lecture: (G 312) | Tuesday | 7:30-9:20am (unless otherwise noted) |
| <i>Dissection</i> (PT 1104) | Wednesday | 9:35-10:25am |
| <i>Biomechanics</i> (G 312) | Thursday | 7:30-9:20am (unless otherwise noted) |
| <i>Dissection</i> | | |
| <hr/> | | |
| Labs: (CG 007) | Tuesday | A 9:35-11:30am |
| <i>Dissection</i> | | B 11:45-1:40pm |
| Begins after (PT 1104) | Tuesday | B 9:35-11:30 |
| Spring break <i>Biomechanics</i> | | A 12:50-2:45 |
| <hr/> | | |
| (CG 007) | Thursday | A 9:35-11:30am |
| <i>Dissection</i> | | B 11:45-1:40pm |
| (PT 1104) | Thursday | B 9:35-11:30am |
| <i>Biomechanics</i> | | A 12:50-2:45pm |

General Objectives:

The student will be able to.....

1. Demonstrate **appropriate affective behaviors** (at the level of 90%) during class lecture, classroom laboratory sessions, dissection lab, student presentations, and classroom and laboratory examinations. These behaviors include but are not limited to respect, consideration, communication, and professionalism. (Please refer to the generic abilities and professional development plan for more details). Students will use feedback to improve affective skills.
2. Define the anatomical and biomechanical terminology and use the terminology appropriately when discussing anatomical content in the classroom and in the laboratory.
3. Identify and locate the points of osteology as listed in the syllabus.
4. Discuss the joints of the body including classification and type, structures (ligaments and other) involved and their functions, and motions occurring at the joint.
5. Discuss the plexi indicating trunks, divisions, and cords from which each nerve emerges and give cord segments for each nerve with an asterisk.

6. Trace the course of each peripheral nerve finding branches to each muscle innervated and the cutaneous branches. Indicate the area of cutaneous innervation for each cutaneous nerve in the body per region.
7. Describe, identify and locate muscle attachments, nerve supply, and primary actions of muscles in the body per region.
8. Describe, identify and locate major arterial and venous structures in the body per region.
9. Describe, identify and locate the organs in the body per region
10. Discuss the relationship of structures in the body to one another:(arteries/veins/nerves/muscle layers/compartments/regions)
11. Explain the sequence of joint motion and muscle activity at complex joints and during complex movements
12. Explain manual therapy
13. Identify boney landmarks and muscles through palpation.
14. Discuss the mechanisms through which manual therapy may influence pain
15. Discuss the historical perspective for the use of manual therapy in physical therapy practice
16. Identify and explain definite and relative contraindications for the use of manual therapy
17. Apply biomechanical principals to use passive movements of joints arthokinematics for joint testing and interventions used by physical therapists
18. Explain and demonstrate muscle- and nerve-based interventions used by physical therapists
19. Evaluate human movement for deviations and compensations and hypothesize possible causes for these deviations
20. Design simple tests of and interventions for musculoskeletal function

TEXTS REQUIRED: These textbooks will be used both fall and spring terms:

- Senesac C: Anatomy Syllabus. Department of Physical Therapy, University of Florida, Gainesville, FL, 2014.
- Senesac CR, Bishop M: Finley's Interactive Cadaveric Dissection Guide, Jones and Bartlett 2010.
- ***You must have an Atlas, it can be any atlas BUT you must have one!**
 - Rohen, JW, Yokochi, C, Lutjen-Drecoll, E: Color Atlas of Anatomy, Seventh Edition, Williams and Wilkins, 2011. *(You must have an atlas)
 - Gilroy AM, MacPherson BR, Ross LM: Atlas of Anatomy, Thieme Medical Publishers 2008
 - Atlas of Human Anatomy: Netter
- Biel, A: Trail Guide to the Body, Third Edition, Books of Discovery, 2005

RECOMMENDED:

- Muscolino JE, Musculoskeletal Anatomy Coloring Book, 2nd edition, Mosby, 2010 (~\$27.95 softcover).

*****Many of the overheads used in the course come from this book***

EQUIPMENT AND DRESS:

A dissection kit consisting of a probe, scalpel with **handle #3 and blades #10**, hemostat forceps (5 inch), and tissue forceps (without tooth) is **REQUIRED**. You will need approximately 20- 30 blades (#10) for this semester. A wrap-around lab coat will prevent fluids from staining your clothes and is **REQUIRED**. Plastic lab coats or aprons are not satisfactory. The Florida State Anatomical Board **REQUIRES** all persons handling cadaveric materials to wear gloves (latex). A mask is optional. I recommend the molded type of mask, rather than the soft mask. These may be purchased at a local pharmacy. You must wear close toe shoes in the laboratory **NO** open toe shoes may be worn in the lab.

*If you arrive with open toe shoes you will be asked to leave the lab.

*If you do not have other required items you will be asked to leave the lab.

Classroom Laboratory Sessions: Appropriate dress, therefore, is shirt and shorts that allow free unencumbered movement of the trunk and extremities. Occasionally, sports bras will be required of the ladies; during laboratory session for the upper extremity, for example.

Instructional Methods:

- Dissection Lecture: lecture, discussion, group presentations
- Dissection Lab: guided dissection with feedback, student presentations
- Functional Lecture: lecture/discussion,
- Functional Classroom Laboratory: sessions are designed to facilitate your understanding of anatomy in the context of function and movement.

GRADING

| <u>GRADING SCALE:</u> | |
|-----------------------|---------------------|
| 93-100 = | A 4.00 grade point |
| 90-92 = | A- 3.67 grade point |
| 87-89 = | B+ 3.33 grade point |
| 83-86 = | B 3.00 grade point |
| 80-82 = | B- 2.67 grade point |
| 77-79 = | C+ 2.33 grade point |
| 73-76 = | C 2.00 grade point |
| 70-72 = | C- 1.67 grade point |
| 67-69 = | D+ 1.33 grade point |
| 63-66 = | D 1.00 grade point |
| 60-62 = | D- 0.67 grade point |
| Below 60 = | E 0 grade point |

| <u>COURSE</u> | <u>%</u> |
|---------------|------------|
| LabExam1 | 15 |
| LabExam2 | 15 |
| Quiz 1 | 5 |
| Quiz 2 | 5 |
| Quiz 3 | 5 |
| Comp1 | 5 |
| Comp2 | 5 |
| Written 1 | 20 |
| Written 2 | 25 |
| <u>TOTAL</u> | <u>100</u> |

All grades on written and laboratory examinations will be carried out to the second decimal point and recorded as such. For the final course grade, the student must achieve the full numerical grade to achieve the letter grade. For example, a final course grade of 82.99 is still a B- grade, but a final grade of 85.00 will be recorded as a B. Grades given on an exam will not be changed once a week has elapsed after handing back the graded exam. Please make an appointment to discuss individual answers. Lab exams are available for review by appointment.

***** On examination days class will begin at 7:30 AM! *****

Academic Honesty / Honor Code

In this professional program we are particularly sensitive to students submitting independent work and to using complete and accurate referencing in complying with the University of Florida Rules - 6C1- 4.017 Student Affairs: Academic Honesty Guidelines. Further details regarding the University of Florida honesty policy is available at: <http://www.dso.ufl.edu/judicial/procedures/academicguide.php> and in your student handbook. All students are required to abide by the Academic Honesty Guidelines, the following pledge has been accepted by the University and is expected of all students: **"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity"**. 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."**

Policy Related to Class Attendance

Attendance is mandatory. Please contact the instructors as soon as possible if you are unable to attend class for any reason. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis.

Policy Related to Make-up Exams

In extraordinary circumstances it may be possible to take an exam early or late. If for any reason you are unable to attend an exam at the last minute, you must notify the instructor as soon as possible. Personal issues with respect to exams will be handled on an individual basis.

Accommodations for students with disabilities

If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office (<http://oss.ufl.edu/>). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575, or Student Mental Health Services, 352-392-1171. Visit their web sites for more information: <http://www.counsel.ufl.edu/> or <http://www.health.ufl.edu/shcc/smhs/index.htm#urgent>

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations, mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: www.health.ufl.edu/shcc

Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789. *BUT – Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone - do not be afraid to ask for assistance.*

STUDENT RESPONSIBILITIES Specific to dissection:

- 1) A student is expected to attend the lecture and laboratory sessions each week for the complete scheduled class time. The student is responsible for the content in the "Anatomy Syllabus" as indicated in the course objectives. In addition, the student is responsible for selected content in "The Dissector's Guide" as indicated in the course objectives.
- 2) **The only excused absence is for illness.** If a student misses a lab because of illness, the student is expected to make up the time in the lab outside of class time. Once the time has been made up, inform Dr. Senesac in writing by email so the student is considered "excused". If a student is absent from lab without being excused by the instructor, three (3) points are subtracted from the final course grade for each absence. Other special individual circumstances may be discussed with the instructor.
- 3) Each student is responsible for an **EQUAL share** of the dissection work. If the instructor observes during class time that a student is not doing his/her share of the dissection, the student will be notified. If the problem is not corrected following the warning, five (5) points will be subtracted from the final grade. Subsequent unheeded warnings will result in additional 5-point deductions from the final grade with each notification.
- 4) **Dissection of a region must be completed prior to the examination day** on that region. If dissection is not completed by this time, each partner on the side of the table will have 10 points subtracted from their Written Examination grade and their Laboratory Examination grade on that region.
- 5) This class requires **additional outside of class time** in the lab. Most students have found they spend an additional 4-8 hours/week in the lab.

ALL STUDENTS

SPECIAL JOINT DISSECTIONS - Each student will be assigned to a special joint dissection. If you are not assigned a joint dissection this semester you will be assigned one the following semester. These will be done outside of class time and presented to the class during assigned lab sessions.



FUNCTIONAL ANATOMY II LECTURE AND LAB SCHEDULE

BRING YOUR SYLLABUS and DISSECTOR'S GUIDE TO LECTURE AND LAB (Tuesday and Thursday). IN ADDITION, *at least one lab partner will ALWAYS BRING an ATLAS TO LAB WHEN DISSECTING; if there is not one at the table you will be asked to leave to get one.*

The schedule below lists the material to be covered for class and laboratory preparation. The Anatomy Syllabus, and Finley's Interactive Cadaveric Dissection Guide should be used in preparation for class-**PRIOR** to class. Pages in your selected Anatomy Atlas are to be looked up by the student. **The student is expected to have studied the DVD prior to lecture and lab**

| WEEK | DAY/ DATE | LECTURE and LAB | TOPIC |
|------|--------------------|--------------------|--|
| 1 | Tuesday Jan 7 | Lecture 8:00 | Osteology of the Skull, The Face, The Facial Nerve |
| | | LAB | Osteology Begin face, facial nerve Notify @ craniotomy/skulls |
| | WED | | |
| | Thursday Jan 9 | Lecture 8:00 | Lateral Neck, Blood Supply-Head and Neck, Structures of the anterior neck, Anterior Neck- Hyoid Muscles (supra/infra) |
| | | LAB | Begin the Lateral Neck Finish Face and the Facial Nerve |
| 2 | Tuesday Jan 14 | Lecture 7:30 | Muscles of Mastication, Muscles of the Pharynx, Larynx, Palate, and Cervical Plexus |
| | | LAB | Begin anterior neck, Continue lateral neck Finish face and facial nerve |
| | WED | | |
| | Thursday Jan 16 | Lecture 7:45 | QUIZ I Intro Larynx/Pharynx, TMJ The Orbit, Course of the Optic Nerve (CN II), Facial Nerve, Review Objectives for the Head and Neck, ANS, Plexi, Cervical Region (CN VII), and the Trigeminal Nerve (CN V) Assignment of Larynx/Pharynx, TMJ |

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| | | LAB | Continue and Finish other dissection Begin Orbit |
| | | | |
| 3 | Tuesday Jan 21 IFH | Lecture 7:30 | Tempromandibular Joint- Students Larynx and Pharynx- Students Relationships of Structures, The Thorax- Osteology Review, Trachea, Bronchi, Lungs, Muscles of the thoracic wall |
| | 1 st lab 8:35-9:45 2 nd lab 12:30-1:45 | LAB | Finish the Neck Begin Orbit |
| | WED | | |
| | Thursday Jan 23 | Lecture 7:30 | QUIZ II The Heart, Coronary Vessels Mediastinum and Thymus Gland ANS, Plexi, Thorax Thoracic Arteries, Veins, and Ducts Review Dissection of Thorax |
| | | LAB | Presentation of Larynx, Pharynx, and TMJ- Students Finish the Orbit Begin the Thorax/Heart |
| Additional time-TBA | Friday Jan 24 | Lecture | Continuation and REVIEW The Heart, Coronary Vessels Mediastinum and Thymus Gland ANS, Plexi, Thorax Thoracic Arteries, Veins, and Ducts |
| | | LAB | Continue dissection of the thorax Heart and Lungs |
| | | | |
| 4 | Tuesday Jan 28 | Lecture | Cutaneous Innervation and Dermatomes Begin Abdominal Viscera Posterior Abdomen, Muscles, Kidneys, Retroperitoneal Structures The Abdomen-in general |
| | | LAB | Begin the Abdomen |
| | WED | | |
| | Thursday Jan 30 | Lecture | Catch up from Tuesday Introduce the Pelvis and Perineum Assignment of Pelvic Dissections Dissections to be arranged with TA's |
| | | Lab | Lab Exam I The laboratory examination will be on ALL the cadavers in CG-007. You will have one hour to complete the laboratory exam. Your exam time will be |

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| | | | posted. |
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| 5 CSM | Tuesday Feb 4 | Lecture | No lecture |
| | | LAB | Continue dissection with TA's |
| | WED | | |
| CSM | Thursday Feb 6 | Lecture | No lecture |
| ■■■■■■■■ | | LAB | Continue dissection with TA's |
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| 6 | Tuesday Feb 11 | Lecture | ANS-Plexi-Pelvis and Perineum Cutaneous Innervation and Dermatomes - Pelvis and Perineum ANS- Plexi- Abdomen |
| | | LAB | Continue Abdomen, Finish Dissection |
| | WED | | |
| | Thursday Feb 13 | Lecture | QUIZ III Lecture by Pelvic Dissection Students- |
| | | LAB | Presentations of pelvic dissections Students-TA's to supervise |
| | | | |
| 7 | Tuesday Feb 18 IFH | Lab 7:30 | REVIEW –loose ends! Review Objectives for the Pelvis and Perineum for the Thorax Review Objectives for the Abdomen |
| | 1st lab 8:35-10:00 2nd lab 12:30-2:00 | Lab | Review every cadaver Special dissections (L/P, TMJ, Pelvis) |
| | WED | | |
| | Thursday Feb 20 | LAB and WRITTEN EXAM | EXAM –Written-TBA The laboratory examination will be on ALL the cadavers in CG-007. You will have one hour to complete the laboratory exam. Your exam time will be posted. |
| ***** TBA ***** | Friday Feb 21 | Memorial | Closing ceremony for the lab |
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| 8 | Tuesday Feb 25 | | |
| | WED | | |

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| | Thursday Feb 28 | | |
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| 9 | | | BIOMECHANICS - SPRING BREAK- Mar 1nd -9th |
| 10 | | | BIOMECHANICS |
| 11 | | | BIOMECHANICS |
| 12 | | | BIOMECHANICS |
| 13 | | | BIOMECHANICS |
| 14 | | | BIOMECHANICS |
| 16 | | | READING DAYS April 25th, 26th |

FINALS WEEK

April 27th -May 3rd