

**SYLLABUS**  
**Human Functional and Clinical Gross Anatomy (ANAT 6181)**

**COURSE DESCRIPTION:**

ANAT 6181 is a graduate course at a certificate level designed to provide a broad appreciation for the structural organization of the human body and to relate the organization to regional and systems-related functions. There will be a strong emphasis on clinical implications and how disease and/or injury affect normal anatomical structure/function relationships. The syllabus is supplemented with additional educational material and assignments, which are appropriate for students enrolled in the graduate certificate in Anatomical and Translational Sciences. Students will be assigned online weekly discussions on journal articles matching the topic of the week's lecture (see *Readings*). Discussion of these topics will be monitored via an online discussion board in blackboard. In addition, students will prepare a clinical presentation on an anatomical topic relevant to a specific lecture and derived from an article featured in popular media (e.g., *Washington Post*, *Time*, etc). Students will also be provided with an online lab manual utilizing content from the department's NetAnatomy website. These sessions will constitute the foundation for three practical exams taken on blackboard for each third course. Finally, lecture material is supplemented with cadaveric demonstrations in the Gross Anatomy Laboratory of the Medical School.

**LEARNING OBJECTIVES:**

- 1) Discuss the structure and function of the musculoskeletal system in relation to its importance in the limbs, thorax, abdomen, and pelvis.
- 2) Describe the regional organization, structure, and function of the major organ systems in the thorax (Respiratory and Cardiovascular Systems), abdomen (Digestive System), and pelvis & perineum (Urinary and Reproductive Systems).
- 3) Describe the structural organization of the head and neck and the distribution and function of the various cranial nerves.
- 4) Identify major anatomical structures in the human body using radiographs, ultrasound, CT, MRI images.
- 5) Illustrate clinical correlates associated with the major systems of the human body.

**CREDIT HOURS: 3**

**PREREQUISITE:** Introductory Biology for Science or non-Science Majors. Enrollment in the Graduate Certificate in Anatomical and Translational Sciences or permission of the Director of the Graduate Certificate.

**CONTACT TIME/HOURS:** Tues. 2:20 – 3:35 pm.  
Thurs. 2:20 – 3:35 pm

Room TBD

**LABORATORY SESSIONS:** Thurs. 3:40 – 5:00 pm (Ross 218)

**METHOD OF ASSESSMENT:** There will be four types of assessments, as follows:

1. **3 Written Exams** : consisting of multiple choice and short answer questions; each exam comprises 16.7% of the total grade for the course
2. **3 Practical Exams** consisting of short answer questions; each exam comprises 10% of the total grade; to be completed online (*individually, closed-book*) via Blackboard by 11:59pm as denoted in lecture schedule
3. **Clinical Presentation**: consisting of a written PowerPoint, comprising 15% of total grade; to be submitted via blackboard to Dr. Brown after final exam
4. **Online weekly blackboard discussion groups**, comprising 5% of total grade; responses are due each Thursday by 11:59pm as denoted in lecture schedule (note: there is no discussion board due the week of the Spring Break)

**FACULTY:** *Kirsten Brown*, Ph.D. (Course Director, Lecturer, and Lab Instructor)  
Assistant Professor, Department of Anatomy & Regenerative Biology  
Ross Hall 462A; [kmbrown@gwu.edu](mailto:kmbrown@gwu.edu),  
Topics: Introductory and Pelvis & Perineum Lectures

Raymond J. Walsh, Ph.D. (Lecturer and Lab Instructor)  
Professor, Department of Anatomy & Regenerative Biology  
Ross Hall 216, [rjwalsh@gwu.edu](mailto:rjwalsh@gwu.edu),  
Topics: Thorax Lectures

Jeffrey Rosenstein, Ph.D. (Lecturer and Lab Instructor)  
Professor, Department of Anatomy & Regenerative Biology  
Ross Hall 426A, [jrosenst@gwu.edu](mailto:jrosenst@gwu.edu),  
Topics: Upper Limb Lectures

Frank Slaby, Ph.D. (Lecturer and Lab Instructor)  
Professor, Department of Anatomy & Regenerative Biology  
Ross Hall 212, [fjs@gwu.edu](mailto:fjs@gwu.edu),  
Topics: Lower Limb and Head & Neck Lectures

Anne Hirschfield, Ph.D. (Lecturer and Lab Instructor)  
Professor, Department of Anatomy & Regenerative Biology  
Ross Hall 402, [fjs@gwu.edu](mailto:fjs@gwu.edu),  
Topics: Abdomen lectures

**REQUIRED TEXTS:** Text: Gray's Anatomy for Students, Drake, Vogl, & Mitchell, 3<sup>rd</sup> ed. (recommended; available as e-text through Himmelfarb via [http://catalog.himmelfarb.gwu.edu/iii/encore/record/C\\_\\_Rb1622791\\_SGray%27s%20Anatomy%20for%20Student%27s\\_\\_Orightresult\\_\\_U\\_\\_X7?lang=eng&suite=gwmed](http://catalog.himmelfarb.gwu.edu/iii/encore/record/C__Rb1622791_SGray%27s%20Anatomy%20for%20Student%27s__Orightresult__U__X7?lang=eng&suite=gwmed))

Atlas: Atlas of Human Anatomy, Netter, 6<sup>th</sup> ed. (recommended; available as e-text through Himmelfarb via [http://catalog.himmelfarb.gwu.edu/iii/encore/record/C\\_\\_Rb1622792\\_SAtlas%20of%20Human%20Anatomy\\_\\_Orightresult\\_\\_U\\_\\_X7?lang=eng&suite=gwmed](http://catalog.himmelfarb.gwu.edu/iii/encore/record/C__Rb1622792_SAtlas%20of%20Human%20Anatomy__Orightresult__U__X7?lang=eng&suite=gwmed))

Clinical text: Netter's Clinical Anatomy, JT Hansen, 3<sup>rd</sup> edition (*strongly recommended*; available as e-text through Himmelfarb via [http://catalog.himmelfarb.gwu.edu/iii/encore/record/C\\_\\_Rb1622790\\_SNetter%27s%20Clinical%20Anatomy\\_\\_Orightresult\\_\\_U\\_\\_X7?lang=eng&suite=gwmed](http://catalog.himmelfarb.gwu.edu/iii/encore/record/C__Rb1622790_SNetter%27s%20Clinical%20Anatomy__Orightresult__U__X7?lang=eng&suite=gwmed))

**INTERNET RESOURCE:** [www.NetAnatomy.com](http://www.NetAnatomy.com)

**READING LIST: TBD**

### **CLASS POLICIES**

Attendance policy: mandatory

Late work: accepted with permission, penalty may be incurred if unduly late as determined by instructor  
Religious Holidays: will be accommodated if requested

[NOTE: for university policies on teaching, see <http://www.gwu.edu/~academic/Teaching/main.htm> ]

### **ACADEMIC INTEGRITY**

I personally support the GW Code of Academic Integrity. It states: "Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information." For the remainder of the code, see: <http://www.gwu.edu/~ntegrity/code.html>

### **SUPPORT FOR STUDENTS OUTSIDE THE CLASSROOM**

### *DISABILITY SUPPORT SERVICES (DSS)*

Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: <http://gwired.gwu.edu/dss/>

### *UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300*

The University Counseling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:

- crisis and emergency mental health consultations
  - confidential assessment, counseling services (individual and small group), and referrals
- <http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices>

### **SECURITY**

In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.

### **LECTURE TOPICS:**

1. **Tuesday January 12:** Imaging Techniques; Lymphatic System; Anatomical Terms
2. **Thursday January 14:** Musculoskeletal System; Spine, Spinal Cord and Spinal Nerves;  
Lab #1: Tissue Types and Spinal Cord
3. **Tuesday January 19:** Lower Limb I- Walking Gait and the Roles of Gluteal and Thigh Muscles (*Clinical Correlation: Hip Injuries*)
4. **Thursday January 21:** Lower Limb II- Knee Joint; Lab #2- Lower Limb (*Clinical Correlation: Knee Injuries*)
5. **Tuesday January 26:** Lower Limb III- Bones & Major Joints of the Foot (*Clinical Correlation: Ankle Injuries*)
6. **Thursday January 28:** Lower Limb IV- The Roles of Leg Muscles in the Walking Gait;  
Lab #3- Lower Limb (*Clinical Correlation: Fibular Nerve Injury*)
7. **Tuesday February 2:** Upper Limb I- Shoulder (*Clinical Correlations: Shoulder Dislocations*)
8. **Thursday February 4:** Upper Limb II- Axilla and Arm; Lab #4- Upper Limb (*Clinical Correlation: Humeral Fractures*)
9. **Tuesday February 9:** Upper Limb III- Forearm (*Clinical Correlation: Radial Nerve Injuries*)
10. **Thursday February 11:** Upper Limb IV- Hand; Lab #5- Upper Limb (*Clinical Correlation: Median and Ulnar Nerve Injuries*)

**WRITTEN EXAM I on Tuesday February 16**

**PRACTICAL EXAM I taken between February 16 and 19**

11. **Thursday February 18:** Head & Neck I- Neck; Lab #6- Head & Neck (*Clinical Correlation: Cranial Nerve Tests, Pulses*)

12. **Tuesday February 23:** Head & Neck II- Head & Eyes (*Clinical Correlation: Cranial Nerve Tests, Bell's Palsy*)
13. **Thursday February 25:** Head & Neck III- Ears & Nose; Lab #7- Head & Neck (*Clinical Correlation: Cranial Nerve Tests, Sinusitis*)
14. **Tuesday March 1:** Thorax I- Thoracic Wall & Diaphragm (*Clinical Correlation: Rib Fractures*)
15. **Thursday March 3:** Thorax II- Lungs & Pleurae; Lab #8- Thorax (*Clinical Correlation: Pneumothorax*)
16. **Tuesday March 8:** Thorax III- Heart & Cardiac Cycle (*Clinical Correlation: Myocardial Infarction*)
17. **Thursday March 10:** Thorax IV- Mediastinum; Lab #9- Thorax (*Clinical Correlation: Aortic Arch Aneurysm*)
18. **Tuesday March 22:** Head & Neck IV- Throat (*Clinical Correlation: Cranial Nerve Tests, TMJ Disorder*)
19. **Thursday March 24:** Head & Neck- Larynx; Lab #10- Head & Neck (*Clinical Correlation: Thyrocricotomy*)

**WRITTEN EXAM II on Tuesday March 29**

**PRACTICAL EXAM II taken between March 29 and April 1**

20. **Thursday March 31:** Abdomen I- Abdominal Walls; Lab #11- Abdomen (*Clinical Correlation: Inguinal Hernias*)
21. **Tuesday April 5:** Abdomen II- Peritoneum & Blood Supply to the Abdomen (*Clinical Correlation: Portal Hypertension*)
22. **Thursday April 7:** Pelvis and Perineum I- Pelvis and Pelvic Walls; Lab #12- Abdomen and Pelvis (*Clinical Correlation: Pelvic Floor Disorders*)
23. **Tuesday April 12:** Pelvis and Perineum II- Pelvic Organs (*Clinical Correlation: Ectopic Pregnancy, Prostate Cancer*)
24. **Thursday April 14:** Pelvis and Perineum III- Neurovasculature; Lab #13- Abdomen and Pelvis (*Clinical Correlation: Abdominal Aortic Aneurysm*)
25. **Tuesday April 19:** Abdomen III- Abdominal Organs I (*Clinical Correlation: Peptic Ulcers*)
26. **Thursday April 21:** Abdomen IV- Abdominal Organs II; Lab #14- Abdomen and Pelvis (*Clinical Correlation: Cirrhosis*)

**WRITTEN EXAM III TBD**

**PRACTICAL EXAM III TBD**

**CLINICAL POWERPOINT TBD**