

GROSS HUMAN ANATOMY (A551)

Spring 2012

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Classrooms:

Lecture - Jordan Hall 009

Laboratory – Jordan Hall 312

Required Texts:

1. Essential Clinical Anatomy, Keith Moore and Anne Agur, Lippincott Williams & Wilkins, Baltimore, 2011, Fourth Edition (**ma**)
OR
Clinically Oriented Anatomy, Keith Moore, Arthur Dalley and Anne Agur, Lippincott Williams & Wilkins, Baltimore, 2010, Sixth Edition. (**MD**)
2. Langman's Medical Embryology, T.W. Sadler, Lippincott Williams & Wilkins, Baltimore, 2010, Eleventh Edition. (**S**)
3. Grant's Dissector, P.W. Tank, Lippincott Williams & Wilkins, Baltimore, 2008, Fourteenth Edition.
4. Bates' Guide to Physical Examination and History Taking, Lynn Bickley and Peter Szilagy, Lippincott, Philadelphia, 2010, Tenth Edition.
5. Grant's Atlas of Anatomy, Anne Agur and Art Dalley, Lippincott Williams and Wilkins, Baltimore, 2008, Twelfth Edition. (**ONE PER LAB TABLE**)

Course Website URL: <http://www.indiana.edu/~anat550>

You may access the embryology animations directly at:
http://www.indiana.edu/~anat550/embryo_main

Course Description:

This course examines the gross anatomy of the human. Developmental anatomy and regional anatomy of the head, neck and limbs are examined. Cadaver-based dissection labs accompany lecture topics.

Learning Goals:

1. You will learn the anatomy vocabulary necessary to communicate effectively as a physician.
2. You will develop an understanding of the three-dimensionality of the body, and the relationships of body structures.
3. You will learn the surface and deep anatomy that is necessary to perform and understand a physical examination of a patient.
4. You will develop a better understanding of anatomical “hot spots” and why these anatomical areas are clinically relevant.
5. You will understand the origin of anatomical structure (embryology) and the basis for developmental abnormalities (birth defects).
6. You will learn to appreciate human variation.
7. You will learn what information is essential in a typical autopsy report, and you will complete your first autopsy report based on the dissection of your donor.

Examinations

Three (3) **Lecture Exams** will range in value from 80 to 100 points. These exams will include multiple choice questions, matching questions, 4X questions, and short answer/essay questions. The lecture instructors will provide a copy of last year’s exams for study purposes. In addition, sample lecture questions may be found in your A550 Course Guide (distributed on the 1st day of class). There is a mini-exam during the Limbs Section.

Three (3) **Lab Exams** take place in the Gross Anatomy lab. Exams will range in value from 80 to 100 points. Exam questions ask for the correct identification of pinned anatomical structures on cadavers, MRIs, bones and cross sections. Your limb dissection will be graded.

One (1) **Comprehensive Shelf Exam** will be given during finals week. Only medical students need to take this exam, and this exam is worth 20% of your total grade (300 points).

One (1) **Dissection Grade** will be given on 4/12 for complete dissection of the upper and lower limbs. Students will work in pairs to dissect one lower limb and one upper limb, and the pair of students will receive the same dissection grade. Note: an incomplete dissection will be given 0 points! Dissections are graded based on being complete and all structures listed in the dissector being adequately located and identified.

Finally, there is a *Gross Anatomy Laboratory Experience Questionnaire* due on 4/14. The form can be found in your A550 Course Guide.

Competencies Assesed in Gross Anatomy (A550 & A551)

- A. **Effective Communication** is evaluated by: (1) successfully completing the TBLs and (2) examining oral communication on a one-to-one basis as students interact with each other and respond to faculty questions in the laboratory.
- B. **Life-long Learning** is addressed by: (1) active participation in lab and lecture activities and (2) completing the TBL exercises.
- C. **Self-awareness, Self-care, and Personal Growth** are assessed by completing a questionnaire examining the student’s attitude toward the donors (cadavers) (*See sample of Gross Anatomy Laboratory Experience Questionnaire*).

- D. ***Professionalism and Role Recognition*** are evaluated by (1) observing students' attitudes regarding teamwork in their dissection groups and in their TBLs, (2) completion of the individual limb dissection, and (3) completing the Laboratory Experience Questionnaire.
- E. ***Basic Clinical Skills*** are assessed by (1) learning to evaluate x-rays, CT scans, MR images and integrating these radiological techniques with anatomical structure and (2) completing a *Donor Report* (autopsy report) based on the dissection of your donor. The *Donor Report* can be downloaded from the A550 website.

Cheating and Plagiarism:

Students are instructed to make themselves aware of University regulations concerning plagiarism, the maintenance of academic honesty and the definitions of unacceptable behavior and cheating. Academic misconduct of any sort will not be tolerated and will be dealt with as outlined in the ***IU/IUPUI Code of Student Rights, Responsibilities, and Conduct***, which can be viewed at: <http://www.iupui.edu/code/>

Examples of misconduct include but are not limited to:

1. Cheating

A student must not use or attempt to use unauthorized assistance, materials, information, or study aids in any academic exercise

2. Fabrication

A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citations to the sources of information.

3. Plagiarism

A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge an indebtedness whenever he or she does any of the following:

- a. Quotes another person's actual words, either oral or written
- b. Paraphrases another person's words, either oral or written
- c. Uses another person's idea, opinion, or theory; or
- d. Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

4. Interference

- a. A student must not steal, change, destroy, or impede another student's work.
- b. A student must not give or offer a bribe, promise favors, or make threats with the intention of affecting a grade or the evaluation of academic performance.

Potential consequences for academic misconduct:

If the instructor has information that one of his/her students committed an act of academic misconduct, the faculty member will hold an informal conference with the student. The conference will be prompt and private. If the faculty member concludes that the student is responsible for the misconduct, then the faculty member will impose an appropriate academic sanction (e.g., lower or failing grade on the assignment, assessing a lower or failing grade for the course).

DISABILITIES:

If you need any special accommodations due to a disability and you are a student in the School of Medicine please contact the IU School of Medicine Committee on Students with Disabilities.

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If you are a student outside of the IU School of Medicine and you need any special accommodations due to a disability, please contact Disability Services for Students at (317)-855-7578 or

<http://www2.dsa.indiana.edu/dss/> .

Evaluation and Grading Policies:

1. The Indiana University School of Medicine evaluation program guidelines:
Honors (H) 10-20% of the class
High Pass (HP) 30-50% of the class
Pass (P) 40-60% of the class
Fail (F) 0-5% of the class
2. Comparison to performances of previous classes: The class mean (A550 and A551) for previous classes is approximately 84% (range: 79% to 86%). For graduate students, one standard deviation from the mean is approximately a B. In the past, the cutoff line between Pass and Fail has been at or very near 70% (about 2 standard deviations from the mean). Graduate students will receive letter grades: A, B, C, D or F.
3. All Medical Students will be required to pass a comprehensive statewide exam (in the form of a final exam). There is no pass-fail requirement for the exam, but the exam will count as 20% of your total grade. Graduate students do not need to take the comprehensive statewide exam.

A551 POINT DISTRIBUTION: (600 POINTS TOTAL)

3 LECTURE EXAMS (90 + 80 + 120)	=	290
3 LABORATORY EXAMS (90 + 80 + 120)	=	290
DISSECTION GRADE (20)	=	20

FIRST SEMESTER (A550)	=	600 POINTS
SECOND SEMESTER (A551)	=	600 POINTS
<u>COMPREHENSIVE SHELF EXAM</u>	=	<u>300 POINTS</u>
TOTAL POINTS	=	1500 POINTS

Study Tips:

1. We strongly encourage you to study together and work in groups when preparing for both lecture and lab. Discuss complex topics and quiz each other. Working in a group will allow all involved to better understand the material and help clarify any misconceptions.
2. Make sure you examine and study ALL of the bodies in the gross lab. As you will learn, variation is considerable and structures can look completely different in different bodies.
3. Do NOT try to “cram” for the exams. Lecture exams ask you not only to identify material, but to apply and synthesize your knowledge. Instead, try to study a little bit every day.
4. If you have questions, or aren't doing as well as you'd like, please see one of the instructors right away! We want you to succeed and we are here to help. However, we do not know if you need help unless you come and speak with us!

Good luck!!!

GROSS HUMAN ANATOMY (A551)
LECTURE SCHEDULE
SPRING 2012

<u>DATE</u>	<u>TOPIC</u>	<u>READING in BIG MOORE (MD)</u> <u>little moore (ma) or SADLER (S)</u>	<u>LECTURER</u>
1/03	Introduction to Head & Neck, Skull and the Cranial Nerves: Face; Cutaneous Branches of CN V; Parotid Gland and CN VII and CN IX	MD: 822-30; 842-65; 914-6; 1054-82 ma: 519-529, 644-672; (Read pertinent sections related to each lecture)	VDO
1/05	Scalp; Cranial Fossae; Meninges; Skull Dural Venous Sinuses	MD: 843-4; 860-78 ma: 496-511	VDO
1/10	Embryology of the Head & Neck - Pharyngeal Arches; Development of the Skull (1.5 hour lecture)	Sadler Chapter 16 (257-283) MA: 1040-42; 1048-9	SD
1/12	Introduction to the Neck; Fascia of the Neck Posterior of the Neck; CN XI	MD: 982-99; 1075, 1082 ma: 594-604	VDO
1/17	Triangles of the Neck; Cervical Plexus; Deep structures of the Neck	MD: 999-1021 ma: 604-622	VDO
1/19	Temporal and Infratemporal Fossa; CN V ₃ ; Muscles of Mastication; Temporomandibular Joint	MD: 916-928; 1065-7 ma: 549-557	VDO
1/24	Sympathetic Innervation and Lymphatics of the Head and Neck, Integrating Material Learned thus far	MD: 57-65; 968; 1017-8; 1051-2 ma: 36-43; 526-7; 618-9; 638-9	VDO
1/26	Orbit I, Extraocular Muscles; CN III; CN IV; CN VI; CN V ₁	MD: 889-91; 898-99; 1061-68; 1080-81 ma: 529-530; 539-548	VDO
1/31	EXAMINATION (90 POINTS) (from intro to sympathetic innervation: orbit lecture will NOT be on exam 1)		
2/07	Orbit II; Eyelids, Lacrimal Apparatus, Eyeball; CN II	MD: 891-98; 899-914; 1061-2; 1079-80 ma: 530-539	VDO
2/09	Pharynx; Soft Palate; Tonsils, Pharyngeal plexus	MD: 934-8; 1032-40; 1047 ma: 560-3, 631-642	VDO
2/14	Nose; Paranasal Sinuses; CN I; Hard Palate, Pterygopalatine Fossa	MD: 951-965 ma: 570-578	AS

<u>DATE</u>	<u>TOPIC</u>	<u>READING in BIG MOORE (MD)</u> <u>little moore (ma) or Sadler (S)</u>	<u>LECTURER</u>
2/16	Oral Region; Tongue; Sublingual Region	MD: 928-34; 938-51 ma: 557-60; 563-569	SD
2/21	Larynx;	MD:1021-32;1043-7 ma: 623-631	VDO
2/23	Ear; Review of Cranial Nerves	MD: 966-80; 1054-82 ma: 578-592; 644-672	VDO
2/28	Introduction to the Extremities; Development of the Limbs	MA: 510-544, 672-696, 719-721 ma: 318-335, 406-422 Sadler Chapter 9 (132-139) Sadler Chapter 10 (146-149)	AN
3/01	Lumbosacral Plexus, Gluteal Region, Thigh	MA: 312-3, 357-9, 562-9, 572-83, ma: 193-195, 217-220, 336-355	AN
3/06	EXAMINATION (Orbit to Ear/cranial nerves) (80 points)		
	SPRING BREAK: MARCH 10-18		
3/20	Popliteal Fossa, Leg	MA: 545-62, 569-72,584-7 ma: 356-370	AN
3/22	Foot	MA: 609-626 ma: 371-378	AN
3/27	Intro to Upper Limb, Brachial Plexus	MA: 672-697, 721-31 ma: 406-422, 433-439	AN
3/29	Shoulder, Axilla, Arm, Cubital Fossa	MA: 697-721, 731-744 ma: 422-447	AN
4/03	Forearm	MA: 744-771 ma: 446-460	AN
4/05	Wrist and Hand	MA: 771-793 ma: 461-474	AN
4/10	Shoulder & Hip Joints	MA: 793-800, 626-634 ma: 379-384, 475-481	AN
4/12	Elbow, Knee, Ankle, Foot, Wrist Joints (DOUBLE LECTURE)	MA: 634-669; 800-819 ma: 385-402, 482-492	AN
4/17*	LIMBS LECTURE EXAM (120 points)		

COMPREHENSIVE ANATOMY SHELF EXAM (300 points) – TO BE ARRANGED

***DENOTES THE DATE THE ‘GROSS ANATOMY EXPERIENCE QUESTIONNAIRE’ IS DUE.**

GROSS HUMAN ANATOMY (A551)
LABORATORY SCHEDULE: SPRING 2012

<u>DATE</u>	<u>TOPIC</u>	<u>READING ASSIGNMENT IN DISSECTOR(14th ed)</u>	<u>PRIMARY LECTURER</u>
1/03	Face; CN V	199-206 (Do NOT dissect eyelid or orbit)	VDO
1/05	Scalp; Parotid Region; CN VII	206-210	VDO
1/10	Opening of the Skull; Meninges Removal of Brain; Dural Venous Sinuses; Cranial Fossae	215-221, 222-227	VDO
1/12	Posterior and Anterior Triangles of the Neck	186-191	VDO
1/17	Carotid Triangle; Submandibular Triangle, Submental Triangle; Thyroid and Parathyroid Glands	191-196 (leave larynx attached)	VDO
1/19	Temporal and Infratemporal Regions; Temporomandibular Joint	210-214	VDO
1/24	Root of Neck	196-199	VDO
1/26	Orbit I	227-228; 230-232	VDO
1/31	EXAMINATION (intro to H&N to root of neck) (90 POINTS)		
2/07	Orbit II; Accessory Visual Apparatus; Dissection of Eyeball	229-230; 232-234	VDO
2/09	Removal and Bisection of Head; Pharynx	234-240	VDO
2/14	Nasal Cavities and Sinuses	240-244	VDO
2/16	Sphenopalatine Foramen; Pterygopalatine Fossa; Palate; Tonsils and Pharyngeal Wall	244-249	VDO
2/21	Oral Cavities and Tongue; Sublingual Region	249-252	VDO
2/23	Larynx; Middle Ear	252-259	VDO
2/28	Superficial veins and nerves of the Limbs	148-152, 19-21	AN
3/01	Anterior and Medial Thigh;	152-159	AN

<u>DATE</u>	<u>TOPIC</u>	<u>READING ASSIGNMENT IN DISSECTOR</u>	<u>PRIMARY LECTURER</u>
3/06	EXAMINATION (orbit to ear) (80 POINTS)		
	SPRING BREAK: MARCH 10-18		
3/20	Gluteal Region, Posterior Thigh	159-165	AN
3/22	Popliteal Fossa, Posterior Leg, Dorsum of Foot	165-172	AN
3/27	Anterior and Lateral Compartments of the Leg; Sole of Foot	172-180	AN
3/29	Scapular Region; Axilla; Brachial Plexus	22-32	AN
4/03	Arm and Cubital Fossa	32-36	AN
4/05	Flexor and Extensor Compartments of the Forearm	36-40, 47-49	AN
4/10	Palm of the Hand	40-46	AN
4/12*	Hip Joint and Shoulder Joint Knee, Ankle, Elbow Joints	180-185, 49-52 (Dissection of the joints in ONE upper or ONE lower extremity per table only)	AN
4/17	FINAL LAB EXAMINATION -- (120 POINTS)		
	FINALS WEEK -- TURN IN BONE BOX AND CHECK OUT TOOLS AND TABLE. ONE MEMBER OF EACH TABLE GROUP NEEDS TO SCHEDULE A TIME WITH J. HEERSMA.		

***DENOTES DISSECTION GRADE TO DATE. DO NOT DISSECT JOINTS UNTIL DISSECTION IS GRADED (20 POINTS)
DISSECTIONS WILL BE GRADED THE AFTERNOON OF 4/12, DURING THE LAB.**