

Medical Gross Anatomy and Embryology (INMD 6820) – Fall 2016

Dear Incoming Medical Students,

Congratulations and welcome to Medical School!

As Director of the Medical Gross Anatomy & Embryology course, I want to give you a heads-up on what to expect for the start of the course.

I speak for the faculty when I express our enthusiasm to help you build a strong foundation in Anatomy and Embryology in order for you to be the best physician that you can be!

Anatomy and Embryology will begin this year with orientation on Tuesday, Aug 9th from 8:00 to 11:00 am (more on this in a moment). The first laboratory (dissection) will be Wednesday, Aug 10th at 8:00 am. The course finishes with final exam week (Dec 12th through 16th 2016).

Anatomy meets two mornings per week for 19 weeks. These meetings will be laboratory dissection. You will be expected to prepare for lab in your Independent Learning Time (ILT). The course website (BlackBag), pre-recorded lectures, lecture notes, and textbook will be critical in this capacity. There will be many additional review sessions (lecture and lab) during the course.

The course obviously provides the opportunity to learn every structure in the human body. In addition, it includes coverage of **radiographic anatomy**. There will also be a number of medical procedures in lab in order to appreciate the application of anatomy to a procedure without a negative consequence. One goal of the course is to prepare you to perform the physical exam in Essentials of Clinical Medicine (ECM). I am confident that you will find your courses interesting, challenging, and clinically relevant.

The Embryology course will consist of 13 lectures given throughout the semester. The first 3 lectures cover the first weeks of embryonic development. Subsequently, the lectures cover the development of a system of the body. These are aligned with the completion of the dissection of that region of the body/ system. Each lecture will be followed by an on-line quiz to be completed within one-week of the lecture. The goal of the Embryology course is to build a solid foundation of embryology, prepare you to apply embryo during your clinical rotations, prepare you for board exams, and explain the difficult definitive (adult) morphology discovered in dissections.

The orientation on Tuesday, August 9th will be an introduction to the course and laboratory procedures and regulations. The orientation is also your opportunity to have your questions answered regarding Gross Anatomy and Embryology. The course syllabus, grading, textbook requirements, etc will be covered. There will also be an address from the Anatomy Bequest Program on the donor procurement process, as well as your professional obligations of working with cadavers.

We have much to learn, so we will start dissecting on Wednesday morning, August 10th. You will pick-up your locker assignment and meet your three body buddies after orientation on the 9th. Before your first dissection, please plan to arrive early to 5th floor Jackson Hall - well before 8 am to get changed and ready for the first lab. All labs begin at 8:00 am exactly.

You will need a change of clothes (appropriate for dissection lab) and gloves - see below. Note that University Laboratory policy requires coverage of thighs, legs, and feet. Thus, you will not be allowed in the labs wearing shorts or open-toed shoes. You will be provided with lockers and locks – located on 5th floor of Jackson Hall. You will also be provided with dissection tools. Tools, lab notes, Anatomy Atlas, and Dissection Guide will be at your dissection table when you arrive for dissection.

You will start your first lab by conducting your first “Physical Exam” on your “first patient”. The patient’s medical history will be provided. You will need to read this carefully before proceeding to conduct the physical examination. You will then submit your findings (Physical Exam Report -the same form used in ECM) into your dissection notes. After which, there will be the first dissection on the Pectoral region.

During this lab, there will be present a number of second year students to assist you in getting going, and to help you past any ‘first-day jitters’ that you may have.

Please plan to bring the following items with you on Wednesday morning - and for every dissection:

- Old clothes or scrubs, and old shoes to wear in the lab. Much of what you have heard about the fragrance of the dissection lab is true. So bring clothes and shoes that you won’t mind parting with after the course. You can store these clothes in your locker during the course.
- Gloves. (We are not able to supply gloves). No latex please. We highly recommend nitrile gloves. Nitrile gloves provide the best protection for your hands. Many individuals have strong allergies to latex gloves – anywhere, in any of the labs. For this reason, we do not allow latex gloves anywhere in any lab.

There will be lecture and lab note packets for sale in the University of Minnesota Bookstore in Coffman Union. The lecture notes will serve as a guide to preparation for the lab. The lab notes are your guide to the dissection procedure. Copies of lab notes will be provided in the labs. All lecture and lab notes will also be available on the course website.

The following is a list of texts for the course.

(bold texts have referenced page numbers throughout all materials in our course notes):

Books

Required:

1. ***Langman's Medical Embryology*** TW Sadler, 2012, 12th ed, Wolters Kluwer, LWW.

This text is required. It will be necessary to read this text to do well in the course - and to prepare yourself for the embryology component of the Step-I board exam.

2. ***Netter's Atlas of Human Anatomy*** (F.H. Netter, 6th Edition, Elsevier)

An anatomical atlas is absolutely required for the study of anatomy. Each student should have one. Most students seem to prefer *Netter's Atlas of Human Anatomy* (F.H. Netter). However, there are a number of excellent atlases available including *Grant's Atlas of Anatomy* (A.M.R. Agur) and *Anatomy* (C.D. Clemente).

The Netter is available as an E-Book through the Biomedical Library:

<https://www.lib.umn.edu/get?url=https://www.clinicalkey.com%2F%23!%2Fbrowse%2Fbook%2F3-s2.0-C20100686068>

Optional:

Suggested textbooks for this course are in bold. These texts are referenced in course notes.

1. ***Clinically Oriented Anatomy***, (K.L. Moore and A.F. Dalley, 6th Edition, LWW)
2. *Essential Clinical Anatomy* (K.L. Moore and A. Agur, 2002, 2nd edition, LWW, ISBN: 0-7817-2830-4. This is a concise distillation of the previous text.

There are many other good text books that cover the same material. If you have a good anatomy textbook already (graduate level), you probably don't need another one. But all students should have an anatomy text for reference. Also consider that it is worth investing in a good quality anatomy text that you will keep on your bookshelf for reference for your entire medical practice.

3. ***Grant's Dissector*** (Any dissector is recommended. These provide step-by-step instruction to the elaborate, meticulous dissection procedure.)
i.e.
Grant's Dissector, 13th Edition, E.K. Sauerland
or
13th edition, Tank, LWW
or
Essential Anatomy Dissector, 2nd ed. J.T. Hansen, LWW
4. *Color Atlas of Anatomy*. J.W. Rohen, Johannes, C. Yokochi, and E. Lutjen-Drescoll 2007, LWW, ISBN: 9780781790130. This is considered by many to be the finest photographic atlas available.

The biomedical library has many, many of the above textbooks as e-books as a resource for you.

ClinicalKey link to browse for all on-line textbooks:

<https://www.clinicalkey.com/#!/browse/books>

Please prepare for the start of the course by completing the following things!!!

All of the following are found on BlackBag

(1) Before orientation on Tuesday, August 9th, please read the course syllabus found on the course website to learn more about the course.

- ✓ It might also be a good idea to flip through your Netter Atlas to get comfortable with the organization. Note that Gross Anatomy and the Atlas are organized by Regions.
- ✓ For this reason, it might also be a good idea to read through the various SYSTEMS in a textbook, the sections on: Skeletal, Muscular, Nervous, and Cardiovascular systems to get an overview of the way the systems are organized in each Region of the body.

(2) Before physical exam on Wednesday August 10th

(Go to the BlackBag site. Choose the tab labeled “Orientation Videos: Gross Anatomy”)

- ✓ You will meet your first patient (your cadaver) and dissect on Wednesday, August 10th. In order to take part in this activity, you must first view the video by the Bequest Program on the donation process and respect for the donors.....**“Orientation to Cadaver Use and Care”**
- ✓ Be sure to view **“Intro to The Physical Exam”** on the website.
 - i. Also, look over the **Introductory Lab: Patient H & P exam form (“Lab 0”)**. After the exam of your first patient, you must complete the exam form, in great detail, and email it to me. This form is found on the BlackBag site under “Resources: Anatomy & Embryology” → “Gross Anatomy Lab Notes”

(3) **Before your first dissection, please view the following videos.**

These will serve as very valuable preparation!

- ✓ Your dissections in Gross Anatomy are done by Regions. It might be a good idea to watch the lectures that introduce anatomy by the systems – **“Skeletal System Review”, “Muscles Parts I-III”, and “Nervous System Parts I- II”**
- ✓ You may be interested in watching the video on the **“History of Anatomical Dissection”**

(4) To get a valuable introduction/ learn how to DISSECT--

You SHOULD DEFINITELY watch the videos on dissection.

This WILL NOT be covered in lab before dissection.

- ✓ **“Orientation to Dissection – Instruments and Techniques”**
- ✓ **“Orientation to Dissection Techniques”**
- ✓ There is also an introduction video on **“Anatomical Terms and Conventions”**.
Last year’s students suggest that this is required viewing.

(5) To monitor preparedness, and prevent anyone from falling behind, students must complete and submit for each lab session a **“pre-lab assignment”** at the start of each lab session. The assignment will not be worth points, but required in order to be allowed to

dissect and learn. This can be found on the course website. **Please have this done for your first dissection (Pectoral Region) on Wednesday.**

- (6) Upon completion of every laboratory dissection, an evaluation or “check-out” form must be completed. These will be provided to you at the end of each lab session. Your dissection must be thoroughly completed, and all questions and discussions in the lab notes thoroughly answered. The checkout form must be approved and signed by a faculty member or TA before embarking on the subsequent dissection. Note that the check-out form does not need to be approved and signed before leaving the lab, but this **MUST** be done before you will be allowed to begin the subsequent dissection.

That’s about it. We hope you have an excellent experience in your Anatomy studies!

See you in August,

A handwritten signature in blue ink, appearing to read 'Anthony J. Weinhaus', is centered on the page. The signature is fluid and cursive, with a large initial 'A' and 'W'.

Anthony J. Weinhaus, Ph.D.
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