



THE UNIVERSITY OF
CHICAGO

DEPARTMENT OF ORGANISMAL BIOLOGY AND ANATOMY

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Dear 2020 Entering Class,

I am Dr. Callum Ross and, as Course Director of *The Human Body*, the human gross, microscopic anatomy and embryology course at the University of Chicago, I welcome you to the Pritzker School of Medicine. I am looking forward to working with you all! During this course you will learn a large new anatomical vocabulary, learn to identify a large number of structures in a cadaver, and learn to visualize the three dimensional relationships of those structures to one another. The course schedule is here: [Human Body 2020](#).

Most of you are looking ahead to the upcoming course with a mixture of great anticipation and at least some trepidation. Beyond the obvious issues around the dissection of a human body, you should know that the experience of cadaver dissection will profoundly change how you view yourself and others. It is an essential first step in your education as a clinician, but it is also an experience that will set you apart from most other people.

Know that your instructors are keenly aware of some of the intense emotions you may experience when you initially work with your cadaver, but try to keep in mind that those difficult emotions will pass. The temporary discomfort you may experience is well worth it, as a good working knowledge of anatomy is essential to be effective in most areas of medicine. If you are worried about your initial reaction to working in the cadaver lab, you may contact me (rossc@uchicago.edu) and arrange for a tour before the cadaver laboratories start.

Teaching Staff

I will be joined in the laboratory and in lectures by our outstanding teaching staff: Drs. Amanda Smith and, Kara Feilich. These individuals are exceptional anatomists, as well as dedicated and popular teachers. I look forward to working with them.

In addition to your laboratory instructors, you will benefit greatly from the attention of our student Peer Educators (PEs). They are mainly second and fourth year medical students, but can also include MD/PhD students and graduate students. Some of them have served as PEs in the past. They are carefully selected and play a critical role in the course. They will actively assist you in your dissections, conduct regular small group sessions on medical imaging, conduct review sessions with the cadavers, and help you to organize practice practical exams. They work incredibly hard for you and deserve your respect and gratitude.

Throughout the course, we will be visited in lab by clinicians from the hospital. They will provide a short clinical lecture at the beginning of lab and then will tour the lab and visit with you while you are dissecting. They are often accompanied by some of their residents. These clinical lectures give you some clinical context for the anatomy you are learning, but also give you the chance to meet potential future mentors and to make contacts with people you might like to shadow.

Laboratories

The laboratory portion of the Human Body course is very technical. The goal is for you to learn

anatomy so that you can understand and converse readily with your future clinical instructors. The course is not an intellectual exercise and the material covered is carefully chosen to provide the level of detail you need to progress efficiently in subsequent clinical courses and to be successful on your USMLE Step 1 exams. Of course, you may ultimately choose a specialty that requires knowledge of only specific subsets of the material we will cover – but at this point, many of you are intellectual stem cells, and your fate is undetermined. What you learn in this course will allow you to pursue any professional path, and perhaps more importantly, help you make informed decisions about your professional future.

The material covered in lectures will be revisited in the laboratory portion of the course. The laboratory portion of the course is very structured and very dense. For several reasons, **Attendance in Lab is Required**. You are unlikely to pass the course if you do not attend. The scheduled laboratories are the times when instructors and clinicians will be there. Moreover, during the eleven weeks of the course, you must work with three other members of your lab team to dissect a cadaver. This is an enormous amount of work and it is unreasonable, unfair, and unprofessional for you to expect the other members of your team to do this work for you. So, be prepared, show up on time, and do your fair share of the work. Plan your life accordingly. Moreover, please note that you should expect to work outside of regular lab times in order to keep up with the material. Indeed, you may find that you learn some things better in a small group, with a partner, or alone in lab.

Dissection tools, an online dissection manual and an online atlas will be provided for each dissection team. Hard copy reference material will also be available. No teaching or dissecting material should leave the lab. We do recommend that you buy a copy of an atlas of your choice to prepare for lab and study for exams. Some recommendations are given below. You will need to have a set of dedicated clothing—including shoes—for working in the dissection lab. The chemicals used to preserve the cadavers are safe but odiferous, and you will not want to take those odors home with you. Locker rooms are provided for you to change in and out of your street clothing. We will be providing you scrubs for use in the lab. (The Orientation Co-Chairs are distributing a survey to collect scrub sizes from you.) You will be responsible for laundering your scrubs, and should only bring a clean set of scrubs to change into when you come to the Anatomy lab. If you are pregnant, breast-feeding, or planning on becoming pregnant, please contact me to discuss the safety of the preservatives.

Medical Imaging and Histology

In addition to learning vocabulary and learning to identify structures on a dissected cadaver, you need to be able to visualize these structures in place in three dimensions and at various scales. This is achieved through the study of radiographs and serial cross sections of MRI and CT scans taken from living patients. You are required to purchase access to an online medical imaging atlas as part of this course. Details are given below. You will also learn histology using virtual microscopy of slide collections. Medical imaging and tissue histology is studied in the laboratory and online.

Exams

Each written lecture exam is accompanied by a laboratory practical exam, graded separately. In the written exams you will be examined on written material, histological material, and on medical images. The practical exams in the dissection laboratories will be on cadavers, histology and medical images. In all written and practical exams, you must earn a grade of 65% in order to pass. You will have one chance to retake each exam if you fail on your first attempt. Not showing up for an exam (for *any* reason) will use up one of your attempts. Please schedule your time so that you are available for the course between August 11th and October 23rd. A compulsory lab clean-up day will be scheduled at a later date.

Computers

You will need access to a personal computer to complete the course. A laptop is recommended. All of the lectures will be available to you online, all of the textbooks are available online, the embryology text is only online at embryology.ch, the histology and embryology histological material is only available online, as are the laboratory instructions. You can certainly use a laptop during lecture to take notes on the PowerPoint presentations, which will be available to you before class. Your laptop must either be a PC running Windows 10 or a Mac running Mac OS version 10.12 or higher as this level is necessary for VPN and exam software. The laptop should also have a 13" or larger screen and support a resolution of at least 1024x768. Please note that many of our digital resources cannot be accessed with Chromebooks, Linux or mobile (Android, iOS) devices.

Study Tips

Learning anatomy involves a great deal of memorization. The sooner you start to study the vocabulary, the better. So, if you want a leg up, get a set of flashcards and spend some quality time with them over the rest of the summer. You may wish to purchase the textbooks (*Gray's Anatomy for Students* and *Wheater's Histology*) to brush up on material that I assume you know, such as basics of cell structure. The embryology text we use is online (embryology.ch) and you can access it at any time. The medical imaging site we will use is eAnatomy. An effective strategy, and an efficient use of your time, is to use the text and flashcards to become familiar with the names of the structures you will be looking for in your dissection BEFORE each lab. This allows you to focus on doing a good dissection and correctly identifying the various structures you need to know on the cadaver while in lab. It also allows you to utilize your instructors for learning the most challenging material rather than basic things you can learn on your own.

This is a good time to assess your learning techniques. It's never too late to learn better. To this end, I recommend *How We Learn. The Surprising Truth About When, Where, and Why it Happens*. Benedict Carey, Random House, 2015.

Anatomy in the time of COVID.

This is a difficult time. We face challenges as a society, as a country and as individuals. These challenges affect each of us differently, depending on our backgrounds, our history and our experience. The anatomy experience will also impact you all in different ways. My team and I understand this and we are available to listen, to provide advice when we can, and to point you towards support and resources to help you succeed.

I want to tell you some of the things that we have done to ensure that you are all safe and successful during the course. First, the Anatomical Gift Association of Illinois, which supplies our donors for dissection, has ensured that the cadavers are not infected with the virus that causes COVID. Our donations were received before 2020, have been preserved for at least six months, and will be tested before delivery.

Second, the course has been designed to ensure that you have the best experience possible while meeting the demands of social distancing. The course design was developed in consultation with our leading epidemiologist, and was approved at the highest levels in the University, as well as by the Governor's Office by the State of Illinois. In brief, you will watch the lectures remotely (they will also be recorded for you to watch as needed), and you will dissect in lab in full PPE.

What we ask you to do is follow our instructions carefully and thoughtfully, ask questions when you don't understand, and provide helpful feedback on things that you think can be done better and safer. We are in this together, and together we will be successful. Of that, I have no doubt.

I am looking forward to meeting all of you.

Please feel free to e-mail me if you have any questions at all.

Sincerely,

Callum F. Ross, Ph.D.

Professor of Organismal Biology & Anatomy

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