

GROSS HUMAN ANATOMY

ANTH 695 – SPRING 2022
THE UNIVERSITY OF TENNESSEE

Instructor:

Benjamin Auerbach, Ph.D.

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Lab instructor:

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Office hours: Dr. Auerbach is available by e-mail appointment to meet via Zoom.

Meeting Times: Lecture and lab*

Monday: 2:15 – 4:20 P.M.

Tuesday: 2:00 – 4:05 P.M.

Wednesday: 2:15 – 4:20 P.M.

Thursday: 2:00 – 4:05 P.M. and 4:30 – 5:45 P.M.

Locations:

Lecture: 512 Strong Hall

Lab: 514 Strong Hall

* Access to the dissection lab outside of scheduled course hours is open unless specified otherwise by Dr. Auerbach. DO NOT WORK IN THE LAB ALONE! See course schedule for lecture and lab plan.

COVID Safety and Course Meeting Details:

- **Dr. Auerbach and the University strongly encourage you to get vaccinated against COVID-19.**
- To ensure your safety and the safety of your fellow students, **do not come to class if you have tested positive for COVID-19, are feeling unwell (have a fever, chills, cough, etc.), or are in isolation because you have been exposed to someone who has tested positive for SARS-CoV-2 (COVID-19).** If you are unsure about whether you should attend class, **err toward caution**, and stay home.
- **If you get sick, you will be accommodated. Dr. Auerbach will work with you so that you do not get behind in learning anatomy should you have to miss lecture or lab.**
- If you think you are sick or have been exposed to COVID-19, you should contact the Student Health Center or your health care provider. You can also contact the university's COVID-19 support team for guidance by filling out the self-isolation form (covidform.utk.edu).
- University policy: **You must not attend class** if you have tested positive for COVID-19 and are in the isolation period, if you have COVID-19 symptoms and have not been cleared by a medical provider, or if you are an unvaccinated close contact in the quarantine period.
- Wearing a mask in lecture will help keep both you and others healthy. **Please come to lecture and lab already wearing a face mask.** Wear a mask with multiple layers of material and that closely fits your face. Over-the-ear cloth masks, well-fitted surgical masks, and high-quality respirators (KN95, KF94, or N95 masks) are ideal to protect yourself and your fellow students. Buffs, bandanas, and similar thin materials are not sufficient protection. **Please wear your face mask properly, covering both the nose and mouth.**

Course description: Gross Human Anatomy provides advanced graduate students with in-depth anatomical training. A thorough comprehension of anatomy is at the core of biological anthropology, functional anatomy, and comparative evolutionary research. Skeletal function and form, often subjects of analysis in these fields, cannot be fully interpreted and understood without the context of the soft tissues—from muscles and ligaments to blood vessels and organs—that surround and interact with the bones. Using cadaver-based dissection, students experience the best method by which to learn about the structures of the human body, their integration, and, most importantly, variation among humans.

The course consists of three combined subjects: an anatomy lecture course, a laboratory dissection course, and an overview of human development. This is an intensive course, requiring hours of study both in the lab and from texts, but it rewards you for those hours. Special emphasis is placed on evolution and functional anatomy of the body, though an understanding of development (embryology) and pathology (clinical knowledge) is also stressed.

In past years, these topics were paired with guest lectures (the Special Topics in Anatomy Lecture Series) that bridge the textbook and lab knowledge with medicine, research, and practical applications. This spring is unusual in that, because of the pandemic and a search for a new faculty member with specialization in anatomy, the lecture series will be greatly curtailed. Dr. Auerbach will provide more information about special topics lectures over the course of the spring semester.

Course objectives: By the end of the course, you should:

- have developed an advanced understanding of human anatomy & some functional anatomy.
- possess a good basic comprehension of human developmental biology.
- have learned the fine dissection skills necessary to identify, isolate and preserve the delicate structures encountered throughout the course.
- be able to relate the anatomical knowledge gained to research and practical applications.

Course textbooks: Gross Human Anatomy uses four different books to cover the various topics of the course: regional and functional anatomy, developmental biology, and gross anatomical dissection. These are all required for the course. Additional readings will be made available via Canvas for topics not covered in these publications. Students are encouraged to seek additional resources (e.g., additional anatomical atlases, study guides) if they prove useful, though all the course content is more than adequately covered in the four books assigned for the course. Copies of all textbooks should be purchased via Internet retailers (as these will be cheaper than rates the campus bookstore is able to offer).

Principal textbook:

Keith L. Moore, Arther F. Dalley, Anne M.R. Agur. 2018. *Clinically Oriented Anatomy*. Eighth edition. Baltimore: Lippincott Williams & Wilkins. ISBN: 978-1496347213

Embryology textbook:

Gary C. Schoenwolf, Steve B. Bleyl, Philip R Brauer, Philippa H. Francis-West. 2021. *Larsen's Human Embryology*. Sixth edition. Philadelphia: Elsevier. ISBN: 978-0323696043

Anatomical atlas:

Anne Gilroy, Brian R. MacPherson, Lawrence M. Ross. 2020. *Thieme Atlas of Anatomy*. Fourth Edition. New York: Thieme Medical Publishers. ISBN: 978-1684202034

Anatomical dissector:

Patrick W. Tank. 2020. *Grant's Dissector*. 17th edition. Baltimore: Lippincott Williams & Wilkins. ISBN: 978-1975134600

YOU WILL NOT ALWAYS FOLLOW THE INSTRUCTIONS OF THE DISSECTOR VERBATIM. A LIST OF DISSECTION SUGGESTIONS AND ANNOTATIONS TO THE DISSECTOR ARE PROVIDED IN THE LABORATORY MANUAL. BE SURE TO READ THESE, ALONG WITH THE DISSECTOR, BEFORE YOU COME TO LAB!!!

Optionally, you may be interested in acquiring copies of the following supplemental books:

Julia C. Boughner and Campbell Rolian (editors). 2016. *Developmental Approaches to Human Evolution*. New York: Wiley-Blackwell. ISBN 978-1118524688.

John H. Langdon. 2005. *The Human Strategy: An Evolutionary Perspective on Human Anatomy*. New York: Oxford University Press. ISBN: 978-0-19-516735-1.

David Levine, Jim Richards, and Michael Whittle. 2012. *Whittle's Gait Analysis*. Fifth edition. New York: Chuchill Livingstone (Elsevier). ISBN: 978-0702042652.

Todd Vanderah and Douglas Gould. 2020. *Nolte's the Human Brain: An Introduction to Its Functional Anatomy*. Seventh edition. New York: Elsevier. ISBN: 978-0323653985.

Robert H. Whitaker and Neil R. Borley. 2016. *Instant Anatomy*. Fifth edition. New York: Wiley-Blackwell. ISBN 978-1119159384.

Course layout: Two major components comprise the course: lectures and dissection labs. However, the structure and content of these vary further. In addition, there may be up to four guest lectures as part of an abbreviated Special Topics in Anatomy Lecture Series, which will be announced as the semester is underway. **Be sure to reference the course schedule at the end of the syllabus.**

Lectures occur on half of meeting days of the course. Dr. Auerbach will deliver all lectures. Topics of lectures include general anatomy, functional anatomy, and human development. **Development lectures will be delivered online for you to download and watch before class on specified dates. Dr.**

Auerbach will make reference to developmental processes as appropriate when discussing the definitive anatomy, so be sure to watch these online lectures by the date specified. Unless otherwise noted in the schedule, be sure to complete readings for each day before the lecture.

There are 24 scheduled dissections in the course. Labs will occur separately from lectures. Be prepared to spend the full time allotted dissecting in the lab. Many dissections, especially cleaning up structures, will most likely take longer than the assigned time. The course is scheduled to finish by 4:20 on all days except Thursdays, when (after a break) class meets until 5:45 P.M. Dr. Auerbach and Mr. Wehrman will leave the lab no later than 4:30 on Mondays through Wednesdays and no later than 6:00 on the few Thursdays we have scheduled dissections. You are strongly encouraged to be efficient with your time in dissection. Students are permitted to continue dissections in the lab outside of scheduled course hours, though you may not dissect in the lab alone. Specific instructions for accessing the lab and policy for dissecting outside of course hours will be discussed during the special meeting on the 21st of January. (Also see Laboratory and Dissection Safety below, and well as the Lab Manual.)

Course web site: All course communication, study aids, external web resources, and supplementary readings will be available via Canvas, the University of Tennessee online service (**online.utk.edu**). Be sure to check this site frequently for updates.

LABORATORY AND DISSECTION SAFETY

You must be aware of the safety considerations that accompany gross human anatomy dissection. **All students enrolled in this course must attend the laboratory safety lecture on the 21st of January starting at 10:00 A.M. before being permitted to dissect.**

We are fortunate to be able to provide cadavers for use in this course. Remember that these individuals donated their bodies to further your pursuit of knowledge about human anatomy. Treat their bodies with respect and deference, and make the best possible use of their gift in your dissections. (After all, advanced gross anatomy courses that use human cadavers are very rarely taught outside of medical institutions.)

Written guidelines will be provided in the Lab Manual prior to the first course meeting. You must read through these and sign the consent and waiver form at the end of the guidelines before you are allowed to participate in dissections. Most of these rules concern your safety in the laboratory. This includes proper handling of biological waste generated by the dissection process, the proper handling of sharp dissection equipment (namely disposable scalpels), and knowledge of what to do in the case of emergencies or

accidents in the dissection lab. Problems, of course, are not anticipated, but an awareness of correct procedures will minimize the consequences should problems arise. Any lab incidents must be reported to Dr. Auerbach or to Mr. Wehrman.

Be aware that hazardous chemicals are used in the preservation of human cadavers, namely a small concentration of formaldehyde, and a larger concentration of phenol suspended in an aqueous solution including glycerin and methanol. **DIRECT SKIN CONTACT WITH THIS PRESERVATIVE FLUID WILL CAUSE IRRITATION AND MAY LEAD TO MORE SERIOUS COMPLICATIONS.** For this reason, all students must wear neoprene gloves rated to resist phenol and use a neoprene apron when dissecting. **ANY STUDENT WITH MEDICAL CONDITIONS THAT MAY BE AFFECTED BY THESE DISSECTIONS (E.G., RESPIRATORY ILLNESS, PREGNANCY, CIRCULATORY PROBLEMS, OR DIABETES) OR WHO HAVE CONCERNS SHOULD CONTACT DR. AUERBACH BEFORE THE FIRST CLASS MEETING.**

The anatomy laboratory is equipped with down-draft dissection tables and airflow in the lab is laminar. These tables directly vent from the tabletop to minimize the concentration of volatile chemicals into the air. Special care should be taken in attaching and detaching the umbilical connections between the tables and the exhaust hookups protruding from the lab walls.

To further protect you from volatile chemicals in the lab, you will be required to wear a respirator mask. These will be provided for you.

Generally, use common sense in the lab. Do not leave sharp tools in places where others may accidentally bump into them, and do not lose the tools within or under the cadaver (a common but entirely preventable occurrence). Do not touch exposed skin with gloved hands. Wear facial protection when a chance of splatter is possible (e.g., during use of the Stryker saw). Do not work until fatigued in the lab; take breaks for water and to get off your feet. Be sure to properly dispose of all waste. See the list of guidelines provided before the first day of class for more information about the specific treatment of permanent laboratory equipment and for details on waste disposal, procedures for phenol exposure, and general laboratory safety.

Personal laboratory equipment: The laboratory component of this course requires proper equipment for the dissection of cadavers. **You will be provided with dissection equipment and safety attire before the semester starts.** These include:

- Indigo Tools dissection kit

- disposable neoprene surgical gloves & reusable neoprene sleeves
- disposable surgical blades
- a reusable neoprene apron
- respirator masks

Students are encouraged to invest in scrubs or to wear clothing that can be soiled; only long pants or long skirts are permitted. In addition, closed-toe shoes with good traction are required for the laboratory. Students wearing improper footwear will not be permitted to dissect. No exceptions will be made.

Study materials: Anatomical atlases will be made available to students in the lab for reference during dissection, though students are encouraged to acquire used copies of atlases in addition to these to provide multiple perspectives. Models of some anatomical structures will be made available to students in the laboratory, though these models may not leave the lab. Human crania will also be provided during the head and neck section, though these too may not be removed from the lab.

Skeletal study will help you make sense of much of the soft anatomy encountered throughout the course, and so it would benefit you to spend time studying or refreshing your osteological knowledge. A special arrangement has been made with the Forensic Anthropology Center to allow access during normal business hours to select skeletons from the William Bass Skeletal Collection. These skeletons will be available to be studied in the OVAL (Room 427D), and can be accessed by making arrangements with Dr. Auerbach. Space is limited, so try to stagger your visits with classmates.

In addition to the physical resources in the lab, you also have access to a virtual three-dimensional human atlas, **Visible Body**. This may be accessed through the UT Libraries at the following websites: <http://s.lib.utk.edu/atlas> (main atlas); <http://s.lib.utk.edu/muscles> (functional atlas of muscles); and <http://s.lib.utk.edu/anatomyphysiology> (an anatomy and physiology atlas). These are best used as review tools and to help you visualize three-dimensional relationships of structures outside of lab.

Assessment: There are four forms of evaluation used during the course: lecture written exams, pop quizzes, laboratory practical exams, and oral laboratory presentations. Each is explained below, and the dates for all of these (except pop quizzes) are highlighted in grey boxes in the course schedule.

Lecture written exams: There are four written lecture exams. The first is a short (one hour) exam on the thorax only, designed to give you a taste of the exam layout and content for the course. The remaining three exams are full-length (three hour) tests that cover sections of the course divided thematically and regionally. All lecture exams will cover material from the principal textbook (Moore et al.), readings from the human developmental biology textbook (Schoenwolf et al.), and lectures supplementing these two textbooks. Question formats include short answer, fill-in-the-blank, and multiple choice. **Written exams from prior years of the course are available on the course web site.**

Pop quizzes: There will be ten unscheduled quizzes that will take place during the course. These are designed to serve as checkpoints for you throughout the semester, to ensure that you are studying effectively and may pinpoint topics that require additional attention in studying. The material on which you may be quizzed is the same as what appears on the major exams, and quizzes will focus on material already covered in lecture and lab.

Laboratory practical exams: Three laboratory practical exams occur simultaneously with the three full-length lecture exams. You will be given an answer form and have free access during the testing period to complete answers to questions on flagged structures located on the cadavers or models. These lab practical exams involve identification of structures from the cadavers, models, and isolated bones, as well as some functional questions.

Laboratory oral presentations: Once during the semester, each student will be asked to present on the completed dissections of the previous section of the course. Presentations may occur on one of six possible days throughout the course listed in the syllabus and will cover specific topics reflecting recent dissections. Guidelines for the material that must be covered during these presentations may be found in the Lab Manual along with dissector annotations. These oral presentations must be completed in front of Dr. Auerbach *and all dissection partners from the presenter's table*, and may take no longer than twenty (20) minutes. As a maximum of four students will be dissecting at each table, each student at each table is only responsible for one presentation. Presentations will be graded out of 100 points, with four possible scores judged by completeness of material covered and the organization of the presentation:

SCORE	Material covered from presentation guidelines	Presentation organization
60	Inadequate coverage	Not well organized
75	Adequate coverage (some details skipped)	Not well organized
90	Complete coverage	Well organized
100	Complete coverage plus clinical & developmental information	Well organized

Exams and points: The point values for assessment are given below. A total of 1000 points are available in the course and are divided into letter grades according to the following rubric.

Thorax mini lecture exam	50 points
TAPP lecture exam	200 points
TAPP lab practical exam	50 points
Back & limbs lecture exam	200 points
Back & limbs lab practical exam	50 points
Head & neck lecture exam	200 points
Head & neck lab practical exam	50 points
Pop quizzes (10 points each)	100 points
Lab oral presentation	<u>100 points</u>
TOTAL	1000 points

Letter grades: A: 865-1000 B: 730-864 C: 600-729 D: <600

Tips for getting the most out of the course: Any course on human anatomy is challenging but rewarding. You are most likely taking this course in preparation for a professional career in which anatomical knowledge will be essential. Even if you are not taking this for professional reasons, knowledge of your anatomy has long-term practical use. So, remember that you are not learning this information for the exam, but for the rest of your life, professional or otherwise.

A golden rule for anatomy: **DON'T GET BEHIND!** It is to your advantage to keep up with the reading and keep reviewing throughout the course. I strongly encourage you to review nightly, **and read both for the lecture and, especially, the lab dissections ahead of time.** Learning anatomy is similar to studying a language; constant review of terminology is essential. Cramming in anatomy just before the exam isn't to your advantage. Some learning is, admittedly, rote memorization, but much of anatomical study involves integrating functions and intuiting spatial relationships. In short, give time to reading anatomy each day. Synthetic learning (which Dr. Auerbach will discuss in class) is essential for learning anatomy. In short, writing out terms and relationships among structures, making schematics, and learning material from multiple orientations and perspectives through your own, self-made study materials will greatly aid and enrich your learning. Drawing, as you likely incorporated in osteology, is a key to helping you learn anatomy. Draw schematics of blood flow or nerves & their branches. Create tables of muscles and their functions, and then draw simple diagrams of the muscles, linking them to bony origins and insertions. These techniques will help you much more than all-nighters before exams.

Several resources are available as study aids, and I would recommend that you employ these as you find them to be useful in supplementing your primary studying. Web sites that are recommended for

mnemonics, cross-sectional imagery, and embryology are available as “External Links” on the course Canvas web site. There are also good summary study guides, the best of which is *Instant Anatomy* (see citation on page 3); this volume is recommended to help you to review vasculature, nerve distributions, and anatomical spatial relationships.

Staying healthy while taking anatomy: As noted previously, this is a very intensive and high demand course. It is crucial that you look after yourself, both mentally and physically throughout the semester. You are not expected to be proficient at dissection or fully knowledgeable about any aspect of anatomy at the start of the course, even if you have dissected or taken anatomy previously. Give yourself a chance to learn and appreciate the material, and have fun learning it. Forming study groups and working with fellow students helps not only with knowledge but with morale. Taking breaks from dissection to minimize fatigue is important, but so is taking breaks from studying for the course. Pacing your studies will help significantly toward this end; as noted above, do not cram. Getting enough sleep and eating properly, in addition to good hygiene in and out of the lab will minimize the chances of getting sick over the course of the semester. Sleep is crucial for learning and good mental health, so make sure you do not sacrifice rest for study. If you are experiencing unusual anxiety over the course, please do not hesitate to meet with Dr. Auerbach.

Students with disabilities: If you require accommodation because of special needs in learning, please contact the Office of Disability Services at 2227 Dunford Hall (974-6087). Please also contact Dr. Auerbach immediately via e-mail after you register with the Office of Disability Services. Arrangements will be made to adjust exams to fit your needs.

Make-up policy: Short of legitimate professional, religious, legal or medical reasons, you will not be eligible to take examinations at any time other than those that are officially designated. If you must miss an exam, you must contact Dr. Auerbach before the examinations.

COURSE SCHEDULE – ANTH 695 – SPRING 2022

COA – Clinically Oriented Anatomy LHE – Larsen’s Human Embryology GD – Grant’s Dissector
SPECIAL TOPICS LECTURE INFORMATION WILL BE POSTED DURING THE SEMESTER

DATE	LECTURES	DISSECTION / LAB	READINGS
21 JANUARY 10:00 AM – 12:00 PM	Special meeting: Lab safety Course orientation Anatomical terminology & study methods		Lab Manual COA: 2-11
24 JANUARY (M)	Systemic overview of anatomy The nervous system		COA: 11-66
25 JANUARY (T)	Embryonic development [ONLINE] Thinking evolutionarily about anatomy Introduction to the thorax & thoracic wall		LHE: 1-103 COA: 291-326
26 JANUARY (W)	Pleural cavity and lungs Heart & middle mediastinum		COA: 326-381
27 JANUARY (R)	Heart development [ONLINE] Posterior mediastinum		LHE: 261-297 (skim Chapter 13) COA: 382-403
31 JANUARY (M)		1. Thoracic wall & pleural cavity	GD: 38-43; 83-95
1 FEBRUARY (T)		2. Heart and the mediastinum	GD: 96-112
2 FEBRUARY (W)	The abdominal wall & the inguinal canal Abdominal viscera (start)		COA: 405-438; 439-514
3 FEBRUARY (R)	EXAM: Short thorax & systems	THORAX PRESENTIATIONS	
7 FEBRUARY (M)	Abdominal viscera (finish) Introduction to the pelvis		COA: 439-514; 515-548 COA: 554-576
8 FEBRUARY (T)	Abdominal organs development [ONLINE] Urogenital development [ONLINE]		LHE: 335-418
9 FEBRUARY (W)		3. Anterior abdominal wall & inguinal canal	GD: 113-126
10 FEBRUARY (R)		4. Abdominal cavity I	GD: 127-149
14 FEBRUARY (M)	Pelvic viscera and the perineum		COA: 576-660

DATE	LECTURES	DISSECTION / LAB	READINGS
15 FEBRUARY (T)		5. Abdominal cavity II	GD: 149-159
16 FEBRUARY (W)		6. Perineum and pelvic cavity	GD: 166-208
17 FEBRUARY (R)	Development & TAPP Review (<i>optional</i>)	7. Pelvic cavity	
21 FEBRUARY (M)	EXAM: Thorax, abdomen, pelvis & perineum (TAPP)	LAB PRACTICAL EXAM: Thorax, abdomen, pelvis & perineum	
22 FEBRUARY (T)	The thigh and gluteal region The hip & knee (part one)		COA: 667-698; 703-746
23 FEBRUARY (W)	The hip & knee (finish) The leg and the foot	ABDOMINOPELVIC PRESENTATIONS	COA: 746-785
24 FEBRUARY (R)		8. Anterior thigh & medial thigh	GD: 209-224
28 FEBRUARY (M)		9. Gluteal region and posterior thigh	GD: 224-231
1 MARCH (T)	Gait Development of the limbs [ONLINE]		COA: 701-703; Whittle LHE: 491-513
2 MARCH (W)		10. Popliteal region and posterior leg	GD: 232-238
3 MARCH (R)		11. Anterior & lateral leg	GD: 239-244
7 MARCH (M)		12. The foot / Lower limb dissection catch-up	GD: 245-251
8 MARCH (T)	The back The brachial plexus (start)		COA: 72-139 COA: 185-201
9 MARCH (W)	The brachial plexus (finish) The arm	LOWER LIMB PRESENTATIONS	COA: 141-185; 201-214
10 MARCH (R)	The forearm and hand		COA 215-263
SPRING BREAK 14-18 MARCH			
21 MARCH (M)		13. The back	GD: 7-20
AABA Annual Meeting in Denver 22-25 MARCH			
28 MARCH (M)		14. The axilla	GD: 29-48
29 MARCH (T)		15. The arm; anterior forearm	GD: 49-62

DATE	LECTURES	DISSECTION / LAB	READINGS
30 MARCH (W)		16. Posterior forearm and the hand	GD: 63-75
31 MARCH (R)	Back & limbs review		
American Association for Anatomy Annual Meeting in Philadelphia 2-6 APRIL			
7 APRIL (R)	EXAM: Back & limbs	LAB PRACTICAL EXAM: Back & limbs	
8 APRIL (F)*	Introduction to the head and neck Neck triangles, muscles & viscera	*Note that this meeting makes up for the lost instructional day on the 14 th of April.	COA: 830-845 COA: 991-1030
11 APRIL (M)	The face & muscles of mastication	UPPER LIMB PRESENTATIONS	COA: 851-873; 924-929
12 APRIL (T)		17. Suboccipital; anterior neck	GD: 20-22; 262-272
13 APRIL (W)		18. Anterior & root of the neck	GD: 262-277
18 APRIL (M)	Brain, blood flow, meninges, and ventricles		COA: 873-896
19 APRIL (T)	Cranial nerves I		COA: 1062-1091
20 APRIL (W)	Cranial nerves II		
21 APRIL (R)	The eye and orbit		COA: 897-922
25 APRIL (M)		19. Superficial face, parotid & temporal regions	GD: 278-289; 292-298
26 APRIL (T)		20. Brain (& completion of face)	Dr. Auerbach
27 APRIL (W)		21. The orbit	GD: 313-321
28 APRIL (R)	Deep face (oral and nasal cavities)		COA: 922-973
2 MAY (M)	The pharynx; The larynx & ear	CRANIAL NERVES & NECK PRESENTATION	COA: 974-999; 1031- 1050
3 MAY (T)		22a. Atlanto-occipital dissection and head disarticulation	GD: 322-325
4 MAY (W)		22b. Pharynx & bisection of head	GD: 325-330
5 MAY (R)		23. Nasal and oral cavities	GD: 331-345
9 MAY (M)		24. Larynx & the ear	GD: 346-354
10 MAY (T)	Development of the head [ONLINE]		LHE: 419-489
11 MAY (W)	Head and Neck review	DEEP HEAD & NECK PRESENT.	
16 MAY (M)	EXAM: Head and neck	LAB PRACTICAL: Head & neck	