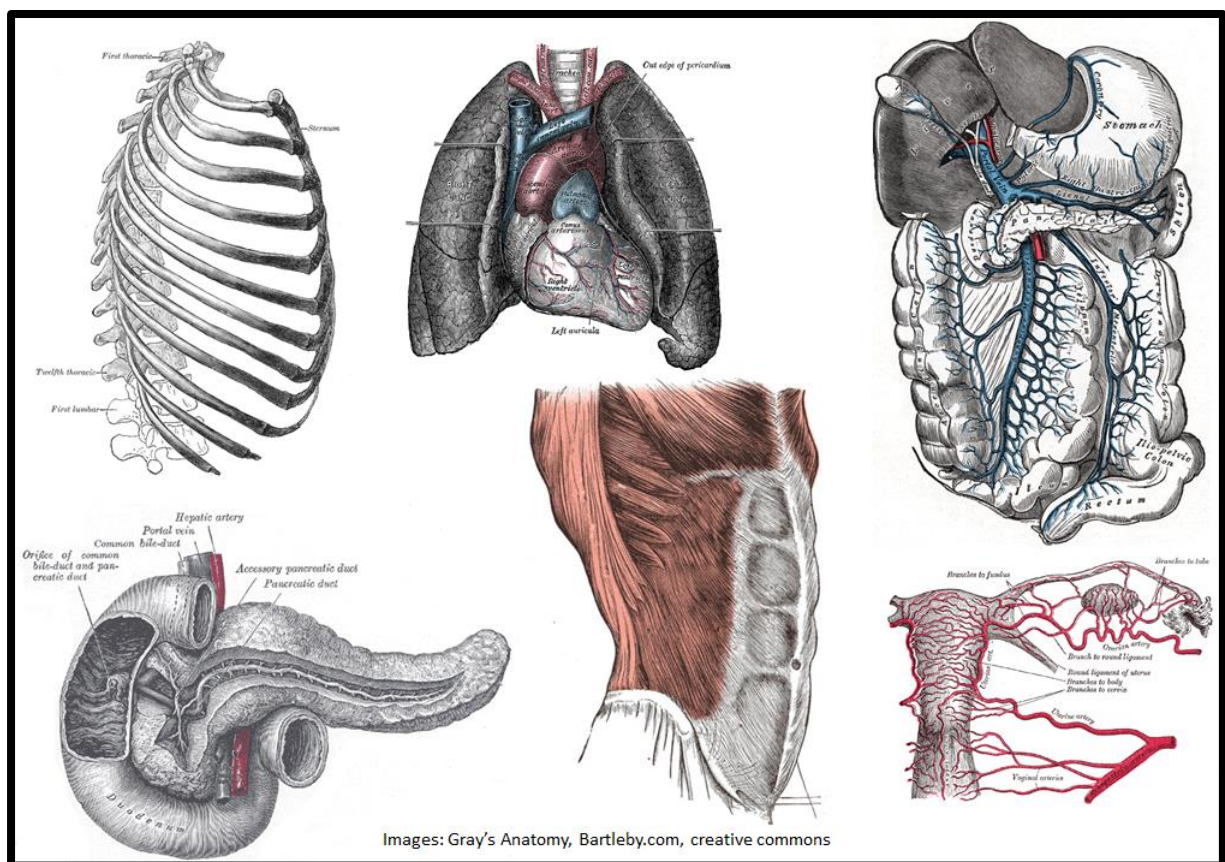


ANAT3121

VISCERAL ANATOMY



COURSE OUTLINE

SESSION 2, 2018

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Please read this manual/outline in conjunction with the following pages on the

[School of Medical Sciences website:](#)

- [Advice for Students](#)
- [Learning Resources](#)

(or see "STUDENTS" tab at medicalsciences.med.unsw.edu.au)

Staff Contact Details

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The course convenors are very happy to meet with students. As our offices are not easily accessible, please email to arrange a suitable time to meet.

Course Details

ANAT3121 Visceral Anatomy is a 6 UOC Level III course for Science, Medical Science, and other students. The course builds on the content covered in the introductory anatomy courses (ANAT1521, ANAT2111 and ANAT2511) and complements the level III anatomy courses (ANAT3131, ANAT3141 and ANAT3411).

This course aims to provide you with a sound understanding of the functional and clinical anatomy of the viscera (organs) in the human body from both a regional and systemic anatomical perspective. The focus is on the organ systems in the thorax, abdomen and pelvis (respiratory, cardiovascular, gastrointestinal, urinary, reproductive, lymphatic and autonomic nervous systems) and their functional integration with each other. Through the course activities, you will construct a 3-dimensional understanding of the human body and be able to apply this to cross-sectional, imaging and clinical anatomy.

Students build their knowledge in these systems via studying prosected wet and plastinated cadaveric specimens, models and bones as well by using the latest available technology. The course incorporates topographical, radiological and cross-sectional anatomy of the respective regions through the study of medical imaging and cadaveric sections. Relevant clinical and functional anatomy is discussed as applicable in seminars and practical sessions, and are the focus of special tutorial sessions designed to allow students to apply the course content via clinical scenarios.

The course was well-received in 2017. Student feedback and suggestions are always valued and the course is modified based on these. The following modifications have been made to the course for 2018:

- The course delivery has been restructured so that the weekly format is now: a two hour interactive seminar, one three-hour practical and a one hour tutorial.
- Tutorials will focus on expanding difficult concepts, and develop problem solving skills relevant to clinical and imaging applications.
- Cross-sectional anatomy has been better integrated into the weekly learning in labs and tutorials.
- The online activities have been increased both for pre-class preparation and to help consolidate weekly learning.

Learning Outcomes

ANAT3121 will develop the attributes identified by the Faculty of Science as important for a science graduate to attain. These include the skills, qualities, understanding and attitudes that promote lifelong learning that students should acquire during their university experience.

At the completion of the course the student should be able to:

1. demonstrate a sound knowledge of the anatomy of the organ systems of the body, including the musculoskeletal framework, the autonomic nervous system and the lymphatic system;
2. apply knowledge of the anatomy of the organ systems to construct a 3-dimensional perspective of the human body and apply this to interpreting cross-sectional anatomy and radiological images
3. deduce the anatomy that underpins relevant clinical problems, and where applicable, their solutions,
4. research and critically evaluate literature and media, and reflect on their content through self-directed learning, teamwork and health advocacy.

Course Structure and attendance:

The weekly format is as follows:

1. Interactive seminars held every Tuesday between 3pm - 5pm; Venue: Mathews 103.
2. A laboratory session held every Wednesday between 9am- 12pm; Venue: WW 101E.
3. A tutorial session held every Thursday between 3pm - 4pm; Mathews 103.

Please note that changes to this format occur in weeks 7, 9 and 12 in relation to planned assessments. These are detailed in the timetable.

Any further changes to the timetable will be communicated via the course moodle.

Arrangements have been made for seminars to be recorded, but please note that this cannot be guaranteed as the technology is controlled centrally. It is strongly recommended that students attend all seminars as they form the basis for the practical content the following week. Attendance will be required at all laboratory and tutorial sessions. The laboratory sessions as well as some tutorials have assessable components.

Teaching Rationale and Strategies

Seminars

The seminars are designed to provide preliminary information and an overview of the topic and are a prerequisite for learning in the labs. Although we make every attempt to ensure that the seminars are recorded and lecture notes published on Moodle, it is advisable for the students to attend all seminars to achieve better learning outcomes.

The timetable has been planned such that the seminars link to practical classes in the following week allowing students sufficient time to prepare for the practical sessions. In some cases there is pre-class work (some of which is online) to assist in preparation for seminars or labs, and/or post-class work to help consolidate content covered.

Laboratory/Practical classes

The laboratory classes complement the lectures, and involve active learning in a small group situation. There is much research to indicate that this is the best method for the learning of anatomy and these sessions will give you a window into the wonder of the human body. You will be required to study dry bones, models, wet and plastinated dissected specimens as well as cross-sectional and radiological anatomy. In the laboratory classes, every student is required to be involved in inquiry and take an active participation in the learning process.

It is strongly advised that students come well prepared in order to make the best use of their time in the laboratory. Each lab session links to content covered in seminars taken the week before. ***For the first lab, pre-lab online lectures will be available from the beginning of 0 week.***

In the lab each student is assigned a laboratory group with a tutor. It is compulsory for the students to stay in their allocated laboratory group for the whole session. If you have any concerns about your group/tutor, you may approach your course convener and discuss the matter. You cannot change your laboratory group on your own.

Surface palpation anatomy and cross-sectional anatomy is included in each practical. Surface and cross-sectional anatomy as well as radiological imaging is examinable via specimens and images during practical exams and in the theory exams.

Tutorials

These are aimed to be interactive sessions focussing on clinical anatomy and solving of clinical problems and include medical imaging and cross-sectional anatomy. Some tutorials will focus on difficult anatomical concepts.

Moodle

This course uses Moodle as its learning platform. Here you will find the lecture notes, online videos and activities, assessment, announcements and discussions. More information regarding instructions and requirements will appear on Moodle under announcements and a pop-up message will appear when you log on.

Students are encouraged to use the discussion forum in the Moodle for questions related to this course. These questions can be answered with corrections or suggestions by your peers and/or the course authority.

Students are expected to check Moodle regularly for announcements, tests and/or additional resources. It remains your responsibility to make yourself aware of the activity.

Assessment

The assessment for this course will have theory and practical components and is shown in the table below.

Lab quiz	10%
Assignment	20%
Spot tests (x2)	35%
End of session written assessment	35%

At the beginning of each lab, there will be a short (usually 5 MCQs) quiz based on the preceding online or seminar content. The five best scored quizzes will contribute to the **lab quiz mark**.

The **assignment task** will be distributed in week 2 of the course. Deadlines for this task will be posted on Moodle.

There will be 2 **spot tests**. **Spot 1** forms the mid-session assessment in week 7 on topics covered upto and including week 6. **Spot 2** will be held in week 13 and will include content from weeks 8 to 13. Both will be conducted in the anatomy laboratory. Spot tests assess ability to identify and correctly name structures in human anatomical specimens, models and medical imaging and ability to correlate this to the gross and clinical anatomy.

The **end of session written assessment** is scheduled during the exam period and will cover the content of the *entire course*.

Content taught in seminars, practicals, tutorials or via Moodle activities can be tested in any of the assessments.

The pass mark for this course is **50%**.

Student Resources

The student in this course is expected to have a textbook and an atlas of their personal choice/preference. You may bring your books with you to the lab classes, for quick reference as long as you are responsible for their safety.

Textbook

Moore, KL, Dalley AF, Agur AM. Clinically Oriented Anatomy, 8th edition, Lippincott Williams & Wilkins
or
Drake, RL, Vogl W and Mitchell AWM, Gray's Anatomy for Students, 3rd edition, Elsevier Churchill Livingstone

Recommended Atlas

Rohen, JW, Yokochi, C. & Lutjen-Drecoll. Color Atlas of Anatomy, Lippincott Williams & Wilkins, 8th edition **or**
Netter, FH. Atlas of Human Anatomy, Novartis, 6th edition **or**
Agur, AMR & Lee, MJ. Grant's Atlas of Anatomy, Lippincott Williams & Wilkins, 13th edition; **or**
Abrahams PH, Boon JM and Spratt JD. McMinn's Clinical Atlas of Human Anatomy, Mosby Elsevier, 7th edition.

Reference Books

Dean D and Herbener TE, "Cross Sectional Human Anatomy: Including images from the National Library of Medicine's Visible Human Project", 2007, Lippincott Williams & Wilkins.
Hull, Lippincott Williams and Wilkins, Colouring atlas of the human body.
Marieb, EN & Hoehn K, Human Anatomy and Physiology + CD 9th edition, Pearson Benjamin Cummings.
Martini FH, Fundamentals of Anatomy and Physiology, 10th edition, Pearson Benjamin Cummings.
Robert D. Acland, Acland's Cross-Sectional Navigator, Lippincott Williams And Wilkins.





Library Resources

See [Learning Resources](#) on the SoMS website Student pages.

- Library Subject Guide for Anatomy SUBJECTGUIDES.LIBRARY.UNSW.EDU.AU/MEDICINE/ANATOMY
- Primal Pictures: 3D interactive anatomy database
- Anatomedia
- Acland's Video Atlas
- Gray's Anatomy for Students

The Library holds a variety of 3D anatomical models for students: They are housed in My Course Reserve, level 2.

Anatomy lab student risk assessment

Medicine Teaching Laboratory Student Risk Assessment		 Gross Anatomy Practical Classes for Medical and Science Students DOC:PHSL-SRA-S&H-01rev1.1
Hazards	Risks	Controls
Physical <ul style="list-style-type: none"> Cold temperature (16oC) Sharp bone/plastic Biological <ul style="list-style-type: none"> Fungi, bacteria (tetanus), hepatitis B and C Chemical <ul style="list-style-type: none"> Formaldehyde Methanol 2-phenoxyethanol 	Cold Penetrating wound of foot Infection Corrosive/Flammable Irritant/toxic Irritant	<ul style="list-style-type: none"> Wear laboratory coat over appropriate warm clothing Wear enclosed shoes with full coverage of the dorsum of the foot Have appropriate immunisation Do not eat, drink or smoke in the Dissecting Room Do not place anything (e.g. pens, pencils) into your mouth Use disposable gloves when handling wet specimens and do not cross-contaminate models or bones with wet specimens Always wash hands with liquid soap and dry thoroughly with disposable paper towel before leaving Low concentrations of chemicals used Chemicals used in well ventilated area Safety Data Sheets for chemicals available in the laboratory
Personal Protective Equipment required		
 Closed in Footwear	 Lab. Coat	 Gloves
Emergency Procedures		
In the event of an alarm sounding, stop the practical class and wait for confirmation to evacuate from demonstrators. Then wash your hands and pack up your bags. Follow the instructions of the demonstrators regarding exits and assembly points.		
Clean up and waste disposal		
<ul style="list-style-type: none"> Cover wet specimens with the towels provided. Make sure that towels do not hang over the edge of the table, because this allows fluid to drip onto the floor. Fluids on the floor are a major safety hazard and should be reported to staff immediately. Replace stools under the tables in your cubicle. Remove your gloves and dispose in the biowaste bins provided. Wash your hands and instruments thoroughly with the soap provided and dry your hands with the paper towel. Remove your laboratory coat when you leave the dissecting room. 		
Ethics Approval		
This type of practical has been previously considered and approved by the UNSW Human Research Ethics Advisory Panel (HREC09372).		
Declaration		
I have read and understand the safety requirements for this practical class and I will observe these requirements. Signature:.....Date:..... Student number:		

ANAT-SRA-Med&SciStudent relates to RA-MED-06. Date for review: 31/8/2018

Ethical Behaviour and human remains

The learning in this course is centred around study of prosected (professionally dissected) human anatomical specimens which have been preserved and prepared from people who have donated their bodies to UNSW via a Bequeathal Program so that you and your peers can study the human body. This is an extraordinary generous act of these donors and their families and is a special privilege. Treating these remains with the utmost care and respect is mandatory and our responsibility. It is good ethical practice and is mandated by law. The University operates the Bequeathal Program under the Code of Practice noted below, which all students are required to adhere to.

Code of Practice:

The University recognises the magnitude of the contribution made by those who donate their bodies for the teaching of anatomy and it is committed to treating the human remains entrusted to its care with the utmost respect and professionalism. In keeping with this commitment, the University requires its employees and students to uphold all legal, public health, and ethical standards associated with the handling of bodies and human tissue samples.

Any activity which undermines its ability to meet UNSW's legislative obligations, or which devalues the contribution made by those who donate their bodies for the purposes of the teaching of anatomy to students will be in breach of this policy and subject to further action

Administrative help

Staff in SoMS student administration are available to help with problems with enrolment and scheduling and should be the first point of contact for administrative problems.

Ph: 9385 2464, email: SOMSenquiries@unsw.edu.au

ANAT3121 TIME TABLE 2018

Weeks	Dates	SEMINARS: Tuesday; 3-5 pm (Mathews 103)	PRACTICALS: Wednesday; 9am-12 pm (WW101E)	TUTORIALS: Thursday; 3-4 pm (Mathews 103)
Week 1: Introduction to thorax, thoracic wall, organisation of the autonomic nervous system	24 th -26 th July	L1. Introduction to the course, general organisation of the thorax, the diaphragm L2. The lower respiratory tract	P1. The thoracic walls, muscles and mechanics of respiration	T1. The autonomic nervous system and nerve supply of thoracic viscera
Week 2: The lower respiratory tract, the mediastinum, the breast	31 st July- 2 nd August	L3. Structures in the superior, posterior and anterior mediastinum L4. The pericardium and heart	P2. General organisation of the thoracic cavity; The lower respiratory tract	T2. Clinical cases: Thoracic wall, breast, lower respiratory tract, mediastinum
Week 3: The Pericardium and heart.	7 th - 9 th August	L5. The abdominal wall L6. The inguinal canal and hernias	P3. The contents of the mediastinum (including pericardium and heart); lymphatic drainage or thorax	T3. Clinical cases: Heart, Pericardium, mediastinum
Week 4: The abdominal wall and inguinal canal	14 th - 16 th August	L7. The peritoneal cavity L8. The oesophagus, stomach and the coeliac trunk	P4. The abdominal wall, the inguinal canal/ VR heart	T4. Cross sectional and radiological anatomy of the thorax
Week 5: The peritoneal cavity; The foregut 1	21 st - 23 rd August	L9. The liver, extrahepatic biliary tree L10. The duodenum, pancreas and spleen	P5. The peritoneal cavity; Foregut 1	T5. Clinical cases: abdominal wall, hernias, peritoneal cavity, oesophagus, stomach
Week 6: Foregut 2	28 th -30 th August	L11. The small and large intestines L12. The mesenteric vessels and portal system; Innervation of the abdominal viscera	P6. Foregut 2	T6. Clinical cases: Liver, biliary tree, duodenum, pancreas, spleen
Week 7: Mid-semester assessment week	4 th – 6 th September		REVISION LAB/ VR liver	SPOT TEST 1
Week 8: The bowel; vessels and nerves of the abdomen; The pelvis	11 th – 13 th September	L13. The suprarenals, kidneys and ureters L14. The urinary bladder and urethra	P7. The intestines and their blood supply; Nerves and vessels of the abdomen	T7. The bony pelvis, the pelvic diaphragm, layout of the perineum
Week 9: The suprarenal glands, the urinary system	18 th - 20 th September	L15. The rectum and anal canal L16. The female reproductive system	P8. The suprarenals, the urinary system Assignment presentations/ peer review	T8. Assignment presentations/ peer review
MID-SEMESTER BREAK				
Week 10: The female reproductive system; The rectum and anal canal	2 nd – 4 th October	L17. The male reproductive system L18. The vessels and nerves of the pelvis	P9. The female reproductive system; the rectum and anal canal	T9. Clinical cases: Urinary system, rectum and anal canal
Week 11: The male reproductive system; Blood vessels and nerves of the pelvis	9 th - 11 th October	L19. The perineum L20. Lymphatic drainage of the abdomen and pelvis	P10. The male reproductive system; the vessels and nerves of the pelvis	T10. Clinical cases: Male and female reproductive system
Week 12: The perineum; Lymphatic drainage of the abdomen and pelvis	16 th -18 th October	P11. The perineum; lymphatic drainage of the abdomen and pelvis	REVISION LAB	T11. Clinical cases: Perineum
Week 13: Wrap up week.	23 rd - 25 th October	L21. Cross sectional and radiological anatomy of the abdomen and pelvis	FINAL SPOT TEST	T12. Clinical cases and wrap up
Exam Period (Date to be announced)	2 nd - 20 th Nov	FINAL WRITTEN ASSESSMENT		

