



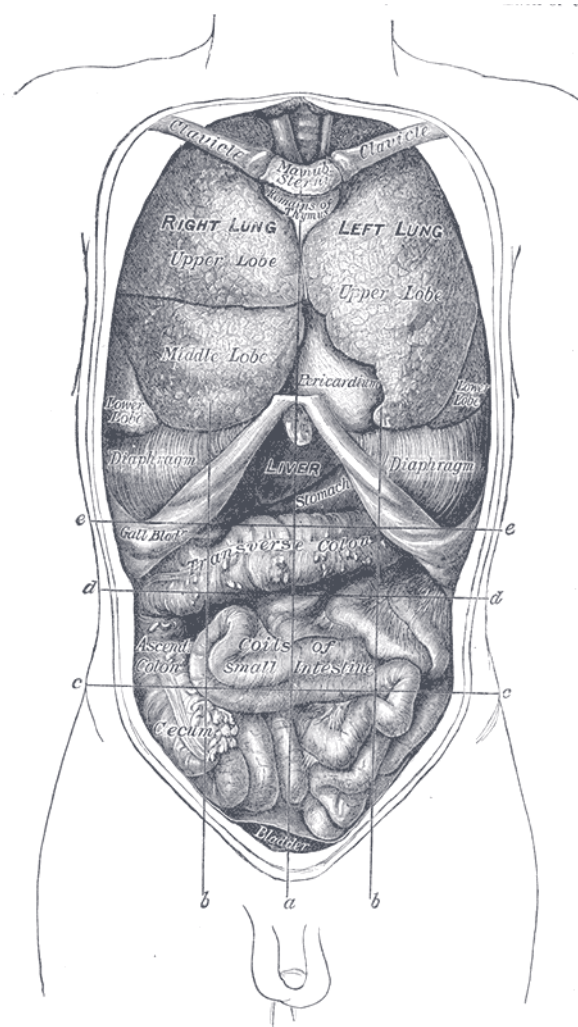
UNSW
SYDNEY

Australia's
Global
University

Faculty of Medicine
School of Medical Sciences

ANAT3121

VISCERAL ANATOMY



COURSE OUTLINE

Term 1, 2019

CRICOS Provider Code 00098G

Table of Contents

Table of Contents	2
Staff Contact Details	3
Learning Outcomes	3
Course Details	4
Course Structure and attendance:	5
Teaching Rationale and Strategies	5
Seminars	5
Laboratory/Practical classes	5
Tutorials	6
Moodle	6
Assessment	7
Student Resources	8
Textbooks	8
Recommended Atlas	8
Reference Books	8
Library Resources	8
Anatomy lab student risk assessment	9
Ethical Behaviour and human remains	10
Administrative help	10
ANAT3121 TIME TABLE 2019	11

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 medicallsciences.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.

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 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 2018. Student feedback and suggestions are always valued and the course is modified based on these. Also, the course has been modified to be effective in the 10-week trimester format. The following modifications have been made to the course for 2019:

- The course delivery has been restructured so that the weekly format is now: one two-hour tutorial, one three-hour practical and one two-hour interactive seminar.
- Tutorials were very well received in 2018. Like last year, there will be a large focus on developing problem solving skills relevant to clinical and imaging applications. This year, some tutorial time will in addition be used for expanding difficult concepts and in some weeks for assessments.
- 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.
- Labs have been re-designed into a station-format to enable individual students to have access to more specimens during their lab time.
- Practical assessments have been changed from the two major spot tests to 3 mini spot assessments in order to encourage continuous learning and to decrease the load at a given time.

Course Structure and attendance:

The weekly format is as follows:

1. Tutorials held every Monday between 2pm - 4pm; Venue: Mathews 103
2. A laboratory session held every Tuesday between 9am - 12pm; Venue: WW 101E.
3. An interactive seminar session held every Wednesday between 12pm - 2pm ; Venue: OMB G31

Please note that changes to this format occur in weeks 4, 7, 8 and 11 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 of 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 (including 0 week) there is pre-class work (some of which is online) to assist in preparation for tutorials 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 not change your laboratory group on your own.

Surface palpatory 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 clarifying difficult anatomical concepts. Three tutorial hours will be used for continuous assessment and one week will be dedicated to presentation and peer review of student assignments.

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.

Continuous assessments	Lab quiz	10%
	Mini spot tests (x3)	30%
Assignment		20%
End of session written assessment		40%

Lab Quiz mark:

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 quiz must be attempted in the present of your lab tutor.

Mini Spot Tests:

There will be 3 **mini spot tests**. These have been scheduled for the first tutorial hours of weeks 4, 7 and 11. The content for these has been colour coded in the timetable and will be as follows:

Mini spot 1 content covered upto and including the lab of week 3.

Mini Spot 2 content covered from the seminars of week 3 upto and including the lab of week 6.

Mini Spot 3 the rest of the course content covered from and including the week 6 seminars.

The venue for the mini spot tests will be the gross anatomy lab. 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. There will be both identification and theory components to the spot tests. Further details will be posted on the course moodle page.

Assignments:

There will be a group **assignment** with oral presentation, peer review and submission components. The task will be distributed in week 2 of the course. The oral presentations are scheduled during the tutorial time of week 8. Details and deadlines for the assignment tasks will be posted on Moodle.

End of session written assessment:

This is scheduled during the exam period and will cover the content of the *entire course*. The assessment will consist of MCQs and short answer questions.

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.

Textbooks

Moore, KL, Dalley AF, Agur AM. *Clinically Oriented Anatomy*, 8th edition, Lippincott Williams & Wilkins (earlier editions are acceptable as well) **or**

Drake, RL, Vogl W and Mitchell AWM, *Gray's Anatomy for Students*, 3rd edition, Elsevier Churchill Livingstone (available online via the library)

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 Management Plan		Gross Anatomy Practical Classes for Medical and Science Students <small>DOC:PHSL-SRA-S&H-01rev1.1</small>
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Hazards	Risks	Controls
Physical Cold temperature (16°C) Sharp bone/plastic Biological Fungi, bacteria (tetanus), hepatitis B and C Chemical 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 Gross Anatomy Lab 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	
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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

- 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 (HC180115)

Declaration

I have read and understand the safety requirements for this practical class and I will observe these requirements.

Signature:.....Date:.....
 Student number:

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, or online via the UNSW Student Portal Web forms <http://unsw.to/webforms>

ANAT3121 TIME TABLE 2019

Week	Tutorial (Monday 2-4 pm)	Lab (Tuesday 9am – 12pm)	Seminars (Wednesday 12- 2 pm)
0 week	Online lectures to be reviewed before tutorial of week 1: Thoracic wall, Diaphragm		
Week 1 18/2-20/2	Course overview; General organisation of the thoracic cavity Activity: Neurovasculature of the thoracic wall	Thoracic wall, diaphragm, General organisation of the thoracic cavity	S1. The lower respiratory tract S2. Oesophagus; Mediastinal contents
Week 2 25/2-27/2	Pre-reading: Online lecture: Breast Activity: The autonomic nervous system Clinical cases: Thoracic wall, breast	The lower respiratory tract; Cervical and thoracic oesophagus; Other mediastinal contents	S3. Pericardium and heart S4. Lymphatic drainage of thorax
Week 3 4/3-6/3	Radiological Anatomy of the thorax Clinical cases: Lower respiratory tract, Heart	Pericardium and heart	S5. The abdominal wall S6. The peritoneal cavity
Week 4 11/3-13/3	Mini-spot 1 Inguinal canal and herniae	The abdominal wall, inguinal canal The peritoneal cavity	S7. and 8. The foregut and associated organs
Week 5 18/3-20/3	Activities: abdominal wall; peritoneal cavity; Coeliac trunk Clinical cases: Abdominal wall, peritoneal cavity	The foregut	S9. The small and large intestine; Mesenteric vessels; S10. Vessels and nerves of the abdomen
Week 6 25/3-27/3	Innervation of abdominal viscera Clinical cases: Foregut	The intestines and their blood supply; Vessels and nerves of the abdomen	S11. The suprarenal glands, Kidneys, Ureters S12. The urinary bladder and urethra;
Week 7 1/4-3/4	Mini-spot 2 The bony pelvis and pelvic walls	The suprarenal glands, kidneys and ureters The bony pelvis; The urinary bladder and urethra	S13. The rectum and anal canal S14. The female reproductive system
Week 8 8/4-10/4	Assignment presentations/ Peer review	The rectum and anal canal The female reproductive system	S15. The male reproductive system S16. Cross-sectional and radiological anatomy 1
Week 9 15/4-17/4	Clinical cases: Urinary system, Pelvic viscera	The male reproductive system	S17. The perineum S18. The vessels and nerves of the pelvis and perineum
Week 10 22/4-24/4	Easter Monday Public Holiday	The perineum The vessels and nerves of the pelvis	S19. The lymphatic drainage of the abdomen and pelvis S20. Cross-sectional and radiological anatomy 2
Week 11 29/4	Mini spot 3	-	-
End of session written assessment will be during the scheduled examination period			