

ANAT2111

Introductory Anatomy



SESSION 1 - 2018

COURSE OUTLINE

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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 medicallsciences.med.unsw.edu.au)

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Appointments with any of the above academics should be arranged via email.

Please email from your **official UNSW student account**, include your **student number** and state the **subject** clearly. Content questions preferably should be posted in the Moodle Forum.

Course Details

Units of Credit and Hours of Study

This course is worth six units of credit (6 UOC). This is a blended learning course (i.e. has both face-to-face and online learning activities) and consists of 6 hours per week of scheduled learning activities. These comprise one hour of online lectures, one hour of an interactive team-based face-to-face learning workshop, a two-hour practical laboratory, and two hours of online and independent textbook reading activities each week.

What is anatomy?

Anatomy literally means to break apart or separate the human body into its parts; to dissect the body. The earliest recorded anatomy teachers, Herophilus and Erasistratus, lived in Ancient Alexandria and taught anatomy between 300 BC and the second century AD. However, the roots of anatomy go back much further – perhaps 4,000 years ago – with the mummification practices of the Ancient Egyptians and with the Ancient Greek physicians. The most famous anatomist is the Ancient Roman Galen, whose work remained the standard for almost 1,300 years until the European Renaissance. During and after the Renaissance, anatomy developed into a modern scientific discipline. Therefore, anatomy is one of the oldest scientific fields and one that has always and continues to underpin medicine. It is also a well-established scientific discipline in its own right.

Anatomy is a dynamic and diverse science that considers the structures of the body from the cellular level through to the body's external surface and beyond. Anatomy examines the cells and tissues of the body (cell biology and histology), the systems of the body (integumentary, skeletal, muscular, nervous, cardiovascular, lymphatic, respiratory, alimentary, urinary, genital and lymphoid systems), the joints, movements and biomechanics of the human body, human comparative and evolutionary anatomy (anthropology), the development of the embryo and postnatal growth of the infant and child, as well as clinical and radiographic anatomy.

Anatomy at UNSW teaches and researches across most of these areas. Note that the term *gross anatomy* refers to the study of the structures of the body that are observable without the aid of microscopes (i.e. the

naked eye) and which can be palpated (touched), while *microanatomy* is sometimes used to refer to the microscopic structures of the body (e.g. tissues; the subject of histology).

Course aims

This course aims provide students with an understanding of the structure and organisation of the human body as it relates to function.

Student learning outcomes

At the end of the course, students will be able to:

1. demonstrate an understanding of the ethical considerations, and good practice of, working with cadaveric tissue
2. demonstrate the appropriate use of the anatomical terminology of body planes, relations, movement, and cavities
3. relate the distribution of each of the basic tissue types to the function of each of the human body systems
4. demonstrate an understanding of the anatomy and function of each of the components of the musculoskeletal, nervous, cardiovascular, respiratory, digestive, urinary and reproductive systems of the human body
5. explain how the function of body systems is interdependent
6. Interpret the effect of an altered structure (due to trauma or pathology) to the function of each body system

The University of NSW has developed a list of attributes which its graduates should possess upon graduation (the 'graduate attributes'). The curriculum and assessment of this course have been designed to help students to develop these capabilities. Students completing the course will have gained knowledge and skills that contribute to directly to them acquiring these attributes during their study at UNSW. One way this has occurred is through curriculum mapping of this course.

See medicalsciences.med.unsw.edu.au/students/undergraduate/advice-students#graduate

Course relationships

Anatomy for Medical Science is the foundation course for all advanced (Level III) gross anatomy courses at UNSW: *Visceral Anatomy* (ANAT3121), *Functional Anatomy 1* (ANAT3131), *Functional Anatomy 2* (ANAT3141) and *Neuroanatomy* (ANAT3411). A number of other courses offered by anatomy compliment these gross anatomy offerings: *Histology: Basic and Systematic* (ANAT2241) and *Embryology: Early and Systematic Development* (ANAT2341). Moreover, those students with an interest in microanatomy and development will find the Level III course *Cell Biology* (ANAT3231) of interest. More generally, anatomy courses compliment the subjects offered by other areas within the School of Medical Science (i.e. Physiology, Pharmacology, Pathology and Health and Exercise Science) as well as courses taught in biological science, biomolecular science and genetics, psychology, biomechanics, vision science, food science and nutrition, medical microbiology and immunology, and engineering.

Teaching rationale

Student learning and engagement with the content of the course underpins all learning activities. Students are initially introduced to concepts in the form of interactive lectures incorporating multimedia-learning tools. With this knowledge in hand, students engage in learning activities during the laboratory sessions where the teacher/tutor guides the student and encourages each student to actively participate in their learning. Students are always encouraged to question, observe and share knowledge and experiences that help their learning and that of their peers. The anatomy laboratory is a wonderful and fascinating environment for discovery and students are given every opportunity to explore the cadaveric specimens, participate in active discussions and find answers for themselves.

While in many ways this course is quite conventional, especially in terms of teaching strategies, students are strongly encouraged to engage with the ideas and materials covered. The role of the teacher (lecturer/tutor) is to impart knowledge, but also to help students navigate their way through the vast subject that is anatomy. Students should feel free to question and think critically, even about basic knowledge covered; things that might be considered unwavering 'facts'. With this in mind, students are strongly encouraged, and will be supported to be enquiring, to ask questions, make pertinent observations, and to share experiences and knowledge with the lecturer/tutors and classmates. The philosophy of the course is also fundamentally about helping students to develop an enthusiasm for learning, especially about their own body and biology. This course also aims to exploit the teaching-research nexus, by feeding research findings and developments, as well as knowledge and skills of the teachers, into teaching and learning.

Online interactive lectures

Students are required to work with online lectures in preparation and **prior to** attending a weekly one-hour face-to-face seminar. These lectures are available online (see corresponding weekly folder in Moodle). They aim to present essential concepts and theoretical details on specific topics throughout the course. These lectures are interactive with incorporated sets of questions aimed to guide and reflect on understanding the key concepts. However, these lectures are not designed to provide the entire content required for achieving the learning outcomes for the course. With the help of online interactive lectures you should be able to navigate the content further independently through the prescribed textbook.

Independent work with the textbook

In addition to working with online lectures, **in preparation** for the weekly face-to-face seminars and tutorials, students are also required to read corresponding pages in the prescribed textbook (see Moodle for instructions). In order to achieve the learning outcomes you need to do additional reading and be able to navigate the textbook/atlas independently. The emphasis is on building your understanding of the topic, incorporating additional details and applying the main concepts introduced by online lectures.

Face-to-face seminars and tutorials

These weekly **compulsory** sessions are designed to consolidate major concepts that have been introduced by online lectures and content introduced by independent work with the textbook. During seminars, with the assistance from lecturers/tutors, you will be undertaking activities that aim to apply the material prior to attending the laboratory session. During tutorials you will be working in teams of 4-5 consolidating content and applying problem-solving approach. It is also a good opportunity to discuss with peers and teaching staff difficult topics and receive an informal feedback.

Laboratory practicals

The purpose of weekly **compulsory** practical sessions is to give students first-hand experience of the content covered. During these two-hour weekly sessions, students also will identify the gross anatomical structures and their features, practice anatomical terminology and discuss the concepts studied in preparation to the weekly topic. The anatomy laboratory is the best resource to learning anatomy and is a wonderful place of privilege, discovery and discussion. The gross anatomy laboratory sessions are small group sessions that allow students to explore prosected (professionally dissected) specimens of the human cadaveric material. Although, the tutor is present to guide you through the activities in these sessions, these sessions are meant to be led by students working in groups of 4-5.

Virtual Anatomy Adaptive Tutorials (VAnAT)

The VAnAT will be made available to students via a link in Moodle during this course and they are included as a part of **assessment**. These are virtual tutorials based on high quality images of prosected specimens. The tutorials are a series of interactive questions based on applying the content covered in lectures and laboratory sessions and are a useful resource in consolidating and revised course content. Sessions are structured to encourage student participation in these activities and to enhance your learning. You will benefit most if you undertake these tutorials consistently. Some of these tutorials may also be done during allocated time within the course timetable. The focus of these tutorials is to apply the principles of anatomy to function.

Independent study

There is insufficient time in the lectures, workshops and practicals for you to develop a deep understanding of the concepts covered in this course. In order for you to achieve the learning outcomes that will be assessed, you will need to revise the material presented in the course regularly. You will probably also need to do additional reading beyond the lecture materials in order to learn effectively. Relevant additional resources, including textbook chapters, will be cited in lecture and practical sessions.

Assessments

Continues assessment tasks have been chosen as tools to enhance and guide your learning as well as a way of measuring performance and are therefore a central teaching strategy in this course. **Online quizzes** are introduced as a part of ongoing assessment to improve understanding of material studied in practical component and to provide an ongoing feedback. **Completion of VAnAT** forms another part of ongoing assessment. They aim to improve deep understanding of weekly topics. **Spot tests** (1 and 2) cover knowledge learned and skills obtained during laboratory classes. **Written final examination** assesses students' knowledge of the course content and deep understanding of major concepts studied.

Attendance

Your attendance at seminars, laboratories and tutorials is **COMPULSORY**, including Week 1 where important matters such as introduction to the course and assessment, laboratory safety, ethical considerations and procedures will be discussed. Attendance at scheduled teaching activities is governed by the University's requirement that students attend **at least 80% of all classes**.

Guidelines regarding extra-curricular activities can be found at:

<https://medicallsciences.med.unsw.edu.au/sites/default/files/Extra-curricularActivitiesSOMS.pdf>.

Failure to meet attendance requirements because of extra-curricular activities such as employment or sports competitions, will not be accepted unless prior approval and special circumstances is obtained. Please note that should you be unable to attend your practical class or tutorial for any reason, you will not be able to do "make-up" labs. In case if you miss any part of your assessment due to misadventure or illness, an application for **Special Consideration** should be lodged online with **Student Central** within three days. **Failure to meet minimal 80% of attendance without approved special considerations will result in the failure of the course.**

Course Structure

It is strongly recommended that students attend all face-to-face workshops and practical laboratories. To satisfy the requirements of the course you are expected to attend at least 80% of practical classes and failure to do so (without good reason) may result in a fail. The workflow of a typical week includes the following activities:

1. **Online interactive lectures and independent reading of the textbook** - independent work (blended activities prior to attending face-to-face activities)
2. **Face-to-face seminars** - Monday (Mathews A): 9-11am
3. **Laboratory practical sessions** - Tuesday (WW 101E): 10am-12pm **OR** 12-2pm **OR** 2-4pm
4. **Face-to-face tutorials** – Thursday (Mathews 103): 1-2pm **OR** 3-4pm **OR** 5-6pm
5. **Consolidating and optional activities** – adaptive tutorials, practice activities available in Moodle, Anatomy Museum

Resources for students

Recommended Text:

Marieb EN, Wilhelm PB & Mallat J (2017). Human Anatomy, 8th ed., Pearson.

Atlas:

Hutchinson M, Mallat J, Marieb EN, Wilhelm PB (2007). A Brief Atlas of the Human Body, 2nd ed., Pearson Benjamin Cummings. Electronic Resource: Anatomy Practice Lab 3, Pearson.

Other books that are useful and may be used as texts instead (available in the Library):

- Snell, R. (2006). *Clinical Anatomy by Systems*. Lippincott, Williams and Wilkins.
- Drake, R. (2005). *Gray's Anatomy for Students*. Churchill Livingstone.
- Moore, K. & Dalley, A. (2010). *Clinically Oriented Anatomy*, 6th ed. Lippincott, Williams and Wilkins.
- Rohen, J., Yokochi, C. & Lütjen-Drecoll, E. (2006). *Color Atlas of Anatomy: A Photographic Study of the Human Body*, 6th ed. Lippincott, Williams and Wilkins.

See also medicallsciences.med.unsw.edu.au/students/undergraduate/learning-resources

Continual course improvement

For course evaluation, feedback has been gathered at the completion of the course, using among other means, UNSW's Course and Teaching Evaluation and Improvement Process and myExperience. Student feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

This year, the Introduction to Anatomy course was a part of the UNSW 2025 Strategy Inspired Learning Initiative and has been significantly redesigned based on not only student feedback but also on best practices in learning and teaching using an interactive, flipped classroom approach. The changes to the course are described below.

- We have significantly reviewed and streamlined the course delivery.
- Didactic lectures have been replaced with online interactive mini-lectures, incorporating animations, and PowerPoint voiceovers. This will enable students to engage more easily with content that is delivered and allow students flexibility to pause to make effective notes and to review content as they encounter difficulty.
- Face-to-face seminars have been introduced as interactive workshop-type activities aiming on grasping the major concepts of the weekly content prior to attending the laboratory sessions
- Face-to-face tutorials have been introduced as follow-up from the laboratory session. This will enable students to engage in team-based learning aiming on trouble-shooting, problem-solving and developing deep understanding of the content. This also will allow students to clarify any issues/misunderstanding directly interacting with peers, tutors and academics.
- The quiz questions associated with weekly content will help students to independently assess and reinforce their understanding of key concepts.
- Optional consolidating activities have been offered online to supplement self-directed studies in preparation to spot tests and quizzes as well as a formative type of self-assessment.
- In each week, the 3-hour lab has been redesigned into a 2-hour practical session and a 1-hour face-to-face tutorial.
 - o The face-to-face tutorial will allow students the opportunity to delve deeper into the content presented and to correlate anatomy to function and medical imaging with the guidance of an experienced academic.
 - o The 2-hour practical session will allow students to explore the structure and location of the components of each system on human cadaveric specimens.
- The online components of the course are presented in a weekly format on Moodle and includes a variety of activities that students can use to assess and receive immediate feedback on their learning. These include quizzes, videos, adaptive tutorials and self-guided museum visits. This choice of review activities will enable students to select the ones that suit their learning style.

Course Schedule, Semester 1, 2018

Week	Dates	Pre-class Work <i>see Moodle</i>	Seminar <i>Mon 9-10am, Mathews Th A</i>	Laboratory Practical <i>Tuesday (check your group allocation) Wallace Wurth 101E</i>	Interactive Tutorial <i>Thursday (check your group allocation) Mathews 103</i>	Consolidation Activities <i>see Moodle</i>	
1	26/02 - 04/03	Online Lectures Textbook Ch 1	Introduction	Lab 1: Orientation to the human body	Tutorial 1: Introduction Quiz - trial	Museum Visit; Adaptive tutorial & Optional activities	
2	05/03 - 11/03	Online Lectures Textbook Ch 19-20	Cardiovascular System	Lab 2: Cardiovascular System	Tutorial 2: Cardiovascular System Quiz 1	Adaptive tutorial & Optional activities & Museum Visit	
3	12/03 - 18/03	Online Lectures Textbook Ch 22	Respiratory System	Lab 3: Respiratory System	Tutorial 3: Respiratory System	Adaptive tutorial & Optional activities	
4	19/03 - 25/03	Online Lectures Textbook Ch 23	Digestive System	Lab 4: Digestive System	Tutorial 4: Digestive System Quiz 2	Adaptive tutorial & Optional activities	
5	26/03 - 01/04	Online Lectures Textbook Ch 24-25	Urinary & Reproductive Systems	Lab 5: Urinary & Reproductive Systems	Tutorial 5: Reproductive System Quiz 3	Adaptive tutorial & Optional activities	
Break	02/04 - 08/04	NOTE FRIDAY IN WEEK 5 IS A PUBLIC HOLIDAY					
6	09/04 - 15/04	Online lectures Textbook Ch 7	Skeletal System I	Revision Lab	<i>TBC</i>	Adaptive tutorials for Weeks 1-5 should be completed by 9am on 09/04/18	
7	16/04 - 22/04	Revise for spot 1	Spot Test 1	Lab 6: Skeletal System I (Axial Skeleton)	Tutorial 6: Skeletal System I	Adaptive tutorial & Optional activities	
8	23/04 - 28/04	Online Lectures Textbook Ch 13-15	Spinal Cord and PNS	Lab 7: Spinal Cord & PNS	Tutorial 7: Nervous System Organisation Quiz 4	Adaptive tutorial & Optional activities	
9	30/04 - 06/05	Online Lectures Textbook Ch 13-15	Brain & ANS	Lab 8: Brain & ANS	Tutorial 8: Autonomic Nervous System	Adaptive tutorial & Optional activities	
10	07/05 - 13/05	Online Lectures Textbook Ch 13-15	Ear & Eye	Lab 9: Ear & Eye	Tutorial 9: Vision and Hearing Quiz 5	Adaptive tutorial & Optional activities	
11	14/05 - 20/05	Video lectures Textbook Ch 7-9	Skeletal System II & Articular System	Lab 10: Skeletal System II (Appendicular Skeleton) & Articular System	Tutorial 10: Bones and Joints	Adaptive tutorial & Optional activities	
12	21/05 - 27/05	Video lectures Textbook Ch 10-11	Muscular System	Lab 11: Muscular System	Tutorial 11: Muscular System Quiz 6	Adaptive tutorial & Optional activities	
13	28/05 - 03/06	Revise for spot 2	Exam Prep	Revision Lab	<i>TBC</i>	Adaptive tutorials for Weeks 7-12 should be completed by 9am on 28/05/18	
Spot Test 2 in EXAM PERIOD							

Assessment

1. Continuous assessment	12%
2. Spot Test 1	24%
3. Spot Test 2	24%
4. Theory Exam	40%

Continuous Assessments

This consists of weekly quizzes (10%) and adaptive tutorials (2%).

Weekly quizzes will be conducted during the tutorial sessions as indicated in the timetable. The best five scores will be taken towards the final mark. Students are required to bring an electronic device capable of accessing the quiz on the Moodle platform.

Adaptive tutorials (VAnAT) will be available via the Moodle Platform. In order to achieve the 2% allocated for this task, students must achieve at least 50% in the adaptive tutorials allocated against each spot test by the deadline indicated on the timetable. No fractional marks will be awarded.

Spot Tests

Spot tests are held to assess student knowledge of course content and to assess deeper learning. Spot tests will cover knowledge learned and skills obtained during laboratory classes. *Format:* students will have around four minutes at each of 10 stations relating to models/specimens. Each station includes 4-5 identification items and 2-3 corresponding theory questions relating to the structures identified. The **Spot Test 1** covers the content of the first half of the semester while the **Spot Test 2** focuses on the second half of the semester. Details are to be announced.

Theory Exam

A single 2 hour written exam will be held during the formal examination period to assess student knowledge of course content and to assess deeper learning (such as the ability to make connections between ideas or to assess capacity for problem solving). Typically, the written exam comprises 40-50 multiple choice questions and around three short answer questions and will test knowledge obtained from lectures and laboratories.

Access to previous exam papers

Past exam papers are **not** available to students. **Sample** questions are instead **provided** during lectures, revision activities and in Moodle.

Failure to complete an assessment

Failure to sit a test or exam without lodgment of an application for **Special Consideration** with Student Central will lead to automatic failure of the test. An absence from a test or exam must be supported by a medical certificate or other document that clearly indicates you were unable to be present. That certificate should be dated the same day as the examination.

See [medsciences.med.unsw.edu.au/students/undergraduate/advice-students#Special Consideration](https://medsciences.med.unsw.edu.au/students/undergraduate/advice-students#Special%20Consideration)

Ethical behaviour and human remains

In this course, you will be required to study human anatomical (prosected = professionally dissected) specimens. Each year, people donate their bodies to UNSW so that you and your colleagues can learn about the human body directly from their remains. These are precious materials provided through the extraordinary generosity of the public (our donors and their families). This is a special privilege afforded very few people. By law, responsibility to the donor and their family members, and as a matter of good ethical practice you must treat all human remains with great respect and care (see below).

See medsciences.med.unsw.edu.au/students/undergraduate/advice-students#Practicals

Anatomical terms

One of the largest challenges for new students in anatomy is learning anatomical terms. In many ways the process is like learning a new language. All scientific disciplines have a set of terms and across the whole of science they are derived mostly from Latin and Ancient Greek words. Why Latin and Ancient Greek? Latin, in particular, is a 'dead' language, meaning that no one alive today uses it as the 'mother' tongue. Thus, it is not subject to fashions and constant change, like most living languages, especially English. Moreover, the spelling of Latin and Ancient Greek words has been agreed to for a long time.

In Australia and other English-speaking countries, anatomical terms are Anglicised (translated to English). This means that in many cases the terms we teach are the English equivalent of the Latin or Greek word (e.g. Latin = *Corpus ossis ilii*; English = Body of the ilium). There are, however, still plenty of Latin and Greek terms used. Their pronunciation, however, is an entirely different matter. It varies greatly across English speaking countries; even at UNSW you will find lecturers employing different pronunciations, partly as a result of where they learned their anatomy! What matters is that we all know which structure we are referring to when we use a particular term; there are no points for correct pronunciation as most of the variants are equally correct!

An international organisation called the *Federative Committee on Anatomical Terminology* with representatives from many countries has published the standard (agreed) set of anatomical terms that anatomists follow. It is called *Terminologia Anatomica* and the last edition was published in 1998. Most internationally oriented textbooks (such as *Gray's Anatomy*) apply *Terminologia Anatomica*. In this course, we strive also to use this standard set of anatomical terms as much as possible as we believe that it represents best international practise as well, as making it easier for you to learn. The terms that you need to know in laboratory classes are given in **bold**. You should, however, endeavour to understand all of the information given in laboratories in order to do well in the course.

The Use and Handling of Specimens (i.e. human remains) in the dissecting room

Prior to attending the practical classes you should read the section below on the handling and use of anatomical specimens.

1. In this and other courses, you will be required to study human anatomical (prosected/professionally dissected) specimens. By law, responsibility to the donor and their living family members, and as a matter of good ethical practice, you must treat all human remains with great care, showing them the respect you would afford a living person. Any inappropriate handling will result in exclusion from the class and possible suspension from the course.
2. Moreover, you must at all times show respect for your tutor and colleagues. Some people react differently to human remains; certain parts of the body may be culturally sensitive or even offensive; some students find working with human heads to be disturbing.
3. Students **must** bring and wear a laboratory coat for all laboratory classes and **must** wear closed toe shoes. Moreover, you **must** wear disposable gloves when handling wet specimens, and at no times are you allowed to eat or drink in the dissecting room. **Failure to comply with these rules will result in you being asked to leave the dissection room.** These are occupational health and safety requirements of the School of Medical Sciences. First aid kits are also provided in the dissection room in the event of an injury during a laboratory class.
4. The solution that most of the human remains are stored in is a mild disinfectant and poses no danger to students when handled correctly. Thus, the floral smell is the disinfectant, and has nothing to do with decomposition of the bodies: they are preserved in formalin and do not decompose under laboratory conditions. They can, however, dry out/discolour through regular use and exposure to air.
5. Due to the delicate nature of the human brain, these specimens are stored in formalin. This chemical emits a strong odour; harmless, unless ingested or exposed to in high concentrations over long periods of time. Please do not spend too long handling such specimens as you might find the fumes cause discomfort. If they do, simply excuse yourself from the class (inform your tutor) and quietly leave the cubicle or laboratory for some fresh air.
6. Some students feel uncomfortable, even physically sick the first time (or few times) they study prosected human remains. This is a common reaction among students and is nothing to be ashamed about. If you feel discomfort when handling remains, simply stand back and observe and communicate with other students in your group while they handle remains. If you feel sick, simply excuse yourself from the class (inform your tutor) and quietly leave the cubicle or laboratory for some fresh air.
7. When handling these materials please be very careful. Always wear gloves, use instruments such as forceps and probes to touch structures, and keep handling to a minimum. Do not move remains from one bench to another. If they need to be moved, ask your tutor to do it.
8. When you have been handling wet specimens always remove your gloves before handling models. Moreover, always wash your hands with soap at the basins in the dissection room when a class has finished (i.e. before leaving the dissection room). Make a habit of practicing good hygiene to look after yourself and others (classmates, other students and your family).
9. Anatomical models must also be treated with great care. Proper handling is essential: do not pick up a cranium by placing your fingers in the orbits, as this will lead to breakage of delicate bones. Instead, pick it up by placing one hand across the braincase, just behind the orbits, and the other hand beneath its base.



Hazards	Risks	Controls
Physical Cold temperature (16°C) Sharp bone/plastic	Cold Penetrating wound of foot	<ul style="list-style-type: none"> Wear laboratory coat over appropriate warm clothing Wear fully 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 to lab Low concentrations of chemicals used Chemicals used in well ventilated area Safety Data Sheets for chemicals available in the laboratory
Biological Fungi, bacteria (tetanus), hepatitis B and C	Infection	
Chemical Formaldehyde Methanol 2-phenoxyethanol	Corrosive/Flammable Irritant/toxic Irritant	

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 the demonstrators. Then wash your hands.

Follow the instructions of the demonstrators regarding exits and assembly points.

Clean up and waste disposal

- Place all specimens in their original trays. 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
- 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: