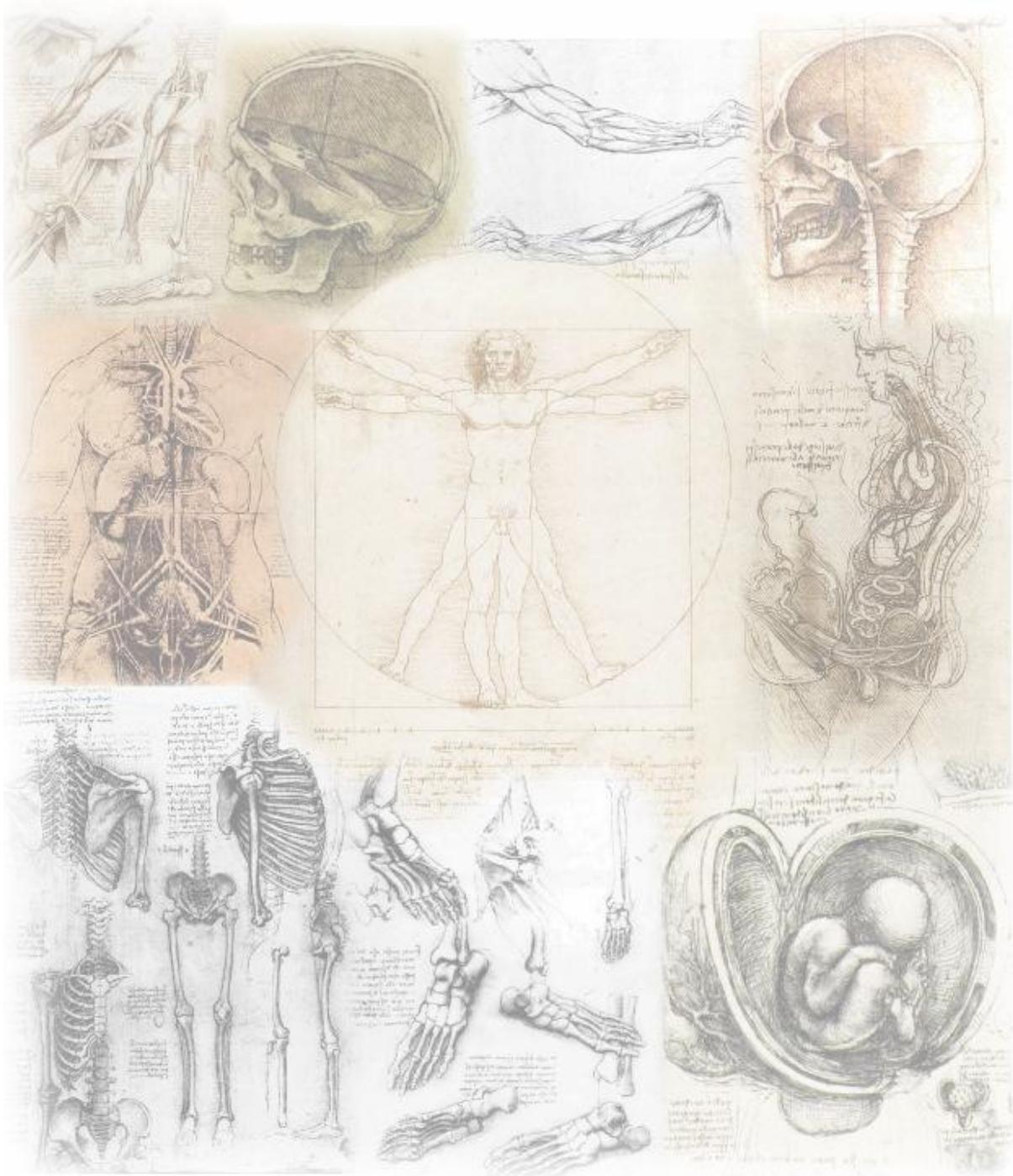


UNSW

MEDICINE

THE UNIVERSITY OF NEW SOUTH WALES
SYDNEY • AUSTRALIA



ANAT2511
FUNDAMENTALS OF ANATOMY
SESSION 1: 2013

ANAT 2511 FUNDAMENTALS OF ANATOMY: COURSE PACK

Table of Contents

COURSE OUTLINE

Course Convenor/Course Authority:	4
Lecturers:	4
Units of Credit	4
Hours per week	4
What is Anatomy?	4
Course aims	5
Student learning outcomes	5
Teaching Rationale and strategies	6
Attendance	6
Recommended Text	7
Resources	8
Revision Facilities	8
Assessment	8
Plagiarism	10
Applications for Special Consideration	11
Supplementary Examinations	11
Official communication by email	11
Preparation of anatomical material	11
Problems with the course	12
Acknowledgements and changes to the course for 2013	12
Health and Safety Rules for Students in the Dissecting Room	13
Student Risk Assessment	15
CLASS SCHEDULE	19

PRACTICAL NOTES

Practical 1: Introduction to Histology	Error! Bookmark not defined.
Practical 2: Introduction to Gross Anatomy	Error! Bookmark not defined.
Practical 3: Basic Tissues – Histology	Error! Bookmark not defined.
Practical 4: Skeleton & Joints – Gross Anatomy	Error! Bookmark not defined.
Practical 5: Bones and Joints – Histology	Error! Bookmark not defined.
Practical 6: Muscular System - Gross Anatomy	Error! Bookmark not defined.
Practical 7: Muscle Tissue – Histology	Error! Bookmark not defined.
Practical 8: Spinal Cord and Nerves	Error! Bookmark not defined.
Practical 9: Nervous Tissue – Histology	Error! Bookmark not defined.
Practical 10: Brain	Error! Bookmark not defined.
Practical 11: Integumentary (Skin) System – Histology	Error! Bookmark not defined.
Practical 12: Eye and Orbit; Hearing & Balance	Error! Bookmark not defined.
Practical 13: Circulatory System – Histology	Error! Bookmark not defined.
Practical 14: Heart & Great Vessels; Lungs	Error! Bookmark not defined.
Practical 15: Respiratory System – Histology	Error! Bookmark not defined.
Practical 16: Upper Respiratory Tract & Upper GIT – Gross Anatomy	Error! Bookmark not defined.
Practical 17: Gastro-intestinal Tract, Liver and Gallbladder – Histology .	Error! Bookmark not defined.

Practical 18: Gastro-intestinal Tract – Anatomy of Abdominal Organs...**Error! Bookmark not defined.**

Practical 19: Urinary System – Histology**Error! Bookmark not defined.**

Practical 20: Urinary & Reproductive Systems – Gross Anatomy.....**Error! Bookmark not defined.**

COURSE OUTLINE 2013

Course Convenor/Course Authority:

Dr Nalini Pather

Office: Room 111, Level 1, 30 Botany Street

Telephone: 02 9385 8025

Email: N.Pather@unsw.edu.au

Lecturers:

Dr Nalini Pather

Dr Irina Dedova

Patrick de Permentier (co-convenor)

Units of Credit

This course is worth six units of credit (6 UOC).

Hours per week

This course entails 6 hours per week comprising two hours of lectures and two two-hours of laboratory time.

What is Anatomy?

Anatomy is derived from the Greek words '*ana*' (meaning to *separate, apart from*), and '*temnein*' (meaning to *cut up, cut open*). Anatomy, therefore, is the study of body structure or morphology. Anatomy is one of the earliest of the medical sciences and has a colourful and prestigious recorded history that spans some 4000 years, with the earliest documents found in Egypt (the Edwin Smith Papyrus, dated 1600BC). Many of the earliest known medical scientists and physicians were devoted to understanding anatomy including the Greek physician Hippocrates (460-377BC) who first discovered the tricuspid valve of the heart. This was around the same time that cadavers where first used in anatomical research by Herophilos and Erasistratus in Alexandria, Egypt (4BC) and when the Sushruta Samhita, an Ayurvedic medical text that included detailed anatomical descriptions was compiled in India. But by far the most notable of the early anatomists is Galen (2AD) who compiled much of the anatomical knowledge known to date into what is probably *the* first anatomy textbook that reigned unchallenged for almost 1500 years - most of this text was destroyed during the Dark Ages. Anatomy really flourished around the 17th and 18th centuries largely due to the invention of the printing press that facilitated the exchange of ideas. Because anatomy was based on observations and drawings, the best anatomists where usually excellent artists (*au*

fait with Latin) who attended dissections and published their drawings for money – these included, Michaelangelo, Rembrandt and Da Vinci.

Today, anatomy is the bedrock of medicine and of an array of allied health disciplines. Anatomical research is diverse and focuses on understanding anatomical function from that of a single cell through to the inter-relation of systems and function, biomechanics and movement, and embryology and development. This is achieved via techniques in cell and molecular biology, dissection as well as the use of clinical and radiological techniques. Exposure to cadaveric and histological specimens is the cornerstone of this course and will provide you with an opportunity to examine the anatomy of the human body and appreciate more fully its adaption to function.

Course aims

This course is designed as a stand-alone subject for students who will benefit from knowledge of basic anatomy.

The aim of this course is to provide students with an understanding of the structural organisation of the human body at a gross (macroscopic) and histological (microscopic) level, i.e. the position, form and structure of organs and ‘systems’. The course is designed to provide an understanding of the human body that underpins its functioning and medical and biomedical engineering designs. The course provides an overview of the structure of the major components of each of the body systems, and includes an overview of the microscopic structure of its tissues. The course is strengthened by an emphasis on the relationship between structure and function. In addition, students will gain familiarity with anatomical and medical terminology and their meanings.

Students are provided the opportunity to appreciate and value the medical sciences especially anatomy and at the end of the course, to leave with an increased sense of awareness and value of the human body and improved capacity to make informed decisions regarding health.

Student learning outcomes

The course focuses on the most important organ systems (musculoskeletal, respiratory, cardiovascular, nervous, digestive, reproductive and sensory organs). At the end of the course, the student will be able to appreciate the structure of the above systems and how this structure optimises the organ functioning. Recent advances in medical and biomedical engineering research related to anatomy will also be discussed.

Student engagement particularly through the gross anatomy practicals will equip them to be able to identify the anatomical features of each of these systems on dissected human specimens, bones and models, as well as applying these to discussion of functional and applied aspects of the body system. Histology practicals focus of the identification of cells

and tissues, viewed by virtual microscopy images of real tissue, again with consideration of their functions.

Through the team based learning activities, students will also develop written and oral skills in scientific communication, and the ability to peer-review and evaluate scientific writing and presentations.

Teaching Rationale and strategies

Student learning and engagement with the content of the course underpins all learning activities. Students are initially introduced to the body systems (both microscopic and macroscopic) in the form of 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.

Through this course students also engage in team based learning through the practical component of the course, and through the compulsory group assignment for this course. Students will be allocated into teams for this component. Learning how to learn, work, interact, and collaborate in a team is essential for success in future career environments. In addition, there is strong evidence that team based learning supports greater student engagement and longer retention of knowledge.

Attendance

It is strongly recommended that students attend all lectures as they provide the basis for the laboratory classes. In order 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.

Lectures	Practicals
Mondays: 3-4pm, LG02	Thursdays: 9-11am, Room G2-G4
Thursdays: 2-3pm, LG03	Fridays: 9-11am, Room WW101
Note: All venues are in the Wallace Wurth Building	

Lectures – This approach is used to present relatively large amounts of information within a given time on specific topics throughout the course. Lecture notes will be available online (see below in COURSE RESOURCES section) prior to or after each lecture, so you should be able to think about and develop an understanding of the lecture concepts as they are presented, rather than writing voluminous notes. However, there will be information and explanations presented in lectures in addition to those covered in the notes that you should take down if they help you to understand the material. The lecturer will also try to allow some time for interaction and activities in each lecture to provide you with an opportunity

to clarify or reinforce the ideas that have been presented. You should take these opportunities to think about the information that has been presented and ask questions to enhance your understanding.

Laboratory practicals – The purpose of the practical sessions is to give students first hand experience of the content covered. 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 prospected (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 lead by students working in groups of 3-4. In the histology laboratory, a tutor will demonstrate features systematically on virtual (online) slides. The function of structures will also be discussed. You will be given adequate time to navigate through the virtual slides on your own or with a friend. Additional tutors will be available to respond to queries or provide additional details and explanations.

Virtual Anatomy Adaptive Tutorials (VAnAT) – The VAnAT will be made available to students periodically via a link in BlackBoard during this course. These are virtual tutorials based on high quality images of prospected 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 will also be done during allocated time within the course timetable. The focus of these tutorials will be to apply the principles of anatomy to function.

Independent study – There is insufficient time in the lectures, tutorials 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 – These 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.

Recommended Text

Marieb, Mallat & Wilhelm (2011). Human Anatomy: International Edition. 6th ed., Pearson Benjamin Cummings. Format Pack. ISBN 9780321753267, ISBN10 0321753267

Other additional useful text for the this course are:

*Please note, these texts are **not compulsory** to purchase.*

Tank P.W. and Gest T.R. (2009) Atlas of Anatomy. Lippincott, Wilkins and Williams

Hull, Kerry Colouring Atlas of the Human Body, Lippincott, Wilkins and Williams ISBN-13: 978-0-7817-6530-5

Tortora, G.J., & Derrickson B. Introduction to the Human Body - The Essentials of Anatomy & Physiology. 8th ed., John Wiley and Sons Inc. 2010, ISBN 978-0-470-23016-9.

Young, B., Lowe, S., Stevens, A. and Heath, J.W., Wheater's Functional Histology: A Text and Colour Atlas, 5th ed., Churchill Livingstone, 2006. ISBN -13:9780443068508.

Resources

1. A website showing basic and systems virtual histology slides
http://www.neocortex.ch/WebMic_GenOrg/allgspez/WebMicGenOrg.html
2. Fabric of Life
3. A **Digital Atlas of Electron Microscopy** by Bruechner, University of Kentucky accessed by using the icon on the student computers in G2 and G4 laboratories.
4. A CD of anatomy images can be purchased from SOMS administration office in the Wallace Wurth building for \$15. The CD contains images of some specimens and models used in the anatomy practicals.

Revision Facilities

1. Anatomy Museum – located on the 1st floor of the Wallace Wurth building. The museum contains a variety of bottled anatomical dissections. Please do not remove museum jars from shelves. The museum also contains computers loaded with Anatomy software and Internet access. Access to the museum is by swipe card and is restricted to anatomy students only, between 8.30 a.m. and 5.30 p.m. Monday to Friday. NO photography is allowed in the Anatomy Museum.
2. Rooms 106 – 108 in the Wallace Wurth Building contain computers with a variety of anatomical software, including the Virtual Microscope. Access to this laboratory is by student swipe card only.
3. Histology laboratories (G2/G4) are generally open from about 8.30 a.m. to 5.30 p.m. Monday to Friday. Students may use them during these hours, provided **the rooms are not required for other classes**. Again these are accessible by swipe card only.
4. Useful Computer Resources on histology and electron microscopy are:
 - A website showing basic and systems virtual histology slides
http://www.neocortex.ch/WebMic_GenOrg/allgspez/WebMicGenOrg.html
 - The interactive histology program "**The Fabric of Life**"
 - A **Digital Atlas of Electron Microscopy** by Bruechner, University of Kentucky accessed by using the icon on the student computers.

Assessment

Team based learning quiz	10%
Team based assignment	15%
Mid-term Practical test (Gross Anatomy and Histology)	15 %
Final Practical test (Gross Anatomy and Histology)	20 %
Final Theory exam	40 %

Team based learning

During the first week of the course you will be divided into 4 practical/tutorial groups and each group will be further subdivided teams of 6-7 students each. Each team will have a mixture of abilities and backgrounds. The use of team-based learning is designed to

improve your learning experience through the use of individual and team quizzes and peer-teaching in an interactive discussion facilitated by a tutor.

These quizzes will be based on pre-readings, lectures and practical sessions. You should therefore make every attempt to engage in all the learning situations provided in the course. The quizzes will be distributed at the beginning of selected practical sessions (these will be announced on Blackboard). These quizzes will be attempted individually and the answers submitted to your tutor. The same quiz questions will then be attempted in teams, with each team submitting their consensus answers. The tutor will then facilitate an interactive discussion of each question and provide clarifications on the challenging questions and concepts. The practical session will then continue with the tasks outlined in your course manual and will usually cover the same scope as the quiz.

You will receive a maximum of **2.5%** towards your final course mark for each tutorial quiz, comprising **1.5%** for your individual performance and **1%** for your group's performance. Over the duration of the semester, 4 of these tutorial/practical sessions will contribute to **10%** of your final marks.

You will receive your group and team allocations by week 2. These teams will also work together on the group project.

Teams will be given a choice of assignment topics in Week 2. To complete the team assignment task, you need to:

- Register your teams assignment choice in Week 3 (note: each topic has a max quota of 2 groups)
- Research the topic using published literature including recent journal articles
- In Week 8, present a 10minute overview of your topic to the class using a PowerPoint presentation, followed by a short time for audience questions. You will be peer-assessed and receive feedback for your presentation.
- In turn, your team will peer-assess a presentation by another team.
- Produce a 2000 word written team report on your topic (marking criteria below).

Each member of the team will submit a 500-word reflection on their learning through the project, the effectiveness of the team and their contributions to the team based learning activities.

This report will be submitted in Week 12 (latest, **Monday, 27 May 2013 at 10am**) electronically via TurnItIn in BlackBoard, **and** a printed copy must also be submitted to the School Office (BSB), Room G27, Biosciences Building.

- In addition, each member of the team will complete an evaluation of the other team members based on their preparedness for the team based class activities and the level and quality of contribution to the team based assignment tasks. This task will be done in class.
- Marks will be deducted for assignments that are submitted after the deadline (**Monday, 27 May 2013 at 10am**).

TEAM BASED ASSIGNMENT MARKING CRITERIA
Both oral and written presentations

Scientific content (8 marks)

- Identifies the major concepts related to the assignment topic
- Demonstrates an understanding of the assignment topic
- Uses peer-reviewed research articles to support the argument and facts

Effective Communication – (4 marks)

- Clarity – clear, simple language, terms defined
- Logical structure, use of headings and paragraphs
- Appropriate language, length, style and format
- Appropriate use of media (graphs, images, video, etc.)

Self-directed learning (4 marks)

- Sources (range, citation standards, quality, relevance)
- Critical thinking (evidence of awareness of bias in sources, others viewpoints, own views, logical argument)

Team work (4 marks)

- Each team member contributes knowledge and skills to the team tasks
- Team has actively devised a plan for the task (plan outlines the tasks, resources needed, process for decision making, due dates, regular follow-up and feedback)

Plagiarism

The School of Medical Sciences will not tolerate plagiarism in submitted written work. The University regards this as academic misconduct and imposes severe penalties

http://www.student.unsw.edu.au/academiclife/assessment/academic_misconduct.shtml.

Evidence of plagiarism in submitted assignments, etc. will be thoroughly investigated and may be penalized by the award of a score of zero for the assessable work. Flagrant plagiarism will be directly referred to the Division of the Registrar for disciplinary action under UNSW rules.

The attention of students is drawn to the following extract from the above website:

“The basic principles are that you should not attempt to pass off the work of another person as your own, and it should be possible for a reader to check the information and ideas that you have used by going to the original source material. Acknowledgment should be sufficiently accurate to enable the source to be located speedily.”

The following are some examples of breaches of these principles:

- a) Quotation without the use of quotation marks. It is a serious breach of these rules to quote another's work without using quotation marks, even if one then refers to the quoted source. The fact that it is quoted must be acknowledged in your work.
- b) Significant paraphrasing, e.g., several sentences, or one very important sentence, which in wording are very similar to the source. This applies even if the source is mentioned, unless there is also due acknowledgment of the fact that the source has been paraphrased.

- c) Unacknowledged use of information or ideas, unless such information or ideas are commonplace.
- d) Citing sources (e.g., texts) which you have not read, without acknowledging the ‘secondary’ source from which knowledge of them has been obtained.”

Appropriate citation of sources therefore includes surrounding any directly quoted text with quotation marks, with block indentation for larger segments of directly quoted text. The preferred format for citation of references is an author-date format with an alphabetically arranged bibliography at the end of the assignment. Note that merely citing textbooks or website URLs is unlikely to yield a bibliography of satisfactory standard. The Internet should be avoided as a primary source of information. Inclusion of appropriate journal articles, both primary research publications and reviews, is usually expected.

Applications for Special Consideration

Students who miss an assessment due to illness or misadventure must submit an application for special consideration within 3 working days of the event to Student Central. Special considerations sought outside the 3 day time period WILL NOT be accepted except in TRULY exceptional circumstances.

Full details of application and the required documentation may be found at <http://my.unsw.edu.au/student/academiclife/assessment/AssessmentatUNSW.html>

Supplementary Examinations

It is intended that supplementary exams for the School of Medical Sciences in Semester 1, 2013 will be held in the week commencing Monday 8th July, 2013.

Official communication by email

All students in ANAT2511 Fundamentals of Anatomy are advised that email is the official means by which the School of Medical Sciences at UNSW will communicate with you. All email messages will be sent to your official UNSW email address and, if you do not wish to use the University email system, you MUST arrange for your official mail to be forwarded to your chosen address. The University recommends that you check your email at least every other day. Facilities for checking email are available in the School of Medical Sciences and in the University Library. The UNSW Library holds free email courses.

Preparation of anatomical material

In the **gross anatomy** practicals, you will have the privilege of working with dissected human specimens, as well as dried bones, models and radiological images. These dissections are obtained from cadavers, which have been generously bequeathed (donated) to the University, prior to death. As soon as possible after death, the body is brought to the University where it undergoes a process known as embalming, which involves flushing the blood out of the arterial system and then infusing it with a colourless preserving solution known as formalin. The specimens are then dissected to show specific anatomical features. Dissected specimens are stored in a preservative solution that does not contain formalin and when needed, is placed on tables for class use. In some cases, dissected specimens are impregnated with a curable polymer in a process known as plastination, which produces dry non-toxic specimens, which have the texture of firm plastic.

For **histological study**, an organ needs not only to be preserved, as discussed above, but also to be prepared for studying under a microscope. This includes cutting a very thin slice (usually 8 μm thick) of the tissue and staining it with dyes so that the contrast between components of the tissue and cells is enhanced. These slides have been digitally imaged for you to study on a computer screen as a virtual microscope slide.

Problems with the course

If you have any problems with the course you should, in the first instance, consult the **Course Organiser**. If you are unable to resolve the difficulty, you can consult the School's nominated **Grievance Resolution Officer** (details will be posted on BlackBoard or may be obtained from the School Administrator, Ms Carmen Robinson, Room G27, Biosciences Building).

Acknowledgements and changes to the course for 2013

The course received excellent student feedback in 2012. More than 90% of students were satisfied with the course structure and content. Majority of the students found the team based learning enjoyable (84%), increased conceptual understanding (82%), and was helpful in preparing for assessments (81%).

For 2013, the following changes have been made:

- Team based activities have been fine-tuned to include
 - Students will be notified of the dates of the class quizzes
 - More class time will be allocated to the team assignment presentation
- Gross anatomy laboratory sessions have been redesigned to focus more on application of concepts learnt
- Minor revision to histology laboratory sessions

Health and Safety Rules for Students in the Dissecting Room

There are some rules that are enforced for the safety of the staff and students, while others are concerned with the need for care and respect of the prosection material.

General courtesy

- Students are required to attend **each lecture and the assigned tutorial/laboratory class** unless given special permission. Provision of an appropriate medical certificate to the course authority will be required for any Special Consideration.
- You may **enter** and **view** specimens in the Dissecting Room **101 only** in the presence of your tutor and/or during your designated tutorial/laboratory class hours. You are **not permitted** to take visitors into the Dissection Room.

Health and Safety Rules

A detailed risk assessment for student activities in the Dissecting Room is located on the notice board at the front entrance (near 1st floor lifts).

When in the Dissecting Room, you are required to:

- **always put on your laboratory coat** when you enter the lab. If you have forgotten to bring your lab coat, purchase a disposable coat from the ground floor in Wallace Wurth building or the Union shops on campus. Lab coats must not be worn in the hall or anywhere outside the laboratories.
- wear covered shoes with enclosed heels, never thongs or sandals.
- **wear latex or vinyl gloves** when touching wet specimens (gloves are available from the Union Shop near CLB theatres).
- never eat or drink.
- **never put anything in your mouth.** For example, pens or pencils that you may have picked up from the table.
- **avoid inhaling** preservative solutions for prolonged periods. If you feel in need of fresh air, ask permission to leave the laboratory for a few minutes.
- **report all accidents** or incidents immediately to a staff member for assessment without exception. Injuries involving sharps or needle-stick will require a blood test as soon as possible.

At the end of your laboratory class:

- **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.

Preservative solution

There are 3 main chemicals used as preservation fluids in the Dissecting Room:
phenoxyethanol (2% in solution); methylated spirits (10%) and formalin (5%)

The safety data sheets (SDSs) for these chemicals are located by the lab First Aid Kit and also on the notice board outside the lab. Women of reproductive years, and especially those who know they are pregnant, should note that all of these are suspected human reproductive and developmental toxins and therefore may pose a hazard to the unborn child. In addition, formalin (**formaldehyde**

solution) is a human carcinogen. Avoid these chemicals coming into contact with your eyes and skin and they should not be ingested.

Most anatomy specimens are stored in 2% phenoxyethanol, which is classified as relatively non-toxic. You should always wear gloves when handling specimens and must avoid ingestion of this chemical and contact with your skin or eyes. Formaldehyde is reported to cause allergic skin and respiratory effects. The potential for adverse health effects, however, is markedly reduced at the concentrations used for embalming and storage of specimens in the Dissecting Room, i.e., the “formalin” solution is less than 5% of a 37% solution of formaldehyde. The specimens provided for classes are without any formalin and a combination of air extraction and conditioning continuously changes the air in the Dissecting Room.

First Aid

If assistance is needed during office hours you may approach **Room 101** staff for **First Aid**. **All incidents must be reported**. The First Aid Kit is located on the left wall near the Dissecting Room entrance door. A second First Aid Kit is located in the east wing on the ledge opposite cubicle E4.

Emergency evacuation

In the case of a fire or other emergency the evacuation alarm will sound. When it sounds for the first time this indicates that everyone should get prepared in case it is necessary to evacuate. When it sounds for the second time, an announcement will be made over the speaker system - **follow these instructions**. Staff will be on hand to supervise any evacuation, and the emergency exit is at the south end of the lab. **Do not use the lifts**. The evacuation assembly area is the landscaped space immediately to the east of the Chancellery and adjacent to the Clancy Auditorium. **Do not assemble anywhere else** and do not leave this area until instructed.

Additional Safety Information

If additional safety information is required you can ask the course convenor or the Anatomy Dissection Laboratory Manager (Mr Vincent Strack). The latest safety information is always available from the SOMS HS Webpage.

<http://medicalsciences.med.unsw.edu.au/SOMSWeb.nsf/page/Health+and+Safety>

Care and respect of prosected material

You are learning from human material prepared from people who have generously donated their bodies for the benefit of science. Skilled staff members have dissected the specimens to allow you, the student, to see anatomical structures in fine detail. Apart from caring for the specimens, it is important for all students learning Anatomy to have and show **utmost respect** for the specimens at all times, in the Dissecting Room, Room 101, and in the Anatomy Museum Room 105. **Great care** should always be exercised when handling specimens, in order to preserve their delicate structure.

Some specific points:

- **Always use only blunt forceps** to handle specimens and **probes** to point to structures, i.e. **never pull** at any parts of the specimen.
- It is **illegal** for any anatomical material to be removed from the premises of the Department of Anatomy for any purpose whatsoever (except of course, for the funeral). All anatomy specimens are micro-chipped for identification and record keeping.
- Photography and video recording are **not permitted** in the Dissecting Room 101, or the Anatomy Museum 105.

Medicine Laboratory Student Risk Assessment	Teaching  UNSW <small>THE UNIVERSITY OF NEW SOUTH WALES</small>	Gross Anatomy Practical Classes for Medical and Science Students DOC:PHSL-SRA-S&H-01rev1.1
--	---	--

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 enclosed shoes with full coverage of the dorsum of the foot Do not eat, drink or smoke in the Dissecting Room Do not place anything (e.g. pens, pencils) into your mouth
Biological Fungi, bacteria	Infection	<ul style="list-style-type: none"> 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
Chemical Formaldehyde Methanol 2-phenoxyethanol	Corrosive/Flammable Irritant/toxic Irritant	<ul style="list-style-type: none"> 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

- 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.

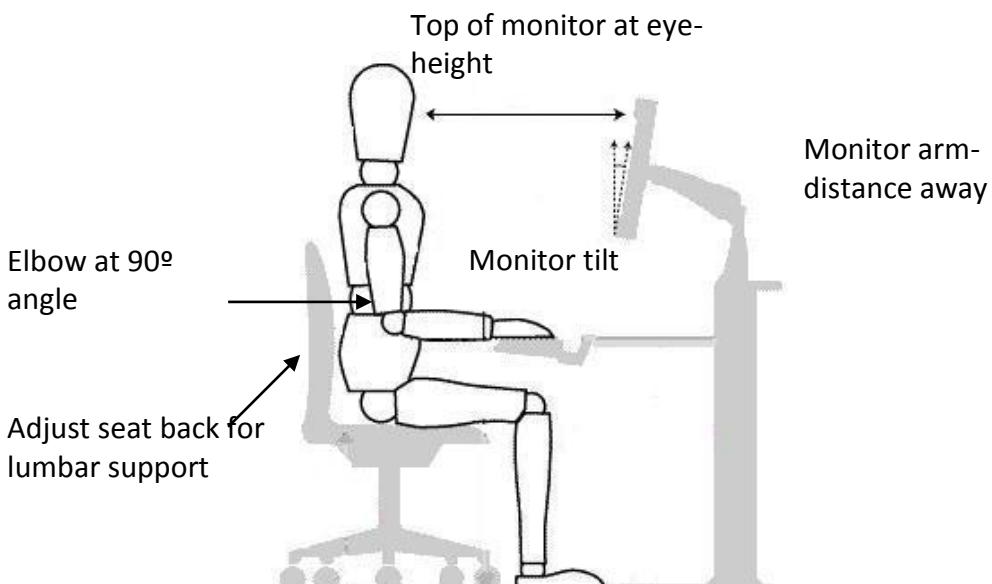
Signature:.....Date:.....

ANAT-SRA-Med&SciStudent relates to RA-MED-06. Date for review: 1/2/2014



Hazards	Risks	Controls
Ergonomics	Musculoskeletal pain.	Correct workstation set-up.
Electrical	Electrical shock/fire	Check electrical equipment in good condition before use. All portable electrical equipment tested and tagged.

Workstation set-up



Personal Protective Equipment

Not necessary in these practicals.

Emergency Procedures

In the event of an alarm, follow the instructions of the demonstrator. The initial sound is advising you to prepare for evacuation and during this time start packing up your things. The second sound gives instruction to leave. The Wallace Wurth assembly point is the lawn in front of the Chancellery. In the event of an injury, inform the demonstrator. First aiders and contact details are on display by the lifts. There is a first aid kit in the laboratory and the Wallace Wurth security office (room G21 on the Ground Floor).

Clean up and waste disposal

No apparatus or chemicals used in these practicals.

Declaration

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

Signature:.....Date:.....

Student Number:.....

CLASS SCHEDULE

Week	Date	Time	Venue	Activity
1 4-10 Mar	Mon, 4 Mar	3-4pm	LG02	Lecture: Introduction to course & anatomy I
	Thurs, 7 Mar	2-3pm	LG03	Gross Anatomy Lecture: Skeletal system
	Thurs, 7 Mar	9-11am	G2-G4	Histo lab: Introduction to Histology
	Fri, 8 Mar	9-11am	WW, M101	Gross Anatomy lab: Introduction to Gross Anatomy
2 11-17 Mar	Mon, 11 Mar	3-4pm	LG02	Histo Lecture: Basic tissues
	Thurs 14 Mar	2-3pm	LG03	Gross Anatomy Lecture: Muscular System
	Thurs 14 Mar	9-11am	G2-G4	Histo lab: Basic tissues
	Fri, 15 Mar	9-11am	WW, M101	Gross Anatomy lab: Skeleton and joints
3 18-24 Mar	Mon, 18 Mar	3-4pm	LG02	Histo Lecture: Bone and joints
	Thurs 21 Mar	2-3pm	LG03	Gross Anatomy Lecture: Nervous System I - spinal cord
	Thurs 21 Mar	9-11am	G2-G4	Histo lab: Bone and joints
	Fri, 22 Mar	9-11am	WW, M101	Gross Anatomy lab: Muscular system
4 25-31 Mar	Mon, 25 Mar	3-4pm	LG02	Histo Lecture: Muscle
	Thurs 28 Mar	2-3pm	LG03	Gross Anatomy Lecture: Nervous System II - brain
	Thurs 28 Mar	9-11am	G2-G4	Histo lab: Muscle
	Fri, 29 Mar	9-11am	WW, M101	Gross Anatomy lab: Spinal cord and nerves
1 st – 7 th April-2013: MID-SESSION BREAK				
5 8-14 Apr	Mon, 8 Apr	3-4pm	LG02	Histo Lecture: Nervous Tissue
	Thurs 11 Apr	2-3pm	LG03	Gross Anatomy Lecture: Nervous System III - eye
	Thurs 11 Apr	9-11am	G2-G4	Histo lab: Nervous tissue
	Fri, 12 Apr	9-11am	WW, M101	Gross Anatomy lab: Brain
6 15-21 Apr	Mon, 15 Apr	3-4pm	LG02	Histo Lecture: Integumentary System
	Thurs 18 Apr	2-3pm	LG03	Gross Anatomy Lecture: Nervous System IV- ear & balance
	Thurs 18 Apr	9-11am	G2-G4	Histo lab: Integumentary System
	Fri, 19 Apr	9-11am	WW, M101	REVISION
7 22-28 Apr	Mon, 22 Apr	3-4pm	WW, M101	SPOT 1 (Gross Anatomy)
	Thurs 25 Apr			ANZAC DAY
	Fri, 26 Apr	9-10am 10-11	TBA	SPOT 1 (Histology) Team-based learning (prep for presentations)

Week	Date	Time	Venue	Activity
8 29Apr-5May	Mon, 29 Apr	3-4pm	LG02	Histo Lecture: Circulatory System
	Thurs 2 May	2-3pm	LG03	Gross Anatomy Lecture: Cardiovascular System
	Thurs 2 May	9-11am	G2-G4	Histo lab: Team-based learning presentations
	Fri, 3 May	9-11am	WW, M101	Gross Anatomy lab: Eye & Ear
9 6-12 May	Mon, 6 May	3-4pm	LG02	Histo Lecture: Respiratory System
	Thurs 9 May	2-3pm	LG03	Gross Anatomy Lecture: Respiratory System
	Thurs 9 May	9-11am	G2-G4	Histo lab: Circulatory System
	Fri, 10 May	9-11am	WW, M101	Gross Anatomy lab: Heart and great vessels
10 13-19 May	Mon 13 May	3-4pm	LG02	Gross Anatomy Lecture: Digestive System I
	Thurs 16 May	2-3pm	LG03	Gross Anatomy Lecture: Digestive System II
	Thurs 16 May	9-11am	G2-G4	Histo lab: Respiratory System
	Fri, 17 May	9-11am	WW, M101	<i>Gross Anatomy lab:</i> Respiratory System
11 20-26 May	Mon, 20 May	3-4pm	LG02	Histo Lecture: Digestive System
	Thurs 23 May	2-3pm	LG03	Gross Anatomy Lecture: Urinary System
	Thurs 23 May	9-11am	G2-G4	Histo lab: Digestive System
	Fri, 24 May	9-11am	WW, M101	Gross Anatomy lab: Digestive System
12 27May-2 Jun	Mon, 27 May	3-4pm	LG02	Histo Lecture: Urinary System
	Thurs 30 May	2-3pm	LG03	Gross Anatomy Lecture: Reproductive Systems
	Thurs 30 May	9-11am	G2-G4	Histo lab: Urinary System
	Fri, 31 May	9-11am	WW, M101	Gross Anatomy lab: Urinary and Reproductive Systems
13 3-9 Jun	Mon, 3 June	3-4pm	WW, M101	REVISION
	Thurs, 6 June	2-3pm	LG03	Lecture: WRAP UP LECTURE
	Thurs, 6 June	9-11am	G2-G4	
	Fri, 7 June	9-11am	WW, M101	SPOT 2 (Gross Anatomy and Histology)

