

ANAT2241

Histology: Basic and Systematic

Course Outline
Term 2, 2022

School of Medical Sciences
Faculty of Medicine & Health

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1. Staff

Position	Name	Email	Consultation times and locations
Course Convenor	Joyce El-Haddad	j.el-haddad@unsw.edu.au	By appointment
Course co-convenor	Dr Reza Shizari	r.shizari@unsw.edu.au	By appointment

Please email from your official UNSW student account, include your student number, course code, and state the reason for your email clearly. Except for questions of private/personal context, all questions/queries preferably should be posted in Teams

2. Course information

Units of credit: 6 UOC

Pre-requisite(s): BABS1201 (or DPST1051) AND 30 UOC

Teaching times and locations:

Please see this link: <http://timetable.unsw.edu.au/2022/ANAT2241.html>

Please note, not all classes in the timetable will be used, refer to Moodle for further information.

2.1 Course summary

Introduction to the microscopic anatomy of the human body based on the study of virtual histological images. Topics for study include: the basic tissues (epithelium, connective tissue, muscle and nervous tissue), and cardiovascular, respiratory, integumentary, digestive, immune, endocrine, urinary, male and female reproductive systems.

2.2 Course aims

The aim of this course is to provide students with a comprehensive understanding of the microscopic structure (appearance) and function of normal organs and tissues in the human body. The knowledge of microscopic structures attained in this course can be integrated by students with other subdisciplines of anatomy (macroscopic or gross anatomy, and embryology) and the related biomedical science disciplines such as Pathology and Physiology. The main aims of the course are to:

1. Demonstrate the appropriate use of histological terminology and an understanding of the basic histological tissues.
2. Demonstrate an understanding of the microscopic structure and function of the basic tissues, namely epithelium, connective tissue, muscle and nervous tissue.
3. Demonstrate an understanding of the microscopic structure and function of the following human body systems and their components: cardiovascular, respiratory, integumentary, immune, gastro-intestinal, urinary, and male and female reproductive systems.
4. Demonstrate an understanding of the interdependence of body systems from histological structure.

2.3 Course learning outcomes (CLO)

At the successful completion of this course you (the student) should be able to:

1. Demonstrate the appropriate use of histological terminology and an understanding of the basic histological tissues.
2. Demonstrate an understanding of the microscopic structure and function of the basic tissues, namely epithelium, connective tissue, muscle and nervous tissue.
3. Demonstrate an understanding of the microscopic structure and function of the following human body systems and their components: cardiovascular, respiratory, integumentary, immune, gastro-intestinal, endocrine, urinary, and male and female reproductive systems.
4. Demonstrate an understanding of the interdependence of body systems from histological structure.

2.4 Relationship between course learning outcomes and assessments

Course Learning Outcome (CLO)	LO Statement	Related Tasks & Assessment
CLO 1	Demonstrate the appropriate use of histological terminology and an understanding of the basic histological tissues.	Mid term Assessment Continuous assessment - quizzes Final Theory Exam End term assessment
CLO 2	Demonstrate an understanding of the microscopic structure and function of the basic tissues, namely epithelium, connective tissue, muscle and nervous tissue.	Mid term Assessment Continuous assessment - quizzes
CLO 3	Demonstrate an understanding of the microscopic structure and function of the following human body systems and their components: cardiovascular, respiratory, integumentary, immune, gastro-intestinal, endocrine, urinary, and male and female reproductive systems.	Continuous assessment - quizzes End term assessment Final Theory Exam
CLO 4	Demonstrate an understanding of the interdependence of body systems from histological structure.	Continuous assessment – quizzes Final Theory Exam

3. Strategies and approaches to learning

3.1 Learning and teaching activities

Student learning and engagement with the content of the course underpins all learning activities.

Seminars

The seminars are designed to provide conceptual information and an overview of the content that will be the focus of the week's laboratory. It is advisable that students attend all seminars to achieve better learning outcomes and academic success. All seminars will be streamed live (with a few exceptions to accommodate for public holidays) and recorded and posted on ECHO360. It should be noted that while it is expected that the seminars will be recorded, please note that this cannot be guaranteed as we may encounter technical issues. In some cases, 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 seminars and involve active learning in an online setting. 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. In the online laboratory sessions, you will look at histological slides related to each seminar topic per week. 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 to make the best use of their time in the laboratory.

Self-directed learning activities

The purpose of these weekly activities is to help students interact with the content covered. During these activities students will identify the anatomical structures and their features. Students are also required to read the chapters as indicated by convenors where necessary from the prescribed textbook.

You are encouraged to use the online discussion forums for questions and discussion related to the course content. Please engage in this discussion by answering and commenting on questions and queries from your peers. Teaching staff will respond to unanswered questions on TEAMS or via email.

3.2 Expectations of students

You are reminded that UNSW recommends that a 6 units-of-credit course should involve about 150 hours of study and learning activities. The formal learning activities total approximately 50 hours throughout the term and students are expected (and strongly recommended) to do at least the same number of hours of additional study.

It is expected that for every timetabled hour of learning activity, you will need at least an hour of additional self-directed study. To master the course content, it is expected that you will engage with the course for at least one additional untimetabled hour per week. It is expected that you will attend all seminars, and practical sessions. Each of these sessions are interactive and active participation is recommended. Online laboratory sessions are collaborative learning experiences and is framed on being accountable for your learning and that of your peers. This expectation will be clearly outlined in the course learning management system (Moodle). The course utilises social learning platforms such as Microsoft Teams. It is expected that you will engage with these platforms in a respectful and professional manner and **use your cameras in online practical settings**. If you have any concerns about this, please contact the convenor as soon as possible.

4. Course schedule and structure

This course consists of 45 hours of class contact hours. You are expected to take an additional 50 hours of non-class contact hours to complete assessments, readings, and exam preparation. Please note ALL classes for this course are **online**.

WEEK	SEMINAR	VIDEOS	LABS	CONTINUOUS ASSESSMENT	EXAM
	Monday TEAMS	TUESDAY	Wednesday 2-4 PM TEAMS	Due Sunday 5 PM of every week	See below
1	Cells, Basic Tissues, and Epithelium	Epithelium	Cells, Basic Tissues, and Epithelium	Week 1 Quiz	
2	Connective Tissue	Specialised Connective Tissue: Bone	Connective Tissue and Specialised Connective Tissue	Week 2 Quiz	
3	Muscle Tissue	Nervous tissue pt 1	Muscle tissue and nervous tissue	Week 3 Quiz	
4	Nervous System	Respiratory system	Nervous system, and Respiratory system	Week 4 Quiz	
5	Cardiovascular System	Endocrine	Cardiovascular and endocrine system	Week 5 Quiz	MID-TERM ASSESSMENT DAY: FRIDAY 2-4 OR 4-6 PM
FLEXIWEEK					
7	Gastrointestinal tract	Accessory GIT	GIT and Accessory GIT	Week 6 Quiz	
8	Urinary System	Haemopoietic system	Urinary and Haemopoietic system	Week 7 Quiz	
9	Female reproductive system	Male reproductive system	Female repro and male repro	Week 8 Quiz	
10	Integumentary system	Special senses	Integumentary system and special senses	Week 9 Quiz	END-TERM ASSESSMENT DAY: FRIDAY 2-4 OR 4-6 PM

Exam Period: 12 August – 25 August

Supplementary Exam Period: 5 September – 9 September

This course will have an invigilated exam held on UNSW's Kensington campus. The exam will be conducted on Inspira, an online assessment platform.

A requirement for this exam is that you come to your exam with a fully charged laptop.

If you are completing this course online as a remote student the UNSW Exams Team will contact you to arrange an online invigilated exam monitored by UNSW staff, via Zoom. You will need a working camera and microphone on your laptop and will be required to have your camera on for the entire duration of the exam.

5. Assessment

5.1 Assessment tasks

Assessment task	Length	Weight	Mark	Due date and time
<p>Assessment 1: Continuous assessment - quizzes</p> <p>These are 9 short quizzes (per week) based on images and on theoretical content of a topic, taken remotely, which combined are worth 30%. Only the highest 7 quizzes will count towards final mark</p> <p>These quizzes provide students with regular feedback on their mastery of each topic. The assessment is conducted online in an open book format.</p> <p>Feedback process: Feedback will be provided through Moodle.</p>	5 mins	30%	100	Every Sunday 5 PM week 1-5, 7-10.
<p>Assessment 2: Mid term Assessment</p> <p>This mid-term assessment task integrates practical knowledge of tissues (identifying structures on microscopy images) and theoretical knowledge. The assessment is conducted online in an open book format.</p> <p>Feedback process: Feedback will be provided through Moodle/Teams.</p>	30 mins	20%	100	Week 5 Friday
<p>Assessment 3: End term assessment</p> <p>The end-term assessment</p>	30 mins	20%	100	Week 10 Friday

<p>task integrates practical knowledge of tissues (identifying structures on microscopy images) and theoretical knowledge. The assessment is conducted online in an open book format.</p> <p>Feedback process: Feedback will be provided through Moodle/Teams.</p>				
<p>Assessment 4: Final Theory Exam</p> <p>A single final course exam will be held during the formal examination period. This assesses student's mastery of the course content and ability to apply this knowledge to functional and clinical contexts through problem-solving. This exam is worth 30%. This course will have an invigilated exam held on UNSW's Kensington campus. The exam will be conducted on Inspera, an online assessment platform.</p> <p>A requirement for this exam is that you come to your exam with a fully charged laptop.</p> <p>If you are completing this course online as a remote student the UNSW Exams Team will contact you to arrange an online invigilated exam monitored by UNSW staff, via Zoom. You will need a working camera and microphone on your laptop and will be required to have your camera on for the entire duration of the exam.</p>	2 hours	30%	100	Final exam period

Further information

UNSW grading system: <https://student.unsw.edu.au/grades>

5.2 Assessment criteria and standards

Assessment of Attributes	Level of Attainment			
	Developing	Functional	Proficient	Advanced
Assessment 1: Continuous assessment - quizzes	Limited understanding of required knowledge and concepts. Inaccurate understanding of concepts discussed in lectures and laboratory sessions	Can reproduce significant facts and definitions. Has adequate breadth, but limited depth of understanding	Exhibits breadth and depth of understanding of concepts in the knowledge domain. Able to apply concepts to new contexts	Exhibits accurate and elaborate breadth and depth of understanding of concepts in the knowledge domain. Can apply concepts well to clinical scenarios.
Assessment 2: Mid term Assessment	Inaccurate understanding and explanation of concepts discussed in course. Cannot identify features in new contexts.	Can reproduce accurately required facts and definitions. Has adequate breadth, but limited depth of application of practical concepts.	Exhibits breadth and depth of understanding of practical concepts. Can use terminology accurately in new contexts.	Exhibits accurate and elaborated breadth and depth of understanding of concepts in the knowledge domain. Can apply concepts well to clinical scenarios.
Assessment 3: End term assessment	Inaccurate understanding and explanation of concepts discussed in course. Cannot identify features in new contexts.	Can reproduce accurately required facts and definitions. Has adequate breadth, but limited depth of application of practical concepts.	Exhibits breadth and depth of understanding of practical concepts. Can use terminology accurately in new contexts.	Exhibits accurate and elaborated breadth and depth of understanding of concepts in the knowledge domain. Can apply concepts well to clinical scenarios.
Assessment 4: Final Theory Exam	Limited understanding of required knowledge and concepts. Inaccurate understanding and explanation of concepts discussed in lectures and laboratory sessions;	Can reproduce accurately required facts and definitions. Has adequate breadth, but limited depth of understanding of concepts as evidenced in integrating body systems.	Exhibits breadth and depth of understanding of concepts in the knowledge domain. Can use terminology accurately in new contexts and can discuss concepts appropriately.	Exhibits accurate and elaborated breadth and depth of understanding of concepts in the knowledge domain. Can apply concepts well. Can justify application of concepts based on histological and functional principles, and integration of body systems

5.3 Submission of assessment tasks

Late Submission

Late submissions will be penalized at 5% per day capped at five days (120 hours). Students will not be permitted to submit their assessments after this date.

Special Consideration

If you experience a short-term event beyond your control (exceptional circumstances) that impacts your performance in a particular assessment task, you can apply for Special Considerations.

You must apply for Special Consideration **before** the start of your exam or due date for your assessment, except where your circumstances of illness or misadventure stop you from doing so.

If your circumstances stop you from applying before your exam or assessment due date, you must **apply within 3 working days** of the assessment, or the period covered by your supporting documentation.

More information can be found on the [Special Consideration website](#).

6. Academic integrity, referencing and plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Please use Vancouver or APA referencing style for this course, if required at any point in the course.

Further information about referencing styles can be located at

<https://student.unsw.edu.au/referencing>

***Academic integrity** is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage.¹ At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.*

Further information about academic integrity and **plagiarism** can be located at:

- The Current Students site <https://student.unsw.edu.au/plagiarism>, and
- The ELISE training site <https://subjectguides.library.unsw.edu.au/elise>

The Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

7. Readings and resources

RECOMMENDED TEXTS

Pawlina W. 2018. Histology: A Text and Atlas. 8th edition. Wolters Kluwer

OR

Junqueira's *Basic Histology: Text & Atlas* 15th ed, McGraw-Hill Mescher AL. 2018.

WEBSITES

Virtual Microscopy Database (VMD): <http://virtualmicroscopydatabase.org/>

UNSW Virtual Slides

¹ International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

8. Administrative matters

Student enquiries should be submitted via student portal <https://portal.insight.unsw.edu.au/web-forms/>

9. Additional support for students

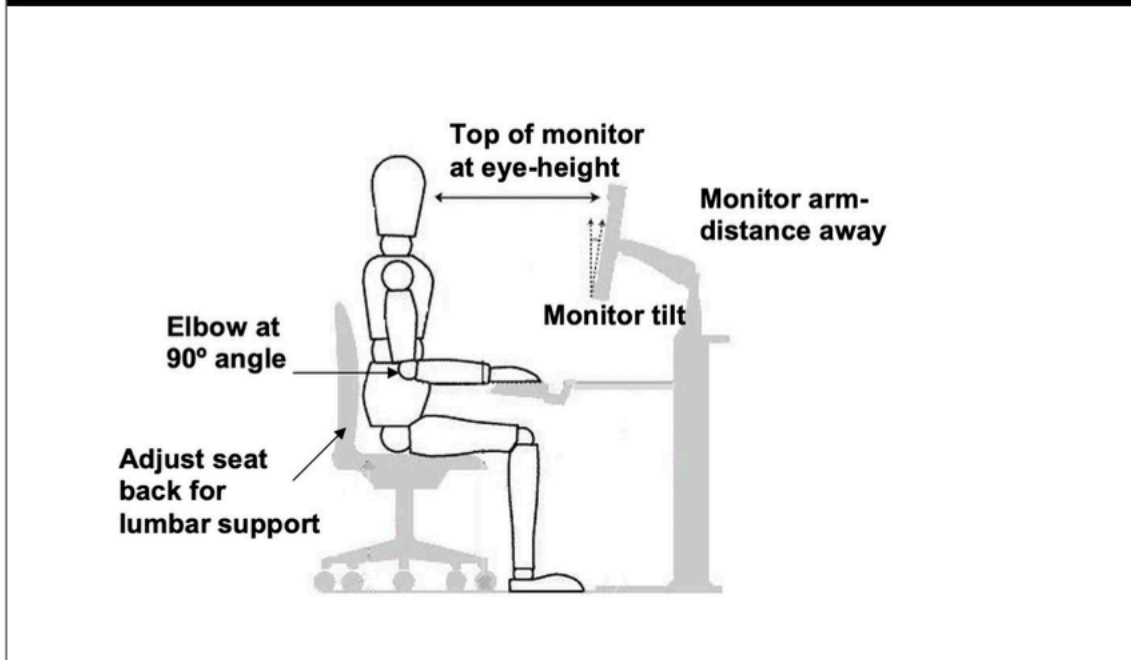
- The Current Students Gateway: <https://student.unsw.edu.au/>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- *Student Wellbeing and Health* <https://www.student.unsw.edu.au/wellbeing>
- UNSW IT Service Centre: <https://www.myit.unsw.edu.au/services/students>
- *UNSW Student Life Hub*: <https://student.unsw.edu.au/hub#main-content>
- *Student Support and Development*: <https://student.unsw.edu.au/support>
- *IT, eLearning and Apps*: <https://student.unsw.edu.au/elearning>
- *Student Support and Success Advisors*: <https://student.unsw.edu.au/advisors>
- *Equitable Learning Services (Formerly Disability Support Unit)*: <https://student.unsw.edu.au/els>
- *Transitioning to Online Learning* <https://www.covid19studyonline.unsw.edu.au/>
- *Guide to Online Study* <https://student.unsw.edu.au/online-study>

10. Student Risk Assessment

Medicine and Science Teaching Laboratory		Practical Classes (Dry and Computer) for Medicine and Science Students C27 Wallace Wurth Building G06/07 D26 Ian Jacobs Building, Lab 08B
Student Risk Assessment		

Hazards		
Ergonomics	Musculoskeletal pain	<ul style="list-style-type: none"> Correct workstation set-up Check electrical equipment is in good condition before use All portable electrical equipment tested and tagged Disinfectants and wipes available for use before and after the practical
Electrical	Electrical shock/Fire	
Biological	Infection	

Workstation set-up



Personal Protective Equipment

Face masks may be required. Please following the instructions provided at the time of entry.

Emergency Procedures

In the event of an alarm, follow the instructions of the academic in charge. The initial sound (beep) is advising you to prepare for evacuation. During this time pack up your personal belongings. The second sound (whoop) gives instruction to leave. The assembly point is on the lawn in front of the Chancellery. In the event of an injury inform the academic in charge (and/or lab staff). First aider and fire warden contact details are on display by the lifts on the floor and in each room. There is a wall mounted First Aid Kit located at the end of the G06 or 08A Laboratory.

Clean up and waste disposal

No apparatus or chemicals used in these rooms.

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: 01/02/2023

11. Ethical behaviour and human remains

The learning activities in this course is centred around the study of human anatomical specimens that have been preserved and prepared from people who have donated their bodies to UNSW via a Bequeathal Program. Their donation makes it possible for you and your peers to 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 NSW Law. The University operates the Bequeathal Program under the Code of Practice noted below, which all students are required to adhere to.

UNSW Department of Anatomy Code of Practice:

The University and Department of Anatomy recognises the magnitude of the contribution made by those who donate their bodies for the teaching of anatomy. We are committed to treating the human remains entrusted to our 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 and guidelines associated with the handling of human 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.

The Department of Anatomy hosts a thanksgiving service to commemorate those people who donated their bodies to enable our students to study anatomy. Families of donors are invited to attend this special ceremony. Staff and students participate in this event through readings of poetry, music and song, and in the laying of flowers as the name of each donor is read. If you would like to participate in this ceremony, please record your interest by emailing our Bequeathal Administrator (bequeathal@unsw.edu.au)