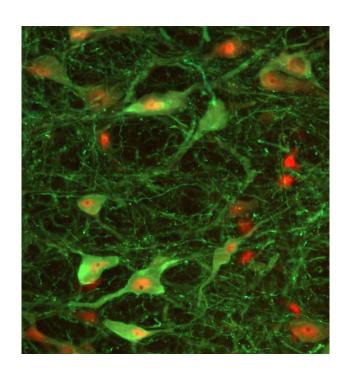


# **ANAT3411**

## Neuroanatomy



Course Outline Term 1, 2023

School of Biomedical Sciences Faculty of Medicine & Health

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#### 1. Staff

Position	Name	Email	Consultation times	Contact Details
Convenor and Lecturer	Prof Pascal Carrive	p.carrive@unsw.edu.au	By appointment via Teams	via email
Co-convenor and Lecturer	Dr Teri Furlong	t.furlong@unsw.edu.au	By appointment via Teams	via email
Co-convenor and Lecturer	Dr Tom Duncan	t.duncan@unsw.edu.au	By appointment via Teams	via email
Instructor	Dr Kosta Kotsidis	k.kotsidis@unsw.edu.au		
Instructor	Mr Bahram Sediqi	bahram.sediqi@student. unsw.edu.au		

## 2. Course information

Units of credit: 6 UoC

Pre-requisite(s): ANAT1521 or a minimum mark of 55 in ANAT2111 or ANAT2511

**Teaching times and locations:** The course consists of 7 hours per week of teaching (3 x1 hr lectures, 1x 2hrs practical class and 1 x 2hrs tutorial class). Lectures will be delivered online synchronously at the beginning of the week. Both practical and tutorial classes will be delivered face-to-face in accordance with the room capacity limits in the Anatomy and computer labs. For more information, see: <a href="https://timetable.unsw.edu.au/2023/ANAT3411.html">https://timetable.unsw.edu.au/2023/ANAT3411.html</a>

## 2.1 Course summary

ANAT3411 Neuroanatomy is an advanced neuroscience course that provides students with an understanding of the development, structure, function and vascular supply of the spinal cord, brainstem, and forebrain. Students will acquire an in-depth knowledge of the neural structures and connections that underpin sensory processing and perception, reflexive and voluntary motor control, and the emergence of complex higher functions in the cerebral cortex such as language and emotions.

This comprehensive systems neuroscience course equips students with skills directly applicable to brain research and pre-medical training.

#### 2.2 Course aims

The aim of this course is to provide students with a basic understanding of the structural organisation of the human central nervous system in sufficient depth to form the basis for further clinical or research studies of the nervous system.

#### 2.3 Course learning outcomes (CLO)

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

- CLO 1. Describe the parts of the spinal cord, brainstem and forebrain and their vascular supply.
- CLO 2. Relate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and emergence of higher brain functions.
- CLO 3. Apply structure and function knowledge of the central nervous system and its vascular supply to solve elementary neurological problems

## 2.4 Relationship between course and program learning outcomes and assessments

ANAT3411 is a component of the Anatomy Major in the BSc and BMedSc, or as a year 3 elective in other BSc and BMedSc programs and in the BExPhys program. It is also a key component of the Neuroscience Major in the BSc and BSc (Adv) programs. It builds on the basic knowledge of the nervous system, previously obtained in either ANAT1521, ANAT2111 or ANAT2511. It provides a useful (though not compulsory) basis for NEUR3221 Neurophysiology (offered in Term 2) and a Honours in Neuroscience (NEUR4442 and NEUR4441).

Course Learning Outcome (CLO)	LO Statement	Related Tasks & Assessment
CLO 1	To describe the parts of the spinal cord, brainstem and forebrain and their vascular supply.	Quizzes and Spot tests Theory Exam
CLO 2	To relate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and emergence of higher brain functions.	Quizzes, Spot tests and Theory Exam
CLO 3	To apply structure and function knowledge of the central nervous system and its vascular supply to solve elementary neurological problems	Quizzes, Spot tests and Theory Exam

## 3. Strategies and approaches to learning

## 3.1 Learning and teaching activities

The course consists of 7 hours per week of instruction  $-3 \times 1$ hr lectures,  $1 \times 2$ hrs practical and  $1 \times 2$ hrs tutorial classes. The lectures will be delivered at the beginning of the week on Mondays and Tuesdays followed by the practical class on Wednesday and the tutorial class on Friday.

#### Lectures

The lectures are designed to provide conceptual information and an overview of the content that will be the focus of the week's topic. It is advisable that students attend all lectures to achieve better learning outcomes and academic success. Lecture slides and notes will be uploaded to Moodle prior to the beginning of each lecture, 1 or 2 days earlier. All lectures will be streamed live (unless they fall on a public holiday) and recorded. The recording will be made available on Teams within hours of lecture completion. While it is our intention and expectation that the lectures will be recorded, please note that this cannot be guaranteed.

#### **Practical classes**

The practical classes will be delivered in the Ian Jacobs (Bioscience) Building Anatomy Iabs. The practical classes complement the lectures, and involve active learning in a small group situation (15-20 students maximum), identifying key structures in 3D models, prosected specimens, and MRI images of the brain. A lab manual will also be made available that contains the learning objectives and activities for the practical classes. Every student is required to be involved in inquiry and take an active participation in the learning process under the guidance of their instructor.

#### **Tutorials**

The tutorials will be delivered in computer classes of the Wallace Wurth Building by one of the lecturers /demonstrators of the course. The lab manual will contain all the learning objectives and activities for tutorial classes. Learning activities of tutorial classes may include activities with the computer software *BrainStorm* - an internet application designed for this course to help students consolidate their learning. Brainstorm is also available at any time outside of formal classes.

#### Independent study and self-directed learning activities

There is not enough time in the lectures, practicals, and tutorials to develop a deep understanding of the concepts covered in the course. To achieve the learning outcomes and do well in the quizzes and other the assessments, it is strongly advised to keep on top of the lectures and revise the material presented in the course on a regular basis. In addition to *Brainstorm*, the online resource that has been designed for this purpose, students may also want to do additional reading beyond the lecture materials. Relevant additional resources, including textbook chapters, will be mentioned in lectures and practical/tutorial sessions. At the end of each practical and tutorial class you will find a page with a series of questions untitled "What have you learned? Can you answer these questions?". You should be able to answer these questions from the knowledge acquired during the lecture and classes. The answers will be made available on the course Moodle page.

#### **Question forums**

Each week there will be a question forum on Teams for students to ask any topic related questions (any questions containing personal information please email the convenors directly). These forums are a place for students to submit questions and interact with other students by answering questions. These forums will be monitored by academic staff, but it is expected that students engage in the discussion and attempt to answer most questions posted.

During Flexi week (week 6), the 2 hrs of lecture on Tuesday will be replaced by an optional online revision session where questions can be raised with the course co-ordinators. There will also be an optional practical session on Wednesday from 1 to 3 pm and 4 to 6 pm for revision in the Anatomy Labs with the instructors of the course. There will be no tutorial in Flexi week. These revision classes are in preparation for Spot test 1 which will be on the Monday of the following week (week 7).

We encourage students to question, observe and share knowledge and experiences with their peers and teachers. We endeavour to make the material interesting to stimulate an enthusiasm for the fascinating subject matter that is covered in this course. Interaction and engagement are essential to facilitate learning.

### 3.2 Expectations of students

#### Keeping up with the pace the course

Students 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.

Neuroanatomy is a fascinating but challenging subject. Challenges include the 3-dimensional visualisation of the brain and its internal parts, the memorisation of name of structures and the understanding of difficult concepts of organisation and function. The pace of the course is fast and the content heavy. Therefore, it is critical to keep up with the pace of the course and not fall behind.

We strongly encourage the students to i) attend the lectures live rather than just view the recordings offline, ii) attend the practical and tutorial classes and arrive on time to do the on-line quizzes at the beginning of the class. Students **must ensure** that they have **viewed and studied the material in the lectures PRIOR** to attending the practical and tutorial classes.

#### **Access to Anatomy Labs**

To be allowed into the Anatomy Labs, students **must first complete** the *Orientation to Anatomy modules Part 1* & *Part 2*, or *Part 3* if they have already completed these modules for another or previous Anatomy course. The modules can be completed during Week 0 and are available on the Moodle Page of the course under the "Compulsory week 0 activity" tab. Students **must wear closed shoes and bring their own lab coats and safety googles** to the labs. Masks are not compulsory, at least until further notice.

## 4. Course schedule and structure

Weeks 1-5

Week	Date	Time	Venue	Activity
	Mon Feb 13	5-6 pm	Online	L1 – Neurohistology
	Tue Feb 14	2-4 pm	Online	L2 - Development of the Nervous System L3 - General Organisation of the Brain
1	Wed Feb 15	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P1 - General Organisation of the Brain P1 - General Organisation of the Brain
	Fri Feb 17	12-2 pm	WW G06-G07	T1 - Neurohistology & Nervous System Development
	Mon Feb 20	5-6 pm	Online	L4 - Spinal Cord 1
	Tue Feb 21	2-4 pm	Online	L5 - Spinal Cord 2 L6 - Spinal Cord 3
2	Wed Feb 22	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P2: Spinal Cord: Gray and White Mater P2: Spinal Cord: Gray and White Mater
	Fri Feb 24	12-2 pm	WW G06-G07	T2 - Spinal Cord: Gray and White Mater
	Mon Feb 27	5-6 pm	Online	L7 - Medulla
	Tue Feb 28	2-4 pm	Online	L8 - Pons and Midbrain L9 - Reticular formation
3	Wed Mar 1	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P3 - Brainstem: Medulla, Pons & Midbrain P3 - Brainstem: Medulla, Pons & Midbrain
	Fri Mar 3	12-2 pm	WW G06-G07	T3 - Brainstem: Medulla, Pons & Midbrain
	Mon Mar 6	5-6 pm	Online	L10 - Cranial nerves part 1
	Tue Mar 7	2-4 pm	Online	L11 - Cranial nerves part 2 L12 - Cranial nerves part 3
4	Wed Mar 8	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P4 - Cranial nerves P4 - Cranial nerves
	Fri Mar 10	12-2 pm	WW G06-G07	T4 - Cranial nerves
	Mon Mar 13	5-6 pm	Online	L13 - Auditory System
	Tue Mar 14	2-4 pm	Online	L14 - Vestibular System L15 - Visual System
5	Wed Mar 15	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P5 - Auditory, Vestibular & Visual Systems P5 - Auditory, Vestibular & Visual Systems
	Fri Mar 17	12-2 pm	WW G06-G07	T5 - Auditory, Vestibular & Visual Systems

Weeks 6-10

Week	Date	Time	Venue	Activity
	Mon Mar 20			- No Lecture -
6	Tue Mar 21	2-4 pm	Online	L16 - Revision (optional) L17 - Revision (optional)
Flexi week	Wed Mar 22	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P6 - Revision (optional) P6 - Revision (optional)
	Fri Mar 24			- No Tutorial -
	Mon Mar 27	5-6 pm	WW 115,116, 120,G16,G08	SPOT TEST1 (on computer and invigilated)
7	Tue Mar 28	2-4 pm	Online	L18 Thalamus L19 Telencephalon
	Wed Mar 29	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P7 - Thalamus and Telencephalon P7 - Thalamus and Telencephalon
	Fri Mar 31	12-2 pm	WW G06-G07	T7 - Thalamus & Telencephalon
	Mon Apr 3	5-6 pm	Online	L20 - Cerebral Cortex
	Tue Apr 4	2-4 pm	Online	L21 - Hypothalamus L22 - Limbic System
8	Wed Apr 5	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P8 - Cerebral cortex & Limbic system P8 - Cerebral cortex & Limbic system
	Fri Apr 7 Easter Frid	12-2 pm	Pre-recorded	T8 - Cerebral cortex & Limbic system
	Mon Apr 10 Easter Mon	5-6 pm	Pre-recorded	L23 - Motor Cortex
	Tue Apr 11	2-4 pm	Online	L24 - Basal Ganglia L25 - Cerebellum
9	Wed Apr 12	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P9 - Basal Ganglia & Cerebellar Disorders P9 - Basal Ganglia & Cerebellar Disorders
	Fri Apr 14	12-2 pm	WW G06-G07	T9 - Basal Ganglia and Cerebellum
	Mon Apr 17			- No Lecture -
	Tue Apr 18	2-4 pm	Online	L26 - Blood supply, Meninges & CSF
10	Wed Apr 19	C1: 1-3 pm C2: 4-6 pm	Anat Lab 7 Anat Lab 7	P10 - Blood supply, Meninges & CSF P10 - Blood supply, Meninges & CSF
	Fri Apr 21	12-2 pm	WW G06-G07	T10 - Clinical cases

Tutorial T8 falls on Easter Friday. This tutorial will be pre-recorded and made available online. Lecture L23 falls on Easter Monday. This lecture will be pre-recorded and made available online.

Exam Period: 28 April – 11 May

Supplementary Exam Period: 22 May - 26 May

#### 5. Assessment

#### 5.1 Assessment tasks

Assessment task	Length	Weight	Due date and time
Pre-prac/tut quizzes	16 quizzes 4 min each	20%	At the start of each practical and tutorial except during Flexi week, T8 and T10.
Spot tests			
Spot test 1	50 min	20%	Monday of week 7, during lecture time
Spot test 2	50 min	20%	During exam period (28 April -11 May)
Theory Exam	2 hrs	40%	During exam period (28 April - 11 May)

Spot Tests and the Theory exam will be based on the specific objectives, learning activities and recommended readings listed for each class.

Students must attempt all assessments to complete the course.

#### Pre-prac/tut quizzes

The pre-prac/tut quizzes ensure students keep up with lecture material and have adequately prepared for the upcoming tutorial and practical classes. They contribute 20% towards the final mark. The quizzes will be conducted online in the class at the beginning of the practicals and tutorials, and under exam conditions (ie, invigilated). For each quiz, students will have 4 minutes to answer 2 multiple choice questions using their smart phone or digital device on material from:

- i) the preceding lectures (and practical) of the week
- ii) the current practical or tutorial class

There will be a total of 16 quizzes (no quiz on Flexi week, T8 and T10). However, only the best 13 quizzes will be considered for the calculation of the final quiz score. Students who miss or arrive late to the tutorial and practical class will not be allowed to sit the quiz. If they can produce a medical certificate, the missed quiz will be waved in the final calculation of the quiz score. Students who wish to perform well in the quizzes will need to i) attend the lectures (and practical) of the week and ensure they can answer basic questions that may arise from the learning objectives; and ii) pre-read the content of the tutorial and practical notes before attending the tutorial and practical class, taking note of the class learning objectives.

#### **Spot Tests**

These are practical examinations, based on practical class contents, that assess your ability to identify structures in brain dissections and cross-sections (including MR images) and to answer relevant short theory questions. You are expected to be able to identify structures shown **in bold type** in the tutorial and practical classes of the Lab Manual and to answer fundamental theory questions about these structures. The Spot Tests are computer-based and run on Moodle. Typically, they present 10 main questions with sub-questions that must be completed within 50 minutes. More information and a

practice spot test will be provided the week before the test (during week 6, flexi-week) for students to familiarise themselves with the format of the spot tests and to gauge the level of knowledge required.

Both spot tests will be held on campus in the **Wallace Wurth** computer rooms of the ground floor and level 1 of the building and will be **invigilated**.

**Spot Test 1** will be held on Monday of week 7 during the lecture slot (5-6 pm) and will examine material up to and including the Visual System (i.e, all practical and tutorial material up to including week 5).

**Spot Test 2** will be held during the exam period (28 April-11 May) and will examine material from the Thalamus (week 7) onwards. The exact date and time will be set by Central, later during the term.

Students who miss a spot test will have to apply for special consideration. If granted, they will be allowed to sit the missed spot test during the supplementary exam period (22-26 May).

#### **Theory Examination**

The theory exam will be computer-based and held during the exam period (28 April-11 May). This will consist of 40 multiple choice questions (60% of the theory exam mark) and 2 written questions (40% of the theory exam mark). The exam will test understanding of the structural organization of the brain and spinal cord and its relationship to function, according to the Learning Outcomes defined earlier. It will cover the whole course, integrating knowledge from all lectures, practicals and tutorials.

#### **Further information**

UNSW grading system: <a href="https://student.unsw.edu.au/grades">https://student.unsw.edu.au/grades</a>

UNSW assessment policy: <a href="https://student.unsw.edu.au/assessment">https://student.unsw.edu.au/assessment</a>

#### 5.2 Assessment criteria and standards

The assessment types are as follow:

• Quizzes: Multiple Choice Questions (MCQ)

Spot tests: MCQ and short answer questions

Theory exam: MCQ, short answer and short essay questions

Assessment	Amount former	Le	vel of knowledge & und	erstanding
type	Answer format	Developing	Functional	Proficient
Multiple choice questions	Choose the one, most correct, answer	Incorrect answer. Limited understanding of required concepts and knowledge	Some correct responses. Demonstrates a deficit in required knowledge	Correct answer. Demonstrates understanding of required concepts and knowledge
Short answer questions	A few words to a few sentences in length	Incorrect answer. Limited understanding of required concepts and knowledge	Partly correct answer due to lack of detail or exactness. Broad understanding of required concepts and knowledge	Correct answer with sufficient level of detail. Clear and precise understanding of required concepts and knowledge

Short essay questions	Several sentences to a few paragraphs in length	Does not reproduce required terminology, facts, and definitions. Has limited depth of understanding of concepts and information is lacking or	Accurately reproduces required terminology, facts, and definitions. Has adequate breadth, but limited depth of understanding or integration of some concepts. Some information may be	Accurately reproduces required terminology, facts, and definitions. Demonstrates breath of understanding by integration of several concepts. All information is present and correct.
		incorrect	lacking or incorrect	

#### 5.3 Submission of assessment tasks

#### **Special Consideration**

If, for the two spot tests and the theory exam, 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 except where your circumstances of illness or misadventure stop you from doing so.

If your circumstances stop you from applying before your exam 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.

#### 5.4. Feedback on assessment

Feedback will be given on pre-prac/tut quizzes, immediately after the completion of the quizzes and before the start of the practical and tutorial classes.

No formal feedback will be given for Spot test 1 & 2. Brief oral feedback will be given for Spot test 1 at the beginning of a practical or tutorial but only for those questions that have been most challenging to the students.

To help students consolidate their learning on a weekly basis, 6 to 8 questions are provided in the lab manual at the end of each practical and tutorial. Answers to these questions will be posted in the tutorial section of the Moodle page of the course.

## 6. Academic integrity, referencing and plagiarism

**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.<sup>1</sup> 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.

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<sup>&</sup>lt;sup>1</sup> International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

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

- The Current Students site <a href="https://student.unsw.edu.au/plagiarism">https://student.unsw.edu.au/plagiarism</a>, and
- The ELISE training site <a href="https://subjectquides.library.unsw.edu.au/elise">https://subjectquides.library.unsw.edu.au/elise</a>

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

## 7. Readings and resources

#### 7.1 Online

#### **BrainStorm** Interactive Neuroanatomy

**BrainStorm** is hosted by BEST and is available at <a href="https://www.best.edu.au">https://www.best.edu.au</a>. Please note that a login authentication step is required to access BrainsStorm. You will receive an invitation to sign up at the beginning of the course. Brainstorm is free for UNSW students and staff.

#### 7.2 Text book

The purchase of a textbook is not compulsory, but here are recommended textbooks.

T.W. Vanderah, and D.J. Gould. **Nolte's The Human Brain: An Introduction to its Functional Anatomy**, 8<sup>th</sup> ed. C.V. Mosby, 2020. This is a comprehensive text. <u>Print</u> and <u>Digital</u> links. The 7<sup>th</sup> ed and 6<sup>th</sup> ed are also sufficient. The <u>6<sup>th</sup> Edition is available online</u> and free from the UNSW library.

T.W. Vanderah, **Nolte's The Human Brain in Photographs And Diagrams**, 5<sup>th</sup> Ed Elsevier, 2018. This is a good companion to the comprehensive Nolte's textbook. <u>Print</u> and <u>Digital</u> links. <u>The 4<sup>th</sup> Edition is available online</u> and free from the UNSW library.

Crossman, A.R. and Neary, D. **Neuroanatomy An Illustrated Colour Text**, 6<sup>th</sup> ed. Churchill Livingstone, 2019. This text is adequate but covers just the essentials. <u>Print</u> and <u>Digital</u> links.

## 7.3 Library references

M.F. Bear, B.W. Connors and M.A. Paradiso. **Neuroscience – Exploring the Brain**, 4<sup>th</sup> ed., Lippincott Williams and Wilkins, 2016. (3<sup>rd</sup> Ed 2007 OK if 4<sup>th</sup> not available)

Waxman, S, G., Clinical Neuroanatomy, 28th ed. McGraw Hill, 2017.

- J.A. Kiernan: Barr's The Human Nervous System. **An anatomical Viewpoint**, 8<sup>th</sup> Edition. J. B. Lippincott, 2004.
- D. E. Haines: Neuroanatomy. **An Atlas of Structures, Sections and Systems**: 8<sup>th</sup> Edition. Urban and Schwarzenberg, 2012.
- E.R. Kandel, J.H. Schwartz, T.M. Jessell, S.A. Seigelbaum, and A.J. Hudspeth. **Principles of Neural Science**, 5<sup>th</sup> ed. Elsevier, 2013
- C. Watson, M. Kirkcaldie, and G. Paxinos, The Brain. Elsevier, 2010

#### 7.4 Other online resources (well worth visiting)

University of California (videos, 3D models and specimens, and interactive modules): <a href="http://www.neuroanatomy.ca/">http://www.neuroanatomy.ca/</a>

University of Utah (videos of specimens): <a href="https://neurologicexam.med.utah.edu/adult/html/brain-dissections.html">https://neurologicexam.med.utah.edu/adult/html/brain-dissections.html</a>

For the basics: 2-minute neuroscience (short videos):

https://www.youtube.com/channel/UCUqZq9PkDp1xaEivtcfJPSq

Soton Brain Hub (short videos): <a href="https://www.youtube.com/channel/UC-\_JaCxgqtv-4ugFhpPYkZg">https://www.youtube.com/channel/UC-\_JaCxgqtv-4ugFhpPYkZg</a> or <a href="http://www.sotonbrainhub.co.uk/">https://www.youtube.com/channel/UC-\_JaCxgqtv-4ugFhpPYkZg</a> or <a href="http://www.sotonbrainhub.co.uk/">https://www.youtube.com/channel/UC-\_JaCxgqtv-4ugFhpPYkZg</a> or

#### 7.4 Revision Facilities

**BrainStorm** is available online for remote use, and on all student computers in the Wallace Wurth Building.

A limited number of models and dissections of neuroanatomical structures are available in the Anatomy Museum (Rm G09).

Access to the Anatomy labs with instructors will be given in week 6 (Flexi week) during the normal hours of the practicals (1-3 and 4-6 pm).

#### 8. Administrative matters

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

## 9. Additional support for students

- The Current Students Gateway: <a href="https://student.unsw.edu.au/">https://student.unsw.edu.au/</a>
- Academic Skills and Support: <a href="https://student.unsw.edu.au/academic-skills">https://student.unsw.edu.au/academic-skills</a>
- Student Wellbeing and Health <a href="https://www.student.unsw.edu.au/wellbeing">https://www.student.unsw.edu.au/wellbeing</a>
- UNSW IT Service Centre: <a href="https://www.myit.unsw.edu.au/services/students">https://www.myit.unsw.edu.au/services/students</a>
- UNSW Student Life Hub: <a href="https://student.unsw.edu.au/hub#main-content">https://student.unsw.edu.au/hub#main-content</a>
- Student Support and Development: <a href="https://student.unsw.edu.au/support">https://student.unsw.edu.au/support</a>
- IT, eLearning and Apps: https://student.unsw.edu.au/elearning
- Student Support and Success Advisors: <a href="https://student.unsw.edu.au/advisors">https://student.unsw.edu.au/advisors</a>
- Equitable Learning Services (Formerly Disability Support Unit): <a href="https://student.unsw.edu.au/els">https://student.unsw.edu.au/els</a>
- Transitioning to Online Learning <a href="https://www.covid19studyonline.unsw.edu.au/">https://www.covid19studyonline.unsw.edu.au/</a>
- Guide to Online Study https://student.unsw.edu.au/online-study
- The Nucleus Student Hub: https://nucleus.unsw.edu.au/en
- Mental Health Connect: is available for onshore and offshore students who are experiencing mental health concerns +61 (2) 9348 0084. If your concern is afterhours 5pm 9am call the UNSW Mental Health Support Line 1300 787 026 or the Medibank 24/7 Health and Support Line +61(2) 8905 0307 for overseas students.
- <u>Student Support and Success Advisors</u> are available for all students with questions about results, visa issues, special consideration. https://www.student.unsw.edu.au/advisors
- MindHUB: for online mental health resources. https://www.student.unsw.edu.au/mind-hub

## 10. Student risk management plans

## 10.1 D26 Ian Jacobs Building L1 Lab07

**Medicine and Science Teaching Laboratory** 





**Anatomy Practical Classes for** Medical and Science Students

D26 Ian Jacobs Building L1 LAB08A/07

Hazards	Risks	Controls
Chemical Formaldehyde Methylated spirits 2-phenoxyethanol	Corrosive Flammable Irritant	<ul> <li>Low concentrations of chemicals used</li> <li>Adequate air changes and ventilation provided</li> <li>Safety Data Sheets for chemicals available</li> </ul>
Physical Cold temperature Heavy and sharp models (e.g. bone/plastic)	Cold Penetrating wound or foot injury	<ul> <li>Always wear a laboratory coat</li> <li>Wear enclosed shoes with full coverage of dorsum of foot</li> <li>Wear protective eyewear</li> </ul>
Biological Fungi Bacteria (tetanus) Hepatitis B and C	Infection	<ul> <li>Ensure appropriate immunisation is current</li> <li>Wear a face mask (if required)</li> <li>Wear disposable gloves when handling wet specimens and do not cross-contaminate models or bones with wet specimens</li> <li>Do not bring in any food or drinks</li> <li>Do not place anything into your mouth (e.g. pen)</li> <li>Use disinfectant provided for cleaning models and surfaces</li> <li>Use hand sanitisers provided regularly</li> <li>Wash hands with soap and dry thoroughly before leaving</li> </ul>

#### **Personal Protective Equipment (required)**











#### **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 are portable First Aid Kits located in LAB08A and LAB07.

#### 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 as this may result in fluid dripping onto the floor. Fluids on the floor are a major safety hazard and should be reported to lab staff immediately.
- Replace stools under the tables (if applicable).
- Remove your gloves and dispose in the biowaste bins provided.
- Wash your hands thoroughly with soap and dry with paper towels provided.
- Remove your laboratory coat as you leave the room.

#### **Ethics Approval**

This type of practical has been previously considered and approved by the UNSW Human Research Ethics Advisory Panel (HC180115).

#### **Declaration**

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

Signature:	Date:
Student number:	

ANAT-SRA-Med&SciStudent relates to RA-MED-06. Date for review: 01/02/2024

### 10.2 C27 Wallace Wurth Building G06/07

Medicine and Science Teaching Laboratory

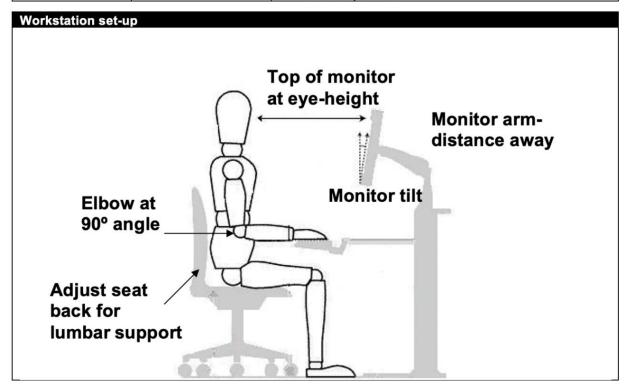
**Student Risk Assessment** 



Practical Classes (Dry & Computer Labs) for Medicine and Science Students

C27 Wallace Wurth Building G06/07 D26 Ian Jacobs Building L1 LAB08B

Hazards	Risks	Controls
Ergonomics	Musculoskeletal pain	Correct workstation set-up
Electrical Biological	Electrical shock/Fire	<ul> <li>Check electrical equipment is in good condition before use</li> <li>All portable electrical equipment tested and tagged</li> <li>Disinfectants and wipes available for use before and after the practical</li> </ul>



#### **Personal Protective Equipment**

Face masks may be required. Please follow 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 a portable kit in the 08A Laboratory.

#### Clean up and waste disposal

No apparatus or chemicals used in these rooms.

#### Declaration

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

Signature:	Date:
Student number:	

ANAT-SRA-Med&SciStudent relates to RA-MED-06. Date for review: 01/02/2024

## 11. Ethical behaviour in anatomical practical class

In this course, you will be required to study human anatomical specimens. Each year, people donate their bodies to UNSW via a Bequeathal Program so that you and your colleagues can learn about the human body. The donations are 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). The University operates the Bequeathal Program under the Code of Practice noted below, which all students are required to adhere to.

Before starting this course, students **MUST** complete the online modules *Orientation to Anatomy modules Part 1 & Part 2*, or *Part 3* which can be found on the Moodle Page of the course under the "Compulsory week 0 activity" tab.

**Code of Practice:** The University recognises the magnitude of the contribution made by those who donate their bodies for the teaching of anatomy, and it is committed to treating the human remains entrusted to its care with the utmost respect and professionalism. In keeping with this commitment, the University requires its employees and students to uphold all legal, public health, and ethical standards associated with the handling of bodies and human tissue samples. Any activity which undermines its ability to meet UNSW's legislative obligations, or which devalues the contribution made by those who donate their bodies for the purposes of the teaching of anatomy to students will be in breach of this policy and subject to further action.

For those engaging in the online space (learning and teaching), the University considers that the Code of Practice remains relevant. The use of images of anatomical specimens should follow principles consistent with the Anatomy Act 1977 and/or Human Tissue Act 1983. When images are used online, these should never be identifiable, caricatured and shared for any purpose other than educational; and should not be published on social media platforms.