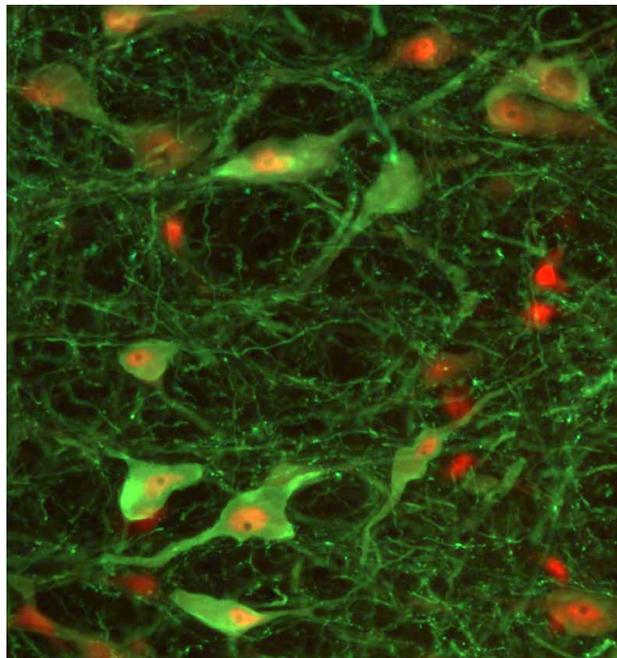


# ANAT3411

## Neuroanatomy



### Course Outline

### Term 1, 2022

School of Medical Sciences  
Faculty of Medicine & Health

# Table of Contents

<b>1. Staff</b>	<b>3</b>
<b>2. Course information</b>	<b>3</b>
2.1 Course summary	3
2.2 Course aims	4
2.3 Course learning outcomes (CLO)	4
2.4 Relationship between course and program learning outcomes and assessments	4
<b>3. Strategies and approaches to learning</b>	<b>5</b>
3.1 Learning and teaching activities	5
3.2 Expectations of students	6
<b>4. Course schedule and structure</b>	<b>7</b>
Weeks 1- 6	7
Weeks 7- 10	8
<b>5. Assessment</b>	<b>9</b>
5.1 Assessment tasks	9
<b>Pre- prac/tut quizzes</b>	<b>9</b>
<b>Spot Tests</b>	<b>10</b>
<b>Theory Examination</b>	<b>10</b>
5.2 Assessment criteria and standards	10
5.3 Submission of assessment tasks	11
5.4. Feedback on assessment	11
<b>Feedback will be given on pre-prac/tut quizzes, immediately after the completion of the quizzes before the start of the practical and tutorial classes.</b>	<b>11</b>
<b>6. Academic integrity and plagiarism</b>	<b>12</b>
<b>7. Readings and resources</b>	<b>12</b>
Online	12
Text Book	12
Library References	12
Revision Facilities	13
<b>8. Administrative matters</b>	<b>13</b>
<b>9. Additional support for students</b>	<b>13</b>
<b>10. Student Risk management Plans</b>	<b>15</b>
<b>10. Student management Plan</b>	<b>15</b>
<b>11. Ethical behaviour in Anatomical Class</b>	<b>18</b>

# 1. Staff

Position	Name	Email	Consultation times & locations	Contact Details
Convenor and Lecturer	A/Prof Pascal Carrive	<a href="mailto:p.carrive@unsw.edu.au">p.carrive@unsw.edu.au</a>	By appointment via Teams	via email
Co-convenor and Lecturer	Dr Teri Furlong	<a href="mailto:t.furlong@unsw.edu.au">t.furlong@unsw.edu.au</a>	By appointment via Teams	via email
Co-convenor and Lecturer	Dr Tom Duncan	<a href="mailto:t.duncan@unsw.edu.au">t.duncan@unsw.edu.au</a>	By appointment via Teams	via email
Lecturer	Dr Reza Shirazi	<a href="mailto:r.shirazi@unsw.edu.au">r.shirazi@unsw.edu.au</a>	By appointment via Teams	via email
Instructor	Dr Kosta Kotsidis			

For any general correspondence concerning the course and course material, please use email: [neuroanatomy@unsw.edu.au](mailto:neuroanatomy@unsw.edu.au). This will be received by all the lecturers of the course.

## 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 until further advice from NSW Health. For more information, see: <http://timetable.unsw.edu.au/2022/ANAT3411.html>

### 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:

CLO 1. To describe the parts of the spinal cord, brainstem and forebrain and their vascular supply.

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.

CLO 3. To 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
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 x 1hr lectures, 1 x 2hrs practical and 1 x 2hrs 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 if possible. 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 labs. 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. Students must bring their own lab coats, safety goggles and masks to the labs.

#### **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 insufficient time in the lectures, practicals, and tutorials 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. Although Brainstorm may be your main online resource, you may also want to do additional reading beyond the lecture materials. Relevant additional resources, including textbook chapters, will be cited 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

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.

## 4. Course schedule and structure

### Weeks 1- 6

Week	Date	Time	Venue	Activity
1	Mon Feb 14 Tue Feb 15	10-11 am 2-4 pm	Online Online	L1 - Neurohistology L2 - Development of the Nervous System L3 - General Organisation of the Brain
	<b>Wed Feb 16</b> <i>Fri Feb 18</i>	<b>C1: 1-3 pm</b> <b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>Anat Lab</b> <b>CompLab</b>	<b>P1 - General Organisation of the Brain</b> <b>P1 - General Organisation of the Brain</b> <b>T1 - Neurohistology &amp; Development of the Nervous System</b>
2	Mon Feb 21 Tue Feb 22	10-11 am 2-4 pm	Online Online	L4 - Spinal Cord 1 L5 - Spinal Cord 2 L6 - Spinal Cord 3
	<b>Wed Feb 23</b> - <i>Fri Feb 25</i>	<b>C1: 1-3 pm</b> <b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>Anat Lab</b> <b>CompLab</b>	<b>P2: Spinal Cord: Gray and White Mater</b> <b>P2: Spinal Cord: Gray and White Mater</b> <b>T2 - Spinal Cord: Gray and White Mater</b>
3	Mon Feb 28 Tue Mar 1	10-11 am 2-4 pm	Online Online	L7 - Medulla L8 - Pons and Midbrain L9 - Reticular formation
	<b>Wed Mar 2</b> <i>Fri Mar 4</i>	<b>C1: 1-3 pm</b> <b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>Anat Lab</b> <b>CompLab</b>	<b>P3 - Brainstem: Medulla, Pons &amp; Midbrain</b> <b>P3 - Brainstem: Medulla, Pons &amp; Midbrain</b> <b>T3 - Brainstem: Medulla, Pons &amp; Midbrain</b>
4	Mon Mar 7 Tue Mar 8	10-11 am 2-4 pm	Online Online	L10 - Cranial nerves part 1 L11 - Cranial nerves part 2 L12 - Cranial nerves part 3
	<b>Wed Mar 9</b> <i>Fri Mar 11</i>	<b>C1: 1-3 pm</b> <b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>Anat Lab</b> <b>CompLab</b>	<b>P4 - Cranial nerves</b> <b>P4 - Cranial nerves</b> <b>T4 - Cranial nerves</b>
5	Mon Mar 14 Tue Mar 15	10-11 am 2-4 pm	Online Online	L13 - Auditory System L14 - Vestibular System L15 - Visual System
	<b>Wed Mar 16</b> <i>Fri Mar 18</i>	<b>C1: 1-3 pm</b> <b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>Anat Lab</b> <b>CompLab</b>	<b>P5 – Auditory, Vestibular &amp; Visual Systems</b> <b>P5 – Auditory, Vestibular &amp; Visual Systems</b> <b>T5 – Auditory, Vestibular &amp; Visual Systems</b>
6 Flexi week	Mon Mar 21 Tue Mar 22	10-11 am 2-4 pm	Online Online	No lecture L16 – Revision (optional) L17 – Revision (optional)
	<b>Wed Mar 23</b> <i>Fri Mar 25</i>	<b>C1: 1-3 pm</b> <b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>Anat Lab</b> <b>CompLab</b>	<b>P6 - Revision (optional)</b> <b>P6 - Revision (optional)</b> <u>No tutorial</u>

## Weeks 7- 10

Week	Date	Time	Venue	Activity
7	Mon Mar 28	10-11 am	CompLab	SPOT TEST1 ( <u>on campus and invigilated</u> ) L18 Thalamus L19 Telencephalon <b>P7 – Thalamus and Telencephalon</b> <b>P7 – Thalamus and Telencephalon</b> <b>T7 – Thalamus &amp; Telencephalon</b>
	Tue Mar 29	2-4 pm	Online	
	<b>Wed Mar 30</b>	<b>C1: 1-3 pm</b>	<b>Anat Lab</b>	
	<b>Fri April 1</b>	<b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>CompLab</b>	
8	Mon April 4	10-11 am	Online	L20 - Motor Cortex L21 - Basal Ganglia L22 - Cerebellum <b>P8 - Basal Ganglia &amp; Cerebellar Disorders</b> <b>P8 - Basal Ganglia &amp; Cerebellar Disorders</b> <b>T8 - Basal Ganglia and Cerebellum</b>
	Tue April 5	2-4 pm	Online	
	<b>Wed April 6</b>	<b>C1: 1-3 pm</b>	<b>Anat Lab</b>	
	<b>Fri April 8</b>	<b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>CompLab</b>	
9	Mon April 11	10-11 am	Online	L23 - Cerebral Cortex L24 - Hypothalamus L25 - Limbic System <b>P9 - Cerebral cortex &amp; Limbic system</b> <b>P9 - Cerebral cortex &amp; Limbic system</b> <b>T9 - Cerebral cortex &amp; Limbic system</b> <i>(pre-recorded -Easter Friday)</i>
	Tue April 12	2-4 pm	Online	
	<b>Wed April 13</b>	<b>C1: 1-3 pm</b>	<b>Anat Lab</b>	
	<b>Fri April 15</b>	<b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>CompLab</b>	
10	Mon April 18	10-11 am	Online	– No lecture – ( <u>Easter Monday</u> ) L26 - Blood Supply to the Brain, Venous Drainage, Meninges & CSF <b>P10 - Blood Supply to the Brain, Venous</b> <b>Drainage, Meninges &amp; CSF</b> <b>T10 – Clinical cases</b>
	Tue April 19	2-4 pm	Online	
	<b>Wed April 20</b>	<b>C1: 1-3 pm</b>	<b>Anat Lab</b>	
	<b>Fri April 22</b>	<b>C2: 4-6 pm</b> <b>9-11 am</b>	<b>Anat Lab</b> <b>CompLab</b>	

Tutorial T9 falls on Easter Friday. This tutorial will be pre-recorded and made available online.

Exam Period: 29 April – 12 May

Supplementary Exam Period: 23 May – 27 May

## 5. Assessment

### 5.1 Assessment tasks

Assessment task	Length	Weight	Due date and time
Pre-prac/tut quizzes	2x 4 min	20%	At the beginning of each practical and tutorial class
Spot tests			
• Spot test 1	50 min	20%	Monday of week 7, during lecture time
• Spot test 2	50 min	20%	During exam period (29 April -12 May)
Theory Exam	2 hrs	40%	During exam period (29 April - 12 May)

Spot Tests and theory examinations 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 assessment. The quizzes will be conducted online 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 tutorial) of the week
- ii) the current practical or tutorial class

Students who arrive late to the tutorial and practical class will not be allowed to sit the quiz. Students who wish to perform well in the quizzes will need to i) attend the lectures (and tutorial) 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 particular note of the class Learning Objectives. There will be a total of 16 quizzes, however, only the best 13 quizzes marks will be considered for the calculation of the final quiz score.

## 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 running from Moodle. Typically, they present 12 questions and will not last more than 50 min. More information and a practice spot test will be provided the week before the test (during week 6, flexi-week). A practice spot test will be made available prior to spot test 1 in order 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 **Wallace Wurth** computer rooms and **invigilated**.

**Spot Test 1** will be held on Monday of Week 7 during the lecture slot (10-11 am) and will examine material up to and including the Visual System (week 5).

**Spot Test 2** will be held during the exam period (29 April-12 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.

## Theory Examination

The theory exam will be held online (remotely) during the exam period (29 April-12 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 lectures and practicals.

## Further information

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

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

## 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 questions and short essay questions

Assessment type	Answer format	Level of knowledge & understanding		
		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

<b>Short answer questions</b>	<i>A few words to a few sentences in length</i>	<i>Incorrect answer. Limited understanding of required concepts and knowledge</i>	<i>Partly correct answer due to lack of detail or exactness. Broad understanding of required concepts and knowledge</i>	<i>Correct answer with sufficient level of detail. Clear and precise understanding of required concepts and knowledge</i>
<b>Short essay questions</b>	<i>Several sentences to a few paragraphs in length</i>	<i>Does not reproduce required terminology, facts, and definitions. Has limited depth of understanding of concepts and information is lacking or incorrect</i>	<i>Accurately reproduces required terminology, facts, and definitions. Has adequate breadth, but limited depth of understanding or integration of some concepts. Some information may be lacking or incorrect</i>	<i>Accurately reproduces required terminology, facts, and definitions. Demonstrates breath of understanding by integration of several concepts. All information is present and correct.</i>

### 5.3 Submission of assessment tasks

#### Special Consideration

For the two spot tests and the theory exam, 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](#).

### 5.4. Feedback on assessment

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

No feedback will be given on Spot test 1 and Spot test 2, however, a practice spot test with answers will be made available 1 week before Spot test 1.

To help students consolidate their learning, 6 to 8 questions are provided in the lab manual at the end of each practical and tutorial.

## 6. Academic integrity 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.

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 <http://subjectguides.library.unsw.edu.au/elise/presenting>

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

### Online

#### **BrainStorm** Interactive Neuroanatomy

BrainStorm is hosted by BEST and is available at <https://www.best.edu.au>. 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.

### Text Book

The purchase of a textbook is not compulsory.

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. 6<sup>th</sup> ed and 7<sup>th</sup> ed are also sufficient. The [6<sup>th</sup> Edition is available online](#) and free from the UNSW library.

OR

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. [The 4<sup>th</sup> Edition is available online](#) 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.

### 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)

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

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

## Other resources

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

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

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

<https://www.youtube.com/channel/UCUgZq9PkDp1xaEivtcfJPSg>

Soton Brain Hub (short videos): <https://www.youtube.com/channel/UC-JaCxgqtv-4ugFhpPYkZg> or <http://www.sotonbrainhub.co.uk/>

## 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).

## 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>
- *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.
- *Student Support and Success Advisors* 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

<b>Medicine and Science Teaching Laboratory</b> <b>Student Risk Assessment</b>		Anatomy Practical Classes for Medical and Science Students Ian Jacobs Building Level 1 LAB08A/07
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Hazards	Risks	Controls
<b>Chemical</b> Formaldehyde Methylated spirits 2-phenoxyethanol  <b>Physical</b> Cold temperature Heavy and sharp models (e.g. bone/plastic)  <b>Biological</b> Fungi Bacteria (tetanus) Hepatitis B and C	Corrosive Flammable Irritant  Cold Penetrating wound or foot injury  Infection	<input type="checkbox"/> Low concentrations of chemicals used <input type="checkbox"/> Adequate air changes and ventilation are provided <input type="checkbox"/> Safety Data Sheets for chemicals available  <input type="checkbox"/> Ensure appropriate immunisation is current <input type="checkbox"/> Wear a laboratory coat at all times <input type="checkbox"/> Wear enclosed shoes with full coverage of the dorsum of the foot <input type="checkbox"/> Wear protective eyewear  <input type="checkbox"/> Wear a face mask (if required) <input type="checkbox"/> Wear disposable gloves when handling wet specimens and do not cross-contaminate models or bones with wet specimens <input type="checkbox"/> Do not handle food or drinks <input type="checkbox"/> Do not place anything into your mouth <input type="checkbox"/> Use disinfectant provided for cleaning models and surfaces <input type="checkbox"/> Use the provided hand sanitisers regularly <input type="checkbox"/> Wash hands with soap and dry thoroughly before leaving

**Personal Protective Equipment required**

				
Lab. Coat	Closed in footwear	Safety Glasses	Gloves	Mask

**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**
- 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 staff immediately.
  - Replace stools under the tables (if applicable).
  - Remove your gloves and dispose in the biowaste bins provided.
  - Wash your hands thoroughly with the soap 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: .....

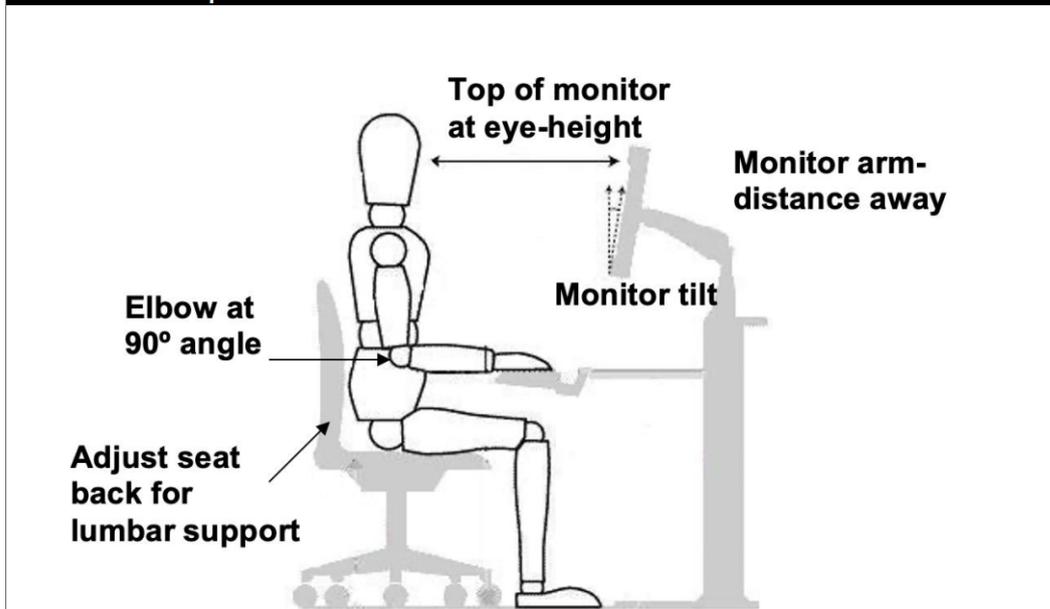
Student number: .....

ANAT-SRA-Med&SciStudent relates to RA-MED-06. Date for review: 01/02/2023



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

**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.

**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: 01/02/2023



Hazards	Risks	Controls
<b>Chemical</b> Formaldehyde Methylated spirits 2-phenoxyethanol	Corrosive Flammable Irritant	<input type="checkbox"/> Low concentrations of chemicals used <input type="checkbox"/> Adequate air changes and ventilation are provided <input type="checkbox"/> Safety Data Sheets for chemicals available
<b>Physical</b> Cold temperature Heavy and sharp models (e.g. bone/plastic)	Cold Penetrating wound Foot injury	<input type="checkbox"/> Wear warm clothing as required <input type="checkbox"/> Always wear a laboratory coat <input type="checkbox"/> Wear long-sleeved surgical gown when working with fresh tissue and embalming <input type="checkbox"/> Always wear enclosed shoes with full coverage of the dorsum of the foot
<b>Biological</b> Fungi Bacteria (tetanus) Hepatitis B and C	Infection	<input type="checkbox"/> Wear protective eyewear <input type="checkbox"/> Use QuickSmart blade removal unit to remove scalpel blades  <input type="checkbox"/> Ensure appropriate immunisation is current <input type="checkbox"/> Wear a face mask (if required) <input type="checkbox"/> Wear disposable gloves when handling wet specimens and do not cross-contaminate models or bones with wet specimens <input type="checkbox"/> Do not bring in any food or drinks <input type="checkbox"/> Do not place anything into your mouth (e.g. pen) <input type="checkbox"/> Use disinfectant provided for cleaning models and surfaces <input type="checkbox"/> Use the provided hand sanitisers regularly <input type="checkbox"/> Wash hands with soap and dry thoroughly before leaving

**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. Follow the instructions of the academic in charge and the fire warden regarding the assembly point. 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 near the entrance/exit doors. There is a wall mounted First Aid Kit located near the entrance/exit doors.

**Clean up and waste disposal**

- Refer to SWP-MED-MED-00093: GASU - Dissecting embalmed cadaveric material and SWP-MED-MED-00094: GASU - Recording and tracking dissection and waste.
- Fluids on the floor are a major safety hazard and should be reported to staff immediately.
- Replace stools under the tables (if applicable).
- Remove your gloves and dispose in the biowaste bins provided.
- Wash your hands thoroughly with the soap and dry your hands with paper towel.
- Remove your lab gown when you leave the Mortuary.

**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: .....

## 11. Ethical behaviour in Anatomical 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 listed as compulsory in Week 0 of the course Moodle site.

**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.

See: <https://medalsciences.med.unsw.edu.au/students/undergraduate/advice-students#Practicals>