



UNSW Course Outline

ANAT2452 Neuroanatomy Fundamentals for Allied Health - 2024

Published on the 12 May 2024

General Course Information

Course Code : ANAT2452

Year : 2024

Term : Term 2

Teaching Period : T2

Is a multi-term course? : No

Faculty : Faculty of Medicine and Health

Academic Unit : School of Biomedical Sciences

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 6

Useful Links

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

Are you training to be a movement specialist or seeking a comprehensive understanding of how

the nervous system controls human function and movement? In this course you will gain a comprehensive understanding of the nervous system that underpins the principles of sensory perception and controls movement and posture. You 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. Hands-on laboratory-based study involving human donor brain specimens and medical imaging will be complemented by problem-based tutorials to understand brain function, clinical presentation and functional deficits.

Course Aims

This course aims to provide you with a thorough understanding of the organisation of the nervous system that underpins its control of sensory perception, motor control and movement. Functional anatomy of the nervous system is correlated with medical imaging, sectional anatomy and clinical presentation.

This course will equip you with a comprehensive understanding of how the nervous systems controls human function and movement, applicable for those seeking a career as a movement specialist.

Relationship to Other Courses

Assistance with progression checking:

If you are unsure how this course fits within your program, you can seek guidance on optimising your program structure from staff at the [Nucleus Student Hub](#).

- Progression plans for UNSW Medicine and Health programs can be found on the [UNSW Medicine & Health website](#).
- Progression plans for UNSW Science programs can be found on the [UNSW Science website](#).

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Identify and describe the internal and external features of the spinal cord, brainstem and forebrain and their vascular supply
CLO2 : Correlate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and higher brain function
CLO3 : Apply structural and functional knowledge of the central nervous system and its vascular supply to neurological presentations and deficits
CLO4 : Integrate knowledge of neuroanatomy with physiology and pathology, to understand the relationship between the nervous system and human behaviour

Course Learning Outcomes	Assessment Item
CLO1 : Identify and describe the internal and external features of the spinal cord, brainstem and forebrain and their vascular supply	<ul style="list-style-type: none">• Midterm spot test• Endterm spot test• Continuous Assessment• Final Exam
CLO2 : Correlate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and higher brain function	<ul style="list-style-type: none">• Midterm spot test• Endterm spot test• Continuous Assessment• Final Exam
CLO3 : Apply structural and functional knowledge of the central nervous system and its vascular supply to neurological presentations and deficits	<ul style="list-style-type: none">• Midterm spot test• Endterm spot test• Continuous Assessment• Final Exam
CLO4 : Integrate knowledge of neuroanatomy with physiology and pathology, to understand the relationship between the nervous system and human behaviour	<ul style="list-style-type: none">• Continuous Assessment• Final Exam

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

All course materials and course announcements are provided on the course learning management system, Moodle (or Open Access).

By accessing and using the ICT resources provided by UNSW, you are agreeing to abide by the

['Acceptable Use of UNSW ICT Resources'](#) policy particularly on respect for intellectual property and copyright, legal and ethical use of ICT resources and security and privacy.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Midterm spot test Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: 28/06/2024 04:00 PM
Endterm spot test Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: 02/08/2024 04:00 PM
Continuous Assessment Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: End of each weekly lab
Final Exam Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: During exam period

Assessment Details

Midterm spot test

Assessment Overview

The Midterm spot test is the first of two spot tests. The aim of the Midterm spot test is to assess your ability to identify neural structures from images of brain dissections and sections (including MRI and CT scans), and to answer basic theory questions. It consists of multiple choice style questions. The Midterm spot test is based on the material covered in the first half of term. It is held around the middle of the term, and is in class and invigilated. Generalised cohort feedback will be provided.

Course Learning Outcomes

- CLO1 : Identify and describe the internal and external features of the spinal cord, brainstem and forebrain and their vascular supply
- CLO2 : Correlate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and higher brain function
- CLO3 : Apply structural and functional knowledge of the central nervous system and its vascular supply to neurological presentations and deficits

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Moodle page.

Submission notes

Refer to Moodle for submission information.

Assessment information

Use of Generative Artificial Intelligence (AI) in the assessment

UNSW Pro-Vice Chancellor Education and Student Experience (PVCESE) provides guidance on the [use of generative Artificial Intelligence](#) in assessments.

NO ASSISTANCE is permitted for this test.

It is prohibited to use any software or service to search for or generate information or answers. If such use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

Not Applicable

Endterm spot test

Assessment Overview

The Endterm spot test is the second of two spot tests. The aim of the Endterm spot test is to assess your ability to identify neural structures from images of brain dissections and sections (including MRI and CT scans), and to answer basic theory questions. It consists of multiple choice style questions. The Endterm spot test is based on the material covered in the second half of term. It is held towards the end of the term, and is in class and invigilated. Generalised cohort feedback will be provided.

Course Learning Outcomes

- CLO1 : Identify and describe the internal and external features of the spinal cord, brainstem and forebrain and their vascular supply
- CLO2 : Correlate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and higher brain function
- CLO3 : Apply structural and functional knowledge of the central nervous system and its vascular supply to neurological presentations and deficits

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Moodle page.

Submission notes

Refer to Moodle for submission information.

Assessment information

Use of Generative Artificial Intelligence (AI) in the assessment

UNSW Pro-Vice Chancellor Education and Student Experience (PVCESE) provides guidance on the [use of generative Artificial Intelligence](#) in assessments.

NO ASSISTANCE is permitted for this test.

It is prohibited to use any software or service to search for or generate information or answers. If such use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

Not Applicable

Continuous Assessment

Assessment Overview

The continuous assessment quizzes will be held during each weekly lab, and consist of multiple choice questions. The aim of this assessment is to ensure you attain an understanding of the concepts in each topic and to identify any concepts for immediate remediation.

Individualised feedback is provided at the end of each quiz. Cohort feedback is provided at the next tutorial led by an academic facilitator and misconceptions discussed. You will be able to access online activities to remediate any misconceptions or troublesome concepts.

Course Learning Outcomes

- CL01 : Identify and describe the internal and external features of the spinal cord, brainstem and forebrain and their vascular supply
- CL02 : Correlate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and higher brain function
- CL03 : Apply structural and functional knowledge of the central nervous system and its vascular supply to neurological presentations and deficits
- CL04 : Integrate knowledge of neuroanatomy with physiology and pathology, to understand the relationship between the nervous system and human behaviour

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Moodle page.

Submission notes

Refer to Moodle for submission information.

Assessment information

Use of Generative Artificial Intelligence (AI) in the assessment

UNSW Pro-Vice Chancellor Education and Student Experience (PVCESE) provides guidance on the [use of generative Artificial Intelligence](#) in assessments.

NO ASSISTANCE is permitted for this test.

It is prohibited to use any software or service to search for or generate information or answers. If such use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

Not Applicable

Final Exam

Assessment Overview

The aim of the Final Exam is to assess your understanding of the structural and functional organisation of the nervous system covered in the course.

The Final Exam consists of multiple-choice questions and short answer questions and is held during the term examination period.

Generalised cohort feedback will be provided once the exams are completed.

Course Learning Outcomes

- CLO1 : Identify and describe the internal and external features of the spinal cord, brainstem and forebrain and their vascular supply
- CLO2 : Correlate the neuroanatomical organisation of the central nervous system to its functions, including the processing of sensory inputs, control of motor outputs and higher brain function
- CLO3 : Apply structural and functional knowledge of the central nervous system and its vascular supply to neurological presentations and deficits
- CLO4 : Integrate knowledge of neuroanatomy with physiology and pathology, to understand the relationship between the nervous system and human behaviour

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Moodle page.

Submission notes

Refer to Moodle for submission information.

Assessment information

Use of Generative Artificial Intelligence (AI) in the assessment

UNSW Pro-Vice Chancellor Education and Student Experience (PVCESE) provides guidance on the [use of generative Artificial Intelligence](#) in assessments.

NO ASSISTANCE is permitted for this test.

It is prohibited to use any software or service to search for or generate information or answers. If such use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

Not Applicable

General Assessment Information

Detailed instructions regarding assessments for this course are provided on the course Moodle page.

For student information on results, grades, and guides to assessment see: <https://student.unsw.edu.au/assessment>

Grading Basis

Standard

Requirements to pass course

In order to pass this course students must:

- Achieve a composite grade of at least 50 out of 100
- Meet any additional requirements specified in the assessment details section and on Moodle.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 0 : 20 May - 26 May	Module	Ethics and Safety Module
Week 1 : 27 May - 2 June	Module	General Organisation of the Brain and Spinal Cord
Week 2 : 3 June - 9 June	Module	Spinal Cord Tracts, Lesions, and Reflexes
Week 3 : 10 June - 16 June	Module	Brainstem and Cranial Nerves Part 1
Week 4 : 17 June - 23 June	Module	Cranial Nerves Part 2 and Brainstem Blood Supply
Week 5 : 24 June - 30 June	Module	Vestibular System and Weeks 1-5 Revision
Week 7 : 8 July - 14 July	Module	Forebrain Cortex and Internal Organization
Week 8 : 15 July - 21 July	Module	Basal Ganglia and Thalamus
Week 9 : 22 July - 28 July	Module	Cerebellum and Forebrain Blood Supply
Week 10 : 29 July - 4 August	Module	Meninges, Venous Supply, CSF, and Weeks 7-10 Revision

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

The times and locations of classes can be found on [myUNSW](#) under Class Timetable.

The expected engagement for all UNSW 6UOC courses is 150 hours per term. This includes lectures, tutorials, readings, and completion of assessments and exam preparation (if relevant).

Course Resources

Recommended Resources

Recommended resources for this course are provided on the course Moodle page.

Additional Costs

There are no additional costs associated with this course.

Course Evaluation and Development

Student feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

We use student feedback from myExperience surveys to develop and make improvements to the course each year. We do this by identifying areas of the course that require development from both the rating responses and written comments. Please spare a few minutes to complete the

myExperience surveys for this course posted at the top of the Moodle page at the end of term.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
	Thomas Duncan					No	Yes
	Kosta Kotsidis					No	No

Other Useful Information

Academic Information

As a student of UNSW Medicine & Health you are expected to familiarise yourself with the contents of this course outline and the UNSW Student Code and policies and procedures related to your studies.

Student Code of Conduct

Throughout your time studying at UNSW Medicine & Health, you share a responsibility with us for maintaining a safe, harmonious and tolerant University environment. This includes within the courses you undertake during your degree and your interactions with the UNSW community, both on campus and online.

The [UNSW Student Code of Conduct](#) website provides a framework for the standard of conduct expected of UNSW students with respect to both academic integrity and your responsibility as a UNSW citizen.

Where the University believes a student may have breached the code, the University may take disciplinary action in accordance with the [Student Misconduct Procedure](#).

The [Student Conduct and Integrity Office](#) provides further resources to assist you to understand your conduct obligations as a student at UNSW.

Academic Honesty and Plagiarism

Academic integrity

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to the principle of academic integrity, and ethical scholarship of learning is fundamental to your success at UNSW Medicine & Health.

Plagiarism, contract cheating, and inappropriate use of generative AI undermine academic integrity and are not tolerated at UNSW. For more information see the [Academic Integrity and Plagiarism toolkit](#).

In addition to the information you are required to review in your [ELISE training](#), UNSW Medicine & Health strongly recommends that you complete the [Working with Academic Integrity](#) module before submitting your first assessment task.

Referencing

Referencing is a way of acknowledging the sources of information that you use to research your assignments. Preferred referencing styles vary among UNSW Medicine & Health disciplines, so check your course Learning Management System (e.g. Moodle or Open Learning) page for information on preferred referencing styles.

For further information on referencing support and styles, see the Current Student [Referencing page](#).

Academic misconduct and plagiarism

At UNSW, academic misconduct is managed in accordance with the [Student Misconduct Procedure](#). Allegations of plagiarism are generally handled according to the [UNSW Plagiarism Management Procedure](#). Plagiarism is defined in the [UNSW Plagiarism Policy](#) and is not tolerated at UNSW.

Use of Generative AI and other tools in your assessment

UNSW has provided guiding statements for the [use of Generative AI in assessments](#). This will differ, depending on the individual assessment task, your course requirements, and the course stage within your program.

Your course convenor will outline if and how you can use Generative AI in each your assessment tasks. Options for the use of generative AI include: (1) no assistance; (2) simple editing assistance; (3) planning assistance; and (4) full assistance with attribution.

You may be required to submit the original generative AI responses, or drafts of your original work. Inappropriate use of generative AI is considered academic misconduct.

See your course Moodle (or Open Learning) page for the full instructions for individual assessment tasks for your course.

Submission of Assessment Tasks

Special Consideration

In cases where illness, misadventure or other circumstances beyond your control will prevent you from submitting your assessment by the due date and you require an extension, you need to formally apply for [Special Consideration](#) through myUNSW.

UNSW has a **Fit to Sit/Submit rule**, which means that by sitting or submitting an assessment on the scheduled assessment date, you are declaring that you are fit to do so and cannot later apply for Special Consideration.

Timed online assessment tasks

If you experience a technical or connection problem during a timed online assessment, such as a timed quiz, you can apply for Special Consideration. To be eligible to apply you need to contact the Course Convenor and advise them of the issue immediately. You will need to submit an application for Special Consideration immediately, and upload screenshots, error messages or other evidence of the technical issue as supporting documentation. Additional information can be found on: <https://student.unsw.edu.au/special-consideration>

Examinations

Information about the conduct of examinations in your course is provided on your course Moodle page.

Other assessment tasks

Late submission of assessment tasks

UNSW has standard late submission penalties as outlined in the [UNSW Assessment Implementation Procedure](#), with no permitted variation. All late assignments (unless extension or exemption previously agreed) will be penalised by 5% of the maximum mark per calendar day (including Saturday, Sunday and public holidays).

Late submissions penalties are capped at five calendar days (120 hours). This means that a student is not permitted to submit an assessment more than 5 calendar days (120 hours) after the due date for that assessment (unless extension or exemption previously agreed).

Failure to complete an assessment task

You are expected to complete all assessment tasks for your courses. In some courses, there will be a minimum pass mark required on a specific assessment task (a “hurdle task”) due to the need to assure clinical competency.

Where a hurdle task is applicable, additional information is provided in the assessment information on your course Moodle page.

Feedback on assessments

Feedback on your performance in assessment tasks will be provided to you in a timely manner. For assessment tasks completed within the teaching period of a course, other than a final assessment, feedback will be provided within 10 working days of submission, under normal circumstances.

Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

Any variation from the above information that is specific to an assessment task will be clearly indicated in the course and assessment information provided to you on your course Moodle (or Open Learning) page.

Faculty-specific Information

Additional support for students

The university offers a wide range of support services that are available for students. Here are some links for you to explore.

- The Current Students Gateway: <https://student.unsw.edu.au>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- Student support: <https://www.student.unsw.edu.au/support>

- Student Wellbeing, Health and Safety: <https://student.unsw.edu.au/wellbeing>

Mind Smart Guides are a series of mental health self-help resources designed to give you the psychological flexibility, resilience and self-management skills you need to thrive at university and at work.

- Mind Smart Guides: <https://student.unsw.edu.au/mindsmart>
- Equitable Learning Services: <https://student.unsw.edu.au/els>
- Guide to studying online: <https://www.student.unsw.edu.au/online-study>

Most courses in UNSW Medicine & Health use Moodle as your Learning Management System. Guidance for using UNSW Moodle can be found on the Current Student page. Difficulties with Moodle should be logged with the IT Service Centre.

- Moodle Support: <https://student.unsw.edu.au/moodle-support>

The IT Service Desk is your central point of contact for assistance and support with remote and on-campus study.

- UNSW IT Service Centre: <https://www.myit.unsw.edu.au/services/students>

Course evaluation and development

At UNSW Medicine & Health, students take an active role in designing their courses and their overall student experience. We regularly seek feedback from students, and continuous improvements are made based on your input. Towards the end of the term, you will be asked to participate in the [myExperience survey](#), which serves as a source of evaluative feedback from students. Your input to this quality enhancement process is valuable in helping us meet your learning needs and deliver an effective and enriching learning experience. Student responses are carefully considered, and the action taken to enhance educational quality is documented in the myFeedback Matters section of your Moodle (or Open Learning) course page.

School-specific Information

Laboratory or practical class safety.

For courses where there is a laboratory or practical-based component, students are required to wear the specified personal protective equipment (e.g., laboratory coat, covered shoes, safety glasses) indicated in the associated student risk assessments. The student risk assessments will be provided on the course Moodle page and must be read and acknowledged prior to the class.

Master of Science in Health Data Science courses

Courses in the Master of Science in Health Data Science are hosted through [Open Learning](#). Additional resources are available on the [Health Data Science Student Hub](#).

Recording of lectures, tutorials and other teaching activities (MSc. HDS only)

Lectures, tutorials and other teaching activities may be recorded. Students should be advised that they are consenting to the recording by their enrolment in the course or participation in the activity. The purpose of audio and video recordings is to enhance the student experience by supporting engaged learning in an online teaching environment and ensure equitable access to all course resources for our students. If you have concerns about accessing course recordings, or being recorded, please contact the Course Convenor.

School Contact Information

School guidelines on contacting staff:

Course questions

All questions related to course content should be posted on Moodle (or Open Learning) or as directed by your Course Convenor.

In cases where email communication with course convenors is necessary, we kindly request the following:

- Use your official email address for any correspondence with teaching staff.
- We expect a high standard of communication. All communication should avoid using short-hand or texting language.
- Include your full name, student ID, and your course code and name in all communication.

Our course convenors are expected to respond to emails during standard working hours of Monday to Friday, 9am-5pm.

Administrative questions

If you have an administrative question about your program of study at the School please submit your enquiry online at [UNSW Ask Us](#).

Complaints and appeals

Student complaints and appeals: <https://student.unsw.edu.au/complaints>

If you have any grievances about your studies, we invite you to address these initially to the Course Convenor. If the response does not meet your expectations, you may then contact:

School Grievance Officer, Prof Nick Di Girolamo (n.digirolamo@unsw.edu.au)

Health Data Science programs: School Grievance Officer, Dr Sanja Lujic (s.lujic@unsw.edu.au)