UNSW Course Outline

ANAT3141 Functional Anatomy of the Limbs - 2024

Published on the 25 Aug 2024

General Course Information

Course Code : ANAT3141
Year : 2024
Term : Term 3
Teaching Period : T3
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

<u>Useful Links</u>

<u>Handbook</u> <u>Class Timetable</u>

Course Details & Outcomes

Course Description

This course follows on from ANAT2111 and ANAT2511 and complements the other level III anatomy courses (ANAT3121 and ANAT3131). The course aims to provide a detailed understanding of the anatomy of the limbs and the functional principles underpinning limb

movement including an understanding of the functional aspects of muscle, joints and the mechanics of movement. Lectures focus on the musculoskeletal anatomy of joints and joint movement of the limbs. This is correlated to movement as it is related to function, exercise conditioning, clinical case applications and surface anatomy. Laboratory classes involve the study of prosected and plastinated specimens, models, X-rays and surface anatomy. Tutorials focus on the anatomy of the limbs using the applications of clinical cases, functional tasks and muscle conditioning exercises - these use online learning tools.

For more detailed information, please click on "Course Outline" in box below.

Course Aims

The course aims to:

1. provide students with an understanding of the organisational structure of the upper and lower limbs and their evolutionary influences

2. develop students understanding of the functional principles underpinning joint movements and muscle actions of the upper and lower limbs

3. develop students understanding of the variations in limb anatomy and its application to medical imaging

4. apply organisational structure of limb anatomy to develop an understanding surface/living anatomy

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 : Demonstrate knowledge of the anatomy of the upper limbs, and apply this to understand the principles related to joint movement and biomechanics
CLO2 : Demonstrate and apply knowledge of the anatomy of the lower limbs and apply this to understand the principles related to joint movement and biomechanics
CLO3 : Demonstrate an understanding of the development of the limbs, and their evolutionary adaptations for function
CLO4 : Apply knowledge of limb organisation to interpretation of medical imaging data
CLO5 : Demonstrate an understanding of the surface/living anatomy of the limbs

Course Learning Outcomes	Assessment Item
CLO1 : Demonstrate knowledge of the anatomy of the upper limbs, and apply this to understand the principles related to joint movement and biomechanics	• Continuous assessment • Spot test - Upper limb • Final examination
CLO2 : Demonstrate and apply knowledge of the anatomy of the lower limbs and apply this to understand the principles related to joint movement and biomechanics	• Spot test - Lower limb • Continuous assessment • Final examination
CLO3 : Demonstrate an understanding of the development of the limbs, and their evolutionary adaptations for function	• Spot test - Lower limb • Spot test - Upper limb • Continuous assessment • Final examination
CLO4 : Apply knowledge of limb organisation to interpretation of medical imaging data	• Spot test - Lower limb • Spot test - Upper limb • Continuous assessment • Final examination
CLO5 : Demonstrate an understanding of the surface/living anatomy of the limbs	• Spot test - Lower limb • Spot test - Upper limb • Continuous assessment • Final examination

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams | Echo 360

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.

Additional Course Information

The laboratory practical class is an opportunity for students to develop graduate attributes by behaving in an ethical, socially responsible and professional manner within the practical class. Students must take due care with biological and hazardous material and make sure all equipment is left clean and functional. In the interests of safety, special attention should be paid to any precautionary measures recommended in the Student Risk Assessment Form (see Moodle). If any accidents or incidents occur they should be reported immediately to the demonstrator in charge of the class who will record the incident and recommend what further action is required.

Students are responsible for meeting the requirements of entry to the anatomy laboratory, including completion of the Student Risk Assessment Form and wearing the required Personal Protective Equipment, as described on the course Moodle page.

Students are encouraged to use the Moodle discussion forum with queries related to the course and anatomical content. Personal issues can be emailed to the course email account (listed on the Moodle page), which will be attended to by the course convenors. All communications should be presented in a professional and respectful manner.

The Department of Anatomy is part of the School of Biomedical Sciences, UNSW Medicine & Health, and is located in the Wallace Wurth Building. Professor Pascal Carrive is Head of Department and appointments to see him may be made via email (p.carrive@unsw.edu.au).

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Continuous assessment Assessment Format: Individual	20%	Start Date: week 2 Due Date: week 10
Spot test - Lower limb Assessment Format: Individual	20%	Start Date: week 7 Due Date: week 7
Spot test - Upper limb Assessment Format: Individual	20%	Start Date: exam period Due Date: exam period
Final examination Assessment Format: Individual	40%	Start Date: exam period Due Date: exam period

Assessment Details
Continuous assessment

Assessment Overview

This includes weekly short multiple choice quizzes, to assess students understanding of anatomical concepts, and team-based assignments that require application of anatomical knowledge to case studies. For quizzes, students receive their individual marks and a summary of the marks of the cohort. For case studies, answers will be discussed in tutorials and teams will receive written feedback related to their submitted work.

Course Learning Outcomes

- CLO1 : Demonstrate knowledge of the anatomy of the upper limbs, and apply this to understand the principles related to joint movement and biomechanics
- CLO2 : Demonstrate and apply knowledge of the anatomy of the lower limbs and apply this to understand the principles related to joint movement and biomechanics
- CLO3 : Demonstrate an understanding of the development of the limbs, and their evolutionary adaptations for function
- CLO4 : Apply knowledge of limb organisation to interpretation of medical imaging data
- CLO5 : Demonstrate an understanding of the surface/living anatomy of the limbs

Detailed Assessment Description

This includes weekly short multiple choice quizzes, to assess students understanding of anatomical concepts, and team-based assignments that require application of anatomical knowledge to case studies. For quizzes, students receive their individual marks and a summary of the marks of the cohort. For case studies, answers will be discussed in tutorials and teams will receive written feedback related to their submitted work.

In these assessments, students will need to:

- demonstrate a thorough knowledge of the anatomical features of the limbs

- analyse and evaluate the involvement of muscles and other anatomical features in movement and stability

- understand links between functional anatomy, biomechanics and clinical conditions related to the limbs

- demonstrate practical laboratory skills in anatomy and an understanding of the ethics of working with human remains questions.

During group activities, all team members must actively contribute to the work submitted for assessment to be eligible for the assigned mark. Those absent who do not contribute will be assigned no marks for that assessment.

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

Assessment Length

various

Submission notes

Refer to Moodle for submission information

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.

If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see here.

Spot test - Lower limb

Assessment Overview

Lab-based assessment on identification of lower limb structures and related theory and application questions.

Students will be given feedback on their individual performance and a summary of the performance of the cohort. Students failing this assessment or 'at risk of failing' will be invited to meet with the relevant academic to discuss problems encountered, assistance available and measures to remediate.

Course Learning Outcomes

- CLO2 : Demonstrate and apply knowledge of the anatomy of the lower limbs and apply this to understand the principles related to joint movement and biomechanics
- CLO3 : Demonstrate an understanding of the development of the limbs, and their evolutionary adaptations for function
- CLO4 : Apply knowledge of limb organisation to interpretation of medical imaging data
- CLO5 : Demonstrate an understanding of the surface/living anatomy of the limbs

Detailed Assessment Description

Lab-based assessment on identification of lower limb structures and related theory and application questions. Students will be presented with prosected human specimens, models and radiographs and will be asked to identify labelled structures and answer questions related to these structures. The course convener will provide information on the number of stations and time allowed at least two weeks before the assessment.

Students will be given feedback on their individual performance and a summary of the performance of the cohort. Students failing this assessment or 'at risk of failing' will be invited to meet with the relevant academic to discuss problems encountered, assistance available and measures to remediate.

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

Assessment Length

1 hour

Submission notes

Refer to Moodle for assessment information

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see here.

NO ASSISTANCE

Spot test - Upper limb

Assessment Overview

Lab-based assessment on identification of upper limb structures and related theory and application questions.

Students will be given feedback on their individual performance and a summary of the performance of the cohort. Students failing this assessment or 'at risk of failing' will be invited to meet with the relevant academic to discuss problems encountered, assistance available and measures to remediate.

Course Learning Outcomes

- CLO1 : Demonstrate knowledge of the anatomy of the upper limbs, and apply this to understand the principles related to joint movement and biomechanics
- CLO3 : Demonstrate an understanding of the development of the limbs, and their evolutionary adaptations for function
- CLO4 : Apply knowledge of limb organisation to interpretation of medical imaging data
- CLO5 : Demonstrate an understanding of the surface/living anatomy of the limbs

Detailed Assessment Description

Lab-based assessment on identification of upper limb structures and related theory and application questions. Students will be presented with prosected human specimens, models and radiographs and will be asked to identify labelled structures on the specimen and answer questions related to these structures. The course convener will provide you with information on the number of stations and time allowed at least two weeks before the assessment.

Students will be given feedback on their individual performance and a summary of the performance of the cohort. Students failing this assessment or 'at risk of failing' will be invited to meet with the relevant academic to discuss problems encountered, assistance available and measures to remediate.

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

Assessment Length

1 hour

Submission notes

Refer to Moodle for assessment information

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see here.

NO ASSISTANCE

Final examination

Assessment Overview

Final written exam (2 hours) assessing the application of anatomical knowledge, including principles of limb movement, function, clinical cases.

Students receive their individual marks and a summary of the marks of the cohort. Students wishing to discuss their performance can make an appointment to see the course convenor.

Course Learning Outcomes

- CLO1 : Demonstrate knowledge of the anatomy of the upper limbs, and apply this to understand the principles related to joint movement and biomechanics
- CLO2 : Demonstrate and apply knowledge of the anatomy of the lower limbs and apply this to understand the principles related to joint movement and biomechanics
- CLO3 : Demonstrate an understanding of the development of the limbs, and their evolutionary adaptations for function
- CLO4 : Apply knowledge of limb organisation to interpretation of medical imaging data
- CLO5 : Demonstrate an understanding of the surface/living anatomy of the limbs

Detailed Assessment Description

Final written exam (2 hours) assessing the application of anatomical knowledge, including principles of limb movement, function and clinical cases. The purpose of this exam is to test your understanding of the concepts covered in the entire course and to assess deeper learning (i.e. the ability to inter-relate information and concepts) and critical thinking.

An announcement detailing the format of the Final written exam will be posted on Moodle during the final week of the term. The Final written exam will will be conducted during the exam period and cover material from the entire course.

Students receive their individual marks and a summary of the marks of the cohort. Students wishing to discuss their performance can make an appointment to see the course convenor.

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

Assessment Length

2 hours

Submission notes

Refer to Moodle for assessment information

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see here.

NO ASSISTANCE

General Assessment Information

Detailed instructions regarding assessments for this course are provided on the course Moodle page (or Open Learning).

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 1 : 9 September - 15 September	Module	Pectoral and Shoulder Regions: Bones, Joints and Muscles
Week 2 : 16 September - 22 September	Module	Axilla and Arm Regions: Muscles, Spaces; Elbow Region: Cubital Fossa and Joints
Week 3 : 23 September - 29 September	Module	Forearm: Bones, Joints and Muscles
Week 4 : 30 September - 6 October	Module	Wrist Region: Bones, Joints & Spaces; Hand: Bones, Joints and Muscles
Week 5 : 7 October - 13 October	Module	Upper Limb Innervation and Vasculature
Week 7 : 21 October - 27 October	Module	Pelvic Girdle and Gluteal Region: Bones, Joints and Muscles
Week 8 : 28 October - 3 November	Module	Thigh Region: Bones, Joints and Muscles, Femoral Triangle; Knee Joint
Week 9 : 4 November - 10 November	Module	Leg Region: Compartments, Bones, Joints and Muscles; Ankle Joint and Foot: Bones, Joints and Muscles
Week 10 : 11 November - 17 November	Module	Lower Limb Innervation and Vasculature

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

Prescribed Resources

Learning resources for this course consist of the following and are available on Moodle:

1. Laboratory manual

2. Lectures slides

3. Lecture recordings

4. Other (as required)

Recommended Resources

Recommended resources for this course include textbooks, online resources and digital learning tools and are indicated 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
Convenor	Daina Sturnieks				By appointment, requests via email	Yes	Yes
	Goran Strkalj				By appointment, requests via email	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 Plagarism

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 of your assessment tasks. Inappropriate use of generative AI is considered academic misconduct.

Options for the use of generative AI include: (1) no assistance (for invigilated assessments); (2) simple editing assistance; (3) drafting assistance; and (4) full assistance with attribution; and (5) Generative AI software-based assessments. See your individual assessment descriptions for the level of permitted use of generative AI for each task and see your course Moodle (or Open Learning) page for the full instructions on permitted use of generative AI in your assessment tasks for this course.

Instructions may include a requirement to submit the original generative AI responses, or drafts of your original work, or provide on request.

Submission of Assessment Tasks

Short extensions and special consideration

Short extension

UNSW has a short extension procedure for submission of assessment tasks. Not all tasks are eligible, and eligible tasks have a predetermined extension length. UNSW Medicine and Health have set School-level extension lengths for eligible assessment tasks. See your course assessment descriptions for more information.

Students must check the availability of a short extension in the individual assessment task information for their courses.

Short extensions do not require supporting documentation. They must be submitted through Special Consideration before the assessment task deadline. No late applications will be accepted.

Late penalties apply to submission of assessment tasks without approved extension.

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. Examinations include centrally timetabled examinations and scheduled, timed examinations and tests managed by your School.

Important information relating to Short Extension and Special Consideration is available here, including eligibility for Special Consideration, circumstances where students with Equitable Learning Plans can apply for Short Extensions and Special Consideration, and the appeals process.

Examinations

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

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

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.

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)

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