



# HLTH108

## Introduction to Anatomy

S1 Day 2018

*Dept of Chiropractic*

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#### **Disclaimer**

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

## General Information

Unit convenor and teaching staff Convener Stephanie Marhoff-Beard <a href="mailto:stephanie.marhoff-beard@mq.edu.au">stephanie.marhoff-beard@mq.edu.au</a> Contact via 9850 6947 C5C 341 By appointment
Credit points 3
Prerequisites
Corequisites
Co-badged status
Unit description This is an introductory unit which presents the basic concepts in gross anatomy, histology and embryology. All systems of the human body are introduced and described at the microscopic and macroscopic levels. The unit also focuses on clinical and surface anatomy. Anatomical models, histology slides and medical imagery are used in the practical sessions and tutorials.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.

Describe different levels of structural organisation of the human body.

Name and identify the four basic tissues and describe the major characteristics of each.

Describe the major developmental events that occur during the embryonic and fetal periods.

Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal,

Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.

Apply the knowledge of anatomy within clinical and research contexts.

Demonstrate foundational learning skills including active engagement in their learning process.

## General Assessment Information

### Participation

**Participation in practical classes is a hurdle task (see [assessment policy](#) for more information on hurdle assessment tasks).**

It is a condition of passing the unit that students must actively participate in a minimum of 80% of the practical classes for the semester. This means you must attend a minimum of at least 11 out of 13 practicals for the semester. Students are expected to present their lab manuals to their tutors at the conclusion of the weekly practical class and will be marked on the completion of the activities.

Please contact the unit convener as soon as possible if you have difficulty attending and participating in any classes throughout the semester. There *may* be alternatives available to make up the work. If there are circumstances that mean you miss a class, you can apply for a Special Consideration. ***If you do not meet the participation requirement, regardless of your accumulative marks, you will be unable to receive a passing grade for this unit.***

### Special Consideration

The University is committed to equity and fairness in all aspects of its learning and teaching. It recognises that students may experience events beyond their control that adversely affect their academic performance in assessment activities. Special Consideration applies only to *short-term, serious and unavoidable* circumstances that arise after a study period has commenced, and where specific assessment task/s have been affected. Students are expected to plan their work so that they can meet assessment deadlines at the same time as other obligations which they may have, both inside and outside the University.

**Serious and Unavoidable circumstances:** the University classifies circumstances as *serious and unavoidable* if they:

- could not have reasonably been anticipated, avoided or guarded against by the student; and
- were beyond the student's control; and
- caused substantial disruption to the student's capacity for undertaking assessment for the unit(s); and
- occurred during an event critical study period and were at least **three (3)** consecutive days duration or a total of 5 days within the teaching period and/or

- prevented completion of an assessment task scheduled for a specific date (e.g. final examination, in class test/quiz, in class presentation).

Students with a pre-existing disability/health condition or prolonged adverse circumstances may be eligible for ongoing assistance and support. Such support is governed by the Student Disability Support [Policy](#) and may be sought and coordinated through [Campus Wellbeing](#). It is recognised that students with chronic/long-term conditions may experience an acute episode of their condition, and that it may not always be possible for the University to put sufficient arrangements in place to provide a reasonable adjustment at the time of assessment. Such eventualities are covered by this policy.

***If you receive [special consideration](#) for the final exam, a supplementary exam will be scheduled in the interval between the regular exam period and the start of the next session. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the [policy](#) prior to submitting an application. You can check the supplementary exam information page on FSE101 in iLearn ([bit.ly/FSESupp](http://bit.ly/FSESupp)) for dates, and approved applicants will receive an individual notification one week prior to the exam with the exact date and time of their supplementary examination.***

## Fit to Sit Model

Macquarie University operates under a 'Fit to Sit' model. This means that, in sitting an examination and/or in-class test or otherwise submitting an assessment, a student is declaring that they are fit to do so. It is the responsibility of the student to determine whether they are fit to sit an examination or test, or otherwise submit an assessment. Therefore, if a student is feeling unfit to sit the examination or test, or otherwise submit the assessment, they should not do so.

Nonetheless, a student may submit an application for Special Consideration if they can demonstrate that:

- they were unfit to make reasonable judgement on their fitness to undertake the assessment, due to mental illness or other exceptional circumstances, or
- they were taken ill during the assessment (in the case of an examination or test), and this can be independently corroborated.

In cases where a student is taken ill during an examination/class test, the student must advise the examination supervisor, who will record the case on the Examination Room Report Form.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Online Quizzes</u>	20%	No	Weeks 2, 4, 7, 8, 10 and 12
<u>Practical test 1</u>	20%	No	Week 7
<u>Practical test 2</u>	20%	No	Week 13
<u>Final Examination</u>	40%	No	University Examination Period
<u>Participation</u>	0%	Yes	Weeks 1-13

### Online Quizzes

Due: **Weeks 2, 4, 7, 8, 10 and 12**

Weighting: **20%**

Six on-line quizzes related to selected learning outcomes.

On successful completion you will be able to:

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Describe different levels of structural organisation of the human body.
- Name and identify the four basic tissues and describe the major characteristics of each.
- Describe the major developmental events that occur during the embryonic and fetal periods.
- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.
- Apply the knowledge of anatomy within clinical and research contexts.

### Practical test 1

Due: **Week 7**

Weighting: **20%**

Practical test (related to models and histology slides used during the practicals and tutorials). Test one will cover weeks 1-6.

On successful completion you will be able to:

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Describe different levels of structural organisation of the human body.
- Name and identify the four basic tissues and describe the major characteristics of each.
- Describe the major developmental events that occur during the embryonic and fetal periods.
- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.
- Apply the knowledge of anatomy within clinical and research contexts.

## Practical test 2

Due: **Week 13**

Weighting: **20%**

Practical test (related to models and histology slides used during the practicals and tutorials). Test two will cover weeks 7-13.

On successful completion you will be able to:

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Describe different levels of structural organisation of the human body.
- Name and identify the four basic tissues and describe the major characteristics of each.
- Describe the major developmental events that occur during the embryonic and fetal periods.
- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.
- Apply the knowledge of anatomy within clinical and research contexts.

## Final Examination

Due: **University Examination Period**

Weighting: **40%**

This will cover the content of the entire semester. Questions will include multiple choice questions, short answer questions, short essay questions or annotate the diagram questions. The final exam covers weeks 1-13.

On successful completion you will be able to:

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Describe different levels of structural organisation of the human body.
- Name and identify the four basic tissues and describe the major characteristics of each.
- Describe the major developmental events that occur during the embryonic and fetal periods.
- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.
- Apply the knowledge of anatomy within clinical and research contexts.

## Participation

Due: **Weeks 1-13**

Weighting: **0%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

Students are expected to present their lab manuals to their tutors at the conclusion of the weekly practical class and will be marked on the completion of the activities. Students must actively participate in a minimum of 80% of the practical classes for the semester (11 out of 13 practicals).

On successful completion you will be able to:

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Describe different levels of structural organisation of the human body.
- Name and identify the four basic tissues and describe the major characteristics of each.
- Describe the major developmental events that occur during the embryonic and fetal periods.
- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.
- Apply the knowledge of anatomy within clinical and research contexts.
- Demonstrate foundational learning skills including active engagement in their learning

process.

## Delivery and Resources

### Attendance

This unit is characterized by a moderate degree of flexibility. It incorporates a variety of learning tools and media. It will comprise:

1. One 1-hour and one 2-hour lecture per week (3-hours total), weeks 1-13. In addition to the face-to-face lectures, the lectures will also be live streamed and can be viewed on the unit iLearn page.
2. One 1-hour tutorial per week, weeks 1-13 (except where indicated) in university classrooms; discussions will be carried out; histology slides, anatomy models and flow charts will be used.
3. One 2-hour laboratory practical per week 1-13 (except where indicated) in the anatomy laboratories; histology slides and anatomy models will be used.

Participation in practical classes is a **hurdle requirement** for this unit. It is a condition of passing the unit that students must actively participate in a minimum of 80% of the practical classes for the semester. Students are expected to present their lab manuals to their tutors at the conclusion of the weekly practical class and will be marked on the completion of the activities. ***If you do not meet the participation requirement, regardless of your accumulative marks, you will be unable to receive a passing grade for this unit.***

Students must attend the classes (tutorials and lab practicals) in which they enrolled. They may not exchange their class time. In special circumstances, students may apply (with the appropriate documentation) in writing to the unit convener, for requests regarding changes. These requests are to be submitted to the unit convenor.

## Required and Recommended Texts and/or Materials

### Core:

Tortora GJ and Derrickson B. 2015. *Introduction to the Human Body*. 10<sup>th</sup> ed. Wiley.

*HLTH108 Introduction to Anatomy Laboratory Manual* - available at Co-op Shop bookshop.

### Alternative textbook:

Tortora GJ and Nielsen MT. 2014. *Principles of Human Anatomy*. 13<sup>th</sup> ed. Wiley.

### Recommended:



More detailed anatomy textbooks:

Drake RL, Vogl AW and Mitchell AWM. 2015. *Gray's Anatomy for Students*. 3<sup>rd</sup> ed. Elsevier.

Moore KL and Dalley AF. 2014. *Clinically Oriented Anatomy* 7<sup>th</sup> ed. Lippincott Williams & Wilkins.

Atlases:

Abrahams PH, Spratt JD, Loukas M, van Schoor AN. 2013. *McMinn's Clinical Atlas of Human Anatomy*. 6<sup>th</sup> ed. Mosby/Saunders Elsevier.

Histology:

Mescher AL. 2013. *Junqueira's Basic Histology*. 13<sup>th</sup> ed. McGraw Hill.

## Unit Schedule

WEEK	LECTURE (Monday)	TUTORIAL (Monday/Tuesday/ Wednesday)	LECTURE (Tuesday)	LABORATORY PRACTICAL (Wednesday/Thursday/ Friday)
1 26 February	Introduction  Terminology and orientation	Terminology and orientation	Cells  Basic tissue  Epithelium	Cell Biology  Epithelium
2 5 March	Connective tissue	Cell biology and connective tissue	Axial and appendicular skeleton	Bones  Connective tissue  (QUIZ 1)
3 12 March	Joints	Bones  Joints	Bone tissue  Muscle tissue	Joints  Specialised connective tissue
4 19 March	Embryology	Embryology	Skeletal muscles	Skeletal muscles  Muscle tissue  (QUIZ 2)
5 26 March	Skin	Muscles  Skin	Cardiovascular system	<b>Public holiday</b>  <b>No practicals</b>

<b>6</b> 2 April	<b>Public holiday</b> <b>No lecture</b>	<b>No tutorials</b>	Blood Revision	Blood vessels (histology and anatomy) Heart
<b>7</b> 9 April	Lymphatics	Blood Blood vessels Lymphatics	Nervous tissue Brain (part 1)	<b>Practical Test 1</b> <b>(QUIZ 3)</b>
16 – 29 April	<b>Session 1 Recess</b>			
<b>8</b> 30 April	Brain (part 2) Cranial nerves	Nervous system	Spinal cord Spinal nerves Autonomic nervous system	Nervous system histology and anatomy <b>(QUIZ 4)</b>
<b>9</b> 7 May	Endocrine system	Endocrine system	Respiratory system	Respiratory system histology and anatomy
<b>10</b> 14 May	Digestive system 1	Respiratory system	Digestive system 2	Digestive system histology and anatomy <b>(QUIZ 5)</b>
<b>11</b> 21 May	Special senses	Digestive system	Urinary system	Digestive system histology Urinary system anatomy
<b>12</b> 28 May	Somatic senses and motor control	Special senses	Reproductive system	Urinary histology Reproductive system histology and anatomy <b>(QUIZ 6)</b>
<b>13</b> 4 June	Surface anatomy	Urinary system Reproductive system	Revision	<b>Practical Test 2</b>

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)

- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

## Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](http://ask.mq.edu.au).

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

#### Learning outcome

- Apply the knowledge of anatomy within clinical and research contexts.

#### Assessment tasks

- Online Quizzes
- Practical test 2
- Final Examination

### Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

#### Learning outcomes

- Apply the knowledge of anatomy within clinical and research contexts.
- Demonstrate foundational learning skills including active engagement in their learning process.

#### Assessment tasks

- Online Quizzes
- Practical test 1
- Practical test 2

- Final Examination
- Participation

## Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

### Learning outcomes

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Describe different levels of structural organisation of the human body.
- Name and identify the four basic tissues and describe the major characteristics of each.
- Describe the major developmental events that occur during the embryonic and fetal periods.
- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.
- Demonstrate foundational learning skills including active engagement in their learning process.

### Assessment tasks

- Online Quizzes
- Practical test 1
- Practical test 2
- Final Examination
- Participation

## Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary

solutions to problems.

This graduate capability is supported by:

## **Learning outcomes**

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Describe different levels of structural organisation of the human body.
- Name and identify the four basic tissues and describe the major characteristics of each.
- Describe the major developmental events that occur during the embryonic and fetal periods.
- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.

## **Assessment tasks**

- Online Quizzes
- Practical test 1
- Practical test 2
- Final Examination
- Participation

## **Critical, Analytical and Integrative Thinking**

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

## **Learning outcome**

- Describe and identify the microscopic and macroscopic anatomy of all systems of the human body and explain their function and integration: Integumentary, Skeletal, Muscular, Cardiovascular, Lymphatic, Nervous, Endocrine, Respiratory, Digestive, Urinary, Reproductive.

## **Assessment tasks**

- Online Quizzes
- Practical test 1

- Practical test 2
- Final Examination
- Participation

## Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

### Learning outcome

- Apply the knowledge of anatomy within clinical and research contexts.

### Assessment tasks

- Online Quizzes
- Final Examination
- Participation

## Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

### Learning outcomes

- Adopt and be able to use anatomical terminology: define and understand the anatomical position, anatomical planes, sections and directional terms.
- Demonstrate foundational learning skills including active engagement in their learning process.

### Assessment tasks

- Online Quizzes
- Practical test 1
- Practical test 2
- Final Examination
- Participation

## Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

### Learning outcomes

- Apply the knowledge of anatomy within clinical and research contexts.
- Demonstrate foundational learning skills including active engagement in their learning process.

### Assessment tasks

- Online Quizzes
- Final Examination

## Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

### Learning outcomes

- Apply the knowledge of anatomy within clinical and research contexts.
- Demonstrate foundational learning skills including active engagement in their learning process.

### Assessment tasks

- Online Quizzes
- Practical test 1
- Practical test 2
- Final Examination



## Changes since First Published

Date	Description
13/02/2018	Additional information has been provided regarding the participation hurdle requirement. Please see "General Assessment Information" for information on the minimum number of practicals a student must attend to meet this hurdle requirement. The new learning outcome "Demonstrate foundational learning skills including active engagement in their learning process" has also been included under the "Learning Outcomes" section.