



HLTH213

Anatomical Sciences 3: Anatomy of the Head, Neck and Trunk

S1 Day 2014

Chiropractic

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General Information

Unit convenor and teaching staff Unit Convenor Goran Strkalj goran.strkalj@mq.edu.au Contact via goran.strkalj@mq.edu.au
Credit points 3
Prerequisites HLTH108(P)
Corequisites
Co-badged status
Unit description This unit builds on the basic anatomy taught in HLTH108. The regional anatomy of the head, neck and trunk is examined in detail. The unit utilises an integrated approach within which relevant gross anatomy, histology and embryology, as well as clinical and applied anatomy are incorporated.

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:

Demonstrate a comprehensive understanding of the anatomy of the head, neck and trunk including the structure and function of the bones, joints, muscle, venous and lymphatic drainage as well as nerve and bloody supply of these structures.

Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.

Demonstrate an ability to use basic anatomical knowledge of the head, neck and trunk as well as critical thinking and research skills to thoroughly evaluate theoretical clinical case studies.

Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images

of the head, neck and trunk using appropriate anatomical terminology.

Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.

Assessment Tasks

Name	Weighting	Due
<u>Assignment</u>	20%	Week 6
<u>Practical Test 1</u>	20%	Wednesday April 30th, Week 7
<u>Practical Test 2</u>	20%	Wednesday 11th June, Week 13
<u>Final Examination</u>	40%	exam period
<u>Attendance</u>	0%	none

Assignment

Due: **Week 6**

Weighting: **20%**

Assignment topics will be given during the first lecture. The assignment will be a brief literature review related to selected topics in anatomy. It is to be written in a journal article format. Late submission will be penalised at 10% per day or part thereof.

On successful completion you will be able to:

- Demonstrate a comprehensive understanding of the anatomy of the head, neck and trunk including the structure and function of the bones, joints, muscle, venous and lymphatic drainage as well as nerve and bloody supply of these structures.
- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.
- Demonstrate an ability to use basic anatomical knowledge of the head, neck and trunk as well as critical thinking and research skills to thoroughly evaluate theoretical clinical case studies.
- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.
- Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.

Practical Test 1

Due: **Wednesday April 30th, Week 7**

Weighting: **20%**

All identification activities conducted during the practical classes are examinable. These activities include identifying structures on images, bones, models, dissections, radiographs, CT and MRI images. There will be 14 stations, each with three identifications (questions). You will be allowed 1.5 minutes per station. Students are rotated through the 14 stations with one student per station.

On successful completion you will be able to:

- Demonstrate a comprehensive understanding of the anatomy of the head, neck and trunk including the structure and function of the bones, joints, muscle, venous and lymphatic drainage as well as nerve and blood supply of these structures.
- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.
- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.
- Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.

Practical Test 2

Due: **Wednesday 11th June, Week 13**

Weighting: **20%**

See description for practical test 1.

On successful completion you will be able to:

- Demonstrate a comprehensive understanding of the anatomy of the head, neck and trunk including the structure and function of the bones, joints, muscle, venous and lymphatic drainage as well as nerve and blood supply of these structures.
- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.
- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.
- Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.

Final Examination

Due: **exam period**

Weighting: **40%**

The final examination will cover content from the entire semester. It will test knowledge and comprehension of theory. Questions will include multiple choice questions, true or false questions, annotated diagrams and short answer questions.

On successful completion you will be able to:

- Demonstrate a comprehensive understanding of the anatomy of the head, neck and trunk including the structure and function of the bones, joints, muscle, venous and lymphatic drainage as well as nerve and bloody supply of these structures.
- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.
- Demonstrate an ability to use basic anatomical knowledge of the head, neck and trunk as well as critical thinking and research skills to thoroughly evaluate theoretical clinical case studies.

Attendance

Due: **none**

Weighting: **0%**

In order to pass this unit, you must attend at least 80% of all practical and tutorial classes.

On successful completion you will be able to:

- Demonstrate a comprehensive understanding of the anatomy of the head, neck and trunk including the structure and function of the bones, joints, muscle, venous and lymphatic drainage as well as nerve and bloody supply of these structures.
- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.
- Demonstrate an ability to use basic anatomical knowledge of the head, neck and trunk as well as critical thinking and research skills to thoroughly evaluate theoretical clinical case studies.
- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.
- Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.

Delivery and Resources

This unit is characterised by a moderate degree of flexibility. Material will be delivered through:

1. One 2-hour lecture, Tuesday 9-11am, Weeks 1-13
2. One 1-hour lecture, Thursday 9am-10am, Weeks 1-13
3. One 2-hour laboratory class per week, Weeks 1-13
4. One 1-hour tutorial class per week, Weeks 2-13
5. Three to four-hours per week self-instructional learning, set readings from the text and exercises on lecture topics

Class times and locations

Please enter your choice for practical and tutorial classes on e-student. Once you are on the attendance list for that practical, you may not change to another. If you appear at another practical, you will be turned away. Under exceptional circumstances, practical times can be changed, but ONLY if you have contacted the Scientific Officer, and have permission to make a swap.

Lectures (attend BOTH)

Day	Start	End	Duration	Room
Tuesday	09:00	11:00	2:00	E7B T3
Thursday	09:00	10:00	1:00	E7B T3

Practical class - Wednesday (attend ONE)

Type	Start	End	Duration	Room
Wet lab 1	09:00	11:00	2-hours	F10A lab (ASAM)
Wet lab 2	11:00	13:00	2-hours	F10A lab (ASAM)
Wet lab 3	13:00	15:00	2-hours	F10A lab (ASAM)

Tutorial class - Thursday (attend ONE)

Type	Start	End	Duration	Room
Tutorial 1	10:00	11:00	1-hour	E5A 230
Tutorial 2	11:00	12:00	1-hour	W6B 350
Tutorial 3	12:00	13:00	1-hour	C5A 226
Tutorial 4	13:00	14:00	1-hour	E5A 230

Unit website

You can log in to the iLearn website for this unit through ilearn.mq.edu.au

All lectures will be posted on the iLearn website for this unit. You will also find a link to Echo 360 recordings of the lectures on this website.

Required and recommended resources

Core:

- HLTH213 Course Manual – available at Co-op bookshop. Macquarie University Printery (**required**)
- Drake RL & Lowrie (2009) *Gray's Anatomy for Students*. 2nd ed. Elsevier.
- Abrahams PH, Boon J & Spratt JD (2009) *McMinn's Clinical Atlas of Human Anatomy*. 6th ed. Mosby/Saunders Elsevier. **OR**
- Rohen JW, Yokochi, C & Lütjen-Drecoll, E (2006) *Color Atlas of Anatomy: A Photographic Study of the Human Body* 6th ed. Lippincott Williams & Wilkins, Philadelphia.

Further Reading:

- Hansen JT. *Netter's Anatomy Flash Cards: with student consult online access* 2nd ed. Saunders, 2006.
- Lumley JSP (1996) *Surface Anatomy: The Anatomical Basis of Clinical Examination* 2nd ed. Churchill Livingstone, Edinburgh.

Websites (correct and functional as of 15th January, 2014):

http://classroom.sdmesa.edu/anatomy/images/Head3B/Head_sagnerv_label.jpg

A labelled sagittal model of the brain

<http://pegasus.cc.ucf.edu/~Brainmd1/brain2.html>

A tutorial designed to teach you about various parts of the brain's structure and function by the University of Central Florida

http://science.tjc.edu/images/heart_model/

Labelled images of the heart by P. Gregory of Tyler Junior College

<http://ect.downstate.edu/courseware/haonline/quiz/practice/u8/quiztop8.htm>

An osteology quiz by Suny Downstate Medical Center. Clicking on the links at the top of the page will also lead you to numerous other resources.

<http://www.medicalstudent.com/>

This website contains links to numerous online medical texts,

<http://msjensen.cehd.umn.edu/webanatomy>

This website by the University of Minnesota contains tests you can use to assess yourself on various topics in anatomy.

<http://www.gwc.maricopa.edu/class/bio201/muscle/mustut.htm>

An online tutorial of the anatomy of skeletal muscle.

<http://www.wesnorman.com/>

An online website containing images and textual information on regional anatomy as well as practice questions. By Wes Norman PhD DSc, formerly of Georgetown University.

<http://www.gwc.maricopa.edu/class/bio201/skeleton.htm>

Online osteology tutorials by J Crimando PhD of GateWay Community College, Phoenix, Arizona.

<http://daphne.palomar.edu/ccarpenter/skeletal%20system%20powerpoint%20quizzes.htm>

This website contains downloadable slides and quizzes on the osteology of the head, neck and trunk as well as on the upper and lower extremities.

<http://www.anatomyatlases.org/AnatomicVariants/AnatomyHP.shtml>

An online anatomy atlas.

<http://www.getbodysmart.com/>

An online human anatomy and physiology textbook.

<http://www.doctorslounge.com/studlounge/mnemonics/anatomy.htm>

A list of anatomy mnemonics.

<http://www.innerbody.com/anim/heart.html>

This website contains information about the heart and cardiovascular system.

http://www.nlm.nih.gov/research/visible/visible_human.html

A link to the National Institutes of Health Visible Human Project. This is an attempt to create a complete, three-dimensional representation of the normal human body.

Changes to this offering

No substantive changes have been made to the offering of this unit in 2014.

Unit Schedule

Week	Lectures	Practical classes	Tutorial class
1	1. Introduction to the unit and osteology 2. Musculoskeletal features of head and neck 3. Musculoskeletal features of head and neck	Skull and cervical vertebrae	No tutorialws in week 1
2	1. Temporomandibular joint 2. Vascular features of the head and neck 3. Vascular features of the head and neck	Muscles of the head and neck TMJ and scalp	1. Osteology 2. Muscles of the head and neck

3	1. Lymphatic features of the head and neck 2. Cranial nerves 3. Cranial nerves	Blood vessels of the head, neck, meninges and dural venous sinuses	Blood vessels and lymphatics of head and neck
4	1. Cervical plexus and nerves, sympathetic supply 2. Parotid, temporal and infratemporal regions, pterygopalatine fossa 3. Nose and paranasal sinuses	Nerve supply of the head and neck	Nerve supply of the head and neck
5	1. Pharynx 2. Larynx and the anatomy of phonation 3. Oral cavity	Parotid, temporal and infratemporal regions	Parotid, temporal and infratemporal regions and the TMJ
6	1. Revision 2. Oral cavity 2 3. Embryology of the head and neck	Pharynx and larynx	Sinuses Assignment due
Midsemester Break			
7	1. Revision 2. Trunk wall: thorax 3. Trunk wall: abdomen	Practical test 1	Oral cavity, pharynx and larynx
8	1. Viscera of the thorax 2. Viscera of the thorax 3. Viscera of the thorax	Thoracic and abdominal walls	Trunk walls of the thorax and abdomen
9	1. Abdominal cavity and peritoneum 2. Viscera of the abdomen 3. Viscera of the abdomen	Viscera of the thorax: lungs and mediastinum	Viscera of the thorax: lungs and mediastinum
10	1. Viscera of the abdomen 2. Viscera of the abdomen 3. Viscera of the abdomen	Viscera of the abdomen: GIT and related organs	Viscera of the abdomen: GIT
11	1. Pelvis and perineum	Neurovascular supply and lymphatic drainage of the trunk	Pelvis and perineum Neurovascular supply/lymphatic drainage of trunk

12	1. Reproductive system 2. Reproductive system 3. Embryology of trunk	Urinary and reproductive system	Urinary and reproductive system
13	1. Revision of the trunk 2. Revision of the head and neck 3. Revision of the head and neck	Practical test 2	Test 2 results and discussion

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/student_conduct/

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) 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

IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

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

Graduate Capabilities

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 outcome

- Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.

Assessment tasks

- Practical Test 1
- Practical Test 2
- Attendance

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 outcome

- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.

Assessment tasks

- Assignment
- Practical Test 1
- Practical Test 2
- Attendance

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

- Demonstrate a comprehensive understanding of the anatomy of the head, neck and trunk including the structure and function of the bones, joints, muscle, venous and lymphatic drainage as well as nerve and bloody supply of these structures.
- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.
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- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.

Assessment tasks

- Assignment
- Practical Test 1
- Practical Test 2
- Final Examination

- Attendance

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:

Assessment tasks

- Practical Test 1
- Practical Test 2
- Attendance

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 outcomes

- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.
- Demonstrate an ability to use basic anatomical knowledge of the head, neck and trunk as well as critical thinking and research skills to thoroughly evaluate theoretical clinical case studies.
- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.

Assessment tasks

- Assignment
- Final Examination

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

- Demonstrate an understanding of the embryology and age-related changes which occur in the structure and function of the head, neck and trunk.

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

- Demonstrate an ability to use basic anatomical knowledge of the head, neck and trunk as well as critical thinking and research skills to thoroughly evaluate theoretical clinical case studies.
- Demonstrate an ability to assess, interpret and explain radiographic, MRI and CT images of the head, neck and trunk using appropriate anatomical terminology.

Assessment tasks

- Assignment
- Practical Test 1
- Practical Test 2
- Final Examination
- Attendance

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 outcome

- Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.

Assessment tasks

- Practical Test 1
- Practical Test 2

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 outcome

- Demonstrate an appreciation for and respect of people who choose to bequeath their body for research or teaching purposes.