



**MACQUARIE UNIVERSITY  
DEPARTMENT OF HEALTH & CHIROPRACTIC  
DIVISION OF ENVIRONMENTAL & LIFE SCIENCES  
UNIT OUTLINE HLTH209 Clinical Anatomy 1**

**HLTH209 CLINICAL ANATOMY I**

**Year and Semester:** 2008, Semester 1

**Unit convenor:** Deborah Bryce

**Prerequisites:** HLTH 107, CHIR107 (or permission from Dean of Division)

**Corequisites:** none

Students in this unit should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything in it is unclear, please consult one of the teaching staff in the unit.

**ABOUT THIS UNIT**

**Unit Description**

- This unit, which is conducted at The University of Sydney, builds on the basic anatomy taught in HLTH107. The gross anatomy of the upper and lower limbs is studied in detail, and discussion of relevant embryology is included. The knowledge gained in this course provides a sound basis for students who wish to better understand and interpret a wide range of musculoskeletal conditions related to the limbs.

**Credit Points** 3

**Unit rationale**

- The fundamental knowledge each student acquires in this course is critical for understand and accurately diagnosing musculoskeletal problems that are presented to chiropractors in clinical practice. A clear and deep understanding of the structure and function of the upper limb and lower limb provides a solid foundation for other units in the program including: Chiropractic Principles and Skills and Radiology.

## TEACHING STAFF

### Convenor

- Deborah Bryce  
Ph: 02 9036 9346  
Email: [debryc@anatomy.usyd.edu.au](mailto:debryc@anatomy.usyd.edu.au)  
Lecturer  
Discipline of Anatomy and Histology  
School of Medical Sciences  
The University of Sydney
- Please contact the convenor by email or telephone to arrange a consultation.
- Macquarie contact is Ray Hayek, [ray.hayek@mq.edu.au](mailto:ray.hayek@mq.edu.au)

## CLASSES

This unit requires attendance at 2 lectures and one (2 hour) tutorial per week, on campus at The University of Sydney, Wednesdays 2-6 pm, during weeks 1-13 of semester 1. An examination will replace lectures and the tutorial in week 7. Greater than 80% attendance at tutorials is required. A continuous assessment each week will assist in clarifying attendance.

Tutorials in this unit will involve working with cadaveric material. Care and respect must be shown. As part of the occupational health and safety regulations, students must wear gowns, gloves and covered shoes **at all times** in tutorial rooms.

The timetable for classes can be found on the University web site at:

<http://www.timetables.mq.edu.au/>

A more detailed timetable with lecture locations can be found at:

<http://www.anatomy.usyd.edu.au/teaching/macquarie/index.html>

## REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

### Recommended text

For HLTH209, HLTH210 and HLTH307:

Moore, KL, and Daley, A. F. 2006, *Clinically Oriented Anatomy*, 5<sup>th</sup> edn, Lippincott, Williams and Wilkins, Baltimore

### Recommended Atlas

Some excellent atlases to select from:

### Photographic Atlas

*Photographic atlases are helpful when preparing for practical examinations.*

Rohen, J.W., Yokochi, C & Lutjen-Drecoll, E. 2006, *Colour Atlas of Anatomy*, 6<sup>th</sup> edn, Lippincott Williams & Wilkins , Philadelphia

or

A Colour Atlas of Human Anatomy, McMinn & Hutchings

### **Diagrammatic Atlas**

Netter, F, *Atlas of Human Anatomy*, 3<sup>rd</sup> Edn, Icon Learning Systems, New Jersey  
*The CD version of this atlas is available on workstations within the Medical library.*

or

Clemente C, 2007, *Anatomy: A Regional Atlas of the Human Body*, 5<sup>th</sup> edn, Lippincott Williams & Wilkins , Philadelphia

### **UNIT WEB PAGE**

The web page for this unit can be found at:

<http://www.anatomy.usyd.edu.au/teaching/macquarie/index.html>

### **LEARNING OUTCOMES**

The learning outcomes of this unit are to: ...

- Understand the anatomical similarities and differences between the upper and lower limb and the features that facilitate manipulation in the upper limb and standing and locomotion in the lower limb.
- Classify and describe the joints of the upper and lower limbs and factors that maintain stability.
- Demonstrate and name the movements of the joints of the upper and lower limb and name and describe the muscles moving these joints
- Describe the muscles of the upper and lower limb: their attachments, actions and nerve supply.
- Describe the formation of nerve plexuses and peripheral nerves of the limbs
- Explain the motor and sensory effects of nerve lesions, and methods for testing and identifying the location of a lesion.
- Demonstrate soft tissue and bony landmarks of the upper and lower limb
- Demonstrate and describe the course and surface markings of the vessels and nerves of the upper and lower limbs.
- Interpret radiographs of the upper and lower limbs including arteriograms, venograms and lymphangiograms

Specific Learning Objectives can be found in the Course Notes (notes can be purchased at the Copy Centre, The University of Sydney.)

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students' generic skills in a range of areas. One of the aims of this unit is that students develop their skills in the following:

- Communication skills;*
- Self-awareness and interpersonal skills;*
- Self-directed learning skills*
- Critical analysis and Problem-solving skills*

## TEACHING AND LEARNING STRATEGY

How the unit is taught

### Lectures

2 hours per week (lecture notes provided). Students are expected to read through the lecture notes and refer to their textbook and atlases prior to lectures.

### Tutorials

Students are expected to participate in small group learning activities in tutorials.

Activities include:

- the identification of bones, joints, ligaments, muscles, vessels and nerves of the upper and lower limb on bones, models and prosections (pre-dissected cadaveric material).
- the interpretation of radiographs of bones, joints and vessels of the limbs
- participation in class room discussions of function and dysfunction related to limb anatomy
- the completion of continuous assessments activities in each tutorial

### Self-Directed Learning Activities

The self-directed activities outlined in the course notes are to be completed outside of the tutorial times. Working in study groups is encouraged. These activities may also be attempted in tutorial sessions, time permitting.

### Weekly Topics include:

Week 1	Shoulder – bones and joints ( <b>Lab coats, covered footwear and disposable gloves are essential to enter the anatomy labs</b> )
Week 2	Shoulder, arm, elbow
Week 3	Forearm
Week 4	Wrist, hand
Week 5	Vessels and nerves of the upper limb
Week 6	Limb development (and revision session)
Week 7	Examination - Upper limb theory and practical
Week 8	Hip, thigh
Week 9	Knee
Week 10	Leg, foot
Week 11	Vessels and nerves of the lower limb
Week 12	Standing and walking, nerve lesions (and revision session)
Week 13	Practical Examination - Lower limb exam

## RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

The theory examinations are designed to test the mastery of basic concepts and anatomical knowledge related to the upper and lower limbs. It tests the student's ability to describe structures, their relationships, function and where relevant, their course. It also tests the student's ability to understand the segmental and peripheral nerve supply to the limbs and to understand and explain the effects of nerve lesions on limb function.

The practical examinations are designed to test the ability to accurately identify anatomical structures on bones, models, cadavers and radiographs.

The continuous assessment is designed to test knowledge, surface anatomy skills, and understanding of the function, and the relationships, of structures in the limbs.

Lecture Notes and Course Notes outline the level of knowledge and skills expected for this unit. (*Notes can be purchased at the Copy Centre at The University of Sydney*)

### **Assessment Tasks**

• Upper limb theory examination	35%	Week 7
• Upper limb practical examination	10%	Week 7
• Lower limb theory examination	35%	Uni. Examination Period
• Lower limb practical examination	10%	Week 13
• Continuous Assessment*	10%	Weeks 1-12

\*Continuous Assessments cover work from the previous week and may include surface anatomy/living anatomy exercises such as indicating the location of a bony landmark, tendon or pulse point (see Course Notes).

### **Attendance**

Eighty percent attendance at tutorials is compulsory. Continuous assessment activities are designed to help students keep up to date with material as well as acting as a measure of attendance.

Attendance at lectures is not compulsory, but is advised. A set of **course and lecture notes can be purchased at the Copy Centre at the University of Sydney.**

**Pdf lecture documents with images** will be available to download on the morning of the lecture (see course notes for url, username and password details).

### **Examination Period**

The University Examination period in the First Half of 2008 is from 11 June 2008 to 27 June 2008.

You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in Draft form approximately eight weeks before the commencement of the examinations and in Final form approximately four weeks before the commencement of the examinations.

<http://www.timetables.mq.edu.au/exam>

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. Information about unavoidable disruption and the special consideration process is available at <http://www.reg.mq.edu.au/Forms/APSCon.pdf>

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period.

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, that is the final day of the official examination period.

Arrangements for special consideration for the Upper Limb Examinations in week 7 of the course are outlined in the HLTH 209 Course Notes and must comply with Macquarie University guidelines.

## **PLAGIARISM**

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the *Handbook of Undergraduate Studies* or on the web at: <http://www.student.mq.edu.au/plagiarism/>

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

## **UNIVERSITY POLICY ON GRADING**

Academic Senate has a set of guidelines on the distribution of grades across the range from fail to high distinction. Your final result will include one of these grades plus a standardised numerical grade (SNG).

On occasion your raw mark for a unit (i.e., the total of your marks for each assessment item) may not be the same as the SNG which you receive. Under the Senate guidelines, results may be scaled to ensure that there is a degree of comparability across the university, so that units with the same past performances of their students should achieve similar results.

It is important that you realise that the policy does not require that a minimum number of students are to be failed in any unit. In fact it does something like the opposite, in requiring examiners to explain their actions if more than 20% of students fail in a unit.

The process of scaling does not change the order of marks among students. A student who receives a higher raw mark than another will also receive a higher final scaled mark.

For an explanation of the policy see

<http://www.mq.edu.au/senate/MQUonly/Issues/Guidelines2003.doc> or  
<http://www.mq.edu.au/senate/MQUonly/Issues/detailedguidelines.doc>.

## **STUDENT SUPPORT SERVICES**

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at <http://www.student.mq.edu.au>.