



# CHIR916

## Diagnostic Imaging 1

S1 Day 2016

*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

Unit Convenor

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C5C 347

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Credit points

4

#### Prerequisites

Admission to MChiro and (CHIR311 or CHIR316 or (CHIR602 and CHIR603 and CHIR604 and CHIR605 and CHIR606 and CHIR607))

#### Corequisites

#### Co-badged status

#### Unit description

This unit develops differential diagnostic skills for radiographic pathologies of the spine, skeleton, chest and abdomen and instructs in routine radiographic positioning of the spine and extremities. This unit forms part of a suite of units in radiographic science that leads to eligibility for licensure to own and operate x-ray equipment.

## 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:

Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.

Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.

Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.

Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.

Implement and explain principles of radiography as applicable to chiropractic practice.

Interpret normal CT and MR appearances in the spine and differentiate specific abnormalities.

## General Assessment Information

### TUTORIALS

All tutorials in this unit are compulsory. A minimum of 80% of radiographic interpretation and radiographic positioning tutorials must be attended for successful completion of this unit.

### ASSIGNMENTS

Submission of assignments will be through ilearn unless otherwise indicated.

It is expected that the academic honesty policy ([http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)) be followed at all times. Breaches of the academic honesty policy may result in disciplinary procedures for the involved student.

References should be cited using the Harvard style of referencing (<http://libguides.mq.edu.au/content.php?pid=459099&sid=3759396>).

Assignment word limits should be adhered to. A deduction of 10% of the final grade will be applied for every 10% increase in word count above the set limit. Word count does not include reference lists.

Late submission of assignments will result in a grade deduction of 10% per day late.

Submissions handed in more than 1 week after the due date will not be assessed.

Extensions to assessment due dates may be granted under extenuating circumstances.

Application for extensions must be made under the disruption to studies policy ([http://students.mq.edu.au/student\\_admin/exams/disruption\\_to\\_studies/](http://students.mq.edu.au/student_admin/exams/disruption_to_studies/)), applied for through [www.ask.mq.edu.au](http://www.ask.mq.edu.au) within 5 days of the disruption and prior to the submission date of the assignment. Resubmission of assignments will not be considered under usual circumstances.

### **PRACTICAL AND SLIDE EXAMS**

If a practical exam or slide exam is missed a supplementary exam will only be considered under the disruption to studies policy ([http://students.mq.edu.au/student\\_admin/exams/disruption\\_to\\_studies/](http://students.mq.edu.au/student_admin/exams/disruption_to_studies/)), applied for through [www.ask.mq.edu.au](http://www.ask.mq.edu.au) within 5 days of the disruption.

Re-sitting of practical or slide exams will only be considered under the disruption to studies policy ([http://students.mq.edu.au/student\\_admin/exams/disruption\\_to\\_studies/](http://students.mq.edu.au/student_admin/exams/disruption_to_studies/)), applied for through [www.ask.mq.edu.au](http://www.ask.mq.edu.au) within 5 days of the disruption. If a re-sit occurs, a VIVA (oral) format will be used.

### **THEORY EXAMINATIONS**

The University Examination period in for Semester 1, 2016 is from June 14th to July 1st 2016.

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.

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 disruption to studies. Information about unavoidable disruption and the disruption to studies process is available at [http://students.mq.edu.au/student\\_admin/exams/disruption\\_to\\_studies/](http://students.mq.edu.au/student_admin/exams/disruption_to_studies/), applied for through [www.ask.mq.edu.au](http://www.ask.mq.edu.au) within 5 days of the disruption

If a Supplementary Examination is granted the examination will be scheduled after the conclusion of the official examination period.

If you sit the theory exam but successfully apply for disruption from studies for that exam you will be required to sit a supplementary examination. This exam will take the format of short answer questions in a VIVA (oral) exam.

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

## Assessment Tasks

Name	Weighting	Due
<u>On-going Assessment</u>	5%	On-going
<u>Assignment</u>	15%	26 April 2016 5pm
<u>Slide Exam</u>	10%	1 April 2016 8-10am
<u>Practical Exam</u>	10%	During week 13
<u>Slide Exam</u>	20%	3 June 2016 8-10am
<u>Final Exam</u>	40%	Exam Period

### On-going Assessment

Due: **On-going**

Weighting: **5%**

On-line quizzes to be performed prior to the radiographic interpretation tutorial each week. These will be available on ilearn and are timed.

On successful completion you will be able to:

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.
- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.
- Interpret normal CT and MR appearances in the spine and differentiate specific abnormalities.

### Assignment

Due: **26 April 2016 5pm**

Weighting: **15%**

Assignment will be available and submitted through ilearn. More information regarding this will be posted early in semester.

On successful completion you will be able to:

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.
- Implement and explain principles of radiography as applicable to chiropractic practice.

## Slide Exam

Due: **1 April 2016 8-10am**

Weighting: **10%**

In-lecture slide exam for radiographic interpretation covering normal radiographic anatomy, congenital disorders and dysplasias and trauma

On successful completion you will be able to:

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.
- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.

## Practical Exam

Due: **During week 13**

Weighting: **10%**

Radiographic positioning practical exam

On successful completion you will be able to:

- Implement and explain principles of radiography as applicable to chiropractic practice.

## Slide Exam

Due: **3 June 2016 8-10am**

Weighting: **20%**

Radiographic interpretation slide exam 2 covering arthritides, endocrine and metabolic

disorders, tumours, infections, vascular and growth disorders, chest and abdomen and spinal CT and MR imaging

On successful completion you will be able to:

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.
- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.
- Interpret normal CT and MR appearances in the spine and differentiate specific abnormalities.

## Final Exam

Due: **Exam Period**

Weighting: **40%**

Exam period final theory exam for radiographic interpretation and positioning

On successful completion you will be able to:

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.
- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.
- Implement and explain principles of radiography as applicable to chiropractic practice.
- Interpret normal CT and MR appearances in the spine and differentiate specific abnormalities.

## Delivery and Resources

### Lecture and Tutorial Times:

Lecture 1: Tuesday 8-9am C5CT2 (Forum)

Lecture 2: Friday 8-10am E7BT3

Lecture 3: Friday 12-1pm E7BT5

Radiographic Positioning Tutorials (x1): Monday 1-2pm, 2-3pm, Thursday 2-3pm, 3-4pm E5A 340

Radiographic Interpretation Tutorials (x1): Thursday 2-3pm, 3-4pm, 4-5pm, 5-6pm E5A 350 (RADLAB)

## Technology:

Audiovisual: all lectures will be recorded and available on ECHO

iLearn: all lecture, tutorial, assignment and on-going assessment material will be available. Due to the large number of pictures within these presentations download times can be slow

## Resources:

### Required Texts:

Yochum, T & Rowe, L; 2005; Essentials of Skeletal Radiology Vol I & II (3rd Ed); Lippincott, William & Wilkins; Baltimore

### Required Manuals:

Radiographic Positioning Manual, 2016

Radiographic Interpretation Tutorial Manual, 2016

### Radiographic Library:

The radiographic library (RADLAB) houses over 1000 xray and is available for your use in E5A 350 whenever classes are not occurring within the room. It is expected that the RADLAB is utilised for your revision for 1-2hrs per week. It is expected that the RADLAB is kept clean and tidy and that the xrays are re-catalogued correctly at the end of your study session. Failure to do this may lead to lack of further access to the RADLAB.

### iLearn:

iLearn will be used to post all information regarding the course. This includes all course materials and information about assessments.

### Internet:

Google images is a great resource for sourcing specific xrays. There are many websites available with extensive xray libraries and this is also a valuable revision tool.

## Unit Schedule

Please see the ilearn page for the weekly schedule



## 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](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

**New Assessment Policy in effect from Session 2 2016** [http://mq.edu.au/policy/docs/assessment/policy\\_2016.html](http://mq.edu.au/policy/docs/assessment/policy_2016.html). For more information visit [http://students.mq.edu.au/events/2016/07/19/new\\_assessment\\_policy\\_in\\_place\\_from\\_session\\_2/](http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/)

Assessment Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/grading/policy.html>

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

Complaint Management Procedure for Students and Members of the Public [http://www.mq.edu.au/policy/docs/complaint\\_management/procedure.html](http://www.mq.edu.au/policy/docs/complaint_management/procedure.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](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/](https://students.mq.edu.au/support/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

### PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

### Learning outcomes

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.
- Implement and explain principles of radiography as applicable to chiropractic practice.

### Assessment tasks

- On-going Assessment
- Assignment
- Slide Exam
- Practical Exam
- Slide Exam
- Final Exam

## PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

### Learning outcomes

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.
- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.
- Implement and explain principles of radiography as applicable to chiropractic practice.
- Interpret normal CT and MR appearances in the spine and differentiate specific abnormalities.

### Assessment tasks

- On-going Assessment
- Assignment
- Slide Exam
- Practical Exam
- Slide Exam
- Final Exam

## PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

### Learning outcomes

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.

- Recognise the range of normal radiographic appearances of the spine, extremities, chest and abdomen, including anatomical and positional variances.
- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.
- Implement and explain principles of radiography as applicable to chiropractic practice.
- Interpret normal CT and MR appearances in the spine and differentiate specific abnormalities.

## **Assessment tasks**

- On-going Assessment
- Assignment
- Slide Exam
- Practical Exam
- Slide Exam
- Final Exam

## **PG - Research and Problem Solving Capability**

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

## **Learning outcomes**

- Explain radiographic terms and distinguish possible reasons for variance in image appearance and imaging faults.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.

## **Assessment tasks**

- On-going Assessment
- Assignment
- Slide Exam
- Slide Exam
- Final Exam

## PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

### Learning outcomes

- Execute a thorough assessment of the radiographic image and differentiate and describe abnormal radiographic appearances.
- Synthesise radiological and clinical findings to determine a differential diagnosis for a radiographic image using a categorical approach.
- Implement and explain principles of radiography as applicable to chiropractic practice.

### Assessment tasks

- On-going Assessment
- Assignment
- Slide Exam
- Practical Exam
- Slide Exam
- Final Exam

## PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

### Learning outcome

- Implement and explain principles of radiography as applicable to chiropractic practice.

### Assessment tasks

- Assignment
- Practical Exam
- Final Exam

## Disruption from Studies Policy

**Serious and unavoidable disruption:** The University classifies a disruption as **serious and unavoidable** if it:

- could not have reasonably been anticipated, avoided or guarded against by the student; and
- was beyond the student's control; and
- caused substantial disruption to the student's capacity for effective study and/or completion of required work; and
- occurred during an event critical study period and was at least three (3) consecutive days duration, and/or
- prevented completion of a final examination.

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 other policies and may be sought and coordinated through [Campus Wellbeing and Support Services](#).

If a supplementary examination is granted as a result of the disruption to studies process the examination will be scheduled after the conclusion of the official examination period. (Individual Faculties may wish to signal when the Faculty Supplementary exams are normally scheduled.)

***If you are granted a supplementary exam via the Disruption to Studies process, you will have to write a supplementary exam in the supplementary exam period. In this scenario, only your supplementary exam mark will count towards your final exam mark, irrespective of whether or not you attended the final exam in the normal examination period. The submission of a Disruption to Studies form should not be used as a 'just in case' strategy.***

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

## Changes since First Published

Date	Description
26/02/2016	Changed lecture room location