



# CHIR916

## Diagnostic Imaging 1

S1 Day 2017

*Dept of Chiropractic*

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## General Information

Unit convenor and teaching staff

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C5C 347

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Credit points

4

Prerequisites

Admission to MChiroprac 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 radiographic interpretation skills of the spine, skeleton, chest and abdomen. Routine radiographic positioning of the spine and extremities is also taught. 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

Tutorial attendance and active participation is expected at a minimum of 70% of tutorials in both radiographic interpretation and radiographic positioning to demonstrate a serious attempt at completing this unit.

### QUIZZES

Quizzes will be available 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.

All quizzes should be attempted. Quizzes will open each week on Friday at 12pm and close the

following Thursday at 2pm. Quizzes will not be reopened after they are closed for any reason, unless an extension is requested as per the disruption from studies policy as outlined below.

Extensions to quiz 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 closing date of the quiz. Resubmission of quizzes will not be considered under usual circumstances.

### **SLIDE EXAMS**

If a 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.

Attendance at a slide exam declares that you are fit to sit the exam. 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, either a VIVA (oral) or written format may be used.

### **THEORY EXAMINATIONS**

The University Examination period for Semester 1, 2017 is from June 12th to June 30th 2017.

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.

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.

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 you attend and complete an examination you are declaring that you are fit to sit that assessment and disruption from studies will not normally be granted.

**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 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. The supplementary exam may be in a different format to the original exam and you will be notified of this when you are granted a supplementary exam. Only your supplementary exam mark will be counted towards your final exam mark.***

***If you apply for Disruption to Study for your final examination, you must make yourself available for the week of July 24 – 28, 2017. If you are not available at that time, there is no guarantee an additional examination time will be offered. Specific examination dates and times will be determined at a later date.***

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">On-going Assessment</a>	20%	No	On-going
<a href="#">Slide Exam</a>	15%	No	7 April 2017 8-10am
<a href="#">Skills Competency Assessments</a>	0%	Yes	During weeks 4, 8 and 13
<a href="#">Slide Exam</a>	15%	No	2 June 2017 8-10am
<a href="#">Final Exam</a>	50%	No	Exam Period
<a href="#">Tutorial Participation</a>	0%	No	On-going

### On-going Assessment

Due: **On-going**

Weighting: **20%**

On-line quizzes to be performed prior to the radiographic interpretation tutorial each week.

These will be available on ilearn. Quizzes may include multiple choice questions, radiographic image description and diagnosis, and radiographic critique. All quizzes should be attempted.

Quizzes will open each week on Friday at 12pm and close the following Thursday at 2pm.

Quizzes will not be reopened after they are closed for any reason. Extensions must be applied for through the disruption from studies procedure as per assignments in the general assessment information below.

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.

## Slide Exam

Due: **7 April 2017 8-10am**

Weighting: **15%**

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

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.

## Skills Competency Assessments

Due: **During weeks 4, 8 and 13**

Weighting: **0%**

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

Radiographic positioning competency assessment. During tutorial times in weeks 4, 8 and 13 students will be expected to demonstrate one radiographic technique. This will be a competency based assessment with no marks awarded. Students must demonstrate three competent techniques to pass the unit. If an attempt is not assessed as competent, students will be given a

single further opportunity to demonstrate competence in that technique.

On successful completion you will be able to:

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

## Slide Exam

Due: **2 June 2017 8-10am**

Weighting: **15%**

Radiographic interpretation slide exam 2 covering infection, endocrine and metabolic disorders, tumours, 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: **50%**

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.

## Tutorial Participation

Due: **On-going**

Weighting: **0%**

Tutorial attendance and active participation is expected at a minimum of 70% of tutorials in both radiographic interpretation and radiographic positioning to demonstrate a serious attempt at completing this unit.

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.

## Delivery and Resources

### Lecture and Tutorial Times:

Lecture 1: Tuesday 8-9am E7BT2

Lecture 2: Friday 8-10am E7BT2

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, 2017 (available electronically on ilearn)

Radiographic Interpretation Tutorial Manual, 2017 (available electronically on ilearn)

### 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)

Assessment Policy [http://mq.edu.au/policy/docs/assessment/policy\\_2016.html](http://mq.edu.au/policy/docs/assessment/policy_2016.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 (in effect until Dec 4th, 2017): [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html)

Special Consideration Policy (in effect from Dec 4th, 2017): <https://staff.mq.edu.au/work/strategy->

[planning-and-governance/university-policies-and-procedures/policies/special-consideration](#)

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
- Slide Exam
- Skills Competency Assessments
- Slide Exam
- Final Exam
- Tutorial Participation

## 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
- Slide Exam
- Skills Competency Assessments
- Slide Exam
- Final Exam
- Tutorial Participation

## **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
- Slide Exam
- Skills Competency Assessments

- Slide Exam
- Final Exam
- Tutorial Participation

## 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
- Slide Exam
- Slide Exam
- Final Exam
- Tutorial Participation

## 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
- Slide Exam
- Skills Competency Assessments
- Slide Exam
- Final Exam
- Tutorial Participation

## 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

- Skills Competency Assessments
- Final Exam

## Changes from Previous Offering

The assignment and radiographic positioning practical exam have been removed to be replaced with more on-going, formative assessments in the weekly quizzes and the competency based assessments. The percentage weighting to the quizzes and the final theory exam have increased.

## 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.