



CHIR8502

Neuromusculoskeletal Diagnosis 2

Session 2, Weekday attendance, North Ryde 2020

Department of Chiropractic

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Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff

convenor

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Contact via 9850 9387

17WW 356

by appointment

convenor

Matt Fernandez

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Credit points

10

Prerequisites

CHIR8501 or CHIR873

Corequisites

Co-badged status

Unit description

This unit builds on the neurology and orthopaedics taught in CHIR8501. This unit is continuous with CHIR8501, with the two units together covering the full spectrum of clinically relevant neurological and orthopaedic conditions for chiropractic students. Students continue to develop competency in the complete neurological and orthopaedic examination and, especially in this unit, develop their skills in tailoring the examination to the patient and developing a differential diagnosis based on the patient's signs and symptoms at clinical presentation. The knowledge and understanding constructed in this way also enables students to discuss and analyse pertinent case studies with the necessary depth required.

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:

ULO1: Perform the clinical neuromusculoskeletal history taking and examination with competency

ULO2: Draw on theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.

ULO3: Communicate an understanding of the content and clinical competency to fellow students and tutors.

ULO4: Demonstrate well developed clinical reasoning skills and the ability to diagnose conditions that are suitable for chiropractic care, and identify conditions that are contraindicated for chiropractic care including conditions of non-musculoskeletal origin

ULO5: Acquire knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

Assessment Tasks

Name	Weighting	Hurdle	Due
Orthopaedics OSCE I and II	30%	No	week 6 and 12
Neurology OSCE I and II	20%	No	Week 7 and 12
Neurology Case Study	10%	No	28 September, 5PM
Final Written Exam	40%	No	in examination period

Orthopaedics OSCE I and II

Assessment Type ¹: Clinical performance evaluation

Indicative Time on Task ²: 7 hours

Due: **week 6 and 12**

Weighting: **30%**

These will assess your competency in performing the Orthopaedic examination.

On successful completion you will be able to:

- Perform the clinical neuromusculoskeletal history taking and examination with competency

- Draw on theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Communicate an understanding of the content and clinical competency to fellow students and tutors.
- Acquire knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

Neurology OSCE I and II

Assessment Type ¹: Clinical performance evaluation

Indicative Time on Task ²: 7 hours

Due: **Week 7 and 12**

Weighting: **20%**

These will assess your competency in performing the neurological examination.

On successful completion you will be able to:

- Perform the clinical neuromusculoskeletal history taking and examination with competency
- Communicate an understanding of the content and clinical competency to fellow students and tutors.
- Acquire knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

Neurology Case Study

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 20 hours

Due: **28 September, 5PM**

Weighting: **10%**

Case study write-up. You may take any *neurological* condition. Write up a case study based on this condition as the diagnosis

On successful completion you will be able to:

- Perform the clinical neuromusculoskeletal history taking and examination with competency

- Draw on theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Communicate an understanding of the content and clinical competency to fellow students and tutors.
- Demonstrate well developed clinical reasoning skills and the ability to diagnose conditions that are suitable for chiropractic care, and identify conditions that are contraindicated for chiropractic care including conditions of non-musculoskeletal origin
- Acquire knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

Final Written Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 20 hours

Due: **in examination period**

Weighting: **40%**

Final examination: This will cover the content of the two strands for the entire semester. It tests your knowledge of the theory, and the ability to connect that knowledge to real life situations (e.g. case studies, clinical presentations). It will consist of a 3 hour written exam with multiple choice questions, and case studies.

On successful completion you will be able to:

- Draw on theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Communicate an understanding of the content and clinical competency to fellow students and tutors.
- Acquire knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Delivery mode

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

	Strand 1 Orthopaedics	Strand 2 Neurology	TOTAL
Lectures Class times & locations	2 × 2 hour lectures per week, weeks 1 – 12 Monday 3pm - 5pm (ONLINE) Wednesday 11-1pm (ONLINE)	1 × 2 hour lectures per week, weeks 1 – 12 Tuesday 8-10am (ONLINE)	6 hours per week (Weeks 1-12)
Tutorials Class times & locations	1 × 2 hour tutorial class per week, weeks 2 – 12 Thursday 9am-11am or 11am-1pm (11WW 320)	1 × 2 hour tutorial class per week, weeks 2 – 13 Wednesday 2-4pm, 4-6pm, (choose one) in building 11WW 320 North lab	4 hours per week, weeks 2-12
Other	1- 2 hours per week revision, self-directed learning	1 - 2 hours per week revision, self-instructional learning and readings from the text	4 hours per week

Further details on class time and locations for this unit can be found at

<https://timetables.mq.edu.au/2017/>

Tutorials

You must attend the tutorial class in which you enrolled. Students must not exchange their class time. In special circumstances, you may request a specific change. These requests are to be submitted to the strand convener.

Attendance Requirements

If you miss your assigned tutorial in any week, you may request attendance at an alternative session, through email request and appropriate documentation to the unit convenor. This allowance may be used on a maximum of 2 occasions. **If you have missed more than 2**

tutorials without giving a reason to the unit convenor for the strand, you will be called to discuss your progress.

Unit Web Page

You can log in to ilearn learning system using the link below:

<http://ilearn.mq.edu.au>

All lectures will be posted on ECHO and/or Zoom links on iLearn. Lecture materials such as Powerpoint and additional material like videos will be available via links on iLearn.

4. Required and recommended resources

Strand 1: Orthopaedics

All lecture notes will be posted on ilearn for CHIR 8502.

Required Texts:

1. **Magee, D.J.** (2014). Orthopaedic Physical Assessment. 6th Edition. W.D Saunders, Philadelphia

Recommended Texts:

1. **Souza, T.A.** (2009) Differential Diagnosis for the Chiropractor, Aspen Publications.
2. **Brukner, P., Khan, K.** (2011) Brukner & Khan's Clinical Sports Medicine. 4th Ed: McGraw-Hill Book Company Australia.
3. **Evans, R.C.** (2008) Illustrated Orthopaedic Physical Assessment: Mosby.

Strand 2: Neurology

Required:

HLTH8502 - Neurology *Tutorial Course Manual* – available on iLearn

Recommended:

- Blumenfeld H (2010) *Neuroanatomy through Clinical Cases*. 2nd ed. Sinauer Associates Inc, Massachusetts. Distributed by Palgrave Macmillan, Victoria, Australia.
- Gates P (2010) *Clinical Neurology; A Primer*. Churchill Livingstone Elsevier, Sydney, Australia
- McCance KL, Huether SE, Brashers VL & Rote NS (2010) *Pathophysiology, The biologic basis for disease in adults and children* Mosby, Elsevier, Canada
- Bickley LS (2009) *Bate's Guide to Physical Examination and History Taking*. 10th ed. Wolters

Required Diagnostic Equipment (Neurological Diagnosis Kit):

1. A diagnostic set with otoscope and ophthalmoscope (Welsh Allen series 97200-BI recommended - ~\$515)
2. A tailor's measuring tape
3. A 128Hz or 256Hz (vibration) **and also** a 512Hz (auditory) tuning fork (AI weighted)
4. Neurotips (no sewing pins or pinwheels allowed strictly by WHS/Biosafety regulations)
5. Large stem ear buds
6. Disposable tongue depressors
7. Tomahawk reflex hammer
8. A number of tactile items e.g. key, coin etc
9. A compass:

A note about textbooks:

Textbooks for this unit can be purchased online from Booktopia <https://www.booktopia.com.au/coop>.

The list of Macquarie University S1 2020 units and texts can be found on the [Booktopia website](#).

Unit Schedule

Strand 1: Orthopaedics

Orthopaedics Timetable

Week	Lecture 1	Lecture 2	Tutorial 1
Week 1 27/7	Introduction to Neuromusculoskeletal Diagnosis II and the classification of neck pain (MF)	Neck Pain due to Serious Pathology (MF)	No Tutorial
Week 2 3/8	Grade III Neck Pain (MF)	Grades I-II Neck Pain (MF)	Orthopaedic Physical Examination of the Cervical Spine - Part I
Week 3 10/8	Whiplash and Associated Disorders (MF)	Thoracic Outlet Syndrome (MF)	Orthopaedic Physical Examination of the Cervical Spine - Part II
Week 4 17/8	Orthopaedic Examination of the Paediatric Patient (MF)	Causes of TMJ pain and dysfunction (MF)	Orthopaedic Physical Examination of the Cervical Spine - Part III and Examination of the TMJ
Week 5 24/8	Conditions of the thoracic spine and rib cage (MF)	Scoliosis and Scheuermann's Disease (BB)	Physical Examination and Orthopaedic Special Tests for Thoracic Outlet Syndrome and the Thoracic Spine and Ribs
Week 6 31/8	<u>Shoulder Introduction and Myofascial Causes of Shoulder Pain</u> (MP)	<u>Neural Causes of Shoulder Pain and Subacromial Impingement Syndrome</u> (MP)	OSCE I
Week 7 7/9	<u>Rotator Cuff Disorders</u> (MP)	<u>Shoulder Instability and Labral Lesions</u> (MP)	Orthopaedic Physical Examination of the Shoulder - Part I
MIDSEMESTER BREAK, 14 – 21 SEPTEMBER 2020			

Week 8 28/9	Myofascial & neural causes of elbow pain (MF)	Joint and osteological causes of elbow pain (MF)	Orthopaedic Physical Examination of the Shoulder - Part II
Week 9 5/10	Public Holiday No lecture	Myofascial & neural causes of wrist pain (BB)	Orthopaedic Physical Examination of the Elbow - Part I

Week 10 15/10	Joint instability and osteological causes of wrist pain (BB)	Conditions of the wrist (BB)	Orthopaedic Physical Examination of the Wrist Part I
Week 11 19/10	Conditions of the fingers and thumb (BB)	Review lecture (MF)	Orthopaedic Physical Examination of the Wrist - Part II and the Hand and Fingers
Week 12 26/10	No Lecture	No Lecture	OSCE II

Strand 2: Neurology

NEUROLOGY TIMETABLE

WEEK NUMBER	Tuesday: LECTURE SCHEDULE	Wednesday: TUTORIAL E5A room 320 North
W1 – Mon July 27	28 July (SW) <ul style="list-style-type: none"> Introduction to the course Headaches 	NONE
W2 – Mon 3 August	4 August (SW) <ul style="list-style-type: none"> Headaches continued 	<ul style="list-style-type: none"> Neuroexam: Revision mental status and cranial nerves, tone and motor testing
W3 – Mon 10 August	11 August (SW) <ul style="list-style-type: none"> Examination of peripheral nerves 	<ul style="list-style-type: none"> Neuroexam: sensory testing Case study
W4 – Mon 17 August	18 August (SW) <ul style="list-style-type: none"> Abnormal movement, Co-ordination and gait disturbances (SW) 	<ul style="list-style-type: none"> peripheral nerve testing, and deep tendon reflexes case study
W5 – Mon 24 August	25 August (AN) <ul style="list-style-type: none"> Neurological Differential Diagnosis Part 1 	<ul style="list-style-type: none"> gait & co-ordination case study
W6 – Mon 31 August	1 September (AN) <ul style="list-style-type: none"> Neurological Differential Diagnosis Part 2 	<ul style="list-style-type: none"> Introduction to the neuroscreen Case study
W7 – Mon 7 September	8 September (AN) <ul style="list-style-type: none"> Neurological Differential Diagnosis Part 3 	<ul style="list-style-type: none"> OSCE I

14 – 27 Sep	MID SEMESTER BREAK	
W8 – Mon 28 September	29 September • The Paediatric Neuroexamination (SW)	• Feedback OSCE I • Case studies/ neuroscreen
W9 - Tuesday 6 October	6 October (AN) • Sensorimotor Control Part 1	• Case studies/ neuroscreen
W10– Mon 12 October	13 October (AN) • Sensorimotor Control Part 2	• Case studies/ neuroscreen
W11 – Mon October 19	20 October (AN) • Diagnosis and Management of Central Pain Syndrome Part 1	• Case studies/ neuroscreen
W12 – Mon 26 October	27 October (AN) • Diagnosis and Management of Central Pain Syndrome Part 2	• OSCE II
W13 – Mon 2 November	3 November • None	None

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.)

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 published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) 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 or if you are a Global MBA student contact globalmba.support@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) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

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

If you are a Global MBA student contact globalmba.support@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/.

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.