

# **CHIR873**

# **Neuromusculoskeletal Diagnosis 1**

S1 Day 2015

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 Stephney Whillier stephney.whillier@mq.edu.au Contact via 9850 9387 C5C 362 as requested via email

co-convenor Ben Brown benjamin.brown@mq.edu.au Contact via 9850 6383 C5C 341

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 introduces you to common neurological and orthopaedic conditions. A variety of teaching methods are employed, from didactic lectures based on current evidence that are made available online, to tutorials that are underpinned by a social constructivist approach to building knowledge, using the discussion of case studies to develop diagnostic skill. You will develop competency in neurological and orthopaedic examination and in developing a differential diagnosis based on the patient's signs and symptoms at clinical presentation. The knowledge and skills acquired during this unit are fundamental for diagnostic competence in chiropractic practice.

### Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <a href="https://www.mq.edu.au/study/calendar-of-dates">https://www.mq.edu.au/study/calendar-of-dates</a>

# **Learning Outcomes**

On successful completion of this unit, you will be able to:

Demonstrate a sound competency in integrating and applying neuromusculoskeletal anatomy, physiology and pathology.

Perform the clinical neuromusculoskeletal history taking and examination competently Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.

Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of non-musculoskeletal origin

Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the practicals

Develop a respect and empathy for patients, and an ethical and professional attitude to health care. In this regard, they should develop a commitment to remain informed and up-to-date in their profession

# **General Assessment Information**

#### Attendance Requirements

A minimum of 80% attendance at tutorial classes is required in order to successfully complete this unit.

You must attend the class in which you are enrolled. You must not exchange your class time. In special circumstances, you may apply for requests regarding changes. These requests are to be submitted to the unit convener.

#### Examinations

The University Examination period is in the First Half of the 2015 from: 9<sup>th</sup> June – 26<sup>th</sup> June.

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 disruption to studies. Information about the disruption to studies process is available at

http://students.mq.edu.au/student\_admin/exams/disruption\_to\_studies/

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.)

**NOTE:** Supplementary exams will be set at a higher difficulty level than exams scheduled in the normal examination period. Supplementary exams may also be in a different format to the exam set in the normal examination period e.g. oral examination.

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.

### **Returning Assessment**

#### Tasks

- 1. Online quizzes will be automatically marked and returned for students to monitor their progress
- 2. The journal article review will be returned in the first tutorial of semester 2, and feedback will be given.
- 3. OSCE: Papers will not be returned. Marks will be incorporated into the final unit grade.
- 4. Examination: Papers will not be returned. Marks will be incorporated into the final unit grade.

#### Extensions and penalties

Extensions to assignments are at the discretion of the unit convenor. It is your responsibility to prove to the convenor that there has been unavoidable disruption. Marks will be deducted for late submissions in the absence of an approved extension.

#### Grades

Achievement of grades will be based on the following criteria:

*High Distinction:* provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application.

*Distinction:* provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.

*Credit:* provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; plus communication of ideas fluently and clearly in terms of the conventions of the discipline.

*Pass:* provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; and communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes.

*Fail*: does not provide evidence of attainment of all learning outcomes. There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; and incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline. In addition a fail grade will be awarded in the event of inadequate tutorial attendance by the candidate, reflecting failure to complete the unit satisfactorily.

Sometimes it helps to 'translate' these descriptions into numbers. So, what we expect from you in this unit, in order for you to attain a specific grade, is outlined below:

#### NOTE: Each strand of the unit must have an overall passing grade

Name	Weighting	Due
1	10%	continuous
2.	10%	Week 11, 18 May, by 5pm
3	20%	weeks 6 & 7
4	20%	Week 12 and 13

# **Assessment Tasks**

Name	Weighting	Due
5	40%	ТВА

### 1

#### Due: continuous Weighting: 10%

Ten quizzes will be made available to students at the start of the semester which will be due at the end of the semester. The quiz questions will be based on lecture and tutorial readings, and will prepare students for the following week's tutorial.

On successful completion you will be able to:

- Demonstrate a sound competency in integrating and applying neuromusculoskeletal anatomy, physiology and pathology.
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

### 2.

#### Due: Week 11, 18 May, by 5pm Weighting: 10%

#### Critical review of journal paper

Choose a randomised controlled clinical trial that addresses a neurological question that has been published in either 2014 or 2015.

Critically appraise the research article according to the criteria below obtained from the review:

Young JM & Solomon MJ (2009) How to critically appraise an article. Nature Clinical Practice Gastroenterology & Hepatology 6: 82-91.

See the link to this and other articles on the critical appraisal of journal articles on iLearn. This will be discussed in further depth in the lectures.

#### TEN QUESTIONS TO ASK WHEN CRITICALLY APPRAISING A RESEARCH ARTICLE.

- 1. Is the study question relevant?
- 2. Does the study add anything new?

- 3. What type of research question is being asked?
- 4. Was the study design appropriate for the research question?
- 5. Did the study methods address the most important potential sources of bias?
- 6. Was the study performed according to the original protocol?
- 7. Does the study test a stated hypothesis?
- 8. Were the statistical analyses performed correctly?
- 9. Do the data justify the conclusions?
- 10. Are there any conflicts of interest?

The review must be submitted electronically to 'Turn-it-In' via the iLearn website. Maximum Length: 4 pages

Font size 11, New Times Roman, 1.5 spacing.

On successful completion you will be able to:

- Demonstrate a sound competency in integrating and applying neuromusculoskeletal anatomy, physiology and pathology.
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

### 3

Due: weeks 6 & 7 Weighting: 20%

OSCE: This will assess your competency in performing the neurological and orthopaedic examinations.

On successful completion you will be able to:

- · Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.

- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the practicals
- Develop a respect and empathy for patients, and an ethical and professional attitude to health care. In this regard, they should develop a commitment to remain informed and up-to-date in their profession

### 4

#### Due: Week 12 and 13 Weighting: 20%

OSCE: This will assess your competency in performing the neurological and orthopaedic examinations

On successful completion you will be able to:

- Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the practicals
- Develop a respect and empathy for patients, and an ethical and professional attitude to health care. In this regard, they should develop a commitment to remain informed and up-to-date in their profession

5

#### Due: **TBA** Weighting: **40%**

FINAL EXAMINATION: This will cover the content of each of the 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, short answer questions and case studies.

On successful completion you will be able to:

- Demonstrate a sound competency in integrating and applying neuromusculoskeletal anatomy, physiology and pathology.
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings

# **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	1-2 × 2 hour lectures per week	1-2 × 2 hour lectures per week	6 hours per week, weeks 1-12
	Lecture 1: Monday 3pm-5pm (E7B T2), weeks 1-12	Lecture 1: Tuesday 9am-11 am, E7B T2, weeks 1-12	
	<b>Lecture 2:</b> Wednesday 9am–11am (E7B T2), weeks 3-11	Lecture 2: Wednesday 9am–11am (E7B T2), weeks 1, 2, 12	
Tutorials	1 × 2 hour tutorial class per week, weeks 2 – 13	1 × 2 hour tutorial class per week, weeks 2 – 13	4 hours per week, weeks 2-13
	Thursday 9-11am or 11am-1pm (E5A 330 South Lab)	Wednesday 2-4, 4-6 (choose one) in (E5A 320 North Lab)	
Other	1-2 hours per week revision, self-instructional learning and readings	1 - 2 hours per week revision, self instructional learning and readings from the text	2 - 4 hours per week

Further details on class time and locations for this unit can be found by following the link below:

http://students.mq.edu.au/student\_admin/timetables

#### **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 coordinator.

#### **Attendance Requirements**

If you miss your assigned tutorial in any week, you may request attendance at an alternative session, through written request and appropriate documentation to the unit convener. This allowance may be used on a maximum of 2 occasions.

#### **Unit Web Page**

You can log in to <u>iLearn</u> System via the link listed below:

#### https://ilearn.mq.edu.au/login/MQ/

All lecture materials will be posted on ilearn, and there is also a link to ECHO360 for **audio or audiovisual** (where available) recordings of the lectures.

Required and recommended resources

# Strand 1: Orthopaedics

Notes are summarised under 'Lectures' on iLearn for CHIR 873

#### Required:

 Magee D.J. (2013). Orthopaedic Physical Assessment. 6<sup>th</sup> Edition. W.D Saunders, Philadelphia

#### **Recommended Reading**

- Brukner P, Khan, K. (2011) <u>Brukner & Khan's Clinical Sports Medicine</u>. 4th Ed. McGraw-Hill Book Company Australia.
- 2. Souza TA. (1997) Differential Diagnosis for the Chiropractor. Aspen Publications.
- Hammer W. 3<sup>rd</sup> Ed. <u>Functional Soft Tissue Examination & Treatment by Manual</u> <u>Methods</u>. Jones and Barlett, Sudbury Massachusetts.
- 4. Evans RC. (2008) Illustrated Orthopaedic Physical Assessment. Mosby.

**NOTE:** Weekly tutorial case reports, questionnaires, and readings will be made available through iLearn.

Students will be required to complete weekly quizzes based on recent peer-reviewed journal articles that will be made available on iLearn.

### Strand 2: Neurology

#### **Required:**

- Blumenfeld H (2010) Neuroanatomy through Clinical Cases. 2<sup>nd</sup> ed. Sinauer Associates Inc, Massachusetts. Distributed by Palgrave Macmillan, Victoria, Australia.
- CHIR873 Neurology *Tutorial Course Manual* available at Co-op bookshop. Macquarie University Printery.

#### **Recommended:**

- Gates P (2010) *Clinical Neurology A Primer*. Churchhill Livingstone Elsevier, Sydney, Australia
- Krebs C et al (2012) *Neuroscience* in Lippincott's Illustrated Reviews (Harvey RA Ed) LWW, USA
- Kandel ER et al (2000) *Principles of Neural Science, 4th ed.* McGraw-Hill, New York.
- Jull, GA et al (2008) *Whiplash, headache, and neck pain: Research-based directions for physical therapies*, 1<sup>st</sup> ed. Churchill Livingstone: Elsevier, Edinburgh.

- Olesen J et al (2006) The Headaches 3<sup>rd</sup> ed. LWW, PA.
- Souza TA (2005) Differential diagnosis and management for the chiropractor 3<sup>rd</sup> ed. Jones & Bartlett Pub, Massachusetts.
- Purves D et al (2012) Neuroscience 5<sup>th</sup> ed. Sinauer Inc, USA
- McCance KL et al (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 10<sup>th</sup> ed.
  Wolters Kluwer/Lippencott Williams & Wilkins, PA
- Kiernan, JA (2009) Barr's The Human Nervous System An Anatomical Viewpoint 9<sup>th</sup> ed.
  Wolters Kluwer/LWW, PA
- Haines, DE (2008) Neuroanatomy: An Atlas of Stuctures, Sections, and Systems 7<sup>th</sup> ed.
  Wolters Kluwer/LWW, PA
- Nolte, J (2009) The Human Brain: An Introduction to its Functional Anatomy 6<sup>th</sup> ed. Mosby/Elsevier, PA

#### Required Diagnostic Equipment (Neurological Diagnosis Kit):

- A diagnostic set with otoscope and ophthalmoscope (Welsh Allen series 97200-BI recommended - ~\$515)
- 2. A tailor's measuring tape
- 3. A 128 and 512Hz tuning fork (Al weighted)
- 4. Neurotips (no sewing pins or pinwheels allowed strictly by OHS/Biosafety regulations)
- 5. Large stem ear buds
- 6. Disposable tongue depressors
- 7. Tomahawk reflex hammer
- 8. Cotton wool

# **Unit Schedule**

# The Neurology Timetable:

#### Unit guide CHIR873 Neuromusculoskeletal Diagnosis 1

Start Date of wk	Lecture (Tuesday, 9 – 11 am)	Lecture (Wednesday, 9-11am)	Tutorial (Wednesday 2 - 4, 4 - 6 pm)
23 Feb	Introduction to Clinical Neurology Pain	Nerve Tension Tests	None
2 Mar	Pain	Nerve Tension Tests and Mobilisations	Nerve Tension Tests and Mobilisations
9 Mar	Altered cognition Seizures		Nerve Tension Tests and Mobilisations
16 Mar	Psychiatric disorders		Neurological History Taking The Neuroexam: mental status
23 Mar	Sleep disorders		Neuroexam: mental status
30 Mar	Eye Presentations		Neuroexam: cranial nerves
7 April – 17 .	April: Mid-semester Break		
20 April	Hearing and Balance Presentations		OSCE
27 April	Cerebrovascular Disease and Brain Neoplasms		Neuroexam: cranial nerves
4 May	Lesions of the Spinal Cord and Localisation of the Lesion		Neuroexam: motor
4 May 11 May			Neuroexam: motor
	of the Lesion Lesions of the Spinal Cord and Localisation		
11 May	of the Lesion Lesions of the Spinal Cord and Localisation of the Lesion	Common Lesions of the NS	Neuroexam: motor

**Orthopaedics** Timetable

#### Unit guide CHIR873 Neuromusculoskeletal Diagnosis 1

WEEK	LECTURE 1	LECTURE 2	Tutorial
1	Introduction to Orthopaedics (B. Brown)	Neurology Lecture	No Tutorial
2	Lower Back Pain due to Serious pathology (B. Brown)	Neurology Lecture	Orthopaedic Assessment of the Lumbar Spine – Part I
3	Lower Back Pain with Associated Radiculopathy I (B. Brown)	Lower Back Pain with Associated Radiculopathy II (B.Brown)	Orthopaedic Assessment of the Lumbar Spine – Part II
4	Lumbar Spine Spondylolysis and Spondylolisthesis (B.Brown)	Lumbar Spine Spondylosis and Stenosis (B.Brown)	Orthopaedic assessment of Lumbar Spine Stability, and Generalised Hypermobility
5	Non-Specific Lower Back Pain (B.Brown)	Lumbar Instability and Hypermobility (B.Brown)	Orthopaedic Assessment of the Sacroiliac Joint and Coccyx
6	Disorders of the sacroiliac Joint and Coccyx (B.Brown)	Leg Length Discrepancy (B.Brown)	OSCE 1

#### Mid Semester Break April 7<sup>th</sup> – April 17<sup>th</sup>, 2015

7	Soft tissue causes of hip pain (M.Pribicevic)	Myofascial & neural causes of hip pain (M.Pribicevic)	Orthopaedic Assessment of the Hip - Part I
8	Osteological Causes of Hip Pain (M.Pribicevic)	Orthopaedic Assessment of the Older Patient (B.Brown)	Orthopaedic Assessment of the Hip - Part II and Knee - Part I

9	Meniscal and cruciate ligament injuries	Collateral injuries, rotatory instability and myofascial disorders of the knee	Orthopaedic Assessment of the Knee – Part II
10	Patellofemoral and growth plate disorders of the knee	Injuries of the lower leg and ankle (B.Brown)	Orthopaedic Assessment of the Foot and Ankle - Part I
11	Joint & ligament disorders of the ankle (B.Brown)	Disorders of the mid-foot, forefoot and toes (B.Brown)	Orthopaedic Assessment of the Foot and Ankle - Part II
12	Review Lecture (B.Brown)	Neurology Lecture	OSCE 2
13	No Lecture	No Lecture	No Tutorial

# **Policies and Procedures**

Macquarie University policies and procedures are accessible from <u>Policy Central</u>. 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 <u>http://www.mq.edu.au/policy/docs/disruption\_studies/policy.html</u> 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 <u>Learning and Teaching Category</u> 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/

### 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 <u>eStudent</u>. For more information visit <u>ask.m</u> <u>q.edu.au</u>.

### Student Support

Macquarie University provides a range of support services for students. For details, visit <u>http://stu</u> dents.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 <u>http://informatics.mq.edu.au/hel</u>p/.

When using the University's IT, you must adhere to the <u>Acceptable Use Policy</u>. 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

- Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings
- Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the practicals
- Develop a respect and empathy for patients, and an ethical and professional attitude to health care. In this regard, they should develop a commitment to remain informed and up-to-date in their profession

### Assessment tasks

- 2.
- 3
- 4

# 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

- Demonstrate a sound competency in integrating and applying neuromusculoskeletal anatomy, physiology and pathology.
- Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Develop strong clinical reasoning skills and the ability to diagnose conditions that are

suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin

- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings
- Develop a respect and empathy for patients, and an ethical and professional attitude to health care. In this regard, they should develop a commitment to remain informed and up-to-date in their profession

### **Assessment tasks**

- 1
- 2.
- 3
- 4
- 5

# 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

- Demonstrate a sound competency in integrating and applying neuromusculoskeletal anatomy, physiology and pathology.
- · Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings
- Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the

practicals

### **Assessment tasks**

- 2.
- 3
- 4
- 5

# 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

- · Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings
- Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the practicals

### Assessment tasks

- 2.
- 3
- 4

# 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

- Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential diagnosis.
- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings
- Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the practicals
- Develop a respect and empathy for patients, and an ethical and professional attitude to health care. In this regard, they should develop a commitment to remain informed and up-to-date in their profession

### Assessment tasks

- 2.
- 3
- 4

# 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 outcomes

- · Perform the clinical neuromusculoskeletal history taking and examination competently
- Show an ability to draw on their theoretical knowledge in order to tailor the physical examination to the clinical presentation of the patient and from this develop a differential

diagnosis.

- Develop strong clinical reasoning skills and the ability to diagnose conditions that are suitable or contraindicated in chiropractic care, including conditions of nonmusculoskeletal origin
- Use acquired knowledge to evaluate conditions, research these cases further using appropriate reference material and communicate findings
- Participate in practical sessions in which the knowledge acquired in texts and lectures is applied in a group situation. They should be able to reason, question and communicate your understandings to each other and your tutors as they complete tasks set in the practicals
- Develop a respect and empathy for patients, and an ethical and professional attitude to health care. In this regard, they should develop a commitment to remain informed and up-to-date in their profession

### Assessment tasks

- 3
- 4

# **Changes from Previous Offering**

An extra six hours of teaching has been added to the Neurology section of this course and hence the orthopaedics teaching hours similarly reduced.

# **Changes since First Published**

Date	Description
22/09/2015	Accidentally create draft version of this offering.