



**UNSW**  
AUSTRALIA

Medical Sciences  
Medicine

## **Exercise Physiology Program**

# **HESC3532**

## **Movement Rehabilitation**

Semester 2, 2015  
Course Outline

CRICOS Provider Code 00098G

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Please read this outline in conjunction with the following pages on the [School of Medical Sciences website](#):

- [Advice for Students](#)
- [Learning Resources](#)

(or see "STUDENTS" tab at [medicalsciences.med.unsw.edu.au](http://medicalsciences.med.unsw.edu.au) )

## Course Staff

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**Course Details** 6 UOC units of credit

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## Course Description

This course describes the use of exercise as a clinical rehabilitation tool for humans with musculoskeletal pathologies and injuries. In addition, the course explains why impairment in motor control, repeated movements and / or sustained postures may predispose people to musculoskeletal injury and perpetuate chronic pain.

The course delivers information about evaluation, design and implementation of movement-based rehabilitation techniques for musculoskeletal injuries and movement impairment syndromes. Students will also refine skills for assessing the physical demands of different work tasks and for rehabilitating and maintaining musculoskeletal function to meet workplace demands.

This course offers a mixture of traditional and interactive/case study approaches to learning and includes a series of case method tutorials that emphasise the application of theory to clinical situations. These case method tutorials are designed as a bridge between the lifestyle change project with an apparently healthy client in HESC3504 and the year 4 clinical practicum courses in the workplace.

## Course Pre-requisites:

ANAT2451 *Functional Anatomy for Health and Exercise Science*

(or ANAT3131 – *Functional Anatomy 1* & ANAT3141 *Functional Anatomy 2*)

BIOM2451 *Biomechanics for Sports Scientists*

NEUR3101 *Muscle and Motor Control*

## **Course Aims**

1. Develop a thorough understanding of the role of exercise and movement in musculoskeletal rehabilitation
2. Attain competencies in conducting clinical tests and implementing exercise based treatments for a range of musculoskeletal injuries
3. Develop advanced problem solving skills and a capacity for critical thinking
4. Develop an ability to engage in independent and reflective learning for the betterment of professional clinical practice
5. Develop a broad range of communication skills and an ability to work as a member of a team of health professionals, with respect for diversity and a high standard of ethical practice

## **Student Learning Outcomes**

This term is used to describe what it is that you should be able to do, explain or understand if you have learned effectively in the course. For each lecture, tutorial, practical and assessment item, the expected learning outcomes will be explicitly stated. The assessment in the course will be matched as closely as possible to the stated learning outcomes. That is, the assessment will test how well you have achieved the learning outcomes of the course. The general learning outcomes for the course are as follows:

### ***At the end of the course you should:***

- Have an understanding of the physical and psychosocial factors underlying a range of musculoskeletal conditions and diseases commonly treated by Exercise Physiologists in clinical practice
- Be competent with the assessment, exercise prescription and management of a range of musculoskeletal conditions and diseases commonly treated by Exercise Physiologists in daily clinical practice
- Be competent with prescribing a progressive exercise program from simple to more demanding and specific functional exercise for a range of musculoskeletal conditions specific to each individuals needs
- Have an understanding of a number of common age related musculoskeletal conditions treated by Exercise Physiologists and considerations for exercise rehabilitation with aging
- Understand when an exercise intervention should be implemented using a cognitive behavioural approach
- Have an understanding of the musculoskeletal demands and risk factors associated various work tasks and strategies to reduce the risk of injury
- Be competent with the routine professional requirements of clinical practice including: treatment approvals, communicating with other health professionals, reporting and maintaining detailed patient and treatment notes

## **Graduate Attributes developed in this course**

- Understand the relationship between physical activity and health
- Deliver lifestyle change programs that use exercise for the primary prevention of disease and the management of chronic disease
- Apply clinical skills and knowledge relevant to cardiopulmonary, metabolic, musculoskeletal and neuromuscular rehabilitation
- Engage in independent and reflective learning for the betterment of professional clinical practice, following an evidence-based approach
- Communicate effectively with patients, colleagues and other health professionals
- Work as a member and a leader of a team
- Display a respect for diversity and a high standard of ethical practice

## **Rationale for the Inclusion of Content and Teaching Approach**

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### **How the course relates to the Exercise Physiology profession**

Exercise interventions are commonly used in daily clinical practice to treat and manage a wide range of musculoskeletal injuries and disease. Clinical Exercise Physiology is a developing field and this course is concerned with developing the clinical skills and competencies required by practicing Exercise Physiologists. This course develops the students understanding of the use of active modalities for the treatment, prevention and management of musculoskeletal injury and disease. The cause, underlying pathology and treatment of a range of musculoskeletal injury and chronic diseases relevant to clinical Exercise Physiology are considered.

There is an emphasis on developing competency with assessment and exercise prescription for a range of musculoskeletal conditions routinely encountered in clinical practice. In addition to the physical origins of injury and pain, the contribution of psychosocial factors to the cycle of pain and disability are also considered and the application cognitive behavioural exercise interventions developed.

The Exercise Physiologist's role in workplace injury prevention is also considered. The participants understanding of the musculoskeletal demands and risk factors associated with different work tasks and active strategies to reduce the risk of injury are developed. A combination of theoretical and practical teaching components is used to achieve the learning objectives.

### **How the course relates to other courses in the Exercise Physiology program**

The course will draw heavily on your knowledge of biomechanics (BIOM2451) and functional anatomy (ANAT2451) and will build upon your understanding of the role of the nervous system in the control of movement developed in Muscle and Motor Control (NEUR3101). The case method tutorial component of this course is runs in parallel with that of Neuromuscular Rehabilitation (HESC3292). The case-based focus of the course is designed as preparation for the 4<sup>th</sup> year clinical practicum, which includes placements working with musculoskeletal disorders.

## **Teaching strategies**

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**Lectures** – This approach is used to present relatively large amounts of information within a given time on specific topics throughout the course. Several guest lecturers specialising in particular areas of learning will contribute to the unit content. PDF copies of the lecture notes will be available online (see below in COURSE RESOURCES section) prior to or after each lecture, so you should be able to think about and develop an understanding of the lecture concepts as they are presented, rather than writing voluminous notes. However, there will be information and explanations presented in lectures in addition to those covered in the notes that you should take down if they help you to understand the material. The lecturer will also try to allow some time for interaction and activities in each lecture to provide you with an opportunity to clarify or reinforce the ideas that have been presented. You should take these opportunities to think about the information that has been presented and ask questions to enhance your understanding.

**Laboratories** – The purpose of the practical components of the course are twofold. The first purpose is to help you to develop musculoskeletal rehabilitation skills relevant to an Exercise Physiologist in clinical practice. The laboratories promote competency with these skills by providing a practical and hands on learning experience and prepare you for clinical placement. The second purpose is practical application of theoretical content covered in lectures.

**Case Study Tutorials** - The case study tutorial (CST) is an active learning approach involving student centered activities of topics that demonstrate theoretical concepts in an applied setting.

This approach is designed to not only enhance your learning experience but also to increase your enjoyment of the topic and hence, your desire to learn.

Case study tutorials allow students to apply theoretical concepts, thus bridging the gap between theory and practice. **All** students will be required to come prepared for each of the 4 CST's and to contribute to the discussion by reading the case study and associated questions provided in the weeks prior to the tutorial. Some students will be designated 'warm callers' prior to the CST. Warm callers will/may be asked to initiate the discussion at various points – e.g.: provide a summary of Mrs X's symptoms; are there any contraindications to Mrs X increasing her activity levels?; please summarise Mrs X's previous treatment history, etc. All other students can receive a 'cold call' at any time during the tutorial and provide an answer to a question or issue being discussed and debated.

The assessment of each CST will involve a practical component and hence unprepared students risk poor grading and worst still, a less than optimal learning experience. A CST learning format is highly relevant to professional development and competencies as it exposes students to issues relevant to Exercise Physiologists in clinical practice. Case studies also provide an opportunity for the development of key skills including communication, group work and problem solving and provide a motivating and enjoyable learning experience.

**Independent study** – There is insufficient time in the lectures, tutorials and laboratories for you to develop a thorough understanding of the concepts covered in this course. In order for you to achieve the learning outcomes that will be assessed, material presented in the course must be revised regularly. Students are also required to cover the readings and resources accompanying each lecture to enhance their understanding of lecture material and as a requirement for case study participation.

**Assessment** – These tasks have been chosen as tools to enhance and guide your learning as well as a way of measuring performance, and are therefore central teaching strategy in this course.

## Course Resources

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See also [Learning Resources](#) on the SoMS website

### Suggested Textbook

- Voight, M. L., B. J. Hoogenboom and WE Prentice (2014). *Musculoskeletal interventions: techniques for therapeutic exercise 3<sup>rd</sup> edition*. McGraw-Hill.

### Suggested Reference Texts

- Houglum, Peggy A. (2010). *Therapeutic exercise for musculoskeletal injuries*. Human Kinetics
- McGill, S. (2002). *Low back disorders: evidence-based prevention and rehabilitation*. Human Kinetics.
- D. Butler and GL. Moseley (2003). *Explain pain*. Noigroup publications.
- Waddell G (2004). *The back pain revolution*. Churchill Livingstone.

## Assessment

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Assessment of your learning in the course will be achieved through examinations (oral viva, multiple choice questions, clinical skills), participation in case study tutorials and the completion of clinical reports and exercise programs arising from the case study tutorials. The examination format tests your ability to apply and communicate knowledge to the management of musculoskeletal conditions in a time-constrained context.

These requirements are similar to those encountered when dealing with a client or patient in a face-to-face setting, communicating with a clinician or colleague, or during a job interview. The examinations will be designed to determine how well you have achieved the general learning outcomes that are outlined above, and the specific learning outcomes outlined in each lecture/practical/tutorial. The emphasis will be on the clinical application of theoretical knowledge.

The case studies will be concerned with developing your clinical reasoning skills with detailed management plans for patients with specific musculoskeletal conditions. The majority of assessment for the case study tutorials is completed as individuals, there is a small component allocated to team work and also to peer assessment. This is to encourage sharing of ideas and knowledge as well as critical analysis of patient management plans.

Summary of Assessments	% Total Marks	Due Date
ASSESSMENT TASK 1 - CASE STUDY TUTORIAL (CST) PARTICIPATION AND REPORT (submitted for <b>2 case studies</b> from the 4 case studies in the course scheduled in weeks 4, 6, 8, 10)	40% participation 10% written report 10% X 2	week 5,7,9, 11 <u>Monday</u> <u>9am</u>
ASSESSMENT TASK 2 - CLINICAL VIVA & SKILLS ASSESSMENT	30%	week 12 & 13 <u>lab</u> <u>classes</u>
ASSESSMENT TASK 3 - END OF SESSION EXAMINATION	30%	Exam period

### Examination procedures and attendance requirements

Attendance is expected at all lectures, practicals and tutorials for this course.

Attendance at all practicals, tutorials and clinicals will be recorded. Students who do not participate in these sessions for any reason other than medical or misadventure, will be marked absent and will be awarded a grade of FAIL for the entire course. If absent for medical reasons, a medical certificate must be lodged with the lecturer within 7 days of the time period of the certificate's expiry. No consideration will be given after this time. Although lectures will be available on Echo360, student participation is encouraged in both the lectures and the tutorials and these are important to attend.

### Deferred Exams

If you miss an exam for medical reasons you must supply adequate documentation (including a medical certificate). Your request for consideration will then be assessed and a deferred exam may be granted. You cannot assume you will be granted supplementary assessment. The deferred exam may include a significant oral element.

## ASSESSMENT TASK 1 – Case Study Tutorial Participation and Report

CST participation and report for 2 case studies; a practical assessment; and a final examination. For each case study the class will be halved into an active and passive group and all students will require a 12 cm x 6cm name tag. Students in the active group will contribute to the CST as part of group of 5-6 students. The CST groups will be organised at the week 2 laboratory. Students will not be made aware who is active and who is passive until the day of the CST, which will require all students to be adequately prepared. Each individual in a group will be marked by students in the passive group and an academic observer. Adequate contribution by each individual and group will require a high level of preparation. Each individual in the passive group will be required to submit a report to a GP and an exercise program relevant to the case studies.

### Learning Outcomes for the Case Study Tutorials

- To develop understanding and competency with clinical EP practices in musculoskeletal rehabilitation
- To develop clinical reasoning skills in musculoskeletal rehabilitation
- To enhance skills in group work and peer assessment
- To foster independent student learning in musculoskeletal rehabilitation
- To develop effective oral and written communication skills for clinical practice

### Marking Criteria:

**Case Study Tutorial Participation** Students will contribute to the case study tutorial as part of a group. Each student's participation in the case study tutorial session will be assessed by their peers (i.e. the passive observer groups) and academic staff. The average of these marks will be calculated for each individual student. The academic observer provides a mark for each individual student (60%). The passive observers submit a group consensus mark for individual student (20%) in the active group that they are assigned to mark. This individual mark will constitute 80% of the participation mark and the remaining 20% will be based on your contribution to your own group's performance as assessed by peers within your group. Consequently, it is important that each member of the group is well prepared and that preparation involves a coordinated effort by each group.

<b>Outstanding Contributor</b> (10%)	<b>Contributions in class reflect exceptional preparation.</b> Ideas offered are always substantive; provide one or more major insights as well as direction for the class. Challenges are well substantiated and persuasively presented. If this group were not active, the quality of discussion would be diminished markedly.
<b>Good Contributor</b> (8%)	<b>Contributions in class reflect thorough preparation.</b> Ideas offered are usually substantive; provide good insights and sometimes direction for the class. Challenges are well substantiated and often persuasive. If this group were not active, the quality of discussion would be diminished.
<b>Adequate Contributor</b> (6%)	<b>Contributions in class reflect satisfactory preparation.</b> Ideas offered are sometimes substantive, provide generally useful insights but seldom offer a new direction for the discussion. Challenges are sometimes presented, fairly well substantiated, and are sometimes persuasive. If this group were not active, the quality of discussion would be diminished somewhat.
<b>Unsatisfactory Contributor</b> (4%)	<b>Contributions in class reflect inadequate preparation.</b> Ideas offered are seldom substantive; provide few if any insights and never a constructive direction for the class. Integrative comments and effective challenges are absent. If this group were not active, it would have little impact on the learning outcomes.
<b>Non-Participant</b> (2%)	<b>This group has made minimal contribution during the case study.</b> If this group was not in attendance, it would make no difference to the learning outcomes

*These criteria will be used for the individual and the team marks.*



**Case Study Tutorial Report and Exercise Program** - 1 week following the case study tutorial, each individual from the passive groups is required to submit one of the following: 1) a written report, in the form of a letter to the patient's physician, or other referring health professional or case manager, or 2) an exercise program in a suitable form to guide the patient and for clinician record keeping. With each class member being in a passive group for 2 of the 4 case study tutorials, a written report will be submitted for 1 case study tutorial and an exercise program will be submitted for the other case study tutorial.

**Marking criteria for the report on the case study tutorial**

Components	Inadequate (1 - 4%)	Okay (5 - 6%)	Good (7 - 8%)	Great (9 - 10%)
<b>Understanding/ Conceptualisation of the patient's condition</b>	demonstrates little understanding of the primary issues for the patient highlighted during the CST	demonstrates poor understanding of the primary issues for the patient highlighted during the CST	demonstrates adequate understanding of the primary issues for the patient highlighted during the CST	demonstrates thorough understanding of the primary issues for the patient highlighted during the CST
<b>Opinion on management approach</b>	unclear, in concise, illogical and inadequately constructed opinion with little relevance to the CST	vague and poorly constructed opinion with poor logic and insufficient relevance to the CST	adequately constructed and logical opinion relevant to the CST	Very well constructed opinion and logic relevant to the CST
<b>Quality of the writing and presentation</b>	poorly written and organised; frequent spelling or grammatical errors; does not adhere to the required format (esp. length).	inadequate clarity of writing and organisation; minimal errors in written expression; follows the required format (esp. length).	clearly written, concise and well organised; few errors in written expression; adheres to the required format (esp. length).	clear, fluent, concise and well organised writing; no errors in written expression; adheres to the required format (esp. length).
<b>Terminology appropriate to the discipline</b>	little or no use of the relevant medical terminology	some use of the relevant medical terminology	suitable use of the relevant medical terminology	refined use of the relevant medical terminology

**Marking criteria for the exercise program for the case study tutorial patient**

Components	Inadequate (1 - 4%)	Okay (5 - 6%)	Good (7 - 8%)	Great (9 - 10%)
<b>Suitability of the exercise prescription – commencement</b>	Inappropriate exercise prescription that may be ineffective and/or unsafe	Safe and somewhat effective exercises, but lacking attention to patient presentation (individualisation) and exercise adherence.	Safe and effective exercises, with reasonable attention to patient presentation (individualisation) and exercise adherence.	Safe and effective exercises, with specific attention to patient presentation (individualisation) and exercise adherence.
<b>Suitability of the exercise prescription – progression</b>	Inappropriate exercise progression that may be ineffective and/or unsafe	Safe and somewhat effective exercise progression, but lacking attention to patient presentation (individualisation) and exercise adherence.	Safe and effective exercise progression, with reasonable attention to patient presentation (individualisation) and exercise adherence.	Safe and effective exercise progression, with specific attention to patient presentation (individualisation) and exercise adherence.
<b>Clarity of the presentation for the patient and professional colleagues</b>	Poorly presented program, that will be difficult for the patient and/or professional colleagues to follow	Adequately presented program though may be difficult for the patient and/or professional colleagues to follow	Neatly presented program that can be readily followed by the patient and professional colleagues	High quality presentation of a program that can be easily followed by the patient and professional colleagues
<b>Evidence of research and/or originality in the exercise prescription</b>	No attention to the evidence base nor originality in thinking for the exercise prescription.	Limited evidence base and/or original thought for the exercise prescription.	Mostly evidence-based, possibly with some original thought in the program design.	Clearly evidence-based and with original thought in the program design

## ASSESSMENT TASK 2 – Clinical Viva and Skills Assessment

The purpose of the practical assessment is to assess your competency with the practical application of the knowledge and skills covered in the unit. The assessment will be undertaken in groups of 3 and encompass material presented in the CST's, laboratories, lectures and readings. This will involve a 40 min oral and skills assessment specific to daily clinical practice in rehabilitation.

The oral assessment will involve verbal responses to questions posed by the examiner. The clinical skills demonstration will be performed on your partner and involve a physical assessment or exercise prescription technique commonly used by EP's in MS rehabilitation. Before commencing the assessment students will be given 15 min to read their case study and consider the specific questions and skills that will to be assessed. Each student will be complete a single case study randomly selected from a bank of 6 cases with ~10 min, 20 min, 10 min respectively, for the patient assessment, exercise prescription and clinical reasoning components.

### Learning Outcomes for the Clinical Viva and Skills Assessment

- To demonstrate detailed knowledge of the unit content and the clinical application of this content to a variety of musculo-skeletal conditions
- To demonstrate competency with assessment, exercise prescription and clinical reasoning relevant to clinical practice in musculo-skeletal rehabilitation
- To demonstrate effective communication with patients and allied health professionals

### Marking criteria for the clinical viva and skills assessment

Assessment component	Grade
<b>Patient assessment - knowledge</b>  Provided correct and complete responses to the questions with minor mistakes Partially answered the questions Inadequate response to the questions	<b>7%</b>  5-7% 3-4% < 3%
<b>Exercise prescription - clinical skills</b> <i>Procedural</i>  Demonstrated the required techniques with competency and a strong application to clinical practice Demonstrated the required techniques with confidence and moderate application to clinical practice Demonstrated the required techniques poorly with little application to clinical practice	<b>16%</b>  12-16% 7-14% 0-7%
<b>Patient management - clinical reasoning</b>  High level of clinical reasoning, knowledge and understanding demonstrated Medium level of clinical reasoning, knowledge and understanding demonstrated Low level of clinical reasoning, knowledge and understanding demonstrated	<b>7%</b>  5-7% 3-4% <3%

## ASSESSMENT TASK 3 – End of Session Examination

The purpose of this exam is to test your recall and understanding of the concepts covered in the ENTIRE COURSE. The format will be multiple choice questions. The exam will be held during the end of session exam period.

### Submission of Assessment Tasks

Assignments are to be submitted electronically through Turnitin via Moodle.

**Penalties for late submission of assignments** – In cases where an extension has NOT been granted, the following penalties will apply: For assignments submitted after **9:00am** on the due date, a penalty of 50% of the maximum marks available for that assignment will be incurred. A further 25% of the maximum possible allocated marks (i.e., a total of 75%) will be deducted from assignments which are two (2) days late. Assignments received more than two (2) days after the due date **will not be allocated a mark**, however, these assignments **must** still be submitted to pass the unit.

### Assessment breakdown:

<i>Item</i>	<i>Grade %</i>	<i>Due date</i>	<i>Feedback</i>
<b>Case study tutorials</b> <b>(each of the 4 CSTs will involve one of the following 4 items)</b> A – Participation by active groups B – Participation by active groups <i>(participation: individual 80% and team 20%, judged by an academic observer and a group of peer observers)</i> C – Written report to referring health professional D – Exercise program (Reports and exercise programs are submitted by individuals who were in the passive groups for the relevant case study tutorial. In a given week, half of the group members will submit a report and the other half an exercise program. This will be switched for the second round of written submissions.)	10% 10% 10% 10%	Week HESC3532 5, 7, 9, 11  HESC3592 6, 8, 10, 12	Participation marks are submitted at the end of each CST and collated grades appear on Moodle within 1 week of the CST.  Reports or exercise programs are due 1 week after the CST and grades will appear on Moodle a week following.
<b>Clinical viva and skills assessment</b> Patient assessment - knowledge Exercise prescription - clinical skills <i>(15% Procedural skills &amp; 5% Communication skills)</i> Patient management - clinical reasoning	30%	Weeks 12 & 13	Grades will appear on Moodle a week following the assessment.
<b>End of session examination</b> Multiple choice questions	30%	Exam period	On release of course final results.

# COURSE SCHEDULE

HESC3532 Semester 2, 2015

	<b>Lecture/Workshop</b> Thur 2-3pm (VAL 121)	<b>Lecture/Workshop</b> Thur 3-4pm (VAL 121)	<b>Case Method Tutorials</b> Thur 4-530pm (Wallace Wurth LGO3)	<b>Laboratory</b> Tues 9-11 am Tues 11-1pm Tues 1-3 pm Tues 3-5 pm (Ex phys clin teach room)
Week 1 (27July- 31)	Patient assessment and communication Dr John Booth	Pain – How's it work?  Dr John Booth	Tips for better case study tutorial engagement (BL; moodle)	Improving clinician and patient communication (BL; moodle)
Week 2 (3Aug- 7)	Rehabilitation for lumbar spine part 1  Dr John Booth	Rehabilitation for the lumbar spine part 2  Dr John Booth		Assessing and screening patients with persisting pain
WEEK3 (10Aug- 14)	Persisting Pain – How's it work now?  Dr John Booth	A bio-psycho-social treatment model  Dr John Booth		Assessment and exercise prescription for the lumbar spine
Week 4 (17Aug- 21)	Conservative and surgical management of shoulder injury/pain Dr John Best	Exercise rehabilitation for the shoulder Dr John Booth	<b>Case study 1</b> Chronic low back pain Booth/Barry	Exercise prescription for complex musculoskeletal
Week 5 (24aug- 28)	Exercise rehab for the lower extremity  Dr John Booth	Hip and knee replacement – Post-operative exercise  Kelly McLeod		<b>Case study 1 report due</b> Rehabilitation techniques for the shoulder
Week 6 (31Aug- 4Sept)	Osteoporosis- assessment & exercise considerations Dr David Simar/ Dr J Booth (BL - moodle)	Work related and functional exercise Dr John Booth	<b>Case study 2</b> Rotator cuff surgery Booth/Barry	Rehabilitation of the knee and lower extremity
Week 7 (7Sept- 11)	Neurological assessment – upper and lower extremity  Dr John Booth	Rehabilitation of the cervical and thoracic spine  Dr John Booth		<b>Case study 2 report due</b> Work related and functional exercise
Week 8 (14Sept -18)	From the lab to the clinic- interfacing implants and spinal tissue  Professor Bill Walsh	Matching exercise to spinal surgery – post operative rehabilitation  Dr John Booth	<b>Case study 3</b> Post-operative rehabilitation following total knee replacement McLeod//Booth	Rehabilitation for the cervical spine
Week 9 (21Sept -25)	Arthritis-assessment & exercise considerations  Dr Janette Thom	Rehabilitation for the deep abdominal muscles and pelvic floor disease/dysfunction Dr John Booth		<b>Case study 3 report due</b> Neurological considerations – upper and lower
Sept 28 - 2 Oct <b>Mid semester break</b>				
Week 10 (5Oct- 9)	Functional Capacity Evaluation  Dr John Booth	Functional Capacity Evaluation  Dr John Booth	<b>Case Study 4</b> Return to work following spinal surgery Booth/Barry	Exercise prescription for the deep abdominal muscles and pelvic floor
Week 11 (12Oct- 16)	Considerations in paediatric musculoskeletal exercise prescription Dr Carolyn Broderick	Workplace assessment  John Booth		<b>Case study 4 report due</b>  Functional capacity evaluation
Week 12 (19Oct- 23)	Workplace Injury Prevention  Dr John Booth	Pre-employment Functional Assessment Dr John Booth (BL; moodle)		<b>Clinical Skills Assessment</b>
Week 13 (26Oct- 30)	Workshop – clinical reasoning and exercise prescription in musculo- skeletal rehab  Dr John Booth	Workshop – clinical reasoning and exercise prescription in musculo- skeletal rehab  Dr John Booth		<b>Clinical Skills Assessment</b>

BL = blended learning