UNSW AUSTRALIA | Medical Sciences
Medicine

DEPARTMENT OF EXERCISE PHYSIOLOGY

HESC2452

Movement Assessment and Instruction

COURSE OUTLINE

SEMESTER 2, 2016

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Please read this manual/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)

HESC2452 Course Information

This course will equip you with skills and knowledge for assessing and instructing exercises and other movements. You will integrate concepts from biomechanics, functional anatomy, and motor learning and skill acquisition in the analysis of exercises, work tasks and activities of daily living. You will refine skills in quantitative and qualitative analysis of movement. The course will also cover aspects of exercise instruction and approaches to movement education. You will develop practical skills in teaching new or modified exercises, work tasks or activities of daily living, giving consideration to pedagogical theory in relation to the instruction of movement.

Credit Points: 6 UOC

COURSE PREREQUISITES

ANAT2451
BIOM2451

OBJECTIVES OF THE COURSE

This course aims to
1. To encourage students to integrate and apply concepts from biomechanics and functional anatomy
2. To extend students' understanding of motor learning and instructional approaches for training people in movement tasks
3. To introduce students more generally to educational theory and practice to support their professional development in being able to themselves train student clinicians in their future professional work
4. To meet industry requirements for professional work in workplace rehabilitation

COURSE CONVENOR and LECTURERS

Course Convenor:

Dr Rachel Ward   rachel.ward@unsw.edu.au
                           Phone: 9385 0565
                           Room 218 Wallace Wurth Building East

Students wishing to see the course convenor should make an appointment via email as our offices are not readily accessible.

Lecturers:

Dr Ben Barry   b.barry@unsw.edu.au
Ms Amanda Burdett   a.burdett@unsw.edu.au

Demonstrators:
Jessica Bellamy   j.bellamy@unsw.edu.au
Briana Clifford   b.clifford@unsw.edu.au
Matthew Jones   matthew.jones@unsw.edu.au
David Mizrahi   d.mizrahi@unsw.edu.au
Michael Wewege   m.wewege@student.unsw.edu.au

<u>Exercise Physiology Coordinator:</u>

Mr Ryan Ling   exphys.med@unsw.edu.au

<u>Technical Officer:</u>

Mr Balu Daniel   b.daniel@unsw.edu.au

STUDENT LEARNING OUTCOMES

HESC2452 will develop those attributes that the Faculty of Medicine has identified as important for an Exercise Physiology Graduate to attain. These include; skills, qualities, understanding and attitudes that promote lifelong learning that students should acquire during their university experience.

<u>Graduate Attributes</u>

- Develop a thorough understanding of the relationship between physical activity and health
- Attain competencies in conducting a broad range of exercise-based clinical tests and in delivering lifestyle change programs that use exercise for the primary prevention of disease and the management of chronic disease
- Attain skills and detailed clinical knowledge relevant to cardiopulmonary, metabolic, musculoskeletal and neuromuscular rehabilitation
- Develop advanced problem solving skills and a capacity for critical thinking
- Develop an ability to engage in independent and reflective learning for the betterment of professional clinical practice
- Develop a broad range of communication skills and an ability to work as a member and a leader of a team, with respect for diversity and a high standard of ethical practice

On completion of this course students should:

1. Demonstrate technical skills for quantitative and qualitative assessment of human movement
2. Have an ability to communicate information to clients and patients in training and rehabilitation programs
3. Understand the appropriateness and effectiveness of different teaching and feedback strategies for movement instruction
4. Have an appreciation and understanding of the implications of individual differences on motor learning and skill acquisition
5. Identify the loads experienced by specific anatomical structures during different postures and movements, and to recognise when this poses a risk of injury

COURSE STRUCTURE and TEACHING STRATEGIES

Learning activities occur on the following days and times:

- Lectures: Monday 1-2pm; Thursday 11am-12

- Tutorials: Friday 11am-12; Friday 12-1pm; Friday 102pm; Friday 2-3pm

- Practicals: Wednesday 1-3pm, Thursday 3-5pm; Friday 9-11am; Friday 4-6pm

Students are expected to attend all scheduled activities for their full duration (2 or 3 hours of lectures per week, and up to 4 hours of practical and/or tutorial sessions per week). Students are reminded that UNSW recommends that a 6 units-of-credit course should involve about 150 hours of study and learning activities. The formal learning activities are approximately 75 hours throughout the semester and students are expected (and strongly recommended) to do at least the same number of hours of additional study.

Course philosophy and design

This course commences with a series of lectures conveying the application of movement assessment to analysis of exercise, activities of daily living, and ergonomic tasks. These lectures run concurrently with laboratory activities focusing on advanced quantitative movement analysis techniques. These learning activities will progressively build on the biomechanical knowledge and skills you acquired through completion of Biomechanics for Health and Exercise Science (BIOM2451). With your aim as practitioners (clinicians) being to assist people with movement enhancement, the course then progresses with a series of lectures outlining the theories associated with motor learning and skill acquisition. This content will build on the elementary introduction to motor control and learning that was provided in Introduction to Exercise Science (HESC1501). These lectures will be supported by concurrent tutorials in which you will develop and practice your skills in movement instruction. The course also includes lectures delivered by practicing Exercise Physiologists from the UNSW Lifestyle Clinic, in which aspects of therapeutic exercise instruction will be covered. Assessment strategies throughout the course require you to apply your skills in movement assessment and instruction to real-life examples.

Rationale for the inclusion of content and teaching approach

How the course relates to the Exercise Physiology profession
Assessment and instruction of movement tasks related to exercise, workplace tasks, and activities of daily living is a fundamental clinical skill required within the Exercise Physiology profession. Graduating students must therefore be proficient in assessing and instructing exercises and other movements. This course integrates concepts from functional anatomy, biomechanics, motor control and learning, and applies them to the assessment and instruction of movement. Students will develop the necessary skills for quantitative and qualitative assessment of human movement, and for teaching patients and clients appropriate and safe techniques for performance of exercises, work tasks or activities of daily living.

How the course relates to other courses in the Exercise Physiology program
This course extends knowledge and skills acquired from courses in Introductory Exercise Science (HESC1501), Exercise Programs & Behaviour (HESC1511), Functional Anatomy (ANAT2451), and Biomechanics for Health and Exercise Science (BIOM2451), to apply these to analysing (quantitatively and qualitatively) movements (exercises, work tasks and

activities of daily living) and identifying how different tissues are loaded in these movements. Skills and knowledge introduced in this course will be further developed throughout the program, in particular in Physical Activity and Health (HESC3504), Muscle and Motor Control (NEUR3101), Movement Rehabilitation (HESC3532), Neuromuscular Rehabilitation (HESC3592) and in Clinical Practicum A & B (HESC4611 & HESC4622).

APPROACH TO LEARNING AND TEACHING

The learning and teaching philosophy underpinning this course is centred on student learning and aims to create an environment which interests and challenges students. The teaching is designed to be engaging and relevant in order to prepare students for future careers.

Lectures – This approach is used to present relatively large amounts of information at a time on specific topics throughout the course. PDF copies of the lecture notes will USUALLY (some guest lecturers may choose not to make their notes available) be available on Moodle (see below in STUDENT RESOURCES section) prior to 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 technical skills that will be relevant in your professional career. It is essential that you obtain some hands-on experience with the major clinical and/or research techniques in movement assessment and instruction before you begin your clinical practicum. These skills will be rehearsed and developed further during subsequent courses in the program. The second purpose is to use experiments to demonstrate and reinforce key theoretical concepts that have been covered in lectures. The questions contained in the practical outlines will guide your learning in this respect.

Tutorials – This format provides a more informal learning environment than a lecture. Sessions will be structured to encourage your participation in activities and discussions designed to enhance your learning. You will benefit most if you do some preparation prior to attending the session.

Independent study – There is insufficient time in the lectures, tutorials and practical for you to develop a deep understanding of the concepts covered in this course. In order for you to achieve the learning outcomes that will be assessed, you will need to revise the material presented in the course regularly. You will probably also need to do additional reading beyond the lecture materials in order to learn effectively. Relevant additional resources will be cited in each lecture.

Assessments – 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.

ASSESSMENT PROCEDURES

Assessment of your learning in the course will be achieved through two clinical skills assessments, laboratory submissions, and a final examination. The clinical skills assessment requirements are similar to those encountered when dealing with a client or patient in a face-to-face setting, or when communicating with other health professionals or researchers. These assessments will assess your ability to effectively communicate with and instruct clients or patients in performing specific movements. These assessments will require you to draw on theories of motor learning and skill acquisition presented in lectures and tutorials.

The lab submissions and quantitative motion analysis report will assess your ability to accurately collect, process, and analyse data, and to communicate concisely in a written report.

The final examination will assess your understanding of the principles underlying quantitative and qualitative analysis of human movement, theories on motor learning and movement instruction, and how these can be related to work-place ergonomics, therapeutic exercise and activities of daily living.

Summary of Assessments	Weight	Due Date
4 x LABORATORY SUBMISSIONS – GRAPHS & ONLINE QUIZ (2.5% PER LAB)	**10%**	Weeks 3, 4, 5, 6
4 x PRE-TUTORIAL QUIZZES – MULTIPLE CHOICE ONLINE QUIZ (1.25% PER QUIZ)	**5%**	Weeks 5, 7, 9, 11
E-PORTFOLIO REFLECTIONS (2% PER REFLECTION)	**8%**	Weeks 2, 8, 12
MOVEMENT INSTRUCTION VIDEO & EXERCISE ANALYSIS	**12%**	Week 9 9am Monday 21 September
QUANTITATIVE MOTION ANALYSIS REPORT	**25%**	Week 12 9am Monday 19 October
MOVEMENT INSTRUCTION VIVA ASSESSMENT	**10%**	Week 13 - During laboratory session times
END OF SESSION EXAMINATION	**30%**	End of session exam period

4 × LABORATORY SUBMISSIONS (Due Weeks 3, 4, 5, 6)

Completed laboratory tasks must be submitted for the following four (4) lab sessions:
- *Laboratory 1 – Actigraphy 1: Collecting and Analysing Accelerometry Data (due Week 3)*
- *Laboratory 2 – Actigraphy 2: Scoring and Analysing Physical Activity Data with ActiLife (due Week 4)*
- *Laboratory 3 – Digitising, Processing and Analysing 2D Kinematic Data with MaxTRAQ (due Week 5)*
- *Laboratory 4 – Processing and Analysing 3D Kinematic Data with Visual3D (due Week 6)*

Each submission is worth 2.5% of the total course mark, summing to a total of 10% of the course result. These tasks have been designed to be completed within the two (2) hour duration of each laboratory session. Procedures for completion of these items are outlined in the notes for each laboratory session. These items must be submitted electronically via Moodle within one (1) week after the laboratory session in which you completed the work. The formative feedback received for these tasks will assist with completion of the Quantitative Movement Analysis Report.

Learning Outcomes for the *4 × Laboratory Submissions*
- To develop skills in conducting quantitative movement analysis with accuracy and attention to detail.
- To develop the ability to use customised software packages and hardware to collect data for quantitative assessment of movement
- To develop proficiency in use of Microsoft Excel for data processing and graphing
- To develop the ability to accurately analyse and interpret quantitative movement assessment data

Submission guidelines and marking criteria for these assessment tasks are available through the "Assessments" section of Moodle.

4 × PRE-TUTORIAL QUIZZES (Due Weeks 5, 7, 9, 11)

Before attending Tutorials 2, 3, 4, and 5, you are required to complete a pre-class reading, and then complete an online multiple-choice quiz based on information provided in the reading. Each quiz is worth 1.25% of the total course mark, summing to a total of 5% of the course result. All readings will be available from Week 1 of semester, and each quiz will be available for 10 days prior to Tutorials 2, 3, 4 and 5, in Weeks 5, 7, 9, 11, respectively. Each quiz MUST be completed before the relevant tutorial in order for marks to be awarded.

Online quizzes must be completed prior to the following four (4) tutorial sessions:

- *Tutorial 2 – Qualitative Analysis of Human Movement (due Week 5)*
- *Tutorial 3 – Instruction & Feedback in Motor Learning (due Week 7)*
- *Tutorial 4 – Motivation in Motor Learning (due Week 9)*
- *Tutorial 5 – Practice Scheduling in Motor Learning (due Week 11)*

Learning Outcomes for the *4 x Pre-Tutorial Quizzes*
- To develop your ability to perform qualitative analysis of movement by identifying appropriate critical features, goals, skills, and abilities associated with a particular movement
- To develop your ability to effectively communicate information to clients and patients in training and rehabilitation programs
- To understanding the appropriateness and effectiveness of different teaching and feedback strategies for movement instruction

E-PORTFOLIO REFLECTIONS (8%) (Due Weeks 2, 8, 12)
The ePortfolio is part of your course assessment and encourages you to reflect on different aspects of your learning journey in this course. Throughout the semester you will be asked to make 4 entries into a blog by answering a prompt question. Your response should be approximately 200 words. The entries are spaced throughout the semester and link to different aspects of the course. This will include: 1) Reflections on your expectations of the course; 2) Reflections on development of your skills in movement instruction, demonstration and feedback delivery; and 3) Reflections on any unexpected skills or knowledge attained during this course.

You will be required to post the reflection entries to OU Blog via Moodle and submit the same blog to Turnitin for originality checks and marking. Instructions on how to submit blog entries to OU Blog and Turnitin are available within the HESC2452 Moodle site.

Blog entries are due at the following times:
- Reflection 1 – due by 5pm Friday August 5 (Week 2)
- Reflection 2 & 3 – due by 5pm Friday September 16 (Week 8)
- Reflection 4 – due by 5pm Friday October 21 (Week 12)

Assessment of ePortfolio will be based on the following criteria: demonstration of engagement with the ePortfolio; reflective practice; building an awareness of the skills you have developed (including course-related skills, professional development skills, transferrable skills); development of career awareness and skills for future employability or work experience; personal values; strengths and weaknesses.

Learning Outcomes for the *E-portfolio Reflections*
- To develop skills in reflective practice
- To develop an awareness of the skills you are developing in this course and their usefulness and applicability to future professional and/or clinical practice.

MOVEMENT INSTRUCTION VIDEO & EXERCISE ANALYSIS (due Week 9)

Part 1
This task is conducted in groups, however each student will receive an individual assessment mark. Students will work in groups of 3 to conduct a movement instruction session. Each student will be videoed while instructing a therapeutic exercise to one of their group members

For instruction of each therapeutic exercise, one student will act as the movement instructor, one as the patient/client (learner) and the third student will video and observe the movement instruction session. Students will switch roles for each exercise during the session, giving each student the opportunity to perform each role within the group. The instruction of each exercise should be of 3 minutes duration per student. Each student will submit their own individual video file.

Video files will be submitted via upload to YouTube and provision of the YouTube link to the course convenor through the Video Assignment link in Moodle. Students can choose the level of privacy for their video. If you do not want your video to be available for public access then ensure you set your privacy setting to "Private", or "Unlisted". Information on the YouTube privacy settings can be obtained through the following link. https://support.google.com/youtube/answer/157177?hl=en&rd=1. Please read this information very carefully before uploading your video to YouTube.

Part 2
You will be required to submit a movement analysis of the exercise you select to instruct for your Movement Instruction Video. You will also be required identify and describe the critical features of the exercise that are important for effective instruction. You will provide this information in the form of written answers to specific questions. Answers to these questions will be submitted by completing and uploaded an Assignment Submission Template to Moodle.

Learning Outcomes for the *Movement Instruction Video & Exercise Analysis*
- To develop your ability to effectively communicate information to clients and patients in training and rehabilitation programs
- To understanding the appropriateness and effectiveness of different teaching and feedback strategies for movement instruction
- To identify and describe anatomical and functional information about an exercise, and the critical features required for effective movement instruction.

Submission guidelines and marking criteria for this assessment task are available through the "Assessments" section of Moodle.

QUANTITATIVE MOTION ANALYSIS REPORT (Due Week 12)

This assessment task will take the form of a written movement analysis report. Students will be required to submit a quantitative analysis of a specific movement task. Three dimensional (3D) kinematic data and electromyography (EMG) data will be collected for this report during the laboratory sessions conducted in Weeks 7 and 8. Data collection will be conducted in groups. Time will be allocated for data processing and graph preparation during the laboratory sessions in Weeks 9 and 10. Data processing and graph preparation will be conducted individually. Each student must complete their own individual Movement Analysis Report, and submit this electronically through Turnitin via Moodle.

Learning Outcomes for the *Quantitative Motion Analysis Report*
- To develop and apply skills and knowledge in advanced quantitative movement analysis
- To develop your ability to communicate effectively in the format of a written report

Submission guidelines and marking criteria for this assessment task are available through the "Assessments" section of Moodle.

MOVEMENT INSTRUCTION VIVA ASSESSMENT (Assessed Week 13)

This assessment task will be held in Week 13 during the usual laboratory timeslots and will be based on assessment of the student's ability to perform movement instruction and qualitative analysis, tasks commonly used in exercise physiology. Each student will be required to perform the tasks listed below, under the face-to-face supervision and assessment of an examiner. Students will be assessed on:

1. Appropriate movement analysis and identification of critical features of selected therapeutic exercises
2. Correct analysis of the skills, abilities, goals and relevance of selected therapeutic exercises
3. Instruction of a mock patient in performance of selected therapeutic exercises. Students will be assessed on their use of physical demonstration, verbal instruction, feedback delivery, and motivational strategies.

Learning Outcomes for the *Movement Instruction Viva Assessment*
- To develop your ability to perform qualitative analysis of movement by identifying appropriate critical features, goals, skills, and abilities associated with a particular movement
- To develop your ability to effectively communicate information to clients and patients in training and rehabilitation programs
- To understanding the appropriateness and effectiveness of different teaching and feedback strategies for movement instruction

Guidelines and marking criteria for this assessment task are available through the "Assessments" section of Moodle.

END OF SESSION EXAMINATION (End of Session Exam Period)

This assessment task will be held during the final examination period in November, and will cover ALL material presented in lectures, tutorials, and laboratories from the ENTIRE semester.

Learning Outcomes for the *End of Session Examination*
- To demonstrate detailed knowledge of the principles underlying quantitative movement analysis techniques, and interpretation of quantitative movement analysis data.
- To demonstrate a comprehensive understanding of theories of motor learning and skill acquisition and how these can be applied to instruction of movement
- To demonstrate understanding of the processes required for accurate qualitative analysis of human movement

The specific date, time and location of the Examination will be released by the UNSW Examinations Office.

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.

TEXTBOOKS AND OTHER RESOURCES

Moodle
Information about the course as well as lecture, tutorial and lab notes can be accessed via the UNSW Moodle system from the following site:
https://moodle.telt.unsw.edu.au/login/index.php

You can use Moodle to download lecture notes, access your grades, find reference material in the course (such as this document), and communicate with the lecturer and your peers. Please see the lecturer if you would like more information to help you to make the most of this resource.

UNSW Library

The University Library provides a range of services to assist students in understanding how to identify what information is required for assignments and projects; how to find the right information to support academic activities; and how to use the right information most effectively. Homepage: http://info.library.unsw.edu.au

Recommended Reference Books
Edwards, W.H. (2011). *Motor Learning and Control: From Theory to Practice*, Wadsworth Cengage Learning
   ISBN: 978-0-495-01080-7
   UNSW Library call no. 152.334/37

Griffiths, I.W. (2006). *Principles of Biomechanics and Motion Analysis,* Lippincott, Williams & Wilkins
   ISBN: 978-0-7817-5231-2
   UNSW Library call no. 612.76/187

Knudson, D.V. (2013). *Qualitative Diagnosis of Human Movement, 3rd Edition,* Human Kinetics
   ISBN: 978-0-7360-3462-3
   UNSW Library call no. 612.76/148

Suggested Reference Books

Schmidt, R.A. & Lee, T.D. (2008). *Motor Learning and Performance, 5th Edition*, Human Kinetics
   ISBN: 978-1-4504-4361-6
   UNSW Library call no. 152.334/24

Magill, R.A. (2011) *Motor Learning and Control: Concepts and Applications 10th Edition*, McGraw-Hill
   ISBN: 978-0-0780-2267-8
   UNSW Library call no. 152.334/22

McGinnis, P.M. (2013) *Biomechanics of Sport and Exercise, 3rd Edition*, Human Kinetics.
   ISBN: 978-0-7360-7966-2
   UNSW Library call no. 612.76/173A

Hamill, J. & Knutzen, K.M. (2009). *Biomechanical Basis of Human Movement, 3rd Edition*, Lippincott, Williams & Wilkins.
   ISBN: 978-0-7817-9128-1
   UNSW Library call no. 612.76/177

Suggested Reference Journals

- *Perceptual and Motor Skills*
- *Motor Control*
- *Journal of Motor Behaviour*
- *Human Movement Science*

- *Journal of Human Movement Studies*
- *Journal of Applied Biomechanics*
- *Sports Biomechanics*

UNSW Learning Centre

The Learning Centre offers academic skills support to all students across all years of study enrolled at UNSW. This includes assistance to improve writing skills and approaches to teamwork. See www.lc.unsw.edu.au

COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students about the course and continual improvements are made based on this feedback. The Course and Teaching Evaluation and Improvement (CATEI) Process of UNSW is the way in which student feedback is evaluated and significant changes to the course will be communicated to subsequent cohorts of students.

HESC2452 Movement Assessment and Instruction was offered for the first time in 2012 as part of the Bachelor of Exercise Physiology. It was introduced with the aim of providing students with increased opportunity to integrate and consolidate their knowledge and practical skills in biomechanics and functional anatomy. The heavy weighting given to practical course assessments in movement assessment and movement instruction has been designed to align with the practical clinical skills requirements of the Exercise Physiology profession.

Student feedback is welcome and taken seriously. A Course and Teaching Evaluation and Improvement (CATEI) survey will be provided in the final weeks of the course to formally gather student feedback. The feedback received will be used to enhance all aspects of the course in its future delivery.

Student feedback from the CATEI survey for the first delivery of HESC2452 in 2012 indicated that more laboratory sessions would have enhanced student learning, as would inclusion of a written examination to assess understanding of the relevant theories and principles. In response to this student feedback, the number of laboratory sessions was increased for 2013 and 2014, and a written examination has been scheduled to occur during the end of session examination period. In addition, the lecture and tutorial schedule has been revised to provide improved support and alignment with completion of all assessment tasks, and additional assessment through online quizzes was implemented in 2015. In 2016, the-portfolio reflections were added to the course to give students the opportunity to reflect on the development of their professional and clinical skills.

GENERAL INFORMATION

The Department of Exercise Physiology is part of the School of Medical Sciences and is within the Faculty of Medicine. It is located in the Wallace Wurth building.

Associate Professor Jeanette Thom is Head of Department. Appointments to meet with her may be made via email (j.thom@unsw.edu.au).

Dr Rachel Ward is the Exercise Physiology Program Authority. Appointments to meet with her may be made via email (rachel.ward@unsw.edu.au).

There is an Honours program conducted by the School. The Honours program is coordinated by Dr Thomas Fath (t.fath@unsw.edu.au) Ph: 9385 8495. Any students considering an Honours year should discuss the requirements with the coordinator. Honours Administrator: Vicky Sawatt (v.sawatt@unsw.edu.au) Ph:9385 8195.

Postgraduate degrees

The Department of Exercise Physiology offers students the opportunity to enter into the following graduate programs:

- ***Research Masters:*** For more information contact the post-graduate co-ordinators Dr Pascal Carrive (p.carrive@unsw.edu.au) or Dr Nicole Jones (n.jones@unsw.edu.au)

- ***Doctorate*** (***Ph.D)***: For more information contact the post-graduate co-ordinators Dr Pascal Carrive (p.carrive@unsw.edu.au) or Dr Nicole Jones (n.jones@unsw.edu.au)

Enrolment and administrative help

Mr Ryan Ling is available to help with problems with enrolment and scheduling, and should be the first point of contact for administrative problems. He can be found in the Medical Education and Student Office (MESO) Ground floor of the Wallace Wurth Building. Ph:9385 2960. Email: exphys.med@unsw.edu.au

Official Communication

All communication will be via your official UNSW email, please see Advice for Student-Official Communication for more details.

Attendance Requirements

Attendance is expected at all lectures, practicals, tutorials and examinations for this course. Attendance at all practicals, tutorials and examinations will be recorded. Students who do not participate in these sessions for any reason other than medical or misadventure, will be marked absent and may 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 except for truly exceptional circumstances. Arrival more than 15 minutes after the start of the class will be recorded as non-attendance. Although lectures will be available on Echo360, student participation is encouraged in the lectures and these are important to attend.

For additional details on the UNSW Policy on Class Attendance and Absence see [Policy on Class Attendance and Absence](#).

Guidelines on extra-curricular activities affecting attendance can be found on the School of Medical sciences Website.

Special Consideration

Please see [UNSW-Special Consideration](#)

If you believe that your performance in a course, either during session or in an examination, has been adversely affected by sickness, misadventure, or other circumstances beyond your control, you should ask for special consideration in the determination of your results. Such requests should be made by lodging an application with UNSW Student Central as soon as practicable after the problem occurs. **Applications made more than three working days after the relevant assessment will not be accepted except in TRULY exceptional circumstances.**

If you unavoidably miss an assessment task, you must lodge an application with UNSW Student Central for special consideration. Your application must include a medical certificate or other relevant documentation. If your request for consideration is granted an alternative assessment will be organised which may take the form of a supplementary exam, increased weighting of the final exam, or an oral element. You cannot assume you will be granted supplementary assessment.

For the UNSW assessment information and policy, see:
my.unsw.edu.au/student/academiclife/assessment/AssessmentPolicyNew.html

student.unsw.edu.au/assessment

Academic Integrity and Plagiarism

Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft and is regarded by the university as academic misconduct. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. The University has adopted an educative approach to plagiarism and has developed a range of resources to support students.

The [UNSW Student Code](#) outlines the standard of conduct expected of students with respect to their academic integrity and plagiarism. More details of what constitutes plagiarism can be found [here](#)

Health and Safety

Class activities must comply with the NSW *Work Health and Safety Act 2011*, the *Work Health and Safety Regulation 2011*, and other relevant legislation and industry standards. It is expected that students will conduct themselves in an appropriate and responsible manner in order not to breach HS regulations and ensure a safe work/study environment for themselves and others. Further information on relevant HS policies and expectations is outlined at: safety.unsw.edu.au

Student Conduct

All students must accept their shared responsibility for maintaining a safe, harmonious and tolerant University environment. For further information see student.unsw.edu.au/conduct

Student Support Services

Student support services can be found at Educational Support Services.

Counselling support services can be found at Counselling and Psychological Services.

Appeal Procedures

Details can be found at Student Complaints and Appeals

COURSE TIMETABLE

Week	Date	Lecture 1 *Monday 1-2pm* *Wallace Wurth LG03*	Lecture 2 *Thursday 11am-12* *Wallace Wurth LG03*	Tutorial *Friday 11am-12* *Friday 12-1pm* *Friday 1-2pm* *Friday 2-3pm* *Wallace Wurth Ex Phys Lab*	Laboratory *Wednesday 1-3pm* *Thursday 3-5pm* *Friday 9-11am* *Friday 4-6pm* *Wallace Wurth G08* **OR** *Wallace Wurth Ex Phys Lab*	Assessments Due
1	25-29 Jul	**L1:** Course introduction & overview (RW)	**L2:** Observational (qualitative) movement analysis (RW)			
2	1-5 Aug	**L3:** Measuring physical activity: Accelerometry (BB)	**L4:** Measuring joint movement: Two-dimensional (2D) motion analysis (RW)		**Lab 1:** Actigraphy 1: Collecting and Analysing Accelerometry Data (JB/MJ/DM/MW) Wallace Wurth G08	• E-portfolio Reflection 1 due 5pm Fri Aug 5 (2%)
3	8-12 Aug	**L5:** Measuring joint movement: Three-dimensional (3D) motion analysis - collecting data (RW)	**L6:** Measuring joint movement: Three-dimensional (3D) motion analysis - analysing data (RW)	**T1:** Preparation for Movement Instruction Video Assessment (BC/JB) Wallace Wurth Ex Phys Lab	**Lab 2:** Actigraphy 2: Scoring and Analysing Physical Activity Data with ActiLife (JB/MJ/DM/MW) Wallace Wurth G08	• Laboratory 1 Submissions due (2.5%)
4	15-19 Aug	**L7:** Defining and measuring motor learning and performance (RW)	**L8:** Stages of motor learning, including kinematic and EMG descriptors (RW)		**Lab 3:** Digitising, Processing and Analysing 2D Kinematic Data with MaxTRAQ (JB/MJ/DM/MW) Wallace Wurth G08	• Laboratory 2 Submissions due (2.5%)
5	22-26 Aug	**L9:** Instruction, demonstration and observation in motor learning (RW)	**L10:** Feedback in motor learning - Definitions and functions of feedback (RW)	**T2:** Qualitative Analysis of Human Movement (BC/JB) Wallace Wurth Ex Phys Lab	**Lab 4:** Processing, Displaying and Analysing 3D Kinematic Data with Visual3D (JB/MJ/DM/MW) Wallace Wurth G08	• Laboratory 3 Submissions due (2.5%) • Tutorial 2 Online Quiz due 9am Fri Aug 26 (1.25%)
6	29 Aug-2 Sept	**L11:** Feedback in motor learning - Effects of precision, timing and frequency of feedback (RW)	**L12:** Skill characteristics/ constraints on motor performance (RW)		**Lab 5:** Collecting 3D Kinematic Data with MaxPRO (JB/MJ/DM/MW) Wallace Wurth Ex Phys Lab	• Laboratory 4 Submissions due (2.5%)

7	5-9 Sept	**L13:** Motivation and attention in *motor learning* (RW)	**L14:** Memory and perception in *motor learning (*RW)	**T3:** Instruction & Feedback in Motor Learning (BC/JB) Wallace Wurth Ex Phys Lab	**Lab 6:** Data Collection for Quantitative Motion Analysis Report (JB/MJ/DM/MW) Wallace Wurth Ex Phys *Lab*	•Tutorial 3 Online Quiz due 9am Fri Sept 9 (1.25%)
8	12-16 Sept	**L15:** Practice and repetition in motor learning (RW)	**L16:** Measuring muscle activity: Electromyography (BB)		**Lab 6:** Data Collection for Quantitative Motion Analysis Report (JB/MJ/DM/MW) Wallace Wurth Ex Phys Lab	•E-portfolio Reflection 2 & 3 due 5pm Fri Sept 16 (4%)
9	19-23 Sept	**L17:** Quantitative motion analysis reports (RW)	**L18:** Quantitative gait analysis (RW)	**T4:** Motivation in Motor Learning (BC/JB) Wallace Wurth Ex Phys Lab	**Lab 7:** Processing Kinematic Data for Quantitative Motion Analysis Report (JB/MJ/DM/MW) Wallace Wurth G08	•Movement Instruction Video & Exercise Analysis due 9am Mon Sept 19 (12%) •Tutorial 4 Online Quiz due 9am Fri Sept 23 (1.25%)
				Mid-semester break		
10	3-7 Oct	**NO LECTURE PUBLIC HOLIDAY**	**L19:** Introduction to Ergonomics: Including activities of daily living (ADLs) and work tasks (BB)		**Lab 8:** Processing EMG Data for Quantitative Motion Analysis Report (JB/MJ/DM/MW) Wallace Wurth G08	
11	10-14 Oct	**L20:** Ergonomics: Biomechanical perspectives on injury (RW)	**L21:** Video assessment feedback, and instruction for final movement instruction assessment (RW)	**T5:** Practice Scheduling in Motor Learning (BC/JB) Wallace Wurth Ex Phys Lab	**Lab 9:** Online Gait Analysis Tutorial (JB/MJ/DM/MW) Wallace Wurth G08	•Tutorial 5 Online Quiz due (1.25%)
12	17-21 Oct	**L22:** Technique & safety assessment for therapeutic exercise delivery (AB)	**L23:** Course summary & review (RW)		**Lab 10:** Movement Instruction Practice & Exercise Analysis (JB/MJ/DM/MW) Wallace Wurth Ex Phys Lab	•Quantitative Motion Analysis Report due 9am Mon Oct 17 (25%) •E-portfolio Reflection 4 due 5pm Fri Oct 21 (2%)
13	24-28 Oct	*NO LECTURE*	*NO LECTURE*		**Movement Instruction Viva Assessment** (10%) (RW/KM/JB/MJ/DM/MW) Wallace Wurth Ex Phys Lab	

RW: Rachel Ward   BB: Ben Barry   AB: Amanda Burdett   JB: Jessica Bellamy   BC: Briana Clifford   MJ: Matthew Jones   DM: David Mizrahi   MW: Michael Wewege