



Faculty of Medicine
School of Medical Sciences

HESC2452

Movement Assessment and Instruction

COURSE OUTLINE

TERM 2, 2019

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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 medicallsciences.med.unsw.edu.au)

HESC2452 Course Information

This course will equip you with knowledge and skills for assessing and instructing clients and patients in exercises and other movements. You will integrate concepts from biomechanics, functional anatomy, motor learning and skill acquisition in the analysis of exercises, work tasks and activities of daily living. You will apply your theoretical understanding of biomechanics and functional anatomy in practical analysis of movement, using both quantitative and qualitative approaches. 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 instructing clients and patients regarding movement and exercise.

This course is restricted to students enrolled in the Bachelor of Exercise Physiology (3871).

Credit Points: 6 UoC

Course Pre-requisites:

ANAT2451

BIOM2451

OBJECTIVES OF THE COURSE

This course aims to

1. Develop students' skills in integrating and applying concepts from biomechanics and functional anatomy
2. Extend students' understanding of motor learning and instructional approaches for training people in movement tasks
3. Develop students' skills in quantitative motion analysis techniques
4. 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

COURSE CONVENOR and TUTORS

Course Convenor & Program Authority

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Available to help with problems with enrolment and scheduling, and the first point of contact for administrative problems.

Technical Officer:

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

COURSE STRUCTURE and TEACHING STRATEGIES

Learning activities occur on the following days and times:

- Lectures: All delivered online via Moodle
- Tutorials: Tuesday 12-1pm; Thursday 1-2pm; Friday 3-4pm; Friday 4-5pm
- Laboratories: Tuesday 4-6pm, Wednesday 12-2pm; Thursday 9-11am; Thursday 11-1pm

Students are expected to attend all scheduled face-to-face classes for their full duration (2 hours of labs per week, and 1 hour of tutorial per week). Students are reminded that UNSW recommends that a 6 unit-of-credit (UoC) course should involve about 150 hours of study and learning activities.

Course philosophy and design

This course includes a series of online lectures conveying the application of quantitative movement analysis of exercise, activities of daily living, and work tasks. The online lectures deliver the theoretical information on which the laboratory activities are based. The laboratory classes will focus on quantitative movement analysis techniques. These learning activities will progressively build on the biomechanical knowledge and skills you acquired through completion of Biomechanics for Sports Scientists (BIOM2451). With your aim as practitioners (clinicians) being to assist people with movement enhancement, the course also includes a series of online 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). The online lectures provide the theoretical basis for the tutorials in which you will develop and practice your skills in movement instruction. 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 and Behaviour (HESC1511), Functional Anatomy (ANAT2451), and Biomechanics for Sports Scientists (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 Exercise Physiology program, in particular in Advanced Exercise Science (HESC3501), Physical Activity and Health (HESC3504), 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.

Online lectures – This approach is used to present relatively large amounts of information to students throughout the course. Online lectures will be available on Moodle throughout the term, PDF copies of the lecture slides will also be available on Moodle. Students are expected to complete each online lecture before the related tutorial or lab class. The lectures provide the theoretical information that underpins all face-to-face classes and assessment tasks.

Laboratories – The purpose of the laboratory 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 demonstrate and reinforce key theoretical concepts that have been covered in the lectures. The questions contained in the laboratory notes will guide your learning in this respect.

Tutorials – These 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, this includes viewing the associated online lecture and completing any related quizzes or reading tasks

Independent study – There is insufficient time in the tutorials and laboratories 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.

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 a central teaching strategy in this course.

TEXTBOOKS AND OTHER RESOURCES

Moodle

Information about the course as well as lecture, tutorial and laboratory material 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 view all online lectures, download lecture slides, download tutorial and laboratory notes, access your grades, find reference material in the course (such as this document), and communicate with the course convenor and your peers. Please see the course convenor 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 the information 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: <https://www.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

Journal of Human Movement Studies

Motor Control

Journal of Applied Biomechanics

Journal of Motor Behaviour

Sports Biomechanics

Human Movement Science

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

See also medicallsciences.med.unsw.edu.au/students/undergraduate/learning-resources

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.

Exercise Physiology Program Learning Outcomes

1. Students will be able to demonstrate detailed clinical knowledge and skills relevant to cardiopulmonary, metabolic, cancer, mental health, musculoskeletal and neuromuscular rehabilitation.
2. Students will be able to engage in independent learning and reflective practice for the betterment of professional clinical practice.
3. Students will be able to conduct a broad range of exercise-based clinical tests and deliver lifestyle change programs that use exercise for the primary prevention of disease and the management of chronic disease.

4. Students will be able to apply advanced problem-solving skills and critical thinking within a scientific and clinical context.
5. Students will be able to describe the relationship between physical activity and health and the implications of this relationship throughout the human lifespan.
6. Students will be able to display effective and appropriate communication skills and an ability to work as a member and leader of a team, with respect for diversity and a high standard of ethical practice.

HESC2452 Course Learning Outcomes

1. Describe and demonstrate the appropriateness and effectiveness of a variety of teaching and feedback strategies for movement instruction and exercise delivery
2. Demonstrate an understanding of the implications of individual differences on motor learning and skill acquisition
3. Effectively communicate information to clients and patients in training and rehabilitation programs
4. Demonstrate theoretical understanding and practical skills regarding the collection, graphical presentation and interpretation of quantitative motion analysis data
5. Identify the biomechanical loads experienced by specific anatomical structures during different postures and movements and recognise when this poses a risk of injury

ASSESSMENT PROCEDURES

Assessment of your learning in the course will be achieved through laboratory submissions and reports, practical skills assessments, and a final examination. The laboratory submissions and quantitative motion analysis report will assess your ability to accurately collect, process, and analyse quantitative data, and to communicate concisely in a written report. The practical 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 and exercises. These assessments will require you to draw on theories of motor learning and skill acquisition presented in the lectures and tutorials. 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
<i>4 x LABORATORY SUBMISSIONS - GRAPHS & ONLINE QUIZ (5% PER LAB)</i>	20%	Weeks 2, 3, 4, 5
<i>QUANTITATIVE MOTION ANALYSIS REPORT</i>	25%	Week 10 9am Monday
<i>MOVEMENT INSTRUCTION SKILLS ASSESSMENT</i>	20%	Final examination period
<i>FINAL EXAMINATION</i>	35%	Final examination period

4 x LABORATORY SUBMISSIONS (Due Weeks 2, 3, 4, 5) 20%

Laboratory work for Labs 1-4 will contribute to 20% of the course result, 5% per lab. For each lab, assessment is based on processing, graphical presentation and interpretation of quantitative motion analysis data. Assessment items must be submitted within one (1) week after the laboratory session in which the work is completed. Written feedback will be provided based on the marking rubric. Completed laboratory tasks must be submitted for the following four (4) lab sessions:

- *Laboratory 1 – Actigraphy 1: Collecting and Analysing Accelerometry Data (due Week 2)*
- *Laboratory 2 – Actigraphy 2: Scoring and Analysing Physical Activity Data with ActiLife (due Week 3)*
- *Laboratory 3 – Digitising, Processing and Analysing 2D Kinematic Data with MaxTRAQ (due Week 4)*
- *Laboratory 4 – Processing and Analysing 3D Kinematic Data with Vicon Nexus (due Week 5)*

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. The formative feedback received for these tasks will assist with completion of the Quantitative Movement Analysis Report.

Learning Outcomes for the 4 x Laboratory Submissions

- Demonstrate skills in conducting quantitative movement analysis with accuracy and attention to detail.
- Demonstrate the ability to use customised software packages and hardware to collect data for quantitative assessment of movement
- Demonstrate proficiency in use of Microsoft Excel for data processing and graphing
- 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.

QUANTITATIVE MOTION ANALYSIS REPORT (Due Week 10) 25%

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 exercise or movement. Data for the quantitative motion analysis report will be collected during in class laboratory sessions. Data collection will be conducted in groups of 5-6 students, with each group working collaboratively to plan and conduct their quantitative motion analysis session. Data for the quantitative motion analysis report will be collected during the laboratory sessions conducted in Weeks 6 and 7. Time will be allocated for data processing and graph preparation during the laboratory sessions in Week 8. 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. Written feedback will be provided based on the marking rubric.

Learning Outcomes for the *Quantitative Motion Analysis Report*

- Apply skills and knowledge in advanced quantitative movement analysis
- 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 SKILLS ASSESSMENT (Final Examination Period) 20%

This practical assessment task will be held in the Final Examination Period and will be based on assessment of the student's ability to perform movement instruction and qualitative analysis, tasks commonly used by Exercise Physiologists. 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. Correct identification and description of anatomical, functional and biomechanical information about two therapeutic exercises
2. Appropriate movement analysis and identification of critical features of two therapeutic exercises
3. Correct analysis of the goals and functional relevance of two therapeutic exercises
4. Instruction of a mock patient in performance of two 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 & Exercise Analysis - Practical Assessment*

- Perform qualitative analysis of movement by identifying appropriate critical features, goals, skills, and abilities associated with a particular movement
- Identify and describe anatomical, functional and biomechanical information about an exercise, and the critical features required for effective movement instruction.
- Effectively communicate information to clients and patients in training and rehabilitation programs

- Demonstrate appropriate and effective teaching, feedback and motivational strategies for movement instruction

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

FINAL EXAMINATION (Final Examination Period) 35%

This assessment task will be held during the Final Examination Period, and will cover ALL material presented in lectures, tutorials, laboratories and assessment tasks from the whole term.

The exam will consist of 50 multiple choice questions (MCQs) worth 50%, and 5 short answer sections, worth 10% each, totalling to 50%.

Learning Outcomes for the *Final Examination*

- Demonstrate detailed knowledge of the principles underlying quantitative movement analysis techniques, and interpretation of quantitative movement analysis data.
- Demonstrate a comprehensive understanding of theories of motor learning and skill acquisition and how these can be applied to instruction of movement
- 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.

COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students about the course and continual improvements are made based on this feedback. [myExperience](#) 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. MyExperience 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 Course and Teaching Evaluation and Information (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 since 2015 a written examination has been included to occur during the final 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 e-portfolio reflections were added to the course to give students the opportunity to reflect on the development of their professional and clinical skills. In 2017 the course took part in a pilot study of the use of Bluepulse, an online formative feedback platform which has been integrated with Moodle at UNSW. Bluepulse is an online instrument students can use to deliver feedback about the course during their participation in the course. From 2018 the number of summative assessment tasks was reduced to four different types of assessments to align with the UNSW 2025 Strategy and Scientia Education Experience. In response to low student attendance at face-to-face lectures in 2018 and previous years, all lectures for 2019 have been converted to online delivery via Moodle.

GENERAL INFORMATION

Official Communication

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

Attendance Requirements

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

Attendance at all tutorial and laboratory classes is compulsory, and must be recorded in the class roll at the start of each class. Arrival more than 15 minutes after the start of the class will be recorded as non-attendance. It is your responsibility to ensure that the tutor records your attendance and no discussions will be entered into after the completion of the class. Satisfactory completion of the work set for each class is essential. It should be noted that non-attendance for other than documented medical or other serious reasons, or unsatisfactory performance during the term may result in an additional practical assessment exam or ineligibility to pass the course. Students who miss practical classes due to illness or for other reasons must submit a copy of medical certificates or other documentation to the course convenor.

Laboratory Classes

The laboratory class is an opportunity for students to develop program learning outcomes behaving in an ethical, socially responsible and professional manner within the practical class.

Students must take due care with biological and hazardous material and make sure all equipment is left clean and functional. In the interests of safety, special attention should be paid to any precautionary measures recommended in the notes. If any accidents or incidents occur they should be reported immediately to the tutor in charge of the class who will record the incident and recommend what further action is required.

For more details see [Advice for Students-Practical Classes](#)

Special Consideration

Please see [UNSW-Special Consideration](#) and [Student Advice-Special Consideration](#)

If you unavoidably miss any assessments, you must lodge an application with UNSW Student Central for special consideration. If your request for consideration is approved an alternative assessment will be organised which may take the form of a supplementary exam or assessment, or increased weighting of the final exam.

See: [Student-Advice-Reviews and Appeals](#)

Student Support Services

See: [Student Advice-Student support services](#).

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](#)

Student Conduct

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

Student Equity and Diversity Issues

Students requiring assistance are encouraged to discuss their needs with the course convenor prior, or at the commencement of the course, or with staff in the Disability Unit (previously known as SEADU) (9385 4734). Further information for students with disabilities is available at www.student.unsw.edu.au/disability

Health and Safety

Class activities must comply with the NSW *Work Health and Safety Act 2011*, the *Work Health and Safety Regulation 2017*, 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:
www.safety.unsw.edu.au

Appeal Procedures

Details can be found at [Student Complaints and Appeals](#)

COURSE TIMETABLE 2019

Week	Date	Online Lectures		Tutorial	Laboratory	Assessments Due
				<p>Tuesday 12-1pm Thursday 1-2pm Friday 3-4pm Friday 4-5pm</p> <p>Wallace Wurth Ex Phys Lab</p>	<p>Tuesday 4-6pm Wednesday 12-2pm Thursday 9-11am Thursday 11am-1pm</p> <p>Wallace Wurth G16/17 OR NeuRA Biomechanics Lab OR Wallace Wurth Ex Phys Lab</p>	
0	31 May	L0₁ : Course introduction and overview	L0₂ : Assumed knowledge revision			
1	3-7 Jun	L1 : Qualitative analysis of human movement	L2 : Measuring physical activity: Accelerometry	T1 : Movement analysis (RW)	Lab 1 : Actigraphy 1: Collecting and analysing accelerometry data (MW/ML) Wallace Wurth G16/17	
2	10-14 Jun	L3 : Defining and measuring motor learning and performance	L4 : Measuring joint movement: Two-dimensional (2D) motion analysis	T2 : Defining and measuring motor learning (RW)	Lab 2 : Actigraphy 2: Scoring and analysing physical activity data with ActiLife (MW/ML) Wallace Wurth G16/17	Laboratory 1 Submissions (5%) due before lab 2 class
3	17-21 Jun	L5 : Stages of motor learning, including kinematic and EMG descriptors	L6 : Instruction, demonstration and observation in motor learning	T3 : Stages of motor learning (RW)	Lab 3 : Digitising, processing and analysing 2D kinematic data with MaxTRAQ (MW/ML) Wallace Wurth G16/17	Laboratory 2 Submissions (5%) due before lab 3 class
4	24-28 Jun	L7 : Measuring joint movement: Three-dimensional (3D) motion analysis - collecting data	L8 : Measuring joint movement: Three-dimensional (3D) motion analysis - analysing data	T4 : Instruction and demonstration in motor learning (RW)	Lab 4 : Processing, displaying and analysing 3D kinematic data with Vicon Nexus (MW/ML) Wallace Wurth G16/17	Laboratory 3 Submissions (5%) due before lab 4 class
5	1-5 Jul	L9 : Feedback in motor learning - Definitions and functions of feedback	L10 : Feedback in motor learning - Effects of precision, timing and frequency of feedback	T5 : Feedback in motor learning (RW)	Lab 5 : Collecting 3D kinematic data with Vicon (MW/ML) NeuRA Biomechanics Lab	Laboratory 4 Submissions (5%) due before lab 5 class
6	8-12 Jul	L11 : Skill characteristics/constraints on motor performance	L12 : Motivation and attention in motor learning	T6 : Motor skill characteristics (RW)	Lab 7 : Data collection for Quantitative Motion Analysis Report (MW/ML) NeuRA Biomechanics Lab	

7	<i>15-19 Jul</i>	L13: Memory and perception in motor learning	L14: Practice and repetition in motor learning	T7: Motivation and attention in motor learning (RW)	Lab 7: Data collection for Quantitative Motion Analysis Report (MW/ML) <i>NeuRA Biomechanics Lab</i>	
8	<i>22-26 Jul</i>	L15: Biomechanical perspectives on Injury	L16: Measuring muscle activity: Electromyography	T8: Memory and practice scheduling in motor learning (RW)	Lab 8: Data processing for Quantitative Motion Analysis Report (MW/ML) <i>Wallace Wurth G16/17</i>	
9	<i>29 Jul-2 Aug</i>	L17: Quantitative gait analysis	L18: Quantitative motion analysis reports (RW)	T9: Biomechanical analysis of technique and posture (RW)	Lab 9: Online gait analysis tutorial (MW/ML) <i>Wallace Wurth G16/17</i>	
10	<i>5-9 Aug</i>	L19: Technique and safety assessment for therapeutic exercise delivery	L20: Course summary and review	T10: Revision tutorial (RW)	Lab 10: Movement instruction practice & exercise analysis (MW/ML) <i>Wallace Wurth Ex Phys Lab</i>	Quantitative Motion Analysis Report (25%) due 9am Mon Aug 5
STUDY PERIOD	<i>13-15 Aug</i>					
FINAL EXAM PERIOD	<i>16-31 Aug</i>					Movement Instruction Skills Assessment (20%)
						Final Examination (35%)

RW: Rachel Ward, ML: Meg Letton, MW: Michael Wewege,