# PHTY301

## Human Movement

S2 Day 2018

*Department of Health Professions*

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# General Information

Unit convenor and teaching staff
Unit Convenor
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Tutor
Jodie Wills
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Tutor
Daniel Glassbrook
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Credit points
3

Prerequisites
39cp at 100 level or above including (HLTH108 and (HLTH109 or MEDI203) and PHTY302)

Corequisites

Co-badged status

Unit description
This unit provides students with a broad overview of motor learning and performance. The unit integrates the student's prior study of anatomy, biomechanics, physiology, neuroscience and behavioural sciences as it pertains to human movement. The aim of the unit is to provide a behavioural and physiological understanding of the acquisition and execution of skilled motor actions. The unit explores the classification of motor skills, the neuromotor processes that underpin motor performance and features of the learning environment that can be manipulated to promote motor learning in a coaching and/or rehabilitation context. Students will have the opportunity to apply their learning through a group project in which they train a healthy person to improve a motor skill.

## Important Academic Dates

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

# Learning Outcomes

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

Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition

Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements

Describe strategies to optimise motor learning and performance in healthy people

Implement, and progress an evidence-based motor skill training program in healthy people

Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level

Critically evaluate a motor skill training program

Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

# General Assessment Information

**General assessment Information**

Information concerning Macquarie University's assessment policy is available at https://staff.mq.edu.au/work4/strategy-planning-and-governance/university-policies-and-procedures/policies/assessment. Grade descriptors and other information concerning grading requirements are contained in Schedule 1 of the Macquarie University Assessment Policy.

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes and attempt all assessment tasks.

Further details for each assessment task will be available on iLearn, including marking rubrics, proformas and example assignments

All final grades in the department of Health Professions are determined by a grading committee and are not the sole responsibility of the Unit Convenor.

Students will be awarded one of these grades plus a Standardised Numerical Grade (SNG). The SNG is not necessarily a summation of the individual assessment components. The final grade and SNG that are awarded reflect the corresponding grade descriptor in Schedule 1 of the Assessment Policy.

Extensions for Assessment Tasks Applications for assessment task extensions must be submitted via www.ask.mq.edu.au. For further details please refer to the Disruption to Studies Policy available at https://students.mq.edu.au/study/my-study-program/special-consideration/disruption-to-studies

Late Submission of Work

All assignments which are officially received after the due date, and where no extension has been granted by the course convenor or tutor, will incur a deduction of 10% for the first day, and 10% for each subsequent day including the actual day on which the work is received. Weekends and public holidays are included. For example:

| Due Date | Received | Days Late | Deduction | Raw Mark | Final Mark |
|---|---|---|---|---|---|
| Friday, 14th | Monday, 17th | 3 | 30% | 75% | 45% |

# Assessment Tasks

| Name | Weighting | Hurdle | Due |
|---|---|---|---|
| Written assignment | 30% | No | Week 3 |
| Written assignment (Program) | 30% | No | Week 5 |
| Group Seminar | 40% | No | Week 13 |

## Written assignment

Due: **Week 3**
Weighting: **30%**

Motor Skill Analysis

On successful completion you will be able to:

- Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition
- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements

## Written assignment (Program)

Due: **Week 5**
Weighting: **30%**

Training program and evaluation plan

On successful completion you will be able to:

- Describe strategies to optimise motor learning and performance in healthy people
- Implement, and progress an evidence-based motor skill training program in healthy people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
- Critically evaluate a motor skill training program

## Group Seminar

Due: **Week 13**
Weighting: **40%**

12 minute group presentation focussed on implementation and results of the training program as well as reflection on development, implementation and evaluation of the program.

On successful completion you will be able to:

- Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition
- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements
- Describe strategies to optimise motor learning and performance in healthy people
- Implement, and progress an evidence-based motor skill training program in healthy people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
- Critically evaluate a motor skill training program
- Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

# Delivery and Resources

### Unit Organisation

This is a three credit point unit run over a 13 week session. Each week there is a two hour lecture and every second week there is a two hour laboratory. Further information is available via the PHTY301 iLearn site http://ilearn.mq.edu.au

### Assumed knowledge

This unit builds on your learning in the previous undergraduate units particularly in the area of Anatomy and Biomechanics; In particular, HLTH108/9, BIOL247, MEDI203, and PHTY302.

### Teaching and Learning Strategy

This unit will have a 2 hour lecture and 2 hour laboratory every second week n.b., refer to weekly schedule for specific timings. Lectures will provide foundation knowledge and also provide discussion of concepts and ideas to further understanding of the content. Laboratories will allow for the demonstration and learning of practical skills relevant to Human Movement. The teaching approach will be based on students developing a deep understanding of principles and the ability to independently solve problems, with the expectation that students can then translate this knowledge to different scenarios.

### Textbooks & Readings

Essential

This unit does not have any textbooks that are essential for you to purchase.

Recommended

The following texts will be useful resources and available in the library. Recommendations about specific readings from these and other resources (such as research papers, books, websites and videos) will be listed on iLearn.

- *Sports biomechanics: the basics: optimising human performance / Anthony J. Blazevich, 2nd ed., A & C Black Publishers: London*
- *Fundamentals of Biomechanics / Duane Knudson, 2nd ed., Springer US: Boston, MA*
- *Biomechanics and motor control of human movement / David A. Winter, 4th ed., Hoboken, N.J. : Wiley, c2009, Wiley-Blackwell Online Books*
- *Motor learning and control : concepts and applications / Richard A. Magill, New York University, David I. Anderson, San Francisco State University. Tenth edition., New York, NY : McGraw-Hill*
- *The biophysical foundations of human movement / Bruce Abernethy ... [et al.]. 2nd ed., Champaign, IL : Human Kinetics*

An interactive laboratory manual is available for purchase. Further details are provided on iLearn.

### Attendance

All lectures and tutorials are scheduled in your individual timetable. You may make a request to your tutor to attend a different tutorial on a one-off basis for extenuating circumstances. In most cases lectures are recorded (this cannot be guaranteed as ICT issues may occur preventing this) however, attendance is expected at both lectures and tutorials, as this is where the majority of learning occurs. Failure to attend may impact your final results. It is the responsibility of the student to contact their tutor by email to inform tutors if they are going to be absent. The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/

In particular, attendance at all laboratories is required, as is attendance at the four lectures as specified on iLearn.

### Technology and Equipment

On-campus

Teaching rooms are equipped with state of art audio-visual and ICT equipment including iPads, internet connection, high quality video cameras and multiple LCD screens. Students will use a range of physiotherapy specific equipment typically used in the assessment and management of people with a range of health conditions.

Off-campus

Should you choose to work off campus you will need to have access to a reliable internet connection in order to retrieve unit information & at times to submit assessment tasks via iLearn.

# Unit Schedule

Compulsory lectures are on Weeks 1-3, and Week 9. Note these weeks may change. Any changes will be communicated through iLearn.

Compulsory laboratories are on Weeks 2, 4, 6, 9, 11, and 13. Note these weeks may change. Any changes will be communicated through iLearn.

# Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy *(**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Undergraduate students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/study/getting-started/student-conduct

## Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

## Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

### Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

## Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

## IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

# Graduate Capabilities

## Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

### Learning outcomes

- Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition
- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements
- Implement, and progress an evidence-based motor skill training program in healthy

people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
- Critically evaluate a motor skill training program
- Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

### Assessment tasks

- Written assignment
- Written assignment (Program)
- Group Seminar

## Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

### Learning outcomes

- Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition
- Implement, and progress an evidence-based motor skill training program in healthy people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
- Critically evaluate a motor skill training program
- Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

### Assessment tasks

- Written assignment
- Written assignment (Program)
- Group Seminar

## Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they

participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

## Learning outcomes

- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements
- Describe strategies to optimise motor learning and performance in healthy people
- Implement, and progress an evidence-based motor skill training program in healthy people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
- Critically evaluate a motor skill training program
- Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

## Assessment tasks

- Written assignment
- Written assignment (Program)
- Group Seminar

# Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

## Learning outcomes

- Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition
- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements
- Describe strategies to optimise motor learning and performance in healthy people
- Implement, and progress an evidence-based motor skill training program in healthy

people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
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## Assessment tasks

- Written assignment
- Written assignment (Program)
- Group Seminar

# Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

## Learning outcomes

- Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition
- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements
- Describe strategies to optimise motor learning and performance in healthy people
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## Assessment tasks

- Written assignment
- Written assignment (Program)
- Group Seminar

## Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

### Learning outcomes

- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements
- Describe strategies to optimise motor learning and performance in healthy people
- Implement, and progress an evidence-based motor skill training program in healthy people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
- Critically evaluate a motor skill training program
- Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

### Assessment tasks

- Written assignment
- Written assignment (Program)
- Group Seminar

## Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

### Learning outcomes

- Define the concepts of motor skill and motor learning and describe the stages of motor skill acquisition
- Analyse and classify motor skills according to the relevant anatomical, biomechanical, environmental, physiological and psychological requirements

- Implement, and progress an evidence-based motor skill training program in healthy people
- Design an evidence-based motor skill training program which is specifically tailored to a healthy person's goals and current ability level
- Critically evaluate a motor skill training program
- Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

### Assessment tasks

- Written assignment
- Written assignment (Program)
- Group Seminar

## Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

### Learning outcomes

- Implement, and progress an evidence-based motor skill training program in healthy people
- Reflect on the development, implementation and evaluation of a motor skill training program and make recommendations to improve future training programs and outcomes.

### Assessment tasks

- Written assignment (Program)
- Group Seminar

# Changes from Previous Offering

No major changes