PHTY8100

Applied Sciences for Physiotherapy A

Session 2, In person-scheduled-weekday, North Ryde 2022

Department of Health Sciences

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Disclaimer

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General Information

Unit convenor and teaching staff

Unit Convenor
Laura Brown
laura.brown@mq.edu.au

Tutor
Michael Doumit
michael.doumit@mq.edu.au

Tutor
Bianca Van Vlimmeren
bianca.vanvlimmeren@mqhealth.org.au

Stage Lead
Joel Fuller
joel.fuller@mq.edu.au

Credit points
10

Prerequisites
Admission to DPT

Corequisites

Co-badged status

Unit description
This unit will build upon your prerequisite and assumed knowledge with a focus on exercise science and the cardiorespiratory system in the context of physiotherapy. You will examine the physiological responses and adaptations to inactivity, physical activity and exercise training. Comparisons in exercise response and adaptations to training will be made in healthy individuals and those with impairments in cardiorespiratory fitness. You will acquire skills in exercise testing and exercise prescription required for physiotherapy practice. Additionally, this unit will provide you with an introduction to physiotherapy assessment and management of cardiorespiratory impairments.

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:

ULO1: Explain the range of physiological responses to exercise and exercise training in different population groups including healthy individuals and those with common health conditions. (Scientist and Scholar)

ULO2: Discuss the principles of exercise testing and a person-centred approach to exercise prescription including strategies to promote participation that considers an individual's impairments, goals and preferences, as well as their social, behavioural and cultural background. (Clinical Practitioner)

ULO3: Competently select, perform and interpret tests commonly used in physiotherapy practice to assess exercise capacity and cardiorespiratory fitness in individuals who are either active or sedentary as well as those with common health conditions. (Clinical Practitioner)

ULO4: Design and progress an evidence-based exercise program to optimise an individual's health and wellbeing that considers their impairments, goals and preferences, as well as their social, behavioural and cultural background. (Clinical Practitioner)

ULO5: Competently assess breathing and provide safe and effective treatment for common cardiorespiratory impairments. (Clinical Practitioner)

General Assessment Information

Grade descriptors and other information concerning grading are contained in the Macquarie University Assessment Policy.

All final grades are determined by a grading committee, in accordance with the Macquarie University Assessment Policy, and are not the sole responsibility of the Unit Convenor.

Students will be awarded a final grade and a mark which must correspond to the grade descriptors specified in the Assessment Procedure (clause 128).

To pass this unit, you must demonstrate sufficient evidence of achievement of the learning outcomes, meet any ungraded requirements, and achieve a final mark of 50 or better.

Further details for each assessment task will be available on iLearn.

Extensions for Assessment Tasks

Applications for assessment task extensions may be considered for short-term, unexpected, serious, and unavoidable circumstances affecting assessment. Applications must be submitted via www.ask.mq.edu.au. For further details please refer to the Special Considerations Policy. You can also find out more on the MQ Student Portal. Should you encounter any personal issues

or concerns in regard to health and wellbeing during your studies you can also gain personal support and advice on campus. Please click on this link for further information.

Late Submission of Work

Unless a Special Consideration request has been submitted and approved, a 5% penalty (OF THE TOTAL POSSIBLE MARK) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical concern.

For example:

Number of days (hours) late	Total Possible Marks	Deduction	Raw mark	Final mark
1 day (1-24 hours)	100	5	75	70
2 days (24-48 hours)	100	10	75	65
3 days (48-72 hours)	100	15	75	60
7 days (144-168 hours)	100	35	75	40
>7 days (>168 hours)	100	-	75	0

For any late submissions of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.

Hurdle Assessment

Mastery register is a hurdle assessment. A hurdle requirement is an activity for which a minimum level of performance or participation is a condition of passing the unit in which it occurs. You must obtain a pass grade in this assessment as a minimum requirement for passing the unit. Should you fail to obtain a pass grade upon your initial attempt, one supplementary opportunity will be provided to demonstrate that you meet the minimum requirements for this assessment. Should you still not meet a pass standard a Fail (Hurdle) grade will be awarded, as indicated by a FH grade upon your transcript.

Assessment Tasks

Name	Weighting	Hurdle	Due
Mastery register	0%	Yes	Week 14
Quiz 1	30%	No	Week 6

Name	Weighting	Hurdle	Due
Quiz 2	30%	No	Week 11
Clinical simulation exam	40%	No	Week 14/15/16

Mastery register

Assessment Type [1]: Clinical performance evaluation
Indicative Time on Task [2]: 10 hours
Due: **Week 14**
Weighting: **0%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

The mastery register for PHTY8100 is a list of key skills in which competence is considered to be a requirement for the assurance of quality physiotherapy practice for registration. You must demonstrate a minimum level of competence in these skills as a condition of passing this unit by achieving 60% completion of the mastery register in order to successfully complete the unit.

On successful completion you will be able to:

- Discuss the principles of exercise testing and a person-centred approach to exercise prescription including strategies to promote participation that considers an individual's impairments, goals and preferences, as well as their social, behavioural and cultural background. (Clinical Practitioner)
- Competently select, perform and interpret tests commonly used in physiotherapy practice to assess exercise capacity and cardiorespiratory fitness in individuals who are either active or sedentary as well as those with common health conditions. (Clinical Practitioner)
- Competently assess breathing and provide safe and effective treatment for common cardiorespiratory impairments. (Clinical Practitioner)

Quiz 1

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 15 hours
Due: **Week 6**
Weighting: **30%**

The quiz will include short-answer questions on unit content delivered up to the end of the week prior to the quiz.

On successful completion you will be able to:

- Explain the range of physiological responses to exercise and exercise training in different population groups including healthy individuals and those with common health conditions. (Scientist and Scholar)
- Discuss the principles of exercise testing and a person-centred approach to exercise prescription including strategies to promote participation that considers an individual's impairments, goals and preferences, as well as their social, behavioural and cultural background. (Clinical Practitioner)

Quiz 2

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 17 hours
Due: **Week 11**
Weighting: **30%**

The quiz will include short-answer questions on unit content delivered up to the end of the week prior to the quiz.

On successful completion you will be able to:

- Explain the range of physiological responses to exercise and exercise training in different population groups including healthy individuals and those with common health conditions. (Scientist and Scholar)
- Discuss the principles of exercise testing and a person-centred approach to exercise prescription including strategies to promote participation that considers an individual's impairments, goals and preferences, as well as their social, behavioural and cultural background. (Clinical Practitioner)
- Competently select, perform and interpret tests commonly used in physiotherapy practice to assess exercise capacity and cardiorespiratory fitness in individuals who are either active or sedentary as well as those with common health conditions. (Clinical Practitioner)
- Design and progress an evidence-based exercise program to optimise an individual's health and wellbeing that considers their impairments, goals and preferences, as well as

their social, behavioural and cultural background. (Clinical Practitioner)
- Competently assess breathing and provide safe and effective treatment for common cardiorespiratory impairments. (Clinical Practitioner)

Clinical simulation exam

Assessment Type [1]: Clinical performance evaluation
Indicative Time on Task [2]: 30 hours
Due: **Week 14/15/16**
Weighting: **40%**

The clinical simulation exam involves both practical demonstration of cardiorespiratory assessment and treatment, as well as a viva component.

On successful completion you will be able to:

- Explain the range of physiological responses to exercise and exercise training in different population groups including healthy individuals and those with common health conditions. (Scientist and Scholar)
- Discuss the principles of exercise testing and a person-centred approach to exercise prescription including strategies to promote participation that considers an individual's impairments, goals and preferences, as well as their social, behavioural and cultural background. (Clinical Practitioner)
- Competently select, perform and interpret tests commonly used in physiotherapy practice to assess exercise capacity and cardiorespiratory fitness in individuals who are either active or sedentary as well as those with common health conditions. (Clinical Practitioner)
- Design and progress an evidence-based exercise program to optimise an individual's health and wellbeing that considers their impairments, goals and preferences, as well as their social, behavioural and cultural background. (Clinical Practitioner)
- Competently assess breathing and provide safe and effective treatment for common cardiorespiratory impairments. (Clinical Practitioner)

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[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

As a student enrolled in this unit, you will engage in a range of online and face-to-face learning activities, including readings, online lecture modules and videos. Details can be found on the iLearn site for this unit.

Assumed knowledge

This unit assumes that you have comprehensive knowledge of anatomy and physiology.

Unit Organisation

This is a ten credit point unit run over a 13 week session. Overall, it is anticipated that you spend approximately 150 hours across the session on this unit. Within this unit, there will be approximately 29 hours of campus-based learning activities, with a further 49 hours of online activities, including online interactive lectures and preparation for face-to-face tutorials. You will also need to allow approximately 72 hours for assessment based work.

Teaching and Learning Strategy

This unit encompasses an active learning approach where you will be expected to actively engage in enhancing your own learning experience. A blended learning and teaching strategy is implemented within this unit with online resources providing content and interactive activities such as knowledge checks, quizzes and forums, which is further built upon in campus-based tutorials. You will be able to use tutorials to practice observation, assessment and prescription of programs to improve performance in cardiorespiratory activities. The teaching approach will be based on you developing a deep understanding of principles and the ability to independently solve problems, with the expectation that you can then translate this knowledge to different scenarios (e.g. patients with similar activity limitations but different diagnoses).

Textbooks & Readings

Essential

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

Recommended

Recommended readings for this unit are accessible through Leganto.

The following text will be a useful resource and available in the library reserve and as an e-book. Recommendations about specific readings from these and other resources (such as research papers, books, websites and videos) will be listed on iLearn.

Main and Denehy (2016) Cardiorespiratory Physiotherapy: Adults and Paediatrics (5th Ed). Elsevier Health Sciences. The following exercise physiology text is strongly recommended, however if you have a similar text from previous studies that is fine. Copies will be held in library reserve and also available as an e-book.

Powers SK and Howley ET (2018) Exercise physiology: Theory and application to Fitness and

Performance (10th Edition) New York: McGraw Hill

Technology Used

Active participation in the learning activities throughout the unit will require students to have access to a tablet, laptop or similar device. Students who do not own their own laptop computer may borrow one from the university library.

Consultation with staff

All staff will be available for individual consultation. See iLearn for contact details.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). 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
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

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

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

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

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) 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 or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and

courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Student Support

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

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Services and Support

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues

Student Enquiries

Got a question? Ask us via AskMQ, or contact Service Connect.

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.

Changes from Previous Offering

Aligning with the return to campus post covid-19, classes for this unit will return to face to face delivery.

Inclusion and Diversity

Social inclusion at Macquarie University is about giving everyone who has the potential to benefit from higher education the opportunity to study at university, participate in campus life and flourish in their chosen field. The University has made significant moves to promote an equitable, diverse and exciting campus community for the benefit of staff and students. It is your responsibility to contribute towards the development of an inclusive culture and practice in the areas of learning and teaching, research, and service orientation and delivery. As a member of the Macquarie University community, you must not discriminate against or harass others based on their sex, gender, race, marital status, carers' responsibilities, disability, sexual orientation, age, political conviction or religious belief. All staff and students are expected to display appropriate behaviour that is conducive to a healthy learning environment for everyone.

Professionalism

In the Faculty of Medicine, Health & Human Sciences professionalism is a key capability embedded in all our programs. As part of developing professionalism, Faculty of Medicine, Health & Human Sciences students are expected to attend all face-to-face tutorials. All tutorials are scheduled in your individual timetable. The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/. You may make a request to your unit convenor to attend a different tutorial on a one-off basis for extenuating circumstances. Failure to attend any learning and teaching activities, including workshops, may impact your final results. It is your responsibility to contact the unit convenors by email to inform tutors if you are going to be absent.

Another dimension of professionalism is having respect for your peers. It is the right of every student to learn in an environment that is free of disruption and distraction. Please arrive to all learning activities on time, and if you are unavoidably detained, please join activity as quietly as possible to minimise disruption. Phones and other electronic devices that produce noise and other distractions must be turned off prior to entering class. Where your own device (e.g., laptop) is being used for class-related activities, you are asked to close down all other applications to avoid distraction to you and others. Please treat your fellow students with the utmost respect. If you are uncomfortable participating in any specific activity, please let the relevant academic know.