PHTY3000

Exercise Physiology

Session 1, In person-scheduled-weekday, North Ryde 2022

Department of Health Sciences

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General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
120cp including (HLTH108 or ANAT1001) and ((HLTH109 or ANAT1002) or (MEDI203 or MEDI2100)) and (BIOL247 or BIOL2220 or MEDI211 or MEDI2101)

Corequisites

Co-badged status

Unit description
The unit will cover the basic principles of exercise physiology. You will build on this knowledge and apply an integrated approach to explore: i) how the body responds to different types exercise training strategies; ii) how the body responds to exercise in different environments; and iii) why exercise is beneficial for improving fitness and health-related parameters in healthy individuals and those with common health conditions. You will draw on knowledge from human physiology and anatomy, and be provided with practical experiences to apply this theoretical knowledge.

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: Describe the normal physiological (cardiovascular, respiratory, metabolic and musculoskeletal) response to exercise.

ULO2: Describe and identify appropriate exercise testing for a healthy population.

ULO3: Evaluate an exercise programme for healthy adults and modify for those with common health conditions.

ULO4: Analyse and interpret exercise data from healthy adults and modify for those with common health conditions.

ULO5: Describe the physiological rationale for different exercise paradigms.

ULO6: Apply an integrated approach to describe the human physiological responses to exercising in hot, cold, hypoxic, and hyperbaric conditions.

ULO7: Communicate awareness of the societal, cultural and ethical aspects of exercise to the wider community.

General Assessment Information

General Assessment Information

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, which corresponds to the grade descriptors specified in the Assessment Procedure (clause 128).

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, meet any ungraded requirements including professionalism, and achieve a final mark of 50 or better. Further details for each assessment task will be available on iLearn.

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Student Professionalism

In the Faculty of Medicine, Health, and Human Sciences, professionalism is a key capability embedded in all our courses. As part of developing professionalism, students are expected to attend all small group interactive sessions including tutorials and laboratory-based practical sessions.

Furthermore, lectures and seminars are key learning activities that you are expected to attend throughout completion of your degree. While audio recordings and lecture slides may be made available following these large group sessions, it is important to recognise that such resources are a study aid - and should not be considered an alternative to lecture or seminar attendance. Echo360 recordings of live lectures do not always work and are not a substitute for in-person lecture attendance.

Students are required to attend a minimum of 80% of all noted compulsory activities. Students that do not meet this requirement may be deemed unable to meet expectations regarding professionalism, learning outcomes, and may be referred for disciplinary action (which may include exclusion from assessments and unit failure).

Similarly, as part of developing professionalism, students are expected to submit all work by the due date. Applications for assessment task extensions must be supported by appropriate evidence and submitted via www.ask.mq.edu.au. For further details please refer to the Special Consideration Policy available at https://students.mq.edu.au/study/my-study-program/special-consideration.

Late Submission

All assignments which are officially received after the due date, and where no extension has been granted, will receive a 5% per day penalty including weekends and public holidays. If you submit the assessment task 10 days or more beyond the due date, without an approved extension, you will be awarded a maximum of 50% of the overall assessment marks. For example:

Due date	Received	Days late	Deduction	Raw mark	Final mark
Friday 14th	Monday 17th	3	15%	75%	60%
Friday 14th	Monday 24th	10	50%	75%	25%

Assessment Tasks

Name	Weighting	Hurdle	Due
Mid session quiz	20%	No	Week 7
Health Pitch	30%	No	Week 12
Final Examination	50%	No	Central Exam Period

Mid session quiz

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 15 hours
Due: **Week 7**
Weighting: **20%**

Students will complete an online quiz during a specified period.

On successful completion you will be able to:

- Describe the normal physiological (cardiovascular, respiratory, metabolic and musculoskeletal) response to exercise.
- Describe and identify appropriate exercise testing for a healthy population.
- Evaluate an exercise programme for healthy adults and modify for those with common health conditions.
- Analyse and interpret exercise data from healthy adults and modify for those with common health conditions.

- Describe the physiological rationale for different exercise paradigms.

Health Pitch

Assessment Type [1]: Presentation
Indicative Time on Task [2]: 20 hours
Due: **Week 12**
Weighting: **30%**

In small groups you will develop and present a short health pitch and accompanying infographic demonstrating your understanding of exercising in a challenging environment or with a common health condition.

On successful completion you will be able to:

- Describe the physiological rationale for different exercise paradigms.
- Apply an integrated approach to describe the human physiological responses to exercising in hot, cold, hypoxic, and hyperbaric conditions.
- Communicate awareness of the societal, cultural and ethical aspects of exercise to the wider community.

Final Examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 30 hours
Due: **Central Exam Period**
Weighting: **50%**

This written exam will test your understanding of all content delivered in this unit of study. It will comprise a combination of multiple choice and short answer questions. This exam will be invigilated.

On successful completion you will be able to:

- Describe the normal physiological (cardiovascular, respiratory, metabolic and musculoskeletal) response to exercise.
- Describe and identify appropriate exercise testing for a healthy population.
- Evaluate an exercise programme for healthy adults and modify for those with common health conditions.

- Analyse and interpret exercise data from healthy adults and modify for those with common health conditions.
- Describe the physiological rationale for different exercise paradigms.
- Apply an integrated approach to describe the human physiological responses to exercising in hot, cold, hypoxic, and hyperbaric conditions.
- Communicate awareness of the societal, cultural and ethical aspects of exercise to the wider community.

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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

Unit Organisation

This is a 10 credit point unit run over a 13 week session. Each week there is a lecture and a laboratory or tutorial. These will be run using a mix of face to face and online modes. Further information is available via the PHTY3000 iLearn site.

Assumed knowledge

This unit builds on your learning in the previous undergraduate units particularly in the area of Physiology.

Teaching and Learning Strategy

This unit will have a 2 hour lecture and 2 hour laboratory/tutorial every week. 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 Exercise Physiology. Tutorials will comprise activities to consolidate learning. 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.

- *Exercise Physiology: for health fitness and performance. S.A.Plowman and D.L. Smith , 5th ed., Wolters Kluwer*
- *ACSM's Guidelines for Exercise Testing and Prescription. American College of Sports medicine www.acsm.org, 10th ed., Wolters Kluwer*

Attendance

All lectures and tutorials are scheduled in your individual timetable. You may make a request to your tutor to attend a different laboratory/tutorial on a one-off basis for extenuating circumstances. Attendance is expected at both laboratories 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/

Technology and Equipment

On-campus

The Exercise and Sports Science laboratories are located in the Macquarie University Sport and Aquatic Center (MUSAC). This teaching space is equipped with state of the art exercise and sports science equipment, audio-visual, and ICT equipment including iPads, internet connection, and multiple LCD screens. Students will use a range of specific equipment typically used in the assessment, management, and development of human physical performance.

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

Please consult iLearn for specific unit schedule 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 since First Published

Date	Description
08/02/2022	Updated 'General Assessment Information' to reflect updates in MQ assessment policy.
07/02/2022	Modified "General Assessment Information" to "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, which corresponds to the grade descriptors specified in the Assessment Procedure (clause 128). To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, meet any ungraded requirements including professionalism, and achieve a final mark of 50 or better. Further details for each assessment task will be available on iLearn."