# ESPS1001

## Human Physiology for Exercise and Sport

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

*Department of Health Sciences*

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# General Information

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|---|
| Unit convenor and teaching staff<br>Emily Hill<br>e.hill@mq.edu.au<br><br>Tim Doyle<br>tim.doyle@mq.edu.au<br><br>Tim Doyle<br>tim.doyle@mq.edu.au |
| Credit points<br>10 |
| Prerequisites |
| Corequisites |
| Co-badged status |
| Unit description<br>The unit will cover the basic principles of human physiology and provide context within an exercise and sport setting. You will learn about energy systems and the function of physiological systems broadly. Laboratory experiences will allow you to see and apply this theoretical knowledge and explore the interaction of these systems. |

## 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:** Demonstrate an understanding of the function and relationship of human physiological systems relating to exercise

**ULO2:** Describe the interaction of different physiological systems as they relate to exercise

**ULO3:** Demonstrate an understanding of the physiological functions of human cells in signal transduction, regulation of gene expression, transport, excitability, transmission, and homeostasis

**ULO4:** Demonstrate a basic level of understanding how and why pre-exercise screening is important prior to undertaking a physical training program

# 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.

## 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-semester quiz | 40% | No | Week 6 |
| Exercise Physiology Laboratory Book | 0% | Yes | Week 13 |
| Final Examination | 60% | No | Central Exam Period |

## Mid-semester quiz

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 20 hours
Due: **Week 6**
Weighting: **40%**

This quiz will assess your knowledge of basic exercise physiology

On successful completion you will be able to:

- Demonstrate an understanding of the function and relationship of human physiological systems relating to exercise
- Describe the interaction of different physiological systems as they relate to exercise
- Demonstrate an understanding of the physiological functions of human cells in signal transduction, regulation of gene expression, transport, excitability, transmission, and homeostasis

## Exercise Physiology Laboratory Book

Assessment Type [1]: Lab book
Indicative Time on Task [2]: 25 hours
Due: **Week 13**
Weighting: **0%**
**This is a hurdle assessment task (see assessment policy for more information on hurdle**

**assessment tasks)**

During the practical components of this unit you will maintain a lab book that will be assessed regularly to provide feedback on practical skills, knowledge, and communication relevant to an exercise scientist. Each week's entry will be pass or fail.

On successful completion you will be able to:

- Demonstrate an understanding of the function and relationship of human physiological systems relating to exercise
- Demonstrate a basic level of understanding how and why pre-exercise screening is important prior to undertaking a physical training program

## Final Examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 35 hours
Due: **Central Exam Period**
Weighting: **60%**

This final exam will be a comprehensive assessment of your understanding and application of exercise physiology.

On successful completion you will be able to:

- Demonstrate an understanding of the function and relationship of human physiological systems relating to exercise
- Describe the interaction of different physiological systems as they relate to exercise
- Demonstrate an understanding of the physiological functions of human cells in signal transduction, regulation of gene expression, transport, excitability, transmission, and homeostasis
- Demonstrate a basic level of understanding how and why pre-exercise screening is important prior to undertaking a physical training program

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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. These will be run using a mix of face to face and online modes. Further information is available via the ESPS1001 iLearn site.

**Teaching and Learning Strategy**

This unit will have a weekly lecture and laboratory every week n.b., refer to weekly schedule for specific timings and weeks where laboratories may not be scheduled due to assessments. 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 Science. 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**

Recommended Readings

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

Recommended Texts

- Exercise physiology : theory and application to fitness and performance Powers, Scott K. (Scott Kline), 1950- author.; Howley, Edward T., 1943- author.; ProQuest (Firm)
- ESSA's student manual for health, exercise & sport assessment Coombes, Jeff ; Skinner, Tina
- Exercise physiology for health, fitness, and performance / Sharon A. Plowman, Northern Illinois University, Denise L. Smith, Skidmore College. Author: Sharon A. Plowman
- Human Anatomy and Physiology, EBook, Global Edition Author: Marieb, Elaine Hoehn, Katja

**Attendance**

All lectures and laboratories are scheduled in your individual timetable. You may make a request to your tutor to attend a different laboratory 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 (face to face and online) and laboratories, 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 website 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 |
|---|---|
| 07/02/2022 | Updated General Assessment Information |
| 31/01/2022 | Typos corrected. |