ESPS1001

Human Physiology for Exercise and Sport

Session 1, In person-scheduled-weekday, North Ryde 2025

School of Health Sciences and Nursing

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General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
Admission to BExerSpSc

Corequisites

Co-badged status

Unit description
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: Describe the function and interaction of human physiological systems at rest. (Scientist & Scholar and Exercise Science Practitioner)

ULO2: Explain how different physiological systems interact and influence each other in the context of exercise. (Scientist & Scholar)

ULO3: Describe how cells in the human body work together to send signals, control gene activity, move substances, respond to their environment, and communicate with each other. (Scientist & Scholar)

ULO4: Analyse and interpret physiological data obtained during various types of

exercise. (Scientist & Scholar and Exercise Science 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. You must also make a serious attempt at **all** assessment items.

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

Late Submissions

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.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Block #1 Assessment	30%	No	Week 5		No	
Block #2 Assessment Task	30%	No	Week 9		No	
Final Examination	40%	No	Central Exam Period		No	
Exercise Physiology Laboratory Book	0%	Yes	Week 13		No	

Block #1 Assessment

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 20 hours
Due: **Week 5**
Weighting: **30%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:

This assessment task will help gauge your understanding of fundamental concepts in human physiology.

On successful completion you will be able to:

- Describe the function and interaction of human physiological systems at rest. (Scientist & Scholar and Exercise Science Practitioner)
- Explain how different physiological systems interact and influence each other in the context of exercise. (Scientist & Scholar)

Block #2 Assessment Task

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 20 hours
Due: **Week 9**
Weighting: **30%**
Groupwork/Individual:

Short extension [3]: No
AI Approach:

This assessment task will help gauge your understanding of core concepts of human physiology relevant to exercise.

On successful completion you will be able to:

- Describe the function and interaction of human physiological systems at rest. (Scientist & Scholar and Exercise Science Practitioner)
- Explain how different physiological systems interact and influence each other in the context of exercise. (Scientist & Scholar)
- Describe how cells in the human body work together to send signals, control gene activity, move substances, respond to their environment, and communicate with each other. (Scientist & Scholar)

Final Examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 25 hours
Due: **Central Exam Period**
Weighting: **40%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:

This final exam will be a comprehensive assessment of your understanding and application of fundamental human physiology concepts and their relation to exercise.

On successful completion you will be able to:

- Describe the function and interaction of human physiological systems at rest. (Scientist & Scholar and Exercise Science Practitioner)
- Explain how different physiological systems interact and influence each other in the context of exercise. (Scientist & Scholar)
- Describe how cells in the human body work together to send signals, control gene activity, move substances, respond to their environment, and communicate with each other. (Scientist & Scholar)

- Analyse and interpret physiological data obtained during various types of exercise. (Scientist & Scholar and Exercise Science Practitioner)

Exercise Physiology Laboratory Book

Assessment Type [1]: Lab book
Indicative Time on Task [2]: 15 hours
Due: **Week 13**
Weighting: **0%**
Groupwork/Individual:
Short extension [3]: No
AI Approach:
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:

- Describe the function and interaction of human physiological systems at rest. (Scientist & Scholar and Exercise Science Practitioner)
- Explain how different physiological systems interact and influence each other in the context of exercise. (Scientist & Scholar)
- Analyse and interpret physiological data obtained during various types of exercise. (Scientist & Scholar and Exercise Science 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
- Academic Success 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.

[3] An automatic short extension is available for some assessments. Apply through the Service Connect Portal.

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 modules, videos and lectures. Details can be found on the iLearn site for this unit.

Recommended Readings

- Exercise physiology : theory and application to fitness and performance (Eleventh edition.). Powers, S. K., Howley, E. T., & Quindry, J.
- ESSA's student manual for health, exercise and sport assessment (Second edition.). Coombes, J., & Skinner, T.
- Exercise physiology for health, fitness, and performance (Fifth edition.). Plowman, S. A., & Smith, D. L.
- Human Anatomy And Physiology. Marieb, E. N.

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.

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 connect.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/

Academic Success

Academic Success 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 Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the Service Connect Portal, 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.

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

Fitness to Practice (FTP) is the demonstration of professional competence, acceptable professional behaviour, freedom from impairment and compliance with course-specific requirements needed for a student to practice properly and safely throughout their course and to appropriately practice within a professional environment as a future Exercise Scientist.

Students undertaking the Bachelor of Exercise and Sports Science are required to demonstrate they meet requirements of the four attributes of FTP – Conduct, Performance, Health and Compliance throughout their entire program of study so that they can meet the requirements of the exercise science profession.

Students must also meet the inherent requirements to complete their degree, course, or unit and graduate. To meet the inherent requirements of the Bachelor of Exercise and Sport Science, full participation in practical classes which involve observation, manual handling, undertaking exercise for the purposes of instruction and demonstration is expected.

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 clinical, practical, laboratory, work-integrated learning (e.g., PACE placements), and team-based learning activities. Some learning activities are recorded (e.g., face-to-face lectures), however you are encouraged to avoid relying upon such material as they do not recreate the whole learning experience and technical issues can and do occur. As an adult learner, we respect your decision to choose how you engage with your learning, but we would remind you that the learning opportunities we create for you have been done so to enable your success, and that by not engaging you may impact your ability to successfully complete this unit. We equally expect that you show respect for the academic staff who have worked hard to develop meaningful activities and prioritise your learning by communicating with them in advance if you are unable to attend a small group interactive session.

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.

Unit information based on version 2025.01R of the Handbook