



BIOL6210

Life Processes

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

School of Natural Sciences

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General Information

Unit convenor and teaching staff

Simon Griffith

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Credit points

10

Prerequisites

Admission to MBiotech or MConsBiol or GradDipConsBiol or GradCertConsBiol or MSc or MScInnovationBioConsMgmt

Corequisites

Co-badged status

Unit description

This unit will compare and contrast a range of physiological processes in microbes, plants and animals. It will highlight common features and their evolutionary origins, with particular reference to prokaryotic genes which have been conserved in multicellular organisms. Topics to be explored include metabolism (e.g. respiration, photosynthesis and transport), environmental responses (e.g. abiotic stress response, immune reactions, behaviour), morphogenesis (e.g. cell division, homeotic genes, embryogenesis and symmetry) and phenology (e.g. sexual maturation, fertilisation, life cycles). The unit will draw the common threads of evolution together in complex multicellular organisms, as well as contrasting those processes unique to each Kingdom, such as photosynthesis and locomotion.

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 co-ordination of physiological processes in organisms, including transport systems and responses to stimuli

ULO2: Apply detailed knowledge to explain the processes by which organisms gain energy, grow, and develop

ULO3: Compare and contrast physiological processes, and their evolution, in microbes, plants, and animals

ULO4: Demonstrate critical thinking and writing skills to appraise scientific literature on a major physiological theme

ULO5: Analyse and interpret complex experimental data and critically evaluate these data in the context of physiological phenomena

ULO6: Apply broad and coherent knowledge of physiology to understand how organisms adapt to environmental challenges

General Assessment Information

General Assessment Information

Late Assessment Submission Penalty

From 1 July 2022, Students enrolled in Session based units with written assessments will have the following late penalty applied. Please see <https://students.mq.edu.au/study/assessment-exams/assessments> for more information.

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 **11:55 pm**. A 1-hour grace period is provided to students who experience a technical concern.

For any late submission 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](#).

Assessments where Late Submissions will be accepted

In this unit, late submissions will accepted as follows:

- Written Assignment - YES, Standard Late Penalty applies

Assessment Tasks

Name	Weighting	Hurdle	Due
Written assessment	20%	No	Monday 10th October (11.55pm)
Final exam	40%	Yes	Final exam period
Practical quizzes	20%	No	Within one week of completing each practical class
Weekly quizzes	20%	No	Each week through session

Written assessment

Assessment Type ¹: Report

Indicative Time on Task ²: 15 hours

Due: **Monday 10th October (11.55pm)**

Weighting: **20%**

A deep critical appraisal of two recent publications on one of a set of topics chosen by the student

On successful completion you will be able to:

- Demonstrate critical thinking and writing skills to appraise scientific literature on a major physiological theme
- Analyse and interpret complex experimental data and critically evaluate these data in the context of physiological phenomena
- Apply broad and coherent knowledge of physiology to understand how organisms adapt to environmental challenges

Final exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 20 hours

Due: **Final exam period**

Weighting: **40%**

This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)

An analytical set of short-answer assembled in graded order of difficulty designed to test understanding rather than factual recall.

On successful completion you will be able to:

- Describe the co-ordination of physiological processes in organisms, including transport systems and responses to stimuli
- Apply detailed knowledge to explain the processes by which organisms gain energy, grow, and develop
- Compare and contrast physiological processes, and their evolution, in microbes, plants,

and animals

- Analyse and interpret complex experimental data and critically evaluate these data in the context of physiological phenomena
- Apply broad and coherent knowledge of physiology to understand how organisms adapt to environmental challenges

Practical quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 10 hours

Due: **Within one week of completing each practical class**

Weighting: **20%**

Students complete a set of prac-specific questions embedded in each practical with answers registered in iLearn

On successful completion you will be able to:

- Describe the co-ordination of physiological processes in organisms, including transport systems and responses to stimuli
- Apply detailed knowledge to explain the processes by which organisms gain energy, grow, and develop
- Demonstrate critical thinking and writing skills to appraise scientific literature on a major physiological theme

Weekly quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 12 hours

Due: **Each week through session**

Weighting: **20%**

Students complete a set of lecture-specific questions embedded in each lecture with answers registered in iLearn

On successful completion you will be able to:

- Describe the co-ordination of physiological processes in organisms, including transport systems and responses to stimuli

- Apply detailed knowledge to explain the processes by which organisms gain energy, grow, and develop
 - Compare and contrast physiological processes, and their evolution, in microbes, plants, and animals
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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

All lectures for this course will be online in 2022, and posted through ilearn and echo.

Practical classes will be delivered in person during on campus sessions on the following dates 27th and 28th August and 20th and 21st of September. You need to attend the classes on campus for all of these four days.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.s.mq.edu.au\)](https://policies.s.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 \(https://students.mq.edu.au/support/study/policies\)](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 \(https://policies.mq.edu.au\)](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.