



# BIOL2210

## Life Processes

Session 2, Special circumstances, North Ryde 2021

*Archive (Pre-2022) - Department of Biological Sciences*

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### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

### Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).

Visit the [MQ COVID-19 information page](#) for more detail.

## General Information

Unit convenor and teaching staff

Convenor

Simon Griffith

[simon.griffith@mq.edu.au](mailto:simon.griffith@mq.edu.au)

Credit points

10

Prerequisites

(40cp at 1000 level or above) including (BIOL1310 or BIOL114) or (BIOL1110 or BIOL115)

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 applications in the fields of biotechnology and medicine

## Assessment Tasks

| Name                               | Weighting | Hurdle | Due   |
|------------------------------------|-----------|--------|---|
| <a href="#">Final Exam</a>         | 40%       | Yes    | Exam Period   |
| <a href="#">Practical quizzes</a>  | 20%       | No     | Following each practical class in Wk 2,3,4,5,6,8,9,10,11,12 |
| <a href="#">Written assessment</a> | 20%       | No     | Week 12, Monday 25th October                                |
| <a href="#">Weekly quizzes</a>     | 20%       | No     | After lectures each week (Wk 1-13)                          |

### Final Exam

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **Exam Period**

Weighting: **40%**

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

An analytical set of questions 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 applications in the fields of biotechnology and medicine

## Practical quizzes

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Following each practical class in Wk 2,3,4,5,6,8,9,10,11,12**

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

## Written assessment

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **Week 12, Monday 25th October**

Weighting: **20%**

A critical analysis 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 applications in the fields of biotechnology and medicine

## Weekly quizzes

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **After lectures each week (Wk 1-13)**

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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<sup>1</sup> 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.

<sup>2</sup> 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 2021, and posted through iLearn and Echo.

All practicals will be live and require on campus attendance

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](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](#)
- [Grade Appeal Policy](#)
- [Complaint Management 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](https://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Student Support

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

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](https://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](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  |
|------------|--|
| 13/08/2021 | Added BIOL2210@mq.edu.au mailbox as contact, as directed by Sharyon O'Donnell. |
| 13/08/2021 | Removed BIOL2210@mq.edu.au mailbox contact at request of convenor.             |