



BIOX1210

Human Biology

Session 1, Fully online/virtual 2021

Archive (Pre-2022) - Department of Biological Sciences

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	3
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	6
<u>Delivery and Resources</u>	8
<u>Unit Schedule</u>	8
<u>Policies and Procedures</u>	10
<u>Changes since First Published</u>	12

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.

Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff

Convenor

Michael Gillings

michael.gillings@mq.edu.au

Contact via 9850 8199

14 Eastern Rd E8A271

Mon Tues 11.00 am

Tutor

Timothy Ghaly

biol1210@mq.edu.au

Contact via 9850 6977

14 Eastern Rd E8A263

First Year Teaching Co-ordinator

Kate Barry

biol1210@mq.edu.au

Credit points

10

Prerequisites

Corequisites

Co-badged status

BIOX1210

Unit description

This unit is for anyone interested in humans, and how humans interact with the rest of the living world. The subjects covered include basic anatomy, genetics, physiology, disease, reproduction, and human evolution. BIOX1210 will give you the ability to think critically about the major problems of our times, which are often biological in nature. To understand issues such as genetic engineering, global climate change, bioterrorism, cloning, assisted reproductive technologies, antibiotic resistance or the emergence of new human diseases requires a familiarity with modern biological knowledge. In particular, it is increasingly important for anyone involved in human health or medicine to understand ecological and evolutionary processes. We aim to equip you with this knowledge, and at the same time give you an appreciation for the mystery and diversity of life on this planet. The unit content is dealt with in such a way that students without prior studies in biology will not be at a disadvantage, however biology students are also encouraged to take this unit. All queries should be directed to Open Universities Australia.

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 and working knowledge of key biological terms
- ULO2:** Explain physiological processes in the human body starting at the genetic level and working through the biochemistry, cell and tissue functions to a physical outcome
- ULO3:** Outline the complex interactions between organ systems that result in homeostasis
- ULO4:** Apply biological concepts to a range of contemporary issues
- ULO5:** Find scientific articles and critically evaluate the design and conclusions of biological experiments
- ULO6:** Summarize key findings related to complex biological topics

General Assessment Information

Assessment in this Unit

Assessment for this unit consists of a mixture of assignments, short tests and a final examination. Submission of all assignments and completion of all tests is strongly recommended, since failure to complete assessment tasks will make it difficult to pass the unit. Students must receive at least 50% overall to pass this subject.

Assessment at a glance

Task	Weight	Due Date	Learning Outcome	Graduate Capabilities	Description
Writing Task	4%	Week 2	6-7	2-4	A 300 word statement on human biology
Online Quizzes	40%	Weekly	1-4	1,4-5	Multiple Choice Quizzes covering lectures from the previous weeks
Reference List	16%	Week 7	1-7	1-5, 7	Summary of papers and correctly formatted reference list
Final Exam	40%	Exam period	1-4, 6-7	1, 3-7	A 2 hour test on the unit content, containing 100 multiple choice questions

Assessment #1 Writing Task

is an early assessment task to introduce you to thinking about human biology. This work is worth 4% of your total assessment. It will not be given a formal mark – if you hand it in on time, you get 4%, simple as that.

The writing task is to be a single paragraph, approximately 300 words long, on the topic “**Are humans different from other animals?**” It should be written directly from your own point of view. You do not need to consult any references, nor is a bibliography needed. You do not have to have the biology correct, although this might help.

Assessment #2 Reference List

is an exercise designed to introduce you to the processes you must go through to write a review of a scientific topic. It is worth 16% of your assessment marks. Firstly, you will be asked to find appropriate reference material using on-line databases of scientific papers. Then you will be asked to summarize what interests you in each paper, in a single sentence. Finally you will construct a reference list in the correct format for the Biological Sciences.

Assessment #3 On-Line Quizzes

will cover material presented in the previous week’s lectures. They will be opened on Fridays and will cover the previous week’s lectures, so I strongly suggest you have the lecture notes handy. Quizzes will run from opening on the Friday of Week 2 and will remain open **until the date of the Final Exam**. There will be a total of 10 quizzes each worth 4% of your assessment marks. Each quiz will consist of 20 multiple choice questions to be answered using the On-Line form. Questions will be based on material in the lecture slides. Once you open the quiz, you will have one hour to complete it.

Assessment #4 Final examination

The final examination is 2 hours in duration and will cover all the material presented in the Unit. It will be conducted on-line at a time to be organized by the examinations section.

The exam will consist of 100 multiple choice questions in a similar format to the questions in the on-line quizzes. To pass the unit, you must obtain more than 50% overall, and passing the final examination will be essential.

The questions will involve an understanding of biological terms and structures. Questions may also ask you to integrate information from different parts of the Unit, and to demonstrate practical application of your biological knowledge to particular problems. Some questions may ask you to use your critical judgment on various statements about biological systems.

Examples of both multiple choice questions are available on iLearn, and will be given during lectures.

If you miss the final exam through illness or misadventure:

If you apply for Disruption to Study for your final examination, you must be available to take a supplementary exam. If you receive special consideration for the final exam, a supplementary exam will be scheduled in the interval between the regular exam period and the start of the next session. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the policy prior to submitting an application. You can check the supplementary exam information page in iLearn for dates, and approved applicants will receive an individual notification one week prior to the exam with the exact date and time of their supplementary examination.

SUBMITTING YOUR ASSIGNMENTS: IMPORTANT

Assignment submission

Assignments are to be submitted by 5pm on the date specified.

Late assignments will be penalised unless an extension has been granted.

Extensions, penalties and disruptions to studies

Late assignments will attract a penalty of **10%** of the total marks allocated to the exercise per day. You may hand in your work after the due date and escape penalty only if you have an acceptable reason (usually a medical certificate). Discuss your problem with the Lecturer as early as possible before the due date, however note that all requests for extensions **MUST** be submitted using the online form: ask.mq.edu.au.

Information about the Disruptions to Studies policy and procedure is online at Policy Central: http://www.mq.edu.au/policy/docs/disruption_studies/procedure.html.

Information on managing your Disruptions to Studies: http://students.mq.edu.au/student_admin/manage_your_study_program/disruption_to_studies/

Submitting your assignments

All assignments will be submitted as electronic copies via the BIOL1210 iLearn page. There will be a Turnitin link for each assignment, in the appropriate week. Turnitin will check your assignment for plagiarism.

Academic Honesty – please read, as this is very important

Presenting the work of another person as one's own is a serious breach of the University's rules and carries significant penalties. The University's Academic Honesty Policy can be found at http://www.mq.edu.au/policy/docs/academic_honesty/policy.html

In this unit, we will be checking written work for plagiarism using TURNITIN. Penalties for plagiarism may include a zero mark for the assignment or in more extreme cases, failure of the unit. Plagiarism WILL be noted on your academic record. Full details of penalties can be found at http://www.mq.edu.au/policy/docs/academic_honesty/schedule_penalties.html

Assessment Tasks

Name	Weighting	Hurdle	Due
Writing Task	4%	No	Friday 5 pm Week 2
Final exam	40%	No	Examination session
Reference List	16%	No	Friday 5pm Week 7
Online Quizzes	40%	No	Weekly

Writing Task

Assessment Type ¹: Non-academic writing

Indicative Time on Task ²: 5 hours

Due: **Friday 5 pm Week 2**

Weighting: **4%**

A short writing task, consisting of a statement on human biology

On successful completion you will be able to:

- Demonstrate an understanding and working knowledge of key biological terms
- Apply biological concepts to a range of contemporary issues

Final exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 45 hours

Due: **Examination session**

Weighting: **40%**

A final exam will be held during the Formal Examination period at the end of semester. This may

consist of multiple choice and short answer questions

On successful completion you will be able to:

- Demonstrate an understanding and working knowledge of key biological terms
- Explain physiological processes in the human body starting at the genetic level and working through the biochemistry, cell and tissue functions to a physical outcome
- Outline the complex interactions between organ systems that result in homeostasis
- Apply biological concepts to a range of contemporary issues
- Find scientific articles and critically evaluate the design and conclusions of biological experiments
- Summarize key findings related to complex biological topics

Reference List

Assessment Type ¹: Annotated bibliography

Indicative Time on Task ²: 19 hours

Due: **Friday 5pm Week 7**

Weighting: **16%**

Summary of papers and correctly formatted reference list

On successful completion you will be able to:

- Demonstrate an understanding and working knowledge of key biological terms
- Apply biological concepts to a range of contemporary issues
- Find scientific articles and critically evaluate the design and conclusions of biological experiments
- Summarize key findings related to complex biological topics

Online Quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 45 hours

Due: **Weekly**

Weighting: **40%**

Multiple Choice Quizzes covering lectures from the previous week

On successful completion you will be able to:

- Demonstrate an understanding and working knowledge of key biological terms
- Explain physiological processes in the human body starting at the genetic level and working through the biochemistry, cell and tissue functions to a physical outcome
- Outline the complex interactions between organ systems that result in homeostasis
- Apply biological concepts to a range of contemporary issues
- Summarize key findings related to complex biological topics

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 [Learning Skills Unit](#) 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 in this Unit will be delivered on-line.

Lecture notes and lecture recordings are available on the iLearn site.

Q & A sessions will be run via the Zoom platform, at times to be advertised during lectures.

Unit Schedule

Lecture Schedule

Week 1: ATOMS TO CELLS

Lecture 1: Introduction and Outline; Scientific Process; Characteristics of Living things.

Lecture 2: Basic chemistry; Biological molecules.

Lecture 3: Cell structure; Prokaryotic and Eukaryotic cells; Cellular organelles;

Week 2: CELLS IN ACTION

Lecture 4: Cellular organelles continued; Cell function; Cell membranes.

Lecture 5: Organisation of Cells into Tissues; Human organisation.

Lecture 6: Organisation of Cells into Tissues; Human organisation.

Week 3: BODY BITS: METABOLISM & HUMAN ORGAN SYSTEMS

Lecture 7: Cell metabolism, Respiration and Photosynthesis.

Lecture 8: Cell metabolism, Respiration and Photosynthesis.

Lecture 9: Digestive System and Nutrition

Week 4: GETTING IT TOGETHER: THE HUMAN INDIVIDUAL

Lecture 10: Urinary System and Excretion, Cardiovascular System.

Lecture 11: Respiratory system, Muscles and skeletons

Lecture 12: Nervous System and Senses.

Week 5: HORMONES, IMMUNITY AND REPRODUCTION

Lecture 13: The Endocrine System; Hormones, Steroids.

Lecture 14: The Immune System; Immunisation; Breast feeding.

Lecture 15: Cell Division; Mitosis and the Cell cycle, Meiosis and Fertilisation.

Week 6: HUMAN REPRODUCTION; LOVE MAKES THE WORLD GO ROUND

Lecture 16: Reproduction, Birth Control, Sexually Transmitted Diseases.

Lecture 17: Theories of Sexual Attraction, The Physiological basis of Love.

Lecture 18: The molecular basis of Inheritance; DNA and the genetic code.

Week 7: THE BASIS OF INHERITANCE

Lecture 19: DNA and the Genetic Code (continued), Protein Synthesis.

Lecture 20: From Genes to Phenotype; Introduction to Genetics, Review of Meiosis.

Lecture 21: Chromosome Abnormalities and Genetic Diseases.

Week 8: DNA MANIPULATION, BIOTECHNOLOGY, BIODIVERSITY

Lecture 22: Gene cloning and Recombinant DNA technology.

Lecture 23: Genetically Modified Organisms; Cloning of Whole Animals.

Lecture 24: The Diversity of Living things, How many species are there?

Week 9: WHEN IT GOES WRONG, MICRORGANISMS GOOD AND BAD

Lecture 25: Cancers at the Cellular and DNA level; Aging; Why do we have to die?

Lecture 26: A tour of diseases, New and Emerging Diseases, Antibiotic resistance.

Lecture 27: The Human Microbiome.

Week 10: HUMANS AND MICROORGANISMS, SHARING THE PLANET

Lecture 28: Microorganisms in the service of Humankind

Lecture 29: Symbiosis: cooperation between genes, cells, and species

Lecture 30: Human effects on the Biosphere, Past, Present and Future.

Week 11: EVOLUTION, WHERE DID WE COME FROM AND WHERE ARE WE GOING?

Lecture 31: Understanding Evolution.

Lecture 32: On the Origin of Life on Earth (and elsewhere)

Lecture 33: Genetics of the great apes; Evolution of Man, What makes us Human?

Week 12: BIOLOGICAL LITERACY, REVIEW

Lecture 34: Critical thinking; Recent Breakthroughs in Biological Science

Lecture 35: What's in the Exam; Review of Course

Lecture 36: Revision and Zoom sessions

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](#)
- [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 or if you are a Global MBA student contact 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) 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 Enquiry Service

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

Equity 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.

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
06/02/2021	Assessment On Line Quizzes 10 Quizzes each worth 4%