



BIOL3120

Human Genetics and Evolutionary Medicine

Session 1, Infrequent attendance, 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.

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

Unit convenor

Oliver Griffith

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Unit convenor

Emily Don

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Emily Don

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Credit points

10

Prerequisites

130cp at 1000 level or above including BIOL2110 or BIOL206(P)

Corequisites

Co-badged status

Unit description

This unit deals with the molecular, cellular and population basis of the genetics of human beings in relation to disease and evolutionary medicine. Topics include: genetics, genomics, disease gene discovery, evolutionary medicine and the social and ethical implications of studies in human genetics. Emphasis is placed upon the enormous impact which recent molecular advances have had upon the subject, as well as techniques of genetic analysis. Comparisons with the genetics of other vertebrates are made wherever appropriate.

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:

ULO2: Interpret and demonstrate understanding of the primary scientific literature

ULO1: Solve problems in human genetics using appropriate analytical methods and a variety of up to date resources

ULO3: Explain the importance of new techniques in human genetics for understanding human disease

ULO4: Explain the principles of evolutionary biology and their role in human health and disease

ULO5: Utilise basic bioinformatic skills, including handling of genetic sequence data

ULO6: Understand genetics and its basis in human disease

General Assessment Information

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

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/

Assessment Tasks

Name	Weighting	Hurdle	Due
Problem sets	25%	No	Week 3-12
Literature review	25%	No	Week 13
Examination	50%	No	Formal exam period

Problem sets

Assessment Type **1**: Problem set

Indicative Time on Task ²: 25 hours

Due: **Week 3-12**

Weighting: **25%**

Ongoing problem sets for tutorials throughout the semester

On successful completion you will be able to:

- Solve problems in human genetics using appropriate analytical methods and a variety of up to date resources
- Interpret and demonstrate understanding of the primary scientific literature
- Explain the principles of evolutionary biology and their role in human health and disease
- Utilise basic bioinformatic skills, including handling of genetic sequence data
- Understand genetics and its basis in human disease

Literature review

Assessment Type ¹: Literature review

Indicative Time on Task ²: 25 hours

Due: **Week 13**

Weighting: **25%**

A written literature review of the methodology of a genomic technique

On successful completion you will be able to:

- Interpret and demonstrate understanding of the primary scientific literature
- Explain the importance of new techniques in human genetics for understanding human disease
- Understand genetics and its basis in human disease

Examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 32 hours

Due: **Formal exam period**

Weighting: **50%**

Formal examination covering all content of unit

On successful completion you will be able to:

- Solve problems in human genetics using appropriate analytical methods and a variety of up to date resources
- Explain the importance of new techniques in human genetics for understanding human disease
- Explain the principles of evolutionary biology and their role in human health and disease
- Utilise basic bioinformatic skills, including handling of genetic sequence data
- Understand genetics and its basis in human disease

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

Mode of delivery: BIOL3120 will be delivered through lectures, Q&A sessions, and tutorials. Students will have the option to complete all these activities online. There will be two lectures and a lecture Q&A session each week. Infrequent attendance students will need to be available for a block tutorial session from the 13th-16th of April.

Note that support will be available from the unit convenor via Skype/Zoom, and in-person assistance may be possible depending on staff availability.

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 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 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

If you are a Global MBA student contact 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/.

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.