UNSW Course Outline

BABS1112 Genetics and Society - 2024

Published on the 19 Dec 2023

General Course Information

Course Code : BABS1112
Year : 2024
Term : Summer
Teaching Period : U1
Is a multi-term course? : No
Faculty : Faculty of Science
Academic Unit : School of Biotechnology and Biomolecular Sciences
Delivery Mode : Online
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Genetic knowledge has advanced rapidly over the last few decades leading to a wide range of genetic applications in society. From genetically modified foods to genetic testing and precision medicine, these applications are now a part of everyday life. However, these advancements also

raise important ethical, legal, and social questions that need to be considered.

How much of our lives is pre-determined by our DNA and how much control do we have over our genetic destiny? This course will introduce core genetic concepts and applications using real life examples in a variety of areas including forensics, sport, nutrition, human health, agriculture, and synthetic biology. The course also provides hands-on experience in analysing and interpreting genetic data, as well as the necessary skills to critically evaluate implications of genetic advances, so one can make informed decisions about genetic interventions in their daily lives.

The course is delivered fully online, supported by interactive asynchronous learning material and synchronous live tutorials. No prior science or genetics knowledge is required. The course is aimed at students from any field of study, who have a keen interest in understanding the genetic basis of life and the impact genomic applications have on societal practices.

Course Aims

The aim of this course is to introduce students to fundamental genetic concepts that will enable them to understand current and future genomic applications in a variety of societal practices, and to recognise the associated ethical, legal and social implications (ELSI).

The course ultimately aims to equip students with the required level of genetic literacy to be competent and confident in participating in informed decision making and discussions regarding incorporating genetic applications in everyday life.

Relationship to Other Courses

Equivalent courses: GENS1112

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Identify and describe examples of genetic applications and interventions in everyday life.
CLO2 : Describe basic scientific theories, concepts and techniques underlying genetic applications and interventions.
CLO3 : Interpret and evaluate media representations of genetics and genomics.
CLO4 : Apply the scientific method to perform basic analyses and interpretation of genomic sequencing data.
CLO5 : Develop evidence-based arguments and participate in informed debate on ethical, legal and social implications surrounding genetic applications and interventions.

Course Learning Outcomes	Assessment Item
CLO1 : Identify and describe examples of genetic applications and interventions in everyday life.	• Weekly quizzes • Discussion forum • Critical review
CLO2 : Describe basic scientific theories, concepts and techniques underlying genetic applications and interventions.	• Practical report • Weekly quizzes • Critical review
CLO3 : Interpret and evaluate media representations of genetics and genomics.	• Discussion forum • Critical review
CLO4 : Apply the scientific method to perform basic analyses and interpretation of genomic sequencing data.	• Practical report
CLO5 : Develop evidence-based arguments and participate in informed debate on ethical, legal and social implications surrounding genetic applications and interventions.	• Discussion forum • Critical review

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Weekly quizzes Assessment Format: Individual	25%	
Discussion forum Assessment Format: Individual	30%	
Critical review Assessment Format: Individual	20%	Start Date: Week 1 Due Date: 22/01/2024 09:00 AM
Practical report Assessment Format: Individual	25%	Due Date: 02/02/2024 11:59 PM

Assessment Details

Weekly quizzes

Assessment Overview

These weekly quizzes will focus on the genetic concepts and applications covered during the week in each module. The quizzes will be available online each Friday and will consist of 10

multiple-choice or short answer type questions. You will need to complete the quiz within the indicated time, and you will be allowed to attempt the quiz once only.

Feedback will be released online once the quiz has closed. You will be able to view your responses as well as general feedback for each question.

Course Learning Outcomes

- CLO1 : Identify and describe examples of genetic applications and interventions in everyday life.
- CLO2 : Describe basic scientific theories, concepts and techniques underlying genetic applications and interventions.

Assessment Length

Ten multiple-choice questions per each quiz. You will have 20 min to complete the quiz unless otherwise stated.

Submission notes

The quiz link will only be accessible during the time period mentioned above.

Assessment information

Please see the Assessment 1 Information document on Moodle, under the Assessment Hub section, for additional information on this assessment.

Assignment submission Turnitin type

This is not a Turnitin assignment

Hurdle rules

You must complete this assessment task to pass the course.

Discussion forum

Assessment Overview

This task aims to assess your ability to reflect on and develop evidence-based arguments around the ethical, legal and social implications of genetic applications and interventions. There will be a discussion forum thread for each module, and you will be required to make a minimum of two posts; one post responding to a prompt set by the course convenor (~300 words) and one post responding to a posting made by another student (150-300 words). The forums will be facilitated and monitored by the course convenor.

Five posts (initial responses to the prompts) will be randomly selected at the end of the term to

be assessed for the quality of the postings (20 marks).
You will also be assessed on participation in the forums and communication skills (10 marks).

Feedback will be provided in the form of a marked assessment rubric, along with written feedback.

Course Learning Outcomes

- CLO1 : Identify and describe examples of genetic applications and interventions in everyday life.
- CLO3 : Interpret and evaluate media representations of genetics and genomics.
- CLO5 : Develop evidence-based arguments and participate in informed debate on ethical, legal and social implications surrounding genetic applications and interventions.

Submission notes

The response to the prompt provided in the activity (initial post) should be posted latest by 11.59 pm each Thursday. This is to allow sufficient time for others to reply to your post and engage in conversation while the forum is open.

Assessment information

Please see the Assessment 2 information document available on Moodle in the Assessment Hub for additional details about this assessment task.

All your posts must be made on the discussion forums. Your posts might be screened by submitting them to Turnitin by the course staff in instances where plagiarism or AI writing is suspected.

Assignment submission Turnitin type

This is not a Turnitin assignment

Hurdle rules

You must complete this assessment task to pass the course.

Critical review

Assessment Overview

This task aims to assess your ability to 1) identify genetic applications and interventions as reported in media and 2) apply basic genetic and ELSI concepts learnt in the course and evaluate how they are represented in the media. You will be provided with a list of media articles or documentaries where real-life scenarios of genetics applications or interventions are discussed. You will need to choose one application or intervention and prepare a critical review on how the

application or intervention is presented in the media.

You may choose to present the critical review in a written essay (1500 words) or in a video (10 min). A marking rubric will be used to mark this assessment. Written feedback will also be provided where necessary.

Course Learning Outcomes

- CLO1 : Identify and describe examples of genetic applications and interventions in everyday life.
- CLO2 : Describe basic scientific theories, concepts and techniques underlying genetic applications and interventions.
- CLO3 : Interpret and evaluate media representations of genetics and genomics.
- CLO5 : Develop evidence-based arguments and participate in informed debate on ethical, legal and social implications surrounding genetic applications and interventions.

Assessment Length

You may submit in the form of a written essay (1500 words) or a video (10 - 12 min).

Assessment information

Please see the Assessment 3 information document on Moodle in the Assessment Hub for more details about this assessment task.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Hurdle rules

You must complete this assessment task to pass the course.

Practical report

Assessment Overview

This task will assess your ability to follow the scientific method to investigate a real-life problem using DNA technologies and the ability to interpret the results obtained. It is based on the online practical component of the course that requires you to analyse a set of DNA genotyping results and answer a series of questions based on your observations.

You will be introduced to the task in Week 1 and will have the opportunity to complete the work throughout the term. The final report (maximum 3 pages) is due on the last day of the term.

A marking rubric will be used to mark this assessment. Written feedback will also be provided

where necessary.

Course Learning Outcomes

- CLO2 : Describe basic scientific theories, concepts and techniques underlying genetic applications and interventions.
- CLO4 : Apply the scientific method to perform basic analyses and interpretation of genomic sequencing data.

Assessment information

Please see the Assessment 4 information document on Moodle in the Assessment Hub for more details about this assessment task.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Hurdle rules

You must complete this assessment task to pass the course.

General Assessment Information

Grading Basis

Standard

Requirements to pass course

You must complete ALL the assessable components listed above to pass the course.

There are four individual assessments in this course. If you do not attempt and submit them all, you will receive an unsatisfactory fail grade.

Course Schedule

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Resources

Prescribed Resources

There are no prescribed textbooks for this course. All relevant resources are online and are provided in the online learning activities in Moodle.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Dhanushi Abeygunawardena		Room 220B, Lvl 2 Biological Sciences Building West (D26)	0293856825	By appointment	Yes	Yes

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the UNSW Student Code of Conduct Website.

Academic Honesty and Plagarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.
Further information about referencing styles can be located at https://student.unsw.edu.au/referencing

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.
Further information about academic integrity, plagiarism and the use of AI in assessments can

be located at:

- The Current Students site,
- The ELISE training site, and
- The Use of AI for assessments site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: https://student.unsw.edu.au/conduct

Submission of Assessment Tasks

Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: https://student.unsw.edu.au/special-consideration

Important note: UNSW has a "fit to sit/submit" rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination

or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- The Current Students Gateway
- Student Support
- Academic Skills and Support
- Student Wellbeing, Health and Safety
- Equitable Learning Services
- UNSW IT Service Centre
- Science EDI Student Initiatives, Offerings and Guidelines