



FACULTY OF SCIENCE
School of Biotechnology and Biomolecular Sciences

BABS3151

Human Genetics

Term 1, 2021

Table of Contents

1.	Information about the Course	3
2.	Staff Involved in the Course.....	4
3.	Course Timetable (Lectures, Practicals and Tutorials):... <i>See Course Timetable on Moodle</i>	
4.	Course Details.....	5-6
5.	Rationale and Strategies Underpinning the Course	6
6.	Lecture content.....	7
7.	Assessment Tasks and Feedback.....	8-9
8.	Additional Resources and Support	10
9.	Administration Matters	11
10.	UNSW Academic Honesty and Plagiarism	11
11.	Special Consideration and Further Assessment Term 1 2019.....	

Faculty of Science - Course Outline

1. Information about the Course

NB: Some of this information is available on the [UNSW Handbook](#)¹

Year of Delivery	2021
Course Code	BABS3151
Course Name	Human Genetics
Academic Unit	School of Biotechnology and Biomolecular Sciences
Level of Course	3 rd Year
Units of Credit	6UOC
Term(s) Offered	T1
Assumed Knowledge, Prerequisites or Co-requisites	BABS2204 or BABS2264
Contact Hours per Week	7
Number of Weeks	11 weeks

3. Course schedule

Lecture 1: Monday 1400-1500 Online		Lecture 2: Tue 1700-1800 Online		Lecture 3: Wed 1300-1400 Online		Tutorial/LAB Wed 0900-1300 BioSci Teaching Lab 10, Lv11 Rowntree Room wks 9 & 10	
Week	Topic/Lecturer	Topic/Lecturer	Topic/Lecturer	Topic/Lecturer	Topic/Lecturer	Topic/Lecturer	Prac/Lab
1 Starts Mon 15/02	Introduction to human genetics/ EO Date: 15/02	Human genome structure/ RE 16/02	Human genome variation/ RE 17/02	Human genome variation/ RE 17/02	Human genome variation/ RE 17/02	Human genome variation/ RE 17/02	Getting to know your gene EO, GS, PS, AS 17/02
2 Starts Mon 22/02	Transcriptomics/ NG 22/02	Alternative splicing & post-transcriptional regulation Garvan guest lecturer/ RW 23/02	Sex determination/ PW 24/02	Sex determination/ PW 24/02	Sex determination/ PW 24/02	Sex determination/ PW 24/02	Non-disease-causing variation within your gene EO, GS, PS, AS 24/02
3 Starts Mon 01/03	Massively parallel genomic sequencing technologies including WES & WGS/ AS 01/03	Proteomics and its application to human genetics/ MW 02/03	Epigenomics Garvan guest lecturer/ OB 03/03	Epigenomics Garvan guest lecturer/ OB 03/03	Epigenomics Garvan guest lecturer/ OB 03/03	Epigenomics Garvan guest lecturer/ OB 03/03	Disease-causing variation within your gene EO, GS, PS, AS 03/03
4 Starts Mon 08/03	Monogenic (Mendelian) disorders/ EO 08/03	Mitochondrial, chromosomal & oligogenic disorders/ EO 09/03	Multifactorial (complex) traits & disorders/ IV 10/03	Multifactorial (complex) traits & disorders/ IV 10/03	Multifactorial (complex) traits & disorders/ IV 10/03	Multifactorial (complex) traits & disorders/ IV 10/03	Interrogating RNA transcript data relevant to your gene EO, GS, PS, AS 10/03
5 Starts Mon 15/03	Different clinical genetic testing scenarios/ EO 15/03	Pre-implantation genetic diagnosis Clinical (CHW) guest lecturer/ KJ 16/03	Systems biology and its application to human genetics/ FV 17/03	Systems biology and its application to human genetics/ FV 17/03	Systems biology and its application to human genetics/ FV 17/03	Systems biology and its application to human genetics/ FV 17/03	Midterm Exam (30%) EO, GS, PS, AS 17/03
6 Starts Mon 22/03	Week 6 rest week						
7 Starts Mon 29/03	Personalized medicine & ethical considerations in human genetics/ MD 29/03	Applications of human genome sequencing CCI guest lecturer/ MC 30/03	Frontiers in human genetic research Garvan guest lecturer/	Frontiers in human genetic research Garvan guest lecturer/	Frontiers in human genetic research Garvan guest lecturer/	Frontiers in human genetic research Garvan guest lecturer/	Frontiers in human genetic research Garvan guest lecturer/

4. Course Details

6. Lecture content

FUNDAMENTAL HUMAN GENETICS

- < Human Genome Structure
- < Human Genome Variation
- < Proteomics
- < Transcriptomics
- < Sex determination
- < Human Evolutionary Genetics
- < Human genetics-related systems biology

HUMAN GENETIC VARIATION & DISEASE

- < Human genetic mechanisms of disease
- < Oligogenic Traits

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7.

8. Additional Resources and Support

Text Books

There is no textbook set for this course because the topics covered are diverse and no

10. UNSW Academic Honesty and Plagiarism

What is Plagiarism?

own.

*Examples include:

- < direct duplication of the thoughts or work of another, including by copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or acknowledgement;
- < progression of ideas of the original;
- < piecing together sections of the work of others into a new whole;
- < presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor;

