UNSW Course Outline

BABS3081 Bacteria and Disease - 2024

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General Course Information

Course Code : BABS3081
Year : 2024
Term : Term 2
Teaching Period : T2
Is a multi-term course? : No
Faculty : Faculty of Science
Academic Unit : School of Biotechnology and Biomolecular Sciences
Delivery Mode : Multimodal
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

This course will cover the pathogenic mechanisms used by a diverse array of bacterial pathogens to cause human disease and the epidemiology and strategies used to control and prevent these infectious diseases. The course provides students with a high level

of understanding of how bacteria cause disease and practical skills in the identification of bacterial pathogens. The lecture program includes key pathogens infecting different body systems and current research on selected bacterial pathogens. In conjunction with the lecture program, the laboratory program offers practical experiences in contemporary medical microbiology techniques used for the diagnosis of bacterial infections. In addition, students will develop their research skills by conducting a research project on the isolation and characterisation of a common bacterial pathogen using conventional and molecular techniques.

Course Aims

The aim of this course is to provide students with a background of the pathogenic mechanisms used by common bacteria and develop practical skills in the identification of bacterial pathogens. This will enable students to identify and understand the pathogenic mechanisms used by common bacteria that cause disease and common pathogenic mechanisms used by these bacteria. Also, this course discusses approaches which can be used to control the spread of disease as well as strategies that can be taken to prevent disease. Many of the lectures discuss the process whereby our knowledge on a particular topic was gained. The practical program is designed to develop students' skills in the diagnosis of bacterial infections from bacterial culture-based techniques to molecular techniques. The practical program is also designed to develop students' research skills through a research project.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Explain the pathogenic mechanisms used by common bacteria to cause disease and identify common pathogenic mechanisms used by these bacteria.
CLO2 : Identify approaches that can be used to control the spread of disease as well as strategies that can be taken to prevent disease.
CLO3 : Undertake the steps required to isolate, identify and report bacterial pathogens in a routine microbiology laboratory.
CLO4 : Conduct a research project including performing experiments, collecting and analysing data and writing a research report.

Course Learning Outcomes	Assessment Item
CLO1 : Explain the pathogenic mechanisms used by common bacteria to cause disease and identify common pathogenic mechanisms used by these bacteria.	• Final Exam • Mid-term Test
CLO2 : Identify approaches that can be used to control the spread of disease as well as strategies that can be taken to prevent disease.	• Final Exam • Mid-term Test
CLO3 : Undertake the steps required to isolate, identify and report bacterial pathogens in a routine microbiology laboratory.	• Laboratory Components
CLO4 : Conduct a research project including performing experiments, collecting and analysing data and writing a research report.	• Project Report

Learning and Teaching Technologies

Moodle - Learning Management System

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Project Report Assessment Format: Individual Short Extension: Yes (7 days)	20%	
Final Exam Assessment Format: Individual	40%	
Mid-term Test Assessment Format: Individual	20%	
Laboratory Components Assessment Format: Individual	20%	

Assessment Details

Project Report

Assessment Overview

You will be required to write a report in a research paper format (which includes introduction, materials and methods, results and discussion) from the research project conducted during the practical program.

The report is no more than 2500 words in length with up to 6 figures/tables. Report guidelines and report marking schemes are made available to all students.

One draft section of your results will be reviewed by your demonstrator and given feedback during week 9.

The report is due in Week 10 and submission is through Turnitin.

Feedback on the final report based on the marking scheme and available via demonstrators.

Course Learning Outcomes

- CLO4 : Conduct a research project including performing experiments, collecting and analysing data and writing a research report.

Final Exam

Assessment Overview

The final exam will assess your understanding of the lecture content from Week 4 to Week 10.

The final exam will be 2 hours in duration and occur in the formal exam period

Questions will be in short essay format.

Feedback is available via inquiry through the convenor.

Course Learning Outcomes

- CLO1 : Explain the pathogenic mechanisms used by common bacteria to cause disease and identify common pathogenic mechanisms used by these bacteria.
- CLO2 : Identify approaches that can be used to control the spread of disease as well as strategies that can be taken to prevent disease.

Mid-term Test

Assessment Overview

The mid-term test will assess your understanding of the lecture content from Week 1 to Week 3.

The 1-hour test will be conducted during the Week 5 laboratory time or as specified at the start of the term.

The test will be short essay format.

The test will be conducted once only. Supplementary test may be granted upon special consideration.

Feedback is provided to the whole class or individually by appointment.

Course Learning Outcomes

- CLO1 : Explain the pathogenic mechanisms used by common bacteria to cause disease and identify common pathogenic mechanisms used by these bacteria.
- CLO2 : Identify approaches that can be used to control the spread of disease as well as strategies that can be taken to prevent disease.

Laboratory Components

Assessment Overview

This assessment consists of 3 lab tests (online quizzes) and a diagnostic report.

The 3 lab quizzes account for 16% of the total course weighting. You will be required to complete the quizzes by the deadline specified in the lab manual. You will be able to take the test as many times as you like until the deadline and the highest mark will be your final mark. The quizzes aim to test your knowledge in relation to the practical program.

The diagnostic report worth 4% is a written report from the diagnosis of a simulated clinical sample and due when the identification of the pathogen is complete. This is a brief report which assesses students' skills in laboratory diagnosis of bacterial infections.

Feedback will be provided by demonstrators during class.

Course Learning Outcomes

- CLO3 : Undertake the steps required to isolate, identify and report bacterial pathogens in a routine microbiology laboratory.

General Assessment Information

Grading Basis

Standard

Requirements to pass course

Students who fail the practical assessment (assessment 1 and assessment 4) will fail the subject outright, ie. out of the total 40% of assessment 1+ assessment 2, students must achieve at least 20%.

Course Schedule

Attendance Requirements

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

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Ruiting Lan					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