



Introduction and welcome 3

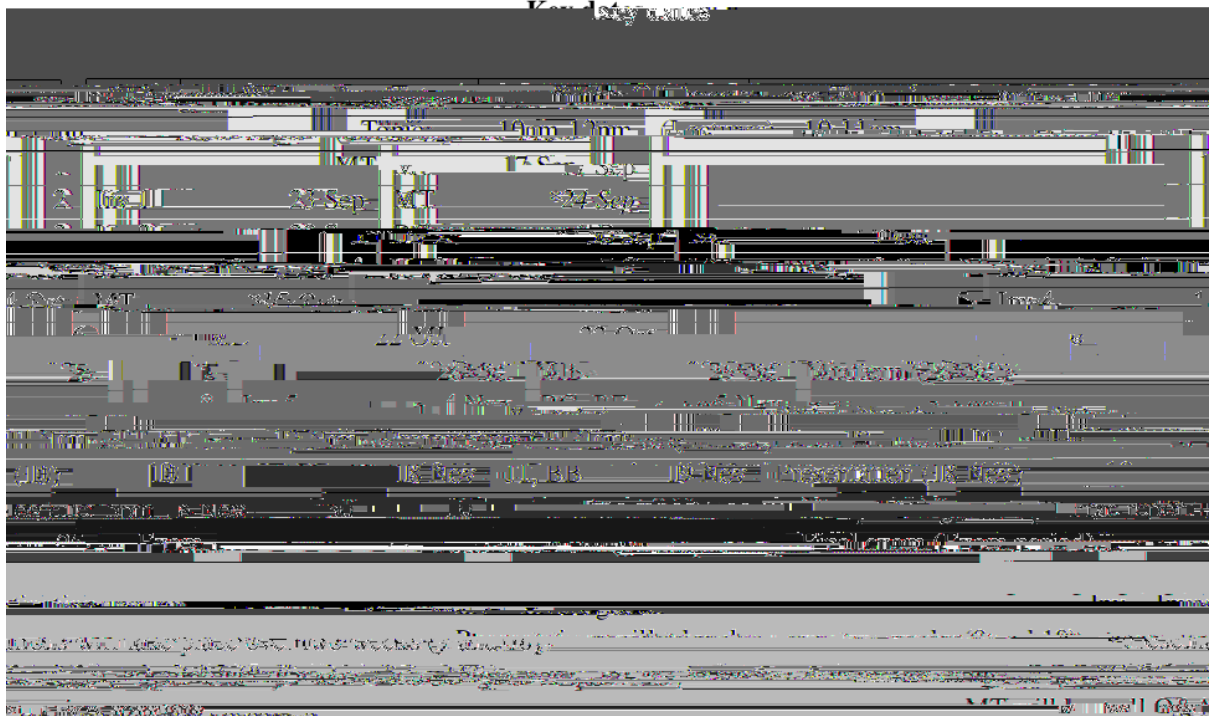


Microbial Genetics is a course worth 6 units of credit consisting of lectures, tutorials, and practical investigations. All components of the course will be delivered online in T3 2020. Prerequisites are 12 UoC from MICR2011 or BIOS2021/BABS2204 or BIOC2621/BABS2264 or BIOC2201. The course aims to present students with the background to microbial genetics and technologies currently used to address microbial genetics. The course is designed to provide opportunities for students to gain knowledge and insight into the scientific developments of ~~WRGD \ live release~~ ~~WRGD~~ The following pages contain a summary of the course structure and learning outcomes. A detailed description of the practical investigations, associated tutorials and assessment tasks for the course can be found in a separate document and on Moodle.

All **lectures** will be delivered online. They are **asynchronous** that recordings will be provided for you to view (in weeks 1-5 and 7-10). In addition, online **synchronous** (live) review sessions will be held each week at 10am on Thursdays. These will be question-and-answer (Q&A) sessions in which you will have the opportunity to ask lecturers questions to clarify lecture material. Please watch lectures before the corresponding review session. Note: a review session will be held in week 6 (Flexibility Week).

The **practicals and tutorials, which together are referred to as Investigations**, will have asynchronous and synchronous components. A synchronous (live) tutorial will be held each week on Wednesday from 10am to 12pm except for week 6. **You are expected to attend all of these sessions.** The tutorial will cover the **Investigations** these times will also be used to discuss the practical material, some of which you will work through in your own time (asynchronously). In weeks 9 and 10 you will present the results of your investigation into **Microbial Genetics and Society**

Assessment will consist of four components: (1) a practical quiz, (2) practical work including a report and a presentation (3), a midterm exam, and (4) a final exam in the exam period. More details are given in the Assessments section below. Key dates for the activities and assessments are as follows.



- x Investigation 1: Transfer of genes by F-prime
- x Investigation 2: (a) DNA repair mechanisms in bacteria
(b) Restriction and modification of DNA
- x Investigation 3: Genetic transfer of antibiotic resistance
- x Investigation 4: Transposon mutagenesis
- x Investigation 5: Genetics of haloarchaea
- x Presentations: Microbial genetics and society



The lecture topics are listed in the following table.

Lecture topics

2- RC	5. Lambda phage
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The assessment components are as follows.

1. Practical quiz

This will be a multiple-choice quiz that you will take online during the tutorial in week 4. This is worth 10% of the course. You will have 30 minutes to complete it and the start time will be announced at the scheduled tutorial.

2. Practical work

a) Practical report

- x All students will be required to submit one practical report worth 25% of the final grade, and complete a lab-log worth 5% of the final grade.
- x BABS3021 Prac Report (for BABS3021 students only) will be based on Investigation 3 (Genetic transfer of antibiotic resistance). This is worth 25%. Details of the format required for the report are provided in the next section.
- x MICR3621 Prac Report (for MICR3621 students only). For this assignment, you will design your own scientific investigation. This is worth 25%. Details of the format required for this report will be provided in Moodle.
- x Lab-log (for both BABS3021 and MICR3621): The second component of the Practical Report will be a log of your activities and reflections on all of the Investigations. This is worth 5%. **Make sure you take notes at or after each prac/tutorial session so that you can complete this component.**
- x **Deadline:** The practical report is due for submission via Turnitin in Moodle by 5pm on the due date. A penalty of 20% of the total value of the assignment per day will be applied to late assignments. **It is strongly recommended that you start working on the practical report early in the term.**

b) Presentation

During the tutorial sessions in weeks 9 and 10 you will have the opportunity to present (online via Microsoft Teams) your views on a current issue involving microbial genetics. See the notes for Microbial Genetics and Society for details. This presentation will be assessed and is worth 10%.

3. Midterm exam

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textbook, or the internet. But you must not communicate with anyone else during the exam.
You must not copy any text (even if you then edit the copied text); write your own answers
in your own words. The exams and prac reports will be scrutinised using Turnitin.

x [Click here](#) to see a check list for preparing to sit an online exam.



The BABS3021 practical report should be written in the format of a research article in a scientific journal such as the ISME Journal, Environmental Microbiology, Journal of Bacteriology, Applied and Environmental Microbiology, Molecular Microbiology, Infection and Immunity. Note that the styles of articles written in journals such as Science and Nature are **not** appropriate for your reports.

Heading: Investigation number and title; date; name of student.

Abstract: A brief, single paragraph description which identifies the aims and outcomes of the work.

Introduction: This section should contain a statement of the aims and objectives of the particular investigation and give a brief general idea of how these aims were accomplished. Generally, the Introduction should be about ½ a typed page, should commence with the introductory material and conclude with the main aims. The Introduction should be written describing known facts and concepts and should therefore be written in the present tense. The description of the aims should be written in the past tense as they should describe what you did, not what you will do.

Materials and Methods: This section should be brief and may consist of merely a reference to the relevant prac. notes.

Results: The results should present all data relating to the investigation. It should include tables or figures (if appropriate). Tables and figures should not be redundant, i.e. do not include T-13(1)7(ude)7(.). T-

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beginning

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Students who believe that their performance, either during the session or in the end of session

- x If you were able to advise your Course Coordinator or Tutor of your illness during the assessment, attach screenshots of this conversation to your Special Consideration application.

HOW TO APPLY FOR SPECIAL CONSIDERATION

The application must be made through Online Services in myUNSW (My Student Profile tab > My Student Services > Online Services > Special Consideration).

Students will be contacted via their official university email as to the outcome of their application.

SUPPLEMENTARY EXAMINATIONS:

The University does not give deferred examinations. However, further assessment exams may be given to those students who were absent from the final exams through illness or misadventure and received Special Consideration approval. Mid-term supplementary exams will be held during the term as determined by the course convenor. Final supplementary exam will be run by The Exam Office during the supplementary exam period.

For Term 3 2020, Supplementary Exams will be scheduled between Monday 11 January ±Friday 15 January, 2021.

It is the responsibility of all students to regularly consult their official student email accounts and myUNSW in order to ascertain whether or not they have been granted further assessment. Failure to sit for the appropriate exam may result in an overall failure for the course. Further assessment will NOT be offered on any alternative dates.

Assess

There is no prescribed referencing style for this course; thus, students can choose a style they desire from an accepted journal in the field. However, the chosen style needs to be used consistently throughout an assignment.

Further information about academic integrity and **plagiarism** can be located at:

- x University Health Service: <http://www.healthservices.unsw.edu.au/>
- x Student Counselling & Psychological Services (CAPS):
<https://student.unsw.edu.au/counselling>
- x UNSW Careers and Employment Service: <http://www.careers.unsw.edu.au/>
- x ARC- Student Life: <https://www.arc.unsw.edu.au/>
- x UNSW Student Life: <https://www.unsw.edu.au/life>