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The published on-line version of the Course Profile is the authoritative version and by the publication of the Course Profile on-line the University deems the student has been notified of and read the course requirements.

# 1. General Course Information

## 1.1 Course Details

<b>COURSE CODE</b>	2008NSC
<b>COURSE TITLE</b>	General Microbiology
<b>ACADEMIC ORGANISATION</b>	ESC School of Environment and Science
<b>TRIMESTER</b>	Trimester 1 2021
<b>MODE</b>	Blended
<b>LEVEL</b>	Undergraduate
<b>LOCATION</b>	Nathan, On Campus
<b>CREDIT POINT VALUE</b>	10

## Course Description:

This course covers the basic concepts, principles and techniques of microbiology. It looks at the domains of Archaea, Bacteria and Eukarya, viruses, microbial diseases, and environmental and applied microbiology including areas such as microbial ecology and microbial biotechnology. Incompatible with: 2007MSC Microbiology. Prerequisite: 1014NSC Fundamentals of Biochemistry.

## Assumed Background:

Prior Assumed: 1041SCG Biological Systems and 1014NSC Fundamentals of Biochemistry  
A desire to learn about the microbes in the world around us.

## 1.2 Course Introduction

This is a defining course for the Bachelor of Science Microbiology major and a core course in a number of other programs. It is designed to provide knowledge in aseptic techniques, handling and manipulating microbes and an understanding of the biochemical, ecological, structural and genetic diversity of microbes.

The microbiology course presented will provide students with a solid understanding of the fundamental concepts, principles and techniques of microbiology. Students will be introduced to the biology of the Archaea, Bacteria, Eukarya and viruses, and shown how microbes impact on our everyday lives. An appreciation of the huge diversity, and importance of microbes also will be acquired. This course equips the student with fundamental theoretical knowledge that can lead to becoming a skilled microbiologist.

## Previous Student Feedback

Student feedback on previous offerings has been incorporated in to course design. Generally students have found the course "well structured", "very interesting and engaging" and "delivered and explained really well". Students enjoy learning the content, find the course well organised and assessment appropriate. Compulsory workshops have been introduced in recent years as a response to student suggestions. They are now seen as a valuable learning component of the course and "useful in expanding upon knowledge". Students like the flow of the course, with each module having several lectures providing the content and a workshop. The revision material provided for each module was seen as "fantastic" and "very helpful". Students have enjoyed the wide scope of microbiology and "its relation to the modern world", particularly the relevance to everyday life in medical, applied and ecological areas.

## 1.3 Course Staff

Primary Convenor **Dr Tony Greene**

<b>PHONE</b>	3735 4427
<b>EMAIL</b>	<a href="mailto:t.greene@griffith.edu.au">t.greene@griffith.edu.au</a>
<b>CAMPUS</b>	Nathan Campus
<b>BUILDING</b>	Science 2 (N34)
<b>ROOM</b>	2.34
<b>CONSULTATION</b>	Consultation can be during lectures or workshops, by appointment or email.

Lecturer **APro Helen Stratton**

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<b>EMAIL</b>	<a href="mailto:h.stratton@griffith.edu.au">h.stratton@griffith.edu.au</a>
<b>CAMPUS</b>	Nathan Campus
<b>BUILDING</b>	Science 2 (N34)
<b>ROOM</b>	2.30
<b>CONSULTATION</b>	During lectures or workshops, by email or appointment

## 1.4 Timetable

Timetables are available on [the Programs and Courses website](#).

NB: Details contained in this Section of the course profile and Section 4.1 Learning Activities are to be read in conjunction with the official class timetable. The published class timetable which is the authoritative source for timetabling information for all campuses can be located by clicking on the above link.

### Additional Timetable Information

#### Lectures:

Two hours of lectures are weekly (Mondays weeks 1-12), along with an additional two hour lecture every second week (Thursdays weeks 2, 4, 5, 7, 9 & 11). Lectures will be presented online. Course content will be presented to explain the concepts.

#### Workshops:

Workshops are timetabled for 2 hours for each module and held in-person in weeks 1, 3, 6, 8, 10, 12. The format of these workshops may vary from module to module. Generally students will be assigned questions to investigate and discuss. Students will be advised in the preceding week the format of the workshop. **Attendance at workshops is compulsory.**

## 1.5 Lecture Capture

It is standard practice at Griffith University that lectures timetabled in lecture capture-enabled venues are recorded and made available to students on the relevant course site, in accordance with the University's [Lecture Capture Policy](#).

The lecture series delivered as part of this course will be recorded and accessible via the Learning@Griffith course site.

# 2. Aims, Outcomes & Graduate Attributes

## 2.1 Course Aims

The course is designed to provide an overall understanding of microbes and their impact on our everyday life. Particular emphasis will be on the major areas of microbiology: medical, environmental and applied microbiology. The fundamental aspects of microbiology will be presented including aseptic technique, handling, manipulating and growth of microbes, control techniques, as well the biochemical, morphological and genetic diversity of microbes. While there are no laboratories in this course, the practical application of these techniques will be exhibited during laboratory studies in 2013NSC Biotechniques Laboratory and 3018NSC Microbiology Laboratory. This course lays the foundations for future studies in microbiology and

provides knowledge in areas requiring an understanding of microorganisms.

## 2.2 Learning Outcomes

After successfully completing this course you should be able to:

- 1 understand and appreciate of the importance of microbiology in life systems
- 2 understand the fundamental concepts and principles of microbiology
- 3 understand the theory behind microbiological techniques
- 4 Understand industrial and medical applications of microorganisms

## 2.3. Graduate Attributes

For further details on the Griffith Graduate please [click here](#)

Griffith University prepares influential graduates to be:

- [Knowledgeable and skilled, with critical judgement](#)
- [Effective communicators and collaborators](#)
- [Innovative, creative and entrepreneurial](#)
- [Socially responsible and engaged in their communities](#)
- [Culturally capable when working with First Australians](#)
- [Effective in culturally diverse and international environments](#)

**This table demonstrates where each of the Griffith Graduate Attributes is taught, practised and assessed in this course.**

For further details on the Griffith Graduate Attributes please refer to [The Griffith Graduate policy](#).

University wide attributes

GRADUATE ATTRIBUTE	TAUGHT	PRACTISED	ASSESSED
Knowledgeable and skilled, with critical judgement	•	•	•
Effective communicators and collaborators	•	•	•
Innovative, creative and entrepreneurial		•	
Socially responsible and engaged in their communities		•	

## 3. Learning Resources

### 3.1 Required Resources

Details of your Required Learning Resources are available from the [Reading List](#).

### 3.2 Recommended Resources

Details of your Recommended Learning Resources are available from the [Reading List](#).

### 3.3 University Learning Resources

The University provides many facilities and support services to assist students in their studies. Links to information about University support resources that are available to students are included below for easy reference.

[Readings](#) - New online service enabling students to access Required and Recommended Learning resources. It connects to the library catalogue to assist with quickly locating material held in Griffith libraries and enables students to manage and prioritise their readings, add personal study notes and export citations.

[Learning@Griffith](#) - there is a dedicated website for this course via the Learning@Griffith at myGriffith.

[Academic Integrity Tutorial](#) - this tutorial helps students to understand what academic integrity is and why it matters. You will be able to identify types of academic misconduct, understand what skills you will need in order to maintain academic integrity, and learn about the processes of referencing styles.

[Student Support](#) - provides a range of services to support students throughout their studies including personal support such as Counselling and Health Services; Academic support; and Financial and Welfare support.

The [Careers and Employment Team](#) provides: Career Wellbeing, Career Planning and Decision Making, Finding Jobs, Skills Identification and Development, Graduate Employment Information, LinkedIn Profile Review, Interview Preparation, Online Psychometric and Aptitude Test Preparation, International Student Support, Disability Disclosure Strategies and Higher Degree Research (HDR) Career Consultations.

[Library and Learning Services](#): Library and Learning Services provides a wide range of quality client-focused services and programs to students, researchers and staff of the University. Library and Learning Services works in collaboration with the academic community to achieve academic and research outcomes.

[Support for learning](#) - the University provides access to common use computing facilities for educational purposes.

[Code of Practice](#) - Griffith Information Technology Resources.

### 3.5 Other Learning Resources & Information

**Learning@Griffith:** Additional learning material, workshop activities/questions, and reading will be made available on the Learning@Griffith website.

# 4. Teaching & Learning Activities

## 4.1 Learning Activities

Week Commencing	Activity	Learning Outcomes
8 Mar 21	<b>Module 1 - Microbial life (Lecture):</b> - Course introduction - Scope of microbiology - Microbes  WORKSHOP 1	1, 2, 4
15 Mar 21	<b>Module 1 continued (Lecture):</b> - Historical developments - Evolution - Phylogeny & Domains - Microbial ecology	1, 2, 3
22 Mar 21	<b>Module 2. Structure &amp; function of microbes (Lecture):</b> - Microscopy - Viruses  WORKSHOP 2	1, 2, 3
29 Mar 21	<b>Module 2. continued (Lecture):</b> - Cellular morphology - Cell membranes - Cell walls - Structures for movement, survival & attachment	1, 2, 3
12 Apr 21	<b>Module 3 - Microbial-human interactions (Lecture):</b> - Human microbiome - Microbial diseases - Disease transmission	1, 3, 4
19 Apr 21	<b>Module 3 continued (Lecture):</b> - Food - Water  WORKSHOP 3	1, 2, 4
26 Apr 21	<b>Module 4 - Control of microbes (Lecture):</b> - Control methods - Sterilisation and disinfection  NOTE: No Monday lecture due to Anzac Day	1, 2, 3, 4
3 May 21	<b>Module 4 continued (Lecture):</b> - Antimicrobial agents - Industrial controls  WORKSHOP 4	2, 4
10 May 21	<b>Module 5. Growth &amp; Metabolism (Lecture):</b> - Nutrition & energetics - Fermentation - Respiration - Phototrophy - Growth dynamics	2, 4
17 May 21	<b>Module 5 continued (Lecture):</b> - Studying microbes - Factors affecting growth  WORKSHOP 5	2, 3
24 May 21	<b>Module 6 - Microbial diversity &amp; genetics (Lecture):</b> - Genomes - Mutation - Gene transfer mechanisms - Systematics - Archaea	1, 2, 4

Week Commencing	Activity	Learning Outcomes
31 May 21	<b>Module 6 continued (Lecture):</b> - Eukarya - Bacterial groups  WORKSHOP 6 & Revision	1, 2, 3

## 4.2 Other Teaching and Learning Activities Information

This course will be presented as a series of lectures, workshops and online revision. Both the lectures and workshops can be interactive and the students are encouraged to ask questions and contribute during workshops. Please note that the sequence of lectures may still vary and a final schedule will be provided on the [learning@griffith](mailto:learning@griffith) course site.

Lectures will be presented online through Collaborate Ultra. Most lectures will be live at the scheduled time. However some may need to be pre-recorded and posted at the scheduled time. Students will be advised of this in advance.

Learning objectives, key topics, slides and revision for lectures will be posted on the [Learning@Griffith](http://Learning@Griffith) website.

Workshops are timetabled for 2 hours within each module (weeks 1, 3, 6, 8, 10, 12) and will be conducted face-to-face. The format of these workshops may change from module to module. Students will be advised in the preceding week the format of the workshop and material also will be provided in the preceding week through the [Learning@Griffith](http://Learning@Griffith) website. The material may take the format of a set of prescribed questions, problems or activities that will reinforce lecture material and direct students to consult the text and additional reading. Further details will be provided during the trimester. Where not immediately available through the activity, answers to the workshop questions will be posted to [Learning@Griffith](mailto:Learning@Griffith) after the completion of each module. Note that attendance at workshops is **compulsory**.

If a class is scheduled on a public holiday (or cancelled for any unexpected reason), this class will normally not be repeated. The content will be integrated across other classes. Hence, there will be no lecture held on 26 April (Anzac day public holiday).

Students Repeating a Course: Normally, students repeating a course should not 'carry forward' marks from a previous attempt. Assessment items are usually offered to provide formative experience as well as a summative assessment. Therefore, NO MARK for any assessment item from a previous attempt will be carried forward.

If any student has a disability and/or health condition that may impact on their ability to successfully undertake required learning activities in this course, they are encouraged to complete the [Griffith University Disclosure Statement](#) and advise their Course Convenor.

## 5. Assessment Plan

### 5.1 Assessment Summary

This is a summary of the assessment in the course. For detailed information on each assessment, see [5.2 Assessment Detail](#) below.

ASSESSMENT TASK	DUE DATE	WEIGHTING	MARKED OUT OF	LEARNING OUTCOMES	MAXIMUM EXTENSION PERIOD
<i>Test or quiz</i> Workshop tasks (x6)	9 Mar 21 - 4 Jun 21	20%	60.0 marks (x6)	1, 2, 3, 4	
<i>Test or quiz</i> Quiz 1, 40 minutes	14 Apr 21 1pm Wednesday week 5 online	15%	30 marks	1, 2, 3, 4	
<i>Test or quiz</i> Quiz 2, 40 minutes	12 May 21 1pm Wednesday week 9 online	15%	30 marks	1, 2, 3, 4	
<i>Exam - selected and constructed responses</i> Examination	Examination Period	50%	100 marks	1, 2, 3, 4	

### 5.2 Assessment Detail

**Title:** Workshop tasks (x6)

**Type:** Test or quiz

**Learning Outcomes Assessed:** 1, 2, 3, 4

**Due Date:**

9 Mar 21 - 4 Jun 21

**Weight:** 20%

**Marked out of:** 60.0

**Task Description:**

Workshop tasks will take the form of either a short quiz at the end of the workshop or submitting answers to a set of workshop questions given online ([learning@griffith](mailto:learning@griffith) site) prior to or during the workshop. In each case, the questions will be related to lecture material. The questions will test the students understanding of the lecture material and associated reading.

Attendance at the workshops is compulsory. Failure to attend a workshop will result in zero marks (out of 10) for that particular assessment task, unless appropriate evidence (e.g. medical certificate) is provided to the Convenor within the 3 days after the workshops.

**Criteria & Marking:**

Details of the task will be given in-class and on the learning@griffith site in the week preceding the workshop.

**Submission:** Via the 'Assignments' tool in Learning@Griffith.

**This assessment item:**

- is a school based activity
  - is an individual activity
  - does not include a self assessment activity
  - does not have a re-attempt provision
- 

**Title:** Quiz 1, 40 minutes

**Type:** Test or quiz

**Learning Outcomes Assessed:** 1, 2, 3, 4

**Due Date:**

14 Apr 21 1pm Wednesday week 5 online

**Weight:** 15%

**Marked out of:** 30

**Task Description:**

Quiz 1 will cover Modules 1 and 2 and be in the form of multiple choice questions. It will test students understanding of the materials and concepts covered in lectures and workshops.

Attendance for the Quiz at the specified time is compulsory. Failure to attend will result in zero marks for the quiz, unless appropriate documentary evidence (e.g. medical certificate) is provided to the Convenor within 3 days of the quiz.

**Criteria & Marking:**

The quiz will test the theory and understanding of the lecture material and will be in the form of multiple choice questions.

Revision and practice questions will be provided for each module covered. Further details will be given in-class prior to the quiz.

**This assessment item:**

- is a school based activity
  - is an individual activity
  - does not include a self assessment activity
  - does not have a re-attempt provision
- 

**Title:** Quiz 2, 40 minutes

**Type:** Test or quiz

**Learning Outcomes Assessed:** 1, 2, 3, 4

**Due Date:**

12 May 21 1pm Wednesday week 9 online

**Weight:** 15%

**Marked out of:** 30

**Task Description:**

Quiz 2 will cover Modules 3 and 4 and be in the form of multiple choice questions. It will test students understanding of the materials and concepts covered in lectures and workshops.

Attendance for the Quiz at the specified time is compulsory. Failure to attend will result in zero marks for the quiz, unless appropriate documentary evidence (e.g. medical certificate) is provided to the Convenor within 3 days of the quiz.

**Criteria & Marking:**

The quiz will test the theory and understanding of the lecture material and will be in the form multiple choice questions. Further details will be given in-class prior to the quiz.

**This assessment item:**

- is a school based activity
  - is an individual activity
  - does not include a self assessment activity
  - does not have a re-attempt provision
- 

**Title:** Examination

**Type:** Exam - selected and constructed responses

**Learning Outcomes Assessed:** 1, 2, 3, 4

**Due Date:**

Examination Period

**Weight:** 50%

**Marked out of:** 100

**Perusal:** 10 minutes

**Duration:** 120 minutes

**Format:** Closed Book, Online

**Task Description:**

The Final Examination will consist of a choice of questions for a written descriptive answer and multiple choice questions. The examination is designed to test the depth of the students understanding of microbiology and their ability to express themselves in relation to facts, concepts, ideas and topical issues in microbiology.

**Criteria & Marking:**

The exact balance of written descriptive and multiple choice questions along with sample questions will be provided in the revision material in week 12. The exam will cover the whole semesters' lecture material.

**This assessment item:**

- is a centrally organised activity
  - is an individual activity
  - does not include a self assessment activity
-

## 5.3 Late Submission

**For all non-Honours Dissertation courses:** An assessment item submitted after the due date, without an approved extension, will be penalised. The standard penalty is the reduction of the mark allocated to the assessment item by 5% of the total weighted mark for the assessment item, for each working day that the item is late. A working day will be defined as Monday to Friday. Assessment items submitted more than five working days after the due date will be awarded zero marks. To understand how the mark is reduced please refer to [Assessment Procedures for Students](#).

**For all Honours Dissertation courses:** Enrolment in an Honours degree shall be cancelled and the candidature terminated if the candidate fails to lodge their Honours dissertation by the prescribed date including any approved extensions.

## 5.4 Other Assessment Information

**Supplementary Assessment** is available in this course in accordance with Section 8 of the University Assessment Policy. To achieve a Pass grade for the course a pass mark for the supplementary assessment item must be achieved.

### Final Grades

A student's final grade for this course will be based on the aggregation and weighting of marks across assessment, any mandatory pass components and grade cut-offs. Grade cut-offs can vary, so you will need to wait for the official release of grades to be sure of your grade for this course.

- This course is a graded course (i.e 7, 6, 5, 4, 3, 2, 1).

# 6. Policies & Guidelines

This section contains the details of and links to the most relevant policies and course guidelines. For further details on University Policies please visit the [Policy Library](#)

## 6.1 Assessment Related Policies and Guidelines

### University Policies & Guidelines

The University's assessment-related policies can be found in the [Griffith Policy Library](#).

Please refer to the following specific policies:

- [Assessment Policy](#)
- [Assessment Procedure for Students](#)

## 6.2 Other Policies and Guidelines

### University Policies and Guidelines

Students are responsible for ensuring that they have read all sections of the Course Profile for the course/s in which they are enrolled in any enrolment period. The published online version of the Course Profile is the authoritative version and by the publication of the Course Profile online, the University deems the student has been notified of and read the course requirements. Variations to the Course Profile during the trimester of offer are not permitted except in exceptional circumstances and will be advised in writing to all enrolled students and via the [Learning@Griffith](mailto:Learning@Griffith) website. Additional information regarding the content of this course may be published on the [Learning@Griffith](#) website.

### Copyright matters

Copyright applies to all teaching materials and materials generated by students which substantially relate to Griffith University courses. *Students are warned against selling Griffith University teaching materials and their student notes online through commercial websites during and after their studies.* You will almost certainly be in breach of copyright law and Griffith's IT Code of Practice if you post these materials on the internet and commercial websites. Please refer to the [Copyright Guide for Students](#) for further information.

### Health and Safety

Griffith University is committed to providing a safe work and study environment. However, all students, staff and visitors have an obligation to ensure the safety of themselves and those whose safety may be affected by their actions. Staff in control of learning activities will ensure as far as reasonably practical, that those activities are safe and that all safety obligations are being met. Students are required to comply with all safety instructions and are requested to report safety concerns to the University.

General health and safety information is available on the [Health, Safety and Wellbeing](#) website.

### Other Key Student-Related Policies

All University policy documents are accessible to students via the [Griffith Policy Library](#) and links to key policy documents, in addition to those listed in 6.1 above, are included below for easy reference:

- [Student Communications Policy](#)
- [Health and Safety Policy](#)
- [Student Administration Policy](#)
- [Student Charter](#)
- [Student Review and Appeals Policy](#)
- [Student Review and Appeals Procedures](#)
- [Student Complaints Policy](#)

### Other Course Guidelines

#### COURSE COMMUNICATIONS

The course convenor will communicate regularly with students via the course website on [learning@griffith](mailto:learning@griffith).



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This will provide a major mechanism for communication within this course and students must check the course announcements on the Learning@griffith website frequently (at least weekly but daily checking is recommended). Students are expected to attend the scheduled classes for face-to-face interaction with the teaching team. Students are encouraged to ask questions and actively participate in classes and use this time to raise any issues that need clarification. The course convenor may be available at times that can be organised outside the scheduled class times if arrangements are made for meeting times that suit both parties. Email and phone contact may also be used as alternative forms of communication. Students are advised to limit email communication to questions or issues that require a short and definitive answer. If more complex issues or questions need to be discussed a consultation time should be organised.