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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>	2202ENG
<b>COURSE TITLE</b>	Environmental Microbiology and Ecology
<b>ACADEMIC ORGANISATION</b>	ENG School of Engineering and Built Environment
<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 introduces the importance of microorganisms to natural and designed ecosystems, biogeochemical cycles, trophic pathways and their beneficial applications. The course provides an understanding of the relationships between living organisms and their abiotic environment, and the living nature of soil, water and air. The course covers fundamentals including cellular transport, microbial growth, environmentally significant biochemical pathways and the taxonomic classification of autotrophic and heterotrophic organisms together with their resource requirements - light, oxygen and nutrients. Ecosystem concepts of food webs, energy flow and mineral cycles are introduced with particular emphasis on applications: decomposition, biogeochemical cycles, wastewater treatment, composting, bio- and phytoremediation, catchment management, and human and ecosystem health. The laboratories cover microbial biodiversity, techniques for the culture, staining and enumeration of microorganisms, animal and plant diversity with an emphasis on water quality and macroinvertebrate sampling, and environmental field monitoring.

## Assumed Background:

No assumed background required

## 1.2 Course Introduction

This course introduces the importance of microorganisms to natural and designed ecosystems, biogeochemical cycles, trophic pathways and their beneficial applications. The course provides an understanding of the relationships between living organisms and their abiotic environment, and the living nature of soil, water and air. The course covers fundamentals including cellular transport, microbial growth, environmentally significant biochemical pathways and the taxonomic classification of autotrophic and heterotrophic organisms together with their resource requirements - light, oxygen and nutrients. Ecosystem concepts of food webs, energy flow and mineral cycles are introduced with particular emphasis on applications: decomposition, biogeochemical cycles, wastewater treatment, composting, bio- and phytoremediation, catchment management, and human and ecosystem health. The laboratories cover microbial biodiversity, techniques for the culture, staining and enumeration of microorganisms, animal and plant diversity with an emphasis on water quality and macroinvertebrate sampling, and environmental field monitoring.

## Previous Student Feedback

This course is consistently rated highly by students who appreciate the hands-on experience in the laboratories and the pond field trip. They also like the guest lectures and the opportunity to explore their future careers as environmental professionals.

Students find the course well organised and engaging, as well as busy, due to the laboratories and the wide variety of assessments. They find the PebblePad laboratory workbook helpful in preparing and consolidating their laboratory experiences, and stepping through their scientific report writing in a structured way.

Attendance at weekly labs and lectures, weekly progress on your assessments and revision is key to your success.

## 1.3 Course Staff

Primary Convenor **Dr Ruby Michael**

<b>PHONE</b>	07 3735 8344
<b>EMAIL</b>	<a href="mailto:ruby.michael@griffith.edu.au">ruby.michael@griffith.edu.au</a>
<b>CAMPUS</b>	Nathan Campus
<b>BUILDING</b>	Environment 2 (N13)
<b>ROOM</b>	1.30
<b>CONSULTATION</b>	Drop-in consultation times will be advised by the convenor in the first lecture. <b>Laboratories are compulsory</b> Please contact your laboratory partner and email your laboratory demonstrator prior to (or during) your scheduled laboratory if there are extenuating circumstances as to why you can't attend.

Course Moderator **Prof Bofu Yu**

<b>EMAIL</b>	<a href="mailto:b.yu@griffith.edu.au">b.yu@griffith.edu.au</a>
<b>CAMPUS</b>	Nathan Campus
<b>BUILDING</b>	Engineering Tech & Aviation (N79)
<b>ROOM</b>	N79 3.07F
<b>CONSULTATION</b>	<b>Students should not contact the course moderator directly as this is an internal role to provide quality assurance of this course.</b>

## 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 link above.

### Additional Timetable Information

Contact hours per student per week: 2 hour Lecture; 3 hour Laboratory

Summary of student contact hours in the trimester:

Total number of lectures (hours): 22

Total number of labs (hours): 33

Grand total number of contact hours: 55

## 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.

## 1.6 Technical Specifications

It is recommended that students have an internet connection capable of 1BPS download and 1BPS upload speed. Upload speeds under 0.5 cannot support video streaming which is required for the effective operation of video based activities.

## 2. Aims, Outcomes & Graduate Attributes

### 2.1 Course Aims

As environmental engineers and scientists it is important to have knowledge and understanding of relevant microbiological and ecological concepts and processes in both natural and engineered environments, and industrial applications. In order to provide solutions to improve the design and efficiency of wastewater treatment systems and assist in bioremediation and rehabilitation of contaminated water and land, it is necessary to understand the relevance of environmental microbiology and ecology. The aim of this course is to provide students with a fundamental knowledge and understanding of environmental microbiology and ecology. This is a preparatory course for understanding processes in wastewater treatment, water pollution control and land restoration.

### 2.2 Learning Outcomes

After successfully completing this course you should be able to:

- 1 Describe basic microbial processes of metabolism and growth and the microbial diversity of soil and water as they relate to ecological and industrial applications
- 2 Describe and discuss the role of microorganisms in biogeochemical cycles; in particular the carbon cycle and the nitrogen cycle in relation to ecological and industrial applications; and the global implications
- 3 Describe basic ecological concepts and discuss their engineering applications
- 4 Describe and discuss the role of microorganisms in natural and engineered systems
- 5 Describe and discuss the environmental requirements of living organisms and the consequences of altering environmental conditions on ecosystem health
- 6 Write a scientific report including review of literature, interpretation and discussion of experimental data
- 7 Learn practical skills in observation, recording and identification; learn microbial laboratory techniques; use instrumentation for water quality sampling; use taxonomic keys for identification
- 8 Reflect upon your professional journey and progress towards attainment of competencies relevant to your career

### 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	•	•	•
Socially responsible and engaged in their communities	•	•	•
Culturally capable when working with First Australians	•		
Effective in culturally diverse and international environments	•		

## Engineers Australia Stage 1 Competencies &amp; Elements of Competency

GRADUATE ATTRIBUTE	LEARNING OUTCOMES
<b>1. KNOWLEDGE AND SKILL BASE</b>	
<b>1.1.</b> Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline	<b>1, 2, 3, 4, 5</b>
<b>1.2.</b> Conceptual understanding of the mathematics, numerical analysis, statistics and computer and information sciences which underpin the engineering discipline.	<b>6</b>
<b>1.3.</b> In-depth understanding of specialist bodies of knowledge within the engineering discipline.	
<b>1.4.</b> Discernment of knowledge development and research directions within the engineering discipline.	<b>2, 4, 6, 7</b>
<b>1.5.</b> Knowledge of contextual factors impacting the engineering discipline.	<b>2, 3, 5</b>
<b>1.6.</b> Understanding the scope, principles, norms, accountabilities and bounds of contemporary engineering practice in the specific discipline.	
<b>2. ENGINEERING APPLICATION ABILITY</b>	
<b>2.1.</b> Application of established engineering methods to complex engineering problem solving.	
<b>2.2.</b> Fluent application of engineering techniques, tools and resources.	
<b>2.3.</b> Application of systematic engineering synthesis and design processes.	
<b>2.4.</b> Application of systematic approaches to the conduct and management of engineering projects.	
<b>3. PROFESSIONAL AND PERSONAL ATTRIBUTES</b>	
<b>3.1.</b> Ethical conduct and professional accountability.	<b>8</b>
<b>3.2.</b> Effective oral and written communication in professional and lay domains.	<b>6, 7, 8</b>
<b>3.3.</b> Creative, innovative and proactive demeanour.	<b>8</b>
<b>3.4.</b> Professional use and management of information.	<b>8</b>
<b>3.5.</b> Orderly management of self, and professional conduct.	<b>7, 8</b>
<b>3.6.</b> Effective team membership and team leadership	<b>8</b>

**Additional Course Information on Graduate Attributes**

Engineers Australia accredits Bachelor of Engineering with Honours programs adjudged against Stage 1 Competencies for a Professional Engineer as preparing their graduates adequately for entry to the profession and admission to membership of Engineers Australia.

Graduates from accredited programs also receive international recognition of their qualifications through the Washington Accord.

Successfully completing this course will contribute to the confirmation of the students' attainment of the above Engineers Australia Stage 1 Competencies for a Professional Engineer.

## 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

*Laboratory notebook for your drawings and notes:*

All students will be required to purchase a Botany Exercise Book (preferably 64 page) from the University Post Office before their first laboratory. Commonly students use A5 but A4 is also okay.

If you don't have a Botany Exercise Book for your first laboratory, you will need to leave and purchase one before you commence your laboratory.

A printed laboratory manual will be supplied.

## 4. Teaching & Learning Activities

### 4.1 Learning Activities

DATE	LECTURE	OTHER ACTIVITIES
8 Mar - 14 Mar	<b>Topic 1:</b> Environmental microbiology's significance for Environmental Management and Engineering. Microbial biodiversity. <b>Learning Outcomes:</b> 4	<b>Week 1</b> (Laboratory): Use of the microscope, size measurements, introduction to aseptic techniques. NB: SAFETY OBLIGATIONS MUST BE SIGNED OFF PRIOR TO ATTENDING THIS LAB (See Laboratory Workbook in PebblePad) <b>Learning Outcomes:</b> 3, 5, 7
15 Mar - 21 Mar	<b>Topic 2:</b> Cell structure and function. Transport processes <b>Learning Outcomes:</b> 1	<b>Week 2</b> (Laboratory): Osmosis and Diffusion <b>Learning Outcomes:</b> 7
22 Mar - 28 Mar	<b>Topic 3:</b> Microbial growth- nutrition; limiting factors. <b>Learning Outcomes:</b> 1	<b>Week 3</b> (Laboratory): Culture of microorganisms and staining techniques **critical to attend this laboratory for your assignment** <b>Learning Outcomes:</b> 7
29 Mar - 4 Apr	<b>Topic 4:</b> Microbial metabolism <b>Learning Outcomes:</b> 2	<b>Week 4</b> (Laboratory): Counting bacteria **critical to attend this laboratory for your assignment** <b>Learning Outcomes:</b> 4, 7
12 Apr - 18 Apr	<b>Topic 5:</b> Biogeochemical cycles <b>Learning Outcomes:</b> 2, 3	<b>Week 5</b> (Laboratory): Diversity 1: Emphasis on Microorganisms <b>Learning Outcomes:</b> 6
19 Apr - 25 Apr	<b>Topic 6:</b> Guest Speakers (COMPULSORY ATTENDANCE FOR CAREER COMPETENCIES ASSIGNMENT) <b>Learning Outcomes:</b> 2, 3	<b>Week 6</b> (Laboratory): ~ FEEDBACK CONSULTATIONS ~ Your tutor will review your full draft of your scientific reports and your laboratory workbook exercises NB: These laboratory consultations will be scheduled online <b>Learning Outcomes:</b> 5, 7
26 Apr - 2 May	<b>Topic 7:</b> ANZAC day - no lecture this week. Work on career competencies assignment. <b>Learning Outcomes:</b> 1	<b>Week 7</b> (Laboratory): TBA <b>Learning Outcomes:</b> 7

DATE	LECTURE	OTHER ACTIVITIES
3 May - 9 May	<b>Topic 8:</b> Wetland ecosystems and their role in water pollution control (Lecture is on TUESDAY May 4th due to University deeming of days) <b>Learning Outcomes:</b> 4, 5	<b>Week 8</b> (Laboratory): Diversity 2: Emphasis on aquatic macro-invertebrates and aquatic plants. <b>Learning Outcomes:</b> 3, 5, 7
10 May - 16 May	<b>Topic 9:</b> Water Quality: Microbiology and Ecology <b>Learning Outcomes:</b> 3, 4, 5	<b>Week 9</b> (Laboratory): Pond field trip: Water quality testing and sampling aquatic macro-invertebrates (Meet at Laboratory). <b>Learning Outcomes:</b> 3, 5, 7
17 May - 23 May	<b>Topic 10:</b> Water and Wastewater Treatment <b>Learning Outcomes:</b> 4	<b>Week 10</b> (Laboratory): Revision Lab <b>Learning Outcomes:</b> 7
24 May - 30 May	<b>Topic 11:</b> Soil microbiology, bioremediation and phytoremediation. <b>Learning Outcomes:</b> 2, 4	<b>Week 11</b> (Laboratory): Laboratory Examination. <b>Learning Outcomes:</b> 7
31 May - 6 Jun	<b>Topic 12:</b> Phytocapping <b>Learning Outcomes:</b> 2, 3, 4, 5	

## 4.2 Other Teaching and Learning Activities Information

Lecture: 2 hour Lecture per week (4-6pm Monday)

Laboratory: 3 hour laboratory per week (Thursday 1-4pm) **COMPULSORY ATTENDANCE**

### **T1 2020 Mid-Tri Study Week**

**Monday 5 April - Friday 9 April**

### **Other Important Dates**

**Week 6 COMPULSORY LECTURE.** The Lecture on Monday 19 April is linked to your Career Competencies assessment.

**Week 7 PUBLIC HOLIDAY Monday 26 April, ANZAC DAY** (NO LECTURE ON THIS DAY) \*\*\*\*\* Monday Lecture will NOT be rescheduled \*\*\* One-on-one consultations will occur on your scientific report drafts and will be scheduled during trimester \*\*\*

### **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.*

**Week 8 PUBLIC HOLIDAY Monday 3 May, LABOUR DAY** (LECTURE RESCHEDULED TO TUESDAY). As per University Deeming of Days policy on the second Monday public holiday, classes scheduled for Monday are to be rescheduled for Tuesday and Tuesday classes are to be cancelled.

### **CONTENT SUMMARY**

This course introduces students to the importance of microorganisms in natural ecological systems and industrial applications. Concepts of mineral cycling and energy flow provide an understanding of the relationships of living organisms with each other and their abiotic environment. The taxonomic classification of autotrophic and heterotrophic organisms is covered together with their resource requirements - oxygen and nutrients, transport process (diffusion, osmosis and active uptake) and metabolic processes (aerobic and anaerobic respiration, photosynthesis, chemosynthesis). Particular emphasis is placed on the role of microorganisms in biogeochemical cycles, waste-water treatment, bioremediation, water quality and industrial processes. Students are introduced to plant and animal diversity, the application of biotic indices for stream health; and use of plants for phytoremediation

*Additional teaching team members*

**Ashlee Shipham - Scientific Officer for laboratories**

Environment 1 (N55) -1.09, 07 3735 6708

## 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> Quiz	12 Apr 21 (Week 5 in Lecture)	10%	10 marks	1, 2, 3	
<i>Portfolio - evidence</i> Laboratory Workbook	22 Apr 21 09:00 - 4 Jun 21 17:00 (Week 6 and Week 12)	15%	15 marks	1, 6, 7	
<i>Portfolio - evidence</i> Career Competencies Reflection	2 May 21 17:00 (Week 7)	10%	10 marks	8	
<i>Assignment - Written</i> Assignment Scientific Report	16 May 21 17:00 (Week 9)	10%	10 marks	6	
<i>Exam - practical/laboratory/clinical</i> Laboratory Exam	27 May 21 13:00 (Week 11)	20%	20 marks	7	
<i>Exam - constructed response</i> Final Exam	Examination Period	35%	35 marks	1, 2, 3, 4, 5	

## 5.2 Assessment Detail

**Title:** Quiz

**Type:** Test or quiz

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

**Due Date:**

12 Apr 21 (Week 5 in Lecture)

**Weight:** 10%

**Marked out of:** 10

**Task Description:**

Item 1: Quiz 1

Date: Week 5 (in Lecture)

Length: 20 Minutes

Weighting: 10%

Conditions: Multiple choice

**Criteria & Marking:**

- Quiz is multiple choice
- venue to be advised during trimester if different from lecture room
- general feedback will be provided in the lecture
- marks uploaded to L@G within 2 weeks

**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:** Laboratory Workbook

**Type:** Portfolio - evidence

**Learning Outcomes Assessed:** 1, 6, 7

**Due Date:**

22 Apr 21 09:00 - 4 Jun 21 17:00 (Week 6 and Week 12)

**Weight:** 15%

**Marked out of:** 15

**Task Description:**

Laboratory Workbook (PebblePad)

The Laboratory Workbook is designed to be your weekly companion throughout this course and to support you recording your learning and preparing for your assessments.

**Due Date:**

**Reviewed in Week 6 consultations**

**Submitted in Week 12 for final marking**

Weighting: 15%

Completion of weekly laboratory workbook exercises including those related to the Scientific Report

The objective of this assessment is to test your skills in:

- developing your content knowledge of microbiology
- developing a systematic approach to observation, collection, recording and interpretation of data
- demonstrating an ability to follow laboratory procedures
- demonstrating an ability to observe and record accurately by drawings, making brief notes, constructing graphs and tables
- demonstrating your ability to write scientifically
- demonstrating your ability to review and reflect on your scientific report writing for continuous improvement



Due to the PC2 Laboratory environment, **you are required to purchase a Botany Exercise Book (usually A5, 48 page)** available from the University Cooperative Bookshop to take notes and record drawings during laboratories. Hand drawings and graphs are to be entered on the plain pages and notes are to be entered on the ruled pages of your Botany Book.

You will be required to provide appropriate evidence of your laboratory work progress in your PebblePad Laboratory Workbook including the drafting of your scientific report and Week 12 reflection.

#### **0% WEEK 6**

Submit your PebblePad Laboratory Workbook Exercises and complete DRAFT of your scientific report. Further details will be provided on L@G.

**Due Date: Thursday 22 April 2021 at 9am (WEEK 6)**

#### **15% WEEK 12**

Further details will be provided on L@G.

**Due Date: Friday 4 June 2021 at 5pm (WEEK 12)**

- marks will be provided on L@G within 2 weeks
- feedback will be provided in your PebblePad workbook

#### **Criteria & Marking:**

Available on L@G

#### **This assessment item:**

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

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**Title:** Career Competencies Reflection

**Type:** Portfolio - evidence

**Learning Outcomes Assessed:** 8

**Due Date:**

2 May 21 17:00 (Week 7)

**Weight:** 10%

**Marked out of:** 10

**Task Description:**

Assignment - Practice-based Assignment

**Due Date: 2 May 2021, 5pm (Week 7)**

Weight: 10%

The marking rubric for this assessment item will be available on L@G.

In this task you will be required to link information from a guest lecturer with the professional and personal attributes required for success in your discipline. You will write a reflection on your experiences to evidence each of the competencies, and analyse how your previous experiences and the skills you have developed relate to your future career.

More information and the marking rubric for this assessment item will be available online.

This assessments will be marked and returned to the students with feedback within two-three weeks of the due date.

#### **IMPORTANT NOTE:**

- assessment is based on the guest Lecture given in Week 6.
- the guest lecture is compulsory to attend face-to-face and attendance will be noted
- marking is done outside the course and marks should be available within 2 weeks
- feedback will be provided in your PebblePad workbook

#### **Criteria & Marking:**

More information and the marking rubric for this assessment item will be available online.

This assessments will be marked and returned to the students with feedback within two-three weeks of the due date.

The marking rubric will be available online so you can see how you will be marked.

The rubric includes a number of criterion related to understanding and evidencing the relevant competencies, as well as the ability to write reflectively and reference correctly.

**Submission:** Online submission

#### **This assessment item:**

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

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**Title:** Scientific Report

**Type:** Assignment - Written Assignment

**Learning Outcomes Assessed:** 6

**Due Date:**

16 May 21 17:00 (Week 9)

**Weight:** 10%

**Marked out of:** 10

**Task Description:**

**Scientific Report**

The objective of this item of assessment is to familiarise you with how to conduct experimental research and write up a scientific report which is an important foundational skill for the rest of your degree and future career.

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The report will be written up in a scientific-paper format and will be based on work carried out in Laboratories 3 and 4.

Although you will work in pairs in the laboratory, you must submit an individual report in which all text is to be written by you.

### **1. Scientific Report Consultation (0%) HURDLE**

In Week 7, you will consult with the Tutor about your Scientific Report in individual consultations.

You must bring a printed copy of your completed DRAFT to this consultation and have prepared three focus areas to work on your DRAFT with your tutor prior to your consultation.

While the Scientific Report Consultation is worth 0%, it is a HURDLE task. If you do not attend or do not submit a complete draft, or do not prepare your three focus areas to work on with your tutor, you will only be eligible for 10/15 marks allocated to the Scientific Report.

### **2. Scientific Report (10%)**

Your final Scientific Report is due in Week 9.

**Due Date: 16th May 2021, 2pm**

- feedback and mark to be provided by end of Week 11 to enable you to complete your laboratory workbook

#### **Criteria & Marking:**

Assessment details and marking criteria will be provided in your Laboratory workbook.

**Submission:** Text Matching Tool - Turnitin.

#### **This assessment item:**

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

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**Title:** Laboratory Exam

**Type:** Exam - practical/laboratory/clinical

**Learning Outcomes Assessed:** 7

**Due Date:**

27 May 21 13:00 (Week 11)

**Weight:** 20%

**Marked out of:** 20

**Perusal:** 10 minutes

**Duration:** 120 minutes

**Format:** Open Book with Restrictions

**Task Description:**

#### **Laboratory Exam**

2 hour laboratory practical exam in your timetabled laboratory. Students will be permitted to consult their Laboratory manual and Botany Exercise Books during the exams.

Non programmable calculator is allowed

No other materials are permitted unless approved and signed off by the course convenor prior to the exam.

#### **Criteria & Marking:**

Duration: 2 hours

Weighting: 20%

**Location of Examination:** This will occur during your standard laboratory time and will be proctored by your convenor.

#### **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
- is a proctored examination

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**Title:** Final Exam

**Type:** Exam - constructed response

**Learning Outcomes Assessed:** 1, 2, 3, 4, 5

**Due Date:**

Examination Period

**Weight:** 35%

**Marked out of:** 35

**Perusal:** 10 minutes

**Duration:** 120 minutes

**Format:** Closed Book, Online

**Task Description:**

Item 6: Final Examination

Due Date: Examination week

Length: 2 hours

Weighting: 35%

Conditions: Short-answer questions

#### **Criteria & Marking:**

Length: 2h

Weighting: 35%

Short answers

**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 not available for this course.

**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).

**Other Information**

Marks for assessment items will be recorded in the Marks Centre and made available to students through My Marks on Learning@Griffith.

Students are required to attempt and complete all types of assessment (practical-based components, workbooks, scientific report, quiz and examinations).

Attendance at laboratory sessions is compulsory and closely linked to three assessment items. Marks cannot be given for aspects of these assessment items if you did not attend the laboratory sessions related to these assessment items.

There is no supplementary assessment for the laboratory components. Please communicate early if you have any unforeseen difficulty meeting compulsory attendance.

Supplementary Assessment: Since this is a laboratory-intensive course supplementary assessment is not available. Supplementary assessment should not be offered for lab-intensive courses with exam weighting of less than 60%.

Resubmission of assessment is not available for this course.

Overall requirements to pass this course:

To receive a grade of 4 or better for the course, you must achieve an aggregate assessment mark of at least 50% in total.

Students repeating the 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.

## 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](#) 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

1. If students wish to submit assessment items with any similar material for two or more courses, they must first seek approval of all course convenors. Failure to do so could be interpreted as cheating.

2. Students should note that submission of an assignment represents an affirmation that it is **all their own work** and that **nothing has been copied** from the work of others **except where appropriately referenced**. The Griffith University *Policy on Academic Misconduct* lists examples of plagiarism under item 2.0, pages 1-2. These are:

- "word for word copying of sentences or paragraphs from one or more sources which are the work or data of other persons (including books, articles, theses, unpublished works, working papers, seminar and conference papers, internal reports, lecture notes or tapes) without clearly identifying their origin by appropriate referencing" (Note: Appropriate referencing means using quotation marks and providing precise details as to the location of the original, e.g. page number(s));
- "closely paraphrasing sentences or paragraphs from one or more sources without appropriate acknowledgment in the form of a reference to the original work or works" (Note: This means providing page numbers or other detailed location information);
- "using another person's ideas, work or research data without appropriate acknowledgment";
- "submitting work which has been produced by someone else on the student's behalf as if it were the work of the student";
- "copying computer files in whole or in part without indicating their origin";
- "submitting work which has been wholly or partially derived from another student's work by a process of mechanical transformation; for example, changing variable names in computer programs".

3. Late Penalties: The penalty for late submission of assessment items is 10% of the total assessment mark for the item per day, unless otherwise specified in the course outline. No assignments will be accepted after the one-week period. A Special Consideration form must be completed and submitted to the Student Administration Office if students request waiver of the late penalty or an extension to an assessment item. Extensions **may** be granted for medical conditions, however extensions will not be granted for work commitments, family commitments or computer failure.

4. Special Consideration: Students applying for special consideration (due to medical or other grounds) for assessment items must notify their convenor and complete the appropriate application form. Special consideration is not retrospective and students should submit Special Consideration forms as soon as they experience any difficulties which may interfere with study or examination performance. It is expected that any applications for special consideration will be received within three days after the date of assessment.

5. Enrolment in this course is granted on the basis that a grade of "P" (Pass) or better has been achieved in any prerequisite or assumed-prior-knowledge course, as specified in Section 1 of this course outline. Failure to meet this requirement may result in your having difficulty with the course and not being able to complete it successfully. Any additional support or special assistance cannot be expected or requested if the prerequisite is waived, or if prior-knowledge requirements have not been met.

GSave #1902 (General lab)

GSave #2546 (Pond field trip)