Course Code:	**FND001**
Course Name:	**Biology**
Semester:	**Semester 1, 2017**
Program:	Foundation Program
Credit Points, Duration, Core or Elective Course	10 credit points, 1 semester duration, elective course
Course Coordinator:	Dr Dayana Matthews
Document modified:	8th February 2017

Teaching Team

Your teacher can be contacted via the email system on the portal.

Dr Dayana Matthews: dayana.matthews@staff.griffithcollege.edu.au

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Staff Consultation

Your teacher is available each week for consultation outside of normal class times. Times that your teacher will be available for consultation will be given in the first week of classes. A list of times and rooms will be published on the Griffith College Portal under the “myTimetable” link.

Prerequisites

There are no prerequisites for this course.

Brief Course Description

This module is designed to develop a broad scientific knowledge of the living world. It will focus on concepts relating to biological structure, function, genetics, biological diversity and interactions of living organisms.

Rationale

The purpose of this course is to introduce students to the study of living organisms as a foundation course essential to further studies in the natural and allied sciences. The course will also enhance general biological understanding, and will be relevant to many tertiary disciplines as well as provide knowledge essential to everyday living as an informed citizen.

Aims

The aim of this course is to provide students with an understanding and basic knowledge of concepts and processes associated with the study of living organisms. The course will also provide opportunities to develop observational, analytical, problem solving, technical and report writing skills.

Learning Outcomes

Upon successful completion of this course you will be able to:

1. Demonstrate an understanding of the basic biological concepts relating to environmental organisms and the relationships between these organisms and how they create an ecosystem;

2. Demonstrate an understanding of biological diversity, including classes of microorganisms and explain how these can be harnessed for use in industrial applications;

3. Demonstrate an understanding of the structures that make up all plant and animal life and explain the theories of their development and transmission;

4. Communicate effectively using appropriate scientific language across a range of mediums;

5. Demonstrate safe and effective manipulative skills in the laboratory.

Texts and Supporting Materials

There is no set text for this course.

Recommended reading:

- Simon, E.J., Dickey, J.L., & Reece, J.B. (2013). *Campbell essential biology with physiology.* (4th ed.), Benjamin Cummings, Redwood City.
- Gunstream, S.E. (2012). *Explorations in basic biology.* (12th ed.). Redwood City: Benjamin Cummings.

Details regarding where you can purchase some of the above resources will be provided during class time.

Organisation and Teaching Strategies

The teaching and assessment portion of the semester is of 13 weeks duration - inclusive. Classes are usually provided in four (4) hour blocks during each of the first thirteen (12) weeks of semester.

For each of Weeks 1-12 you are expected to attend the entire teaching session. Each session will involve:

- Approximately two [2] hours will be spent each week in lectures. During this time concepts and techniques that need to be known to pass this course are presented and discussed.
- Approximately two [2] hours will be spent each week to support the class lectures. These may include tutorials involving problem solving, video analysis, set exercises, computer based research, laboratory classes or online learning.

- Practical classes will be scheduled as indicated below:
  3 X Two [2] hours will be spent completing laboratory exercises relating to concepts that have been taught in previous weeks. These will be held on the Nathan campus in the Scientific Laboratories. Further details will be provided during class time.

During weekly class time (4 hours) you will be presented with the course content through the use of presentations, videos and the use of internet sites. There will also be opportunities for you to reflect on and participate in discussion with your teacher and classmates about the content presented during classes. These discussions will provide you with the opportunity to develop a deeper understanding of the basic concepts relevant to course content and apply these in order to fulfil the aims and objectives of the course. It is expected that you will complete approximately 6 hours of private study each week, which will include weekly homework reading and exercises, and preparation of assessment items. A 10-credit point subject at University constitutes approximately 10 hours of work towards that subject each week.

Many of the resources will be made available to you through the Course Notes section on the Griffith College portal. There is the opportunity to access course resources via online mode so you will need to have Internet access to the Griffith College portal so that you can access the material available for your learning.

Where class times conflict with Public Holidays, 'makeup' classes may be organised on a different day. Further time is made available for student consultation with the Lecturer each week [see Staff Consultation].

Contact hours

The expected contact hours per week for this course comprises of:

Formal classes	Formal Homework	On-line component	Supervised Consultation	Total
4 hours	4 hours	1 hour	1 hour	10 hours

Class Contact Summary

Attendance:
Your attendance in class will be marked twice during a four hour class. To receive full attendance, you must be present in the classroom on both occasions.

Participation in Class:
During classes each week you are expected to actively participate in exercises covering the current topic, and complete a worksheet at the end of each module for assessment.

Consultation Time:
Consultation time is offered on a weekly basis in order to support student learning. Please refer to the student portal or your teacher for details.

Lecture Notes & Course Materials:
Lecture notes will be made available to you on the MyStudy site on the student portal and you are advised to print these out before each class to help guide you in your study program. You are also expected to attend classes having completed the weekly readings and homework activities in order to be able to participate in the interactive group activities.

Scientific Laboratory Classes:
3 X Two [2] hour sessions will be spent completing laboratory exercises relating to concepts that have been taught in previous weeks. These will be held on the Nathan campus. Further details will be provided during class time. In order to participate in the laboratory classes, you **must** have successfully completed the appropriate online safety quizzes, wear closed in shoes. A disposable lab coat and safety glasses will be provided.

Before attending Laboratory classes, you must read the appropriate section in the laboratory notes.

Independent Learning:
Throughout this course you will be encouraged to take personal responsibility for managing your own learning and your own time. In addition to the 4 hours spent in class time for this course you are expected to undertake independent study outside of class time. This independent learning will involve reading and preparing for classes and completing assignments and other assessment tasks. There will be the opportunity to use online resources via the Griffith College portal in order to enhance your learning.

Program Progression:
You are reminded that satisfactory Program Progression requires that attendance in classes is maintained at equal to or greater than 80%, and that GPA is maintained at equal to or greater than 3.5 [please see Griffith College Policy Library - Program Progression Policy - for more information].

Specialist Facilities

Facilities and Resources	Specific Resources required
Indicate any specific facilities and resources required for delivery of this subject.	Scientific laboratories (Nathan campus)
Indicate any specific learning resources required for this subject	Learning resources include: recommended textbook, Portal materials
Indicate any specific IT or electronic learning resources required for this subject	Computer, projector

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Content Schedule

Students will be notified of times and venue for scientific laboratory classes each semester.

Weekly Teaching Schedule

Week	Topic	Activity
1	Introduction to Biology Introduction to Laboratory Safety	Lecture
	Ecology and the environment, Structure of Ecosystems	Lecture
	Biology Lab 1	Laboratory
2	Introduction to Microbiology	Lecture
	Discuss biological classes of microorganisms and explore how they can be harnessed for use in industrial applications. Explore relationships between organisms in an ecosystem	Tutorial
	Worksheet 1 on Ecology and the environment, Structure of ecosystems and Microbiology	Classwork Participation
	Research Assignment Topics chosen.	
3	Plant and animal cell components, Cell Division (Mitosis)	Lecture
	Biology Lab 2	Laboratory
4	DNA, RNAand Protein Synthesis	Lecture

	Annotate diagrams of the structure and function of DNA and RNA, briefly describe Protein Synthesis. Explore plant and animal cell components and annotate diagrams of cell division.	Tutorial
	Worksheet 2 on Plant and animal cell components, Cell Division, DNA, RNA and Protein Synthesis	Classwork Participation
5	Mendelian Genetics	Lecture
	Biology Lab 3	Laboratory
6	Monohybrid and Dihybrid crosses, complete a Punnett square demonstrating Mendelian Inheritance, Revision of Weeks 1 - 5	Tutorial
	Worksheet 3 on genetics and Mendelian inheritance	Classwork Participation
7	Mid-semester Examination (on content covered in weeks 1 to 6 inclusive)	In class Assessment
	Introduction to Human Physiology – concept of Homeostasis Structure and function of the digestive and respiratory systems	Lecture
8	Structure and function of circulatory and excretory systems	Lecture
	Explore the processes of digestion, respiration, circulation and excretion	Tutorial
	Worksheet 4 on Homeostasis, digestive, respiratory, circulatory and excretory systems	Classwork Participation
	Laboratory Reports Due	Assessment
9	Structure and function of endocrine and nervous systems	Lecture
	Explore the processes of endocrine and nervous control	Tutorial
10	Plant Tissues, Photosynthesis and Respiration	Lecture
	Explore plant tissues, photosynthesis and respiration	Tutorial
	Worksheet 5 on endocrine & nervous systems, Plant tissues, Photosynthesis and Respiration	Classwork Participation
	Written Assignment Due	Assessment
11	Biological Diversity and Evolution	Lecture
	Explore classification of organisms and Darwin's theory of evolution	Tutorial
12	Revision of weeks 7 - 11	Lecture
	Revision of weeks 7 - 11	Tutorial
	Worksheet 6 on Biological diversity and Evolution	Classwork Participation

Assessment

This section sets out the assessment requirements for this course.

Summary of Assessment

Item	Assessment Task	Weighting	Relevant Learning Outcomes	Due Date
1	Individual Research Assignment	10%	1- 4	10
2	Take Home laboratory report	10%	3, 4, 5	8
3	Mid-Semester Exam	30%	1 – 4	7
4	Classwork Participation	10%	1- 4	2, 4, 6, 8, 10 & 12
5	Final Exam	40%	1- 4	Final exam Block

Assessment Details

You will be required to complete the following assessment throughout the semester:

Note: All assessment undertaken within this course is to be completed individually.

Mid-Semester Exam (30%)
This in class test is conducted in week 7 of semester and will assess your understanding of various biological terms, concepts and processes up to and including week 6 of semester. Contents include week 1 to 6 materials.

Individual Research Assignment (10%) This assignment must be submitted in week 10 of semester and involves accessing and comparing scientific research on the topics you have chosen to do research on. This helps you to understand and practice the process of scientific journal/report writing.

Classwork and Participation (10%)
You will be required to complete a worksheet on the topics covered in each module during class time in weeks 2, 4, 6, 8, 10 & 12.

Laboratory Report (10%)
Laboratory report is to be given out in a laboratory session and you will have a week to finalise your laboratory

results and findings and complete your lab report and submit in week 8.

Final Exam (40%)
Final exam for this course in week 14 will assess your understanding of topics covered from week 7 to week 12 of semester.

Satisfactory completion of the course
To satisfactorily complete the course, you must achieve a minimum overall mark of 50%.

PLEASE NOTE: Assignments are required to be submitted to Turnitin. Failure to obtain and attach a satisfactory Originality Report will mean that the assignment will not be marked and a score of zero will be recorded for the assignment. Detailed instructions and a Marking Guide will be provided during the semester. Late submissions will attract a penalty as described in the Assessment policy.

Internal moderation and benchmarking processes

All assessment will be set by teaching staff with a collaborative approach that includes peer review and approval by the appropriate Program Convenor. Significant pieces of assessment in the course are internally moderated in a collaborative manner by relevant teaching staff to ensure that the criteria and standards are correctly and consistently applied. Before Final Exams are marked, teachers conduct sample marking to ensure that the criteria and standards are correctly and consistently applied. In addition, benchmarking of the final exam in each course is undertaken be an external person (usually a lecturer in a similar Diploma level course). The benchmarking report provided by the external lecturer informs continuous improvement practices for the subsequent semester.

Satisfactory completion of the unit
To satisfactorily complete the unit, you must achieve a minimum overall mark of 50%.

Submission and Return of Assessment Items

Normally you will be able to access your results within fourteen [14] days of the due date for submission of the *assignment.*

Retention of Originals
You must be able to produce a copy of all work submitted if so requested. Copies should be retained until after the release of final results for the course.

Extensions

To apply for an extension of time for an assessment item you must submit a written request to your lecturer via the Student Website at least 48 hours before the date the assessment item is due. Grounds for extensions are usually: serious illness, accident, disability, bereavement or other compassionate circumstances and must be able to be substantiated with relevant documentation [e.g. medical certificate]. Please refer to the Griffith College website - Policy Library - for guidelines regarding extensions and deferred assessment.

Penalties for late submission without an approved extension

Penalties apply to assignments that are submitted after the due date without an approved extension. Assessment submitted after the due date will be penalised 10% of the TOTAL marks available for assessment (not the mark awarded) for each day the assessment is late. Assessment submitted more than five days late will be awarded a mark of zero (0) For example:

- > 5 minutes and <= 24 hours 10%
- > 24 hours and <= 48 hours 20%
- > 48 hours and <= 72 hours 30%
- > 72 hours and <= 96 hours 40%
- > 96 hours and <= 120 hours 50%
- > 120 hours 100%

Note:

- Two day weekends will count as one day in the calculation of a penalty for late submission.

- When a public holiday falls immediately before or after a weekend, the three days will count as one day in the calculation of a penalty for late submission.
- When two public holidays (e.g. Easter), fall immediately before or after, or one day either side of a weekend, the four days will count as two days in calculating the penalty for late submission.
- When a single public holiday falls mid-week, the day will not be counted towards the calculation of a penalty.

Please refer to the Griffith College website - Policy Library > Assessment Policy for guidelines and penalties for late submission.

Assessment Feedback

Marks awarded for assessment items will also be available on the on-line grades system on the Student Website within fourteen [14] days of the due date.

Generic Skills

Griffith College aims to develop graduates who have an open and critical approach to learning and a capacity for lifelong learning. Through engagement in their studies, students are provided with opportunities to begin the development of these and other generic skills.

Studies in this course will give you opportunities to begin to develop the following skills:

Generic Skills	**Taught**	**Practised**	**Assessed**
Written Communication	Yes	Yes	Yes
Oral Communication	Yes	Yes	Yes
Information Literacy	Yes	Yes	Yes
Secondary Research	Yes	Yes	Yes
Critical and Innovative Thinking	Yes	Yes	Yes
Academic Integrity	Yes	Yes	Yes
Self-directed Learning	Yes	Yes	Yes
Team Work	Yes	Yes	Yes
Cultural Intelligence	Yes	Yes	
English Language Proficiency	Yes	Yes	Yes

Additional Course Generic Skills

Specific Skills	Taught	Practised	Assessed
Laboratory skills	Yes	Yes	Yes

Additional Course Information

Attendance at practical laboratory sessions is an integral part of this biology course. It is important that you attend all laboratory sessions to gain the maximum benefit from the course.

Learning Support

In addition to formal contact hours, you are provided with extra support through individual consultation with teaching staff, English language support, and self-access computer laboratories.

Griffith College is committed to providing additional academic assistance to students to maximise their opportunity to successfully complete units of study. Learning Advisors conduct regular workshops in skill areas essential to studies. These include: time management, goal setting, essay preparation, examination techniques, academic writing skills and maths. Further information on programs available can be accessed on the Griffith College 'Support' tab on the Portal (http://studentsupport.griffithcollege.qld.edu.au/) or by asking the Griffith College staff on reception.

Teacher and Course Evaluations

Student feedback is respected and valued by teachers and the College. Students are encouraged to provide their thoughts on the course and teaching, both positive and critical, directly to their teacher or by completing course and teacher evaluations.

Academic Integrity

Griffith College is committed to maintaining high academic standards to protect the value of its qualifications. Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. It is important for students, teachers, researchers and all staff to act in an honest way, be responsible for their actions, and show fairness in every part of their work. Academic integrity is important for an individual's and the College's reputation.

All staff and students of the College are responsible for academic integrity. As a student, you are expected to conduct your studies honestly, ethically and in accordance with accepted standards of academic conduct. Any form of academic conduct that is contrary to these standards is considered a breach of academic integrity and is unacceptable.

Some students deliberately breach academic integrity standards with intent to deceive. This conscious, pre-meditated form of cheating is considered to be one of the most serious forms of fraudulent academic behaviour, for which the College has zero tolerance and for which penalties, including exclusion from the College, will be applied.

However, Griffith College also recognises many students breach academic integrity standards without intent to deceive. In these cases, students may be required to undertake additional educational activities to remediate their behaviour and may also be provided appropriate advice by academic staff.

As you undertake your studies at Griffith College, your lecturers, tutors and academic advisors will provide you with guidance to understand and maintain academic integrity; however, it is also your responsibility to seek out guidance if and when you are unsure about appropriate academic conduct.

Please ensure that you are familiar with the **Griffith College Academic Integrity Policy**; this policy provides an overview of some of the behaviours that are considered breaches of academic integrity, as well as the penalties and processes involved when a breach is identified.

For further information please refer to the Academic Integrity Policy on the Griffith College website – Policy Library.

Risk Assessment Statement

This course follows Griffith College and Griffith University Workplace Health and Safety Laboratory guidelines.

The aim of workplace health and safety is to make sure that people do not get sick or injured at the workplace. The legislation dealing with this in Queensland is called the Workplace Health and Safety Act, 1995. Anyone who can affect workplace health and safety has an obligation under this Act.

As a student, you have an obligation to yourself and others to undertake activities in a safe manner. You must follow instructions which are provided for safety. You must not put yourself or anyone else at risk. Care especially needs to be taken when you are performing activities which can affect others.
