Pathways and Academic Learning Support Centre

EPBIOL 130: Introduction to Biology

Callaghan

Semester 1 - 2024

The Pathways and Academic Learning Support Centre recognises and respects the unique history and culture of Aboriginal and Torres Strait Islander peoples and their unbroken relationship with the lands and the waters of Australia over millennia. We are dedicated to reconciliation and to offering opportunities for Aboriginal and Torres Strait Islander peoples to access and succeed in higher education. The Centre is committed to providing a culturally safe and inclusive environment for all.

OVERVIEW

Course Description

This course will introduce students to key principles and topics in biology. It will form the basis for subsequent study in the biological sciences and build skills in fundamental science competencies. Topics include themes of biology, chemistry of life, the cell, genetics, evolution, plant and animal form and function.

Academic Progress Requirements

Nil

Contact Hours

Laboratory
Face to Face On Campus
2 hour(s) per week(s) for 1 week(s) starting Week 13

Lecture
Face to Face On Campus
2 hour(s) per week(s) for 12 week(s) starting Week 1

Tutorial
Face to Face On Campus
1 hour(s) per week(s) for 11 week(s) starting Week 2

Unit Weighting

10

Workload

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

COURSE OUTLINE

www.newcastle.edu.au
CRICOS Provider 00109J

CONTACTS

Course Coordinator

Ms Lynette Fletcher
Lynette.Fletcher@newcastle.edu.au
Consultation: Please email to schedule an appointment.

Teaching Staff

Other teaching staff will be advised on the course Canvas site.

School Office

Callaghan
Ground Floor, General Purpose Building (GP)
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enabling@newcastle.edu.au

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HO 168, Humanities Building
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SYLLABUS

Course Content

- Themes of biology; scientific inquiry
- The chemical context of life
- Cell structure and function
- Genetics
- Mechanisms of evolution; the origin of species
- The evolutionary history of biological diversity; phylogeny
- Plant form and function
- Animal form and function

Course Learning Outcomes

On successful completion of this course, students will be able to:
1. Define, explain, and apply key concepts in biology.
2. Utilise data to produce and interpret diagrams relevant to biology.
3. Relate theory to practical applications in biology.
4. Produce a written report addressing key biological concepts.

Course Materials

All course materials will be provided on the course Canvas site. Students are not required to purchase a textbook however Campbell Biology (Australia and New Zealand), 12th Edition is recommended.

SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	26 Feb	1.1 Introduction to the Course: Themes of Biology & Evolution & Scientific Inquiry	Course Outline Readings from Campbell Biology	
2	4 Mar	2.1 The Chemistry of Life; Cell Structure and Function	Readings from Campbell Biology	
3	11 Mar	2.2 Cell Metabolism; Respiration & Fermentation; Photosynthesis	Readings from Campbell Biology	Online Quiz 1 Tutorial Activity 1
4	18 Mar	3.1 Meiosis; Chromosomes & Inheritance; Gene Expression	Readings from Campbell Biology	
5	25 Mar	3.2 Viruses; DNA & Biotechnology; Genomes	Readings from Campbell Biology	Online Quiz 2
6	1 Apr	4.1 Evolution of Populations; Origin of Species; History of Life on Earth	Readings from Campbell Biology	
7	8 Apr	5.1 Phylogeny and the Tree of Life, Bacteria & Archaea; Protists; Plant Diversity	Readings from Campbell Biology	Online Quiz 3 Tutorial Activity 2
Recess				
Recess				
8	29 Apr	5.2 Fungi; Introduction to invertebrates and vertebrates	Readings from Campbell Biology	
9	6 May	6.1 Vascular Plant Structure, Growth & Development; Resource Acquisition & Transport; Nutrition & Soil	Readings from Campbell Biology	Online Quiz 4 Tutorial Activity 3
10	13 May	7.1 Animal Form & Function; Nutrition; Circulation & Gas Exchange; Immune System	Readings from Campbell Biology	Major Report
11	20 May	7.2 Osmoregulation & Excretion; Endocrine System; Animal Reproduction & Development	Readings from Campbell Biology	Online Quiz 5 Tutorial Activity 4
12	27 May	7.3 Nervous System; Sensory & Motor Mechanisms; Animal Behaviour	Readings from Campbell Biology	
13	3 Jun			Online Quiz 6 Laboratory Practical
Examination Period				
Examination Period				

ASSESSMENTS

This course has 5 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Online Quizzes	Sunday 11:59pm Weeks 3, 5, 7, 9, 11, 13	Individual	10%	1, 2, 3
2	Tutorial Activities	Sunday 11:59pm Weeks 3, 7, 9, 11	Individual	20%	1, 2, 3
3	Major Report	Sunday 19th May 11:59pm	Individual	20%	1, 2, 3, 4
4	Laboratory Practical	Week 13 Laboratory	Individual	10%	1, 2, 3
5	Online Examination	Examination Period	Individual	40%	1, 2, 3

Late Submissions The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 5% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Online Quizzes

Assessment Type Quiz

Description Six (6) online topic quizzes are used to assess your knowledge of key concepts relevant to biology and to familiarise you with the style, depth and focus of the questions you will encounter in the formal examination.

The results from the best five (of the six) quizzes will contribute a total of 10% to your final mark, with each quiz consisting of 20 multiple choice questions based on material contained in the lectures, tutorials, and readings. Each quiz can only be attempted once, will be available to attempt for fourteen days and will have a time limit of 30 minutes. Although the quizzes are available for fourteen days, you should complete them as early as possible.

Please note that the quizzes will lock at 11.59pm on their specified closing date (see below) and will not be able to be completed after that time. If, due to unforeseen long-term circumstances only, you are unable to complete a quiz by the due date, please advise the Course Coordinator before the quiz closing date. Quiz marks will be recorded in Grades within the Course Canvas site to allow you to monitor your progress.

The online quizzes will cover the topics listed below and become available at 9.00am on a Monday and close at 11.59pm on the Sunday on the dates shown.

Quiz	Open	Close	Topics
1	4 March	17 March	1.1
2	18 March	31 March	2.1 and 2.2
3	1 April	14 April	3.1 and 3.2
4	29 April	12 May	4.1 and 5.1
5	13 May	26 May	5.2 and 6.1
6	27 May	9 June	7.1, 7.2 and 7.3

Weighting 10%
Due Date Sunday 11:59pm Weeks 3, 5, 7, 9, 11 and 13
Submission Method Online
Assessment Criteria Correct answers
Return Method Online
Feedback Provided Online

Assessment 2 - Tutorial Activities

Assessment Type	Tutorial / Laboratory Exercises
Description	Four (4) tutorial activities, each worth 5%, will consist of work completed across the semester and includes work undertaken in tutorials as well as before and after classes. Tutorial activities and submission documents will be available on Canvas.
Weighting	20%
Due Date	Sunday 11:59pm Weeks 3, 7, 9, 11
Submission Method	Online
Assessment Criteria	Rubric will be provided in Canvas.
Return Method	Online
Feedback Provided	Online

Assessment 3 - Major Report

Assessment Type	Written Assignment
Description	Details of an experiment and the necessary data will be provided to students in an allocated tutorial time. Students will use this information to generate a scientific report.
Weighting	20%
Due Date	Sunday 19th May 11:59pm
Submission Method	Online
Assessment Criteria	Rubric will be provided in Canvas.
Return Method	Online
Feedback Provided	Online

Assessment 4 - Laboratory Practical

Assessment Type	Tutorial / Laboratory Exercises
Description	Students will undertake a laboratory practical to gain experience in a full laboratory setting. A laboratory manual will be completed and submitted in the practical session.
Weighting	10%
Due Date	During Week 13 Laboratory
Submission Method	In class
Assessment Criteria	Rubric will be provided in Canvas
Return Method	Marks will be uploaded to Grades and the marked laboratory manual will be available from the School Office after Week 13.
Feedback Provided	Feedback on the assessment will be provided via comments with returned work.

Assessment 5 - Online Examination

Assessment Type	Online Open Book Formal Examination
Description	The formal examination will consist of 12 short answer questions.
Weighting	40%
Due Date	During the Examination Period
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	Not Returned
Feedback Provided	No feedback will be provided for this assessment.

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

Communication Methods

Email is the principal form of communication at the university and within this course. Always use your student email (NUmail), rather than a private email address, and check this regularly. As Course Coordinator I will try to respond to your email within three (3) working days. I will not normally respond to emails over the weekends. Please be courteous in your email communication and in the online space.

Canvas is used to distribute course material, announcements and other information. It is also used for online quizzes and to allow students to track their individual progressive assessment results throughout the semester via Grades.

Discussions forums in Canvas can be used to ask questions about minor issues. Students are strongly encouraged to use these to communicate with each other, discuss issues relating to the course, and solve minor problems.

Attendance and Engagement

In addition to face-to-face hours in class, out-of-class study and related work will require an additional commitment of up to 10 hours per week of reading, preparation, and study time over the semester. Students are required to spend on average 120-140 hours of effort (contact and non-contact hours including assessment) per semester per 10 unit course.

To maximise your learning opportunities, you should read all relevant material prior to attending class.

It is strongly recommended that you attend your classes every week. Our data shows that you will get better results if you attend class with your peers. If you do have to miss a class, you should catch up on any missed work by accessing lecture recordings if you are enrolled face-to-face. While online tutorials are recorded, on-campus tutorials are not, so you should view other resources available on your Canvas site and contact your course coordinator if you would like advice on how to best catch up on any material that was missed. **If you are unable to attend classes regularly you should reach out to your course coordinator as soon as possible to discuss ways that you can continue to engage with the learning material.**

A plan of regular revision throughout the semester is also strongly recommended to help you manage your time, consolidate information and retain that knowledge for the duration of the course and beyond.

	Assessment items have been designed to reinforce and revise the course material, and ensure you are up to date with course content. You are required to submit all assessable items by the due dates unless prior arrangements have been made.
Additional Contact Details	If you have any questions about your course, please speak with your course coordinator, lecturer or tutor first. For general enquiries, please contact the Pathways and Academic Learning Support Centre Office or your Student Liaison Officer. Contact details for both the office and Student Liaison Officers can be found here. Yapug students can also contact your Indigenous Enabling Learning Advisor Hannah Pipe or your Program Convenor Dan Collins.
Final Examination	This course has a formal examination. All formal examinations will be held during the University's Examination Period. Your exam timetable will be available approximately 4 weeks before the exam period and you must ensure that you are available to undertake your exam at any time during the Examination Period. If you are unable to attend a scheduled examination due to illness or you have another significant, verifiable reason, contact the Pathways and Academic Learning Support Office and advise your lecturer at the earliest opportunity. Completion of an online Adverse Circumstances application including appropriate documentation is required. If you have a permanent or temporary disability or medical condition that means you may need adjustments made during your examination, you must register with AccessAbility at the start of semester so that these arrangements can be made. If you have a Reasonable Adjustment Plan (RAP), your examination will be scheduled in accordance with it. If you are unable to attend your scheduled examination due to illness or other circumstance, you will need to submit and online Adverse Circumstances application and supply appropriate documentation to support your application. Your RAP is not able to be used as your documentation.
Adverse Circumstances	The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for Adverse Circumstances must be lodged via the online Adverse Circumstances system for all individual assessment items worth 30% or greater **by 11:00pm on the day the assessment is due**. For assessment items less than 30%, you will need to contact your Course Coordinator by 11:00pm on the due date of the assessment item. Before applying you must refer to the Adverse Circumstances Affecting Assessment Items Procedure and the Adverse Circumstances Affecting Assessment Items Policy. Please note that students must submit their adverse circumstances application via the online Adverse Circumstances system by 11:00pm on the due date of the assessment item, even if you are using a Reasonable Adjustment Plan (RAP) as your supporting documentation.
Written Assessment Word Limits	If this course includes written assessments, the word limit listed will include headings, sub-heading, in-text citations, quotes and referencing but does not include the list of references, appendices and footnotes. You will not receive a penalty for exceeding the word limit (there is a tolerance of up to 10%), but any work after the maximum word limit may not be included within the allocation of marks.
Academic Misconduct	All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. Please refer to the Student Academic Integrity Policy.
Oral Interviews (Vivas)	As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the Oral Examination (viva) Procedure. In cases where the oral examination reveals the assessment item may not be the student's

	own work the case will be dealt with under the Student Conduct Rule.
Workplace Health and Safety Requirements	This course involves a practical component, laboratory-based activity which requires you to complete a short safety briefing prior to participation. Your lecturer will provide you with more information about this briefing prior to the date of the practical activity.
Software	Free Microsoft Office software is available to enrolled students here and includes 5 TB of free cloud storage with OneDrive.
Timetable	Your timetable for this course is available via the myUni Student Portal and can also be found here.
Course Evaluation	Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.
Important Policy Information	The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures that support a safe and respectful environment at the University.

This course outline was approved by the Director, PALS. No alteration of this course outline is permitted without Director approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.