COURSE OUTLINE

BIO100 Bioscience Foundations

School: School of Health - Biomedicine

2027 | Trimester 1

UniSC Sunshine Coast UniSC Moreton Bay UniSC Caboolture UniSC Fraser Coast UniSC Gympie	BLENDED LEARNING	Most of your course is on campus but you may be able to do some components of this course online.
Online	ONLINE	You can do this course without coming onto campus, unless your program has specified a mandatory onsite requirement.

Please go to unisc.edu.au for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

In this course you will explore the cellular and chemical foundations of life. You will learn about the connection between the structure and function of cells, the organisation and development of cells into tissues, and apply these principles to understand health and disease. You will also develop foundational skills in scientific methods and communication. This course provides essential preparation for further studies in physiology, biology, and genetics relevant to biomedicine and healthcare.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Weekly asynchronous online learning materials, including eModules and associated revision activities and questions.	2hrs	Week 1	12 times
Tutorial/Workshop 1 – Weekly synchronous large class workshops to review theoretical concepts presented in the theory eModules. In person and online attendance options available.	2hrs	Week 1	12 times
Tutorial/Workshop 2 – Weekly synchronous small class workshops to apply theoretical knowledge to practical applications in an interactive, supported environment. In person and online attendance options available.	2hrs	Week 1	12 times
ONLINE			
Learning materials – Weekly asynchronous online learning materials, including eModules and associated revision activities and questions.	2hrs	Week 1	12 times
Tutorial/Workshop 1 – Weekly synchronous large class online workshops to review theoretical concepts presented in the theory eModules.	2hrs	Week 1	12 times
Tutorial/Workshop 2 – Weekly synchronous online workshop to apply theoretical knowledge to practical applications in an interactive, supported environment.	2hrs	Week 1	12 times

1.3. Course Topics

- Foundations in cellular chemistry
- Introduction to scientific measures, solutions and body fluids
- Cell structures and types
- Cellular organelles and support systems
- Energy transformation in cells
- Cell signalling, division and continuity
- Principles of genetics and heredity
- Cells and tissues
- Pathogens, viruses and the cell

2. What level is this course?

100 Level (Introductory)

Engaging with discipline knowledge and skills at foundational level, broad application of knowledge and skills in familiar contexts and with support. Limited or no prerequisites. Normally, associated with the first full-time study year of an undergraduate program.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES On successful completion of this course, you should be able to...	GRADUATE QUALITIES MAPPING Completing these tasks successfully will contribute to you becoming...	PROFESSIONAL STANDARD MAPPING * Australian Institute of Medical and Clinical Scientists
1 Describe the basic structure and function of cells in living organisms.	Knowledgeable	6.2
2 Describe the chemical foundations of life.	Knowledgeable	6.2
3 Apply knowledge of cell structures and functions to solve problems.	Knowledgeable Problem solving	7.2.1
4 Demonstrate foundational skills in scientific communication and critical reasoning.	Communication	10.4.2

* Competencies by Professional Body

CODE	COMPETENCY
AUSTRALIAN INSTITUTE OF MEDICAL AND CLINICAL SCIENTISTS	
6.2	Professional accountability and participation in continuing professional development: Maintain and update scientific/technical knowledge and skills
7.2.1	Makes independent, professional judgements: Problems are solved using sound judgement based upon knowledge and practical experience.
10.4.2	Prepare and deliver report: Preparation of verbal and/or written reports or article (including for publication) is undertaken.

5. Am I eligible to enrol in this course?

Refer to the UniSC Glossary of terms for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1. Pre-requisites

Not applicable

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

LFS103

5.4. Specific assumed prior knowledge and skills (where applicable)

It is recommended that students have some prerequisite knowledge in core mathematics, basic biology and chemistry. An optional Maths Diagnostic test will be available before the teaching trimester commences on the BIO100 if you would like to test your core maths skills and determine whether you require maths support.

5.5. Microcredential Information

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

This course includes weekly formative concept checks which provide an opportunity for you to receive feedback on your academic progress.

6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Portfolio	Individual	30%	2-4 hours per week	Throughout teaching period (refer to Format)	Online Submission
All	2	Written Piece	Individual	30%	1000 words	Week 12	Online Assignment Submission with plagiarism check
All	3	Examination - Centrally Scheduled	Individual	40%	130 minutes	Exam Period	Online Test (Quiz)

All - Assessment Task 1: Theory portfolio

GOAL:	To provide you with the opportunity to demonstrate your knowledge of the theoretical and applied components of this course. The portfolio is a suite of activities that allow you develop your foundational knowledge in Bioscience. This work includes a self-assessment of your learning which is a critical skill in including you educational performance.
PRODUCT:	Portfolio
AUTHORSHIP STATEMENT:	
FORMAT:	Weekly completion of learning materials and associated interactive activities, including self-check questions and skill-based quizzes. Please refer to our Canvas site for details of how and when to submit your assessment tasks.
CRITERIA:	**No.** / **Learning Outcome assessed** 1 Accuracy in scientific calculations and data presentation — 1 2 2 Completion of pre-class eModules and active participation in in class activities — 1 2 3 3 Create and interpret appropriate visual representations of experimental data — 3 4
GENERIC SKILLS:	Communication, Problem solving, Organisation, Information literacy

All - Assessment Task 2: Program-specific written task

GOAL:	To provide you with the opportunity to demonstrate, explain and apply foundational concepts of cell biology, cell chemistry and scientific reasoning through evaluating AI generated output in bioscience, using a case-based critical reflection of AI-generated responses.
PRODUCT:	Written Piece
AUTHORSHIP STATEMENT:	
FORMAT:	Refer to Canvas for details
CRITERIA:	

No.		Learning Outcome assessed
1	Demonstrate knowledge and understanding of the theoretical content	1 2
2	Use theoretical knowledge presented in the course to evaluate AI-generated explanations and health-related outcomes.	3 4
3	Communicate scientific analysis clearly and demonstrate critical reasoning through structured written reflection.	4

GENERIC SKILLS:	Communication, Problem solving, Organisation, Applying technologies, Information literacy

All - Assessment Task 3: End of Semester Examination

GOAL:	To provide you with the opportunity to demonstrate, explain and apply the foundational concepts of cell chemistry and cell biology as they apply to human functioning and health practice.
PRODUCT:	Examination - Centrally Scheduled
AUTHORSHIP STATEMENT:	
FORMAT:	You will sit an end-of-trimester examination based on theory covered in the learning materials, application in workshops and associated readings. This online examination delivered via lockdown browser.
CRITERIA:	

No.		Learning Outcome assessed
1	Demonstrate knowledge and understanding of the theoretical content.	1 2
2	Use theoretical knowledge presented in the course to evaluate experimental results and health related outcomes.	3 4

GENERIC SKILLS:	Communication, Problem solving

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

You need regular access to the resource(s) below. Many texts are available as ebooks through the Library at no additional cost.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Recommended	Lisa A. Urry,Noel Meyers,Michael Lee Cain,Steven Alexander Wasserman,Peter V. Minorsky,Rebecca B. Orr,Karen Burke da Silva,Ann Parkinson,Lesley Lluka,Prasad Chunduri	2021	Campbell Biology	12th	Pearson

8.2. Specific requirements

You will be required to purchase a copy of the BIO100 Course Manual and bring these to workshops. This is available for purchase from UniSC MyPrint. Alternatively, these will be available for printing on the BIO100 Canvas site.

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the online induction training for students, and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:
(a) The final mark is in the percentage range 47% to 49.4%; and
(b) The course is graded using the Standard Grading scale

10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:
(a) One day: deduct 5%;
(b) Two days: deduct 10%;
(c) Three days: deduct 20%;
(d) Four days: deduct 40%;
(e) Five days: deduct 60%;
(f) Six days: deduct 80%;
(g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:
Less than 15 minutes: No penalty
From 15 minutes to 30 minutes: 20% penalty
More than 30 minutes: 100% penalty

10.4. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching

10.5. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The Student Charter sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- UniSC Student Central
- UniSC Adelaide Student Central