

**BIO100** **Bioscience Foundations**

School: School of Health - Biomedicine

2027 | Trimester 1

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

*Please go to [usc.edu.au](http://usc.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
<b>BLENDED LEARNING</b>			
<b>Learning materials</b> – Weekly asynchronous online learning materials, including eModules and associated revision activities and questions.	2hrs	Week 1	12 times
<b>Tutorial/Workshop 1</b> – 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
<b>Tutorial/Workshop 2</b> – 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
<b>ONLINE</b>			
<b>Learning materials</b> – Weekly asynchronous online learning materials, including eModules and associated revision activities and questions.	2hrs	Week 1	12 times
<b>Tutorial/Workshop 1</b> – Weekly synchronous large class online workshops to review theoretical concepts presented in the theory eModules.	2hrs	Week 1	12 times
<b>Tutorial/Workshop 2</b> – 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		GRADUATE QUALITIES
On successful completion of this course, you should be able to...		Completing these tasks successfully will contribute to you becoming...
1	Describe the basic structure and function of cells in living organisms.	Knowledgeable
2	Describe the chemical foundations of life.	Knowledgeable
3	Apply knowledge of cell structures and functions to solve problems.	Knowledgeable Problem solving
4	Demonstrate foundational skills in scientific communication and critical reasoning.	Communication

#### 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.

#### 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

<b>GOAL:</b>	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.	
<b>PRODUCT:</b>	Portfolio	
<b>FORMAT:</b>	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.	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	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
<b>GENERIC SKILLS:</b>	Communication, Problem solving, Organisation, Information literacy	

### All - Assessment Task 2: Program-specific written task

<b>GOAL:</b>	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.	
<b>PRODUCT:</b>	Written Piece	
<b>FORMAT:</b>	Refer to Canvas for details	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	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
<b>GENERIC SKILLS:</b>	Communication, Problem solving, Organisation, Applying technologies, Information literacy	

### All - Assessment Task 3: End of Semester Examination

<b>GOAL:</b>	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.	
<b>PRODUCT:</b>	Examination - Centrally Scheduled	
<b>FORMAT:</b>	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.	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	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
<b>GENERIC SKILLS:</b>	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

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

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 Luka,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. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email [safe@usc.edu.au](mailto:safe@usc.edu.au).

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au).

## 10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au).

## 10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au) or call 07 5430 1226.

## 10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email [AccessAbility@usc.edu.au](mailto:AccessAbility@usc.edu.au) or call 07 5430 2890.

## 10.8. 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>

## 10.9. 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.

## 10.10. General Enquiries

### In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

**Tel:** +61 7 5430 2890

**Email:** [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)