



## COURSE OUTLINE

**BIM300**

# Advanced Professional Skills in Biomedical Science

**Course Coordinator:** Sarah Bajan (SBajan@usc.edu.au) **School:** School of Health and Behavioural Sciences

2021 | Semester 2

USC Sunshine Coast

**ON CAMPUS**

Most of your course is on campus but you may be able to do some components of this course online.

*Please go to the USC website 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

This course introduces you to professional and research skills required for a successful career in biomedical science. In this course you will locate and analyse primary scientific research articles, and interpret and critically evaluate scientific data, boosting your problem-solving and critical thinking skills. You will enhance your communication skills and interpersonal skills by engaging in different methods of scientific communication, discussing ethical considerations in scientific research and providing self and peer assessment. To improve your employability, you will learn how to address selection criteria, which is an essential skill for successful job applications.

### 1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
<b>ON CAMPUS</b>			
<b>Tutorial/Workshop 1</b>	3hrs	Week 1	13 times
<b>Online</b>	2hrs	Week 1	13 times

### 1.3. Course Topics

- Transferable Skills and Employability
- The Role of Communication in Science
- Searching for, Reading and Critiquing Scientific Literature
- How to Formulate a Research Question
- Experimental Design Strategies
- Importance of Statistics in Scientific Research
- Data Analysis
- Ethics and Integrity in Scientific Research

## 2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth 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 Analyse scientific data and scientific literature	Creative and critical thinker
2 Reflect on ethical issues in scientific research.	Ethical
3 Communicate science to diverse audiences using written and oral methods.	Empowered
4 Generate constructive feedback for self and peer assessment	Creative and critical thinker
5 Display organisational and planning skills for effective autonomous and collaborative learning in group work tasks	Empowered
6 Develop skills to enhance career planning and employability	Empowered

### 5. Am I eligible to enrol in this course?

Refer to the [USC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

#### 5.1. Pre-requisites

Permission required for enrolment – please contact the Course Coordinator. Students must be enrolled in SC355 and SC357

#### 5.2. Co-requisites

Not applicable

#### 5.3. Anti-requisites

Not applicable

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

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

Early feedback will be provided for assessment item 1 by the course coordinator prior to its presentation. Formative assessment activities for assessment 2 and 3 will be completed in class.

### 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	Oral	Group	35%	15 min presentation + 5 min Q+A	Week 8	In Class
All	2	Negotiated Assessment	Individual	40%	To be negotiated	Refer to Format	Online Assignment Submission with plagiarism check
All	3	Written Piece	Individual	25%	To be negotiated	Week 11	Online Assignment Submission with plagiarism check

#### All - Assessment Task 1: Presentation of a Scientific Journal Article

<b>GOAL:</b>	The goal of this group presentation is to assess your ability to critically analyse a scientific journal article and communicate your analyses to a general audience. You will develop skills in group work, reflection, communication and critical analysis of literature.	
<b>PRODUCT:</b>	Oral	
<b>FORMAT:</b>	Delivery of a 15 min group oral presentation followed by a 5 min question time. Presentations will be assessed by academics and by your peers. Further details will be provided on the course Blackboard site.	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1	Analysis of scientific data and scientific literature <b>1</b>
	2	Communication of science to a general audience <b>3</b>
	3	Reflection of appropriate ethical issues of the data presented <b>2</b>
	4	Generation of constructive feedback for self and peer assessment <b>4</b>
	5	Displayed organisational and planning skills for effective autonomous and collaborative learning in group work tasks <b>5</b>

#### All - Assessment Task 2: Writing a Scientific Journal Article

<b>GOAL:</b>	The goal of this written article is to assess your ability to analyse, present and communicate scientific data in an essential format for scientific research. You will develop skills in data analysis, communication and critical analysis of literature.	
<b>PRODUCT:</b>	Negotiated Assessment	
<b>FORMAT:</b>	Individual submission of a scientific review article. The topic of the article is driven by the your scientific interests and will be confirmed with the course coordinator. The structure and formatting of the article will adhere to the requirements of the Journal of Biological Chemistry (JBC). One round of feedback will be provided on a draft submission of your article. Further details will be provided on the course Blackboard site.	
	SUBMIT: Draft submission week 10, Final submission week 13	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1	Analysis of scientific data and scientific literature <b>1</b>
	2	Communication of science to a scientific audience <b>3</b>
	3	Reflection of appropriate ethical issues related to the data analysed and presented <b>2</b>

### All - Assessment Task 3: Employability Task

<b>GOAL:</b>	The goal of this written piece is to provide you the opportunity to reflect on your current skill set by addressing selection criteria for a job that interests you. This is an essential component of successful job applications.	
<b>PRODUCT:</b>	Written Piece	
<b>FORMAT:</b>	Individual submission of a report. You will search for and identify a job vacancy that you are interested in and would consider applying for after graduation. From the selection criteria or required attributes of the job vacancy selected, you will identify five criteria to address. If you can not currently address the criteria, you should outline strategies to improve your capacity to address the criteria. Further details will be provided on the course Blackboard site.	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1	Developed skills to enhance career planning and employability 6

## 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. Directed study hours may vary by location. Student workload is calculated at 12.5 learning hours per one unit.

### 7.1. Schedule

PERIOD AND TOPIC	ACTIVITIES
Week 1	Introduction to Advanced Professional Skills in Biomedical Science: Course Overview
Week 2	Transferable Skills and Employability
Week 3	The Role of Communication in Science
Week 4	Searching for, reading and critiquing scientific literature I
Week 5	Searching for, reading and critiquing scientific literature II
Week 6	How to formulate a research question
Week 7	Experimental Design Strategies
Week 8	Importance of Statistics in Scientific Research
Week 9	Data analysis I
Week 10	Data analysis II
Week 11	Ethics and Integrity in Scientific Research I
Week 12	Ethics and Integrity in Scientific Research II

## 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 Blackboard site– Please log in as soon as possible.

### 8.1. Prescribed text(s) or course reader

There are no required/recommended resources for this course.

### 8.2. Specific requirements

Not applicable

## 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 Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

### 10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

### 10.3. Assessment: Submission penalties

Late submission of assessment tasks will be penalised at the following maximum rate:

5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task

10% (of the assessment task's identified value) for the third day

20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task

A result of zero is awarded for an assessment task submitted seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late.

To request an extension, you must contact your Course Coordinator and supply the required documentation to negotiate an outcome.

### 10.4. 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).

### 10.5. 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.

### 10.6. 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.

## 10.7. 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
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website: <http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

## 10.8. General Enquiries

### In person:

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