COURSE OUTLINE

BIM205 Advanced Physiology and Pathophysiology II

School: School of Health - Biomedicine

2028 | Trimester 2

UniSC Sunshine Coast
UniSC Moreton Bay

BLENDED LEARNING

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

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 Advanced Physiology and Pathophysiology II, you will extend your knowledge and skills in human physiology and pathophysiology from the cellular to system level. You will develop an understanding of the complex changes in physiology that occur with disease when normal physiology is altered. The systems, and associated pathophysiology studied, include integumentary and thermoregulation, endocrine, renal, digestive, and reproductive systems, with an emphasis on endocrine control of normal and disease processes. You will also further develop your skills in science research and communication.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Online learning materials	2hrs	Week 1	12 times
Laboratory 1 – Science wetlab with practical skill development	3hrs	Week 1	6 times
Tutorial/Workshop 1 – Small class tutorial with interactive, collaborative learning, case study analysis and assessment assistance	2hrs	Week 2	6 times
Tutorial/Workshop 2 – The weekly online sessions allow you to engage with the theory content and work through problems on the course topics (1st hour) in a facilitated workshop. The second hour – weekly drop-in - will be used for assessment assistance and any questions.	2hrs	Week 1	12 times

1.3. Course Topics

- Integumentary system and Temperature regulation
- Endocrine System
- Renal System
- Digestive System
- Reproductive System

2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

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 Demonstrate depth and breadth of knowledge in the discipline of human physiology relevant to the cells, tissues, organs and systems.	Knowledgeable	6.2.4, 7.2.2, 7.3.2, 9.1.1, 10.4.2
2 Apply knowledge of physiology to elucidate the pathogenesis of disease and dysfunction.	Creative and critical thinker	2.1.1, 2.1.2, 6.2.4, 9.1.1, 10.4.2
3 Research, critically evaluate, and ethically present appropriate and relevant literature about human physiology and pathophysiology.	Ethical	3.3.2, 6.2.4, 6.5.1, 7.2.1, 10.1.5, 10.3.2, 10.4.2
4 Ethically collect, record, interpret, and communicate findings from experiments using physiology knowledge.	Empowered	2.1.1, 2.1.2, 3.3.2, 6.2.4, 10.1.5, 10.3.2, 10.4.2

* Competencies by Professional Body

CODE	COMPETENCY
AUSTRALIAN INSTITUTE OF MEDICAL AND CLINICAL SCIENTISTS	
2.1.1	Assess validity of data/results against possible range of outcomes: Initial observation and limited interpretation for significance of the raw data/results is undertaken.
2.1.2	Assess validity of data/results against possible range of outcomes: Implausible results, results inconsistent with clinical information or expected outcomes based on other test results or those outside defined criteria are investigated further using defined troubleshooting strategies.
3.3.2	Ensure that results with important diagnostic or treatment implications are communicated as per established protocols: Results are interpreted in the light of clinical information provided and knowledge of the test(s) and limitations.
6.2.4	Maintain and update scientific/technical knowledge and skills: Opportunities to enhance learning from investigation of unusual clinical cases and/or results are pursued.
6.5.1	Complies with profession's code of ethics: Decisions are made in a transparent, ethical, accountable and professional manner and conduct is demonstrated in a non-discriminatory manner.
7.2.2	Makes independent, professional judgements: Implications associated with various outcomes of decision-making are recognised and understood.
7.3.2	Demonstrates knowledge of contemporary ethical issues impinging on Medical Science: Rights of individuals/groups are recognised and protected.
7.2.1	Makes independent, professional judgements: Problems are solved using sound judgement based upon knowledge and practical experience.

CODE	COMPETENCY
9.1.1	Research, prepare and deliver appropriate presentations: Educational topics are researched, prepared and presented to health workers and others.
10.4.2	Prepare and deliver report: Preparation of verbal and/or written reports or article (including for publication) is undertaken.
10.1.5	Contribute to planning and design of research and development projects: Relevant information is accessed online, from libraries and other sources.
10.3.2	Evaluate results and the need for further experimental work: Contributions are made to the interpretation of results and conclusions.

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

(HLT109 and HLT110) or LFS112

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

HLT221

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

Not applicable

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

You will receive early feedback in various ways. These include formative feedback on data analysis and presentation in week 1 and 3 Laboratory classes. Formative feedback from the weekly learning materials and Workshop 2 weekly quizzes and associated revision questions will allow you to check your understanding and comprehension of the concepts.

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	50%	Approximately 8 hours across the semester.	Throughout teaching period (refer to Format)	In Class
All	2	Artefact - Technical and Scientific, and Written Piece	Individual	25%	200 word abstract + 500 word poster including tables and graphs as appropriate.	Throughout teaching period (refer to Format)	Online Assignment Submission with plagiarism check
All	3	Examination - Centrally Scheduled	Individual	25%	60 minutes	Exam Period	Exam Venue

All - Assessment Task 1: Theoretical and Practical Portfolio

GOAL:	To regularly engage in the theoretical and practical components of the course through synthesis, analysis, application, and skill development.
PRODUCT:	Portfolio
AUTHORSHIP STATEMENT:	
FORMAT:	This assessment task will include a series of subtasks associated with the practical and theoretical components of the course. These include: 1A: Laboratory and workshop class preparation and participation (15%; Weeks 1 -12) 1B: In class theory and practical quiz (15%; Week 6 workshop) 1C: In class theory and practical quiz (20%; Week 12 workshop) Please refer to the Assessment module in the BIM205 Canvas site and the BIM205 Workbook for further details. This includes task descriptions, format, and submission instructions.
CRITERIA:	

No.		Learning Outcome assessed
1	Demonstrate depth and breadth of knowledge in the discipline of human physiology relevant to the cells, tissues, organs and systems.	1 2
2	Apply knowledge of physiology to elucidate the pathogenesis of disease and dysfunction.	1 2
3	Application of knowledge of physiology to solve problems.	1 2
4	Analysis and interpretation of data from physiology experiments.	1 2 3 4
5	Collection and recording of data from physiology experiments.	4

GENERIC SKILLS:	Problem solving, Organisation, Applying technologies

All - Assessment Task 2: Scientific Abstract and Digital Research Poster

GOAL:	This task supports development of your analytical and research skills to ethically collect, analyse and report on experimental data that conforms to scientific conventions.
PRODUCT:	Artefact - Technical and Scientific, and Written Piece
AUTHORSHIP STATEMENT:	
FORMAT:	You will work in a group (2 - 3 students) to produce a structured abstract and a digital poster to communicate findings from an experiment. This assessment includes the submission of progressive milestones including: Milestone submission, 10% – data analysis (Excel file, 5%) and 200 word Structured Abstract (template provided, 5%) (Week 5, Group). Digital research poster, 15%. The poster will be approximately 500 words and will conform to scientific conventions (a template will be provided) (Week 8, Group). Please refer to the Assessment module in the BIM204/5 Canvas site for further details. This includes comprehensive instructions and, resources, including rubric, task descriptions, format, examples and submission instructions.
CRITERIA:	

No.		**Learning Outcome assessed**
1	Ability to structure and write an abstract and poster conforming to scientific communication conventions.	1 2 3
2	Accuracy and appropriateness of data analysis, and production of tables and/or graphs using computer software.	4
3	Interpretation of the experimental results in terms of physiology, supported by appropriate literature.	1 2 3
4	Use of appropriate scientific and academic language.	3
5	Adherence to instructions on presentation and formatting, including referencing.	3 4
6	Compliance with academic integrity when using and citing literature.	3 4

GENERIC SKILLS:	Communication, Collaboration, Organisation, Applying technologies, Information literacy

All - Assessment Task 3: Practical and Theoretical Examination

GOAL:	To assess your practical skills and ability to apply knowledge to theoretical concepts in human physiology and/or pathophysiology covered in the course to solve problems.
PRODUCT:	Examination - Centrally Scheduled
AUTHORSHIP STATEMENT:	
FORMAT:	A comprehensive, 60 minute examination, consisting of assessments of practical skills and written responses to questions. This examination will be held on campus in the science laboratory. Please refer to the Assessment module in the BIM205 Canvas site for further details.
CRITERIA:	

No.		Learning Outcome assessed
1	Demonstration of knowledge of human physiology.	1 2 4
2	Apply knowledge of physiology and pathophysiology to practical scenarios.	2 4
3	Application of knowledge of physiology to solve problems.	4
4	Demonstration of skills developed in the course.	4

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

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

> There are no required/recommended resources for this course.

8.2. Specific requirements

To successfully complete the UB001 Bachelor of Medical Laboratory Science (Pathology) and meet accreditation requirements of AIMS, UB001 students enrolled in BIM205 must attend and participate in all on-campus practical classes. All final assessments will be invigilated.

You must wear a lab coat, enclosed shoes, and safety glasses during laboratory classes. You must either purchase and bring to lab classes a copy of the BIM205 Laboratory Workbook or alternatively print it yourself (download from Canvas). The workbook is available for purchase from the UniSC MyPrint Shop.

9. How are risks managed in this course?

Risk assessments have been performed for all laboratory classes and a moderate level of health and safety risk exists. Moderate risks are those associated with laboratory work such as working with chemicals and hazardous substances. You will be required to undertake laboratory induction training and it is also 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