COURSE OUTLINE

BIM200 Blood Banking and Transfusion Sciences

School: School of Health - Biomedicine

2025 | Semester 2

UniSC Sunshine Coast | 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 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 study blood group antigen and antibody systems, their interactions and how they relate to the clinical practice of blood transfusion. Building on your knowledge of haematology, you will learn the theory and develop competencies in laboratory techniques including the ABO, Rh and other blood group systems; donor screening, blood collection, preparation and use; blood grouping, antibody screening, cross-matching; problems associated with pregnancy; the risk and benefits of transfusions, strategies to investigate adverse effects of transfusions and tissue-typing.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Fully independent asynchronous learning	1.5hrs	Week 1	12 times
Tutorial/Workshop 1 – On campus tutorial to discuss case based application of blood banking and transfusion concepts.	2hrs	Week 2	6 times
Laboratory 1 – On campus laboratories to develop competencies in blood banking techniques and investigation of transfusion cases.	3hrs	Week 1	13 times

1.3. Course Topics

Blood banking immunology and genetics
ABO & Rh blood group systems;
Other blood group systems;
Pre-transfusion & compatibility testing;
Blood products and their use
Transfusion in clinical practice
Haemolytic disease of the newborn
Adverse transfusion reactions
Hemovigilance
Patient blood management
Blood donation, processing and testing
Apheresis in transfusion practice
Transfusion transmitted diseases
The HLA system and transplantation
Molecular immunohaematology – red cell genotyping
Neutrophil (HNA) & Platelet (HPA) antigens and antibodies in transfusion practice

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 Completing these tasks successfully will contribute to you becoming...
1 Explain, describe, analyse and interpret antigen antibody interactions as they relate to blood banking and transfusion sciences and transplantation disorders	Knowledgeable Creative and critical thinker Empowered Engaged Communication Problem solving Organisation Applying technologies Information literacy
2 Investigate and analyse clinical issues in blood banking and transfusion sciences and their link to the local and global community	Knowledgeable Creative and critical thinker Ethical Engaged Sustainability-focussed Communication Collaboration Problem solving Organisation Applying technologies Information literacy
3 Demonstrate an understanding of the professional and ethical responsibilities inherent in blood transfusion and tissue transplantation in clinical practice.	Knowledgeable Creative and critical thinker Empowered Ethical Engaged Sustainability-focussed Communication Collaboration Problem solving Organisation Information literacy

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

LFS112 and (MLS100 or MLS110) and enrolled in Program UB001 or SC355 or 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

There will be quizzes on weeks 3 (5%), 6 (10%) & 9 (15%) to assess your comprehension of the key theoretical, practical, and clinical concepts covered thus far. Feedback on these concepts and the quiz will take place in the subsequent tutorial .

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	Quiz/zes	Individual	30%	20 to 30 minutes	Refer to Format	In Class
All	2	Literature Review (or component)	Individual	20%	1500 - 2000 words and 10-15min interview	Week 8	Online Assignment Submission with plagiarism check
All	3a	Practical / Laboratory Skills, and Written Piece	Individual	25%	150 min + 10 min perusal	Week 13	In Class
All	3b	Examination - Centrally Scheduled	Individual	25%	120min + 10min perusal	Exam Period	Exam Venue

All - Assessment Task 1: BIM200 Intra semester review quizzes

GOAL:	To demonstrate your understanding of key theoretical, practical, and clinical concepts covered in weeks 1-12 of the course
PRODUCT:	Quiz/zes
FORMAT:	The quizzes will take place in the scheduled lab class on weeks 3, 6 & 9 and are worth 5%, 10% and 15% respectively. The quiz will consists of multi choice questions, short answer questions and case studies.
CRITERIA:	

No.		Learning Outcome assessed
1	Technical & clinical concepts	1 2
2	Explanation & interpretation	1 2 3
3	Identification of ethical & sustainable practices	2 3

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

All - Assessment Task 2: BIM200 Research Study Assignment

GOAL:	To develop the student's ability (i) to search for high quality, relevant and current scientific information and (ii) to organise and apply the knowledge and understanding gathered into a coherant scientific written product. To assess the student's comprehension, application and articulation of their new transfusion science knowledge.
PRODUCT:	Literature Review (or component)
FORMAT:	A number of blood banking topics will be provided to students to choose from at the beginning of the semester. Students may choose to review other blood banking topics but this must be approved by the Course Coordinator. Students will be provided with instructions on how to complete the assignment, including detailed requirements for the assignment and a marking rubric on Canvas at the beginning of the semester.

CRITERIA:

No.		Learning Outcome assessed
1	demonstration of blood banking and transfusion science knowledge	1 2 3
2	ability to source and reference current relevant scientific information	2 3
3	ability to analyse, interpret and summarise relevant information	1 2 3
4	linking implications to global and local community	1 2 3
5	identification of ethical issues	2 3
6	adherence to format	2 3

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

All - Assessment Task 3a: BIM200 Practical Exam

GOAL:	To assess the student's competency in the application and interpretation of blood banking theory, concepts and skills encountered in practical classes throughout the semester.
PRODUCT:	Practical / Laboratory Skills, and Written Piece
FORMAT:	Task 3a will take place in the scheduled lab on week 13. Students will have to process blood banking requests and complete case studies. This will assess their blood banking technical skills and competencies. The assessment may include some multi-choice questions and short answer questions.

CRITERIA:

No.		Learning Outcome assessed
1	principles, theories, and concepts	1 2
2	importance of blood banking and transfusion sciences in the local and global community	2
3	scientific terminologies	1

GENERIC SKILLS:	Problem solving, Organisation, Applying technologies

All - Assessment Task 3b: BIM200 Final theory exam

GOAL:	To demonstrate understanding and the ability to apply key theoretical, practical, and clinical concepts covered in weeks 1-12 of the course.
PRODUCT:	Examination - Centrally Scheduled
FORMAT:	Task 3b is a centrally scheduled invigilated exam that will take place on campus. It will consist of case studies, multi choice questions and short answer questions.
CRITERIA:	

No.		Learning Outcome assessed
1	Technical & clinical concepts	1 2
2	Explanation & interpretation	1 2 3
3	Identification of ethical & sustainable practices	2 3

GENERIC SKILLS:	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

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	Paula R. Howard	2020	Basic and Applied Concepts of Blood Banking and Transfusion Practices	5th	Mosby

8.2. Specific requirements

To successfully complete the UB001 Bachelor of Medical Laboratory Science (Pathology) and meet the accreditation requirements of AIMS, UB001 students enrolled in BIM200 must attend and participate in all on-campus practical classes, attain at least 50% in the theory assessments and attain at least 80% in the laboratory final practical assessments. The final assessments in BIM200 will be invigilated.

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. 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 or using the SafeZone app. For general enquires contact the SafeUniSC team by phone 07 5456 3864 or email 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 or email 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.

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 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 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