

BIM371 Clinical Embryology

School: School of Health - Biomedicine

2023 | Session 8

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

Clinical embryology introduces you to the application of Assisted Reproductive Technology (ART) used by in-vitro fertilisation (IVF) laboratories throughout the world. On completion of this course, you will be able to demonstrate and evaluate current knowledge of human reproduction; molecular genetics in clinical embryology; regulation, ethics and quality management of ART; early reproductive events and ART; assessment of embryo quality; and cryopreservation techniques.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Tutorial/Workshop 1 – There will be two Workshop 1 sessions per week in weeks 2 and 3. These will be delivered online.	1hr	Week 2	4 times
Learning materials – This course will be delivered in an intensive format. There will be two topics covered per week in weeks 2, 3, 4 and 6.	2hrs	Week 2	8 times
Tutorial/Workshop 2 – There will be one tutorial per week in weeks 2, 3, 4 and 6.	3hrs	Week 2	4 times
Laboratory 1 – There will be two laboratory classes per week in weeks 2, 3, 6 and one in week 7.	3hrs	Week 2	7 times

1.3. Course Topics

The topics covered in this course include:

- Physiology, anatomy, histology and endocrinology of the human female and male reproductive systems.
- Genetics in assisted reproductive technology.
- Embryology techniques.
- Quality management in Australian assisted reproductive technology laboratories.
- Cryopreservation
- Early reproductive events
- Assessment of embryo quality
- Male and female infertility factors
- Regulations and ethics in clinical embryology

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 Demonstrate and apply the practical skills and competencies used in embryology laboratories.	Knowledgeable
2 Describe and interpret the underlying scientific principles of assisted reproductive technologies.	Knowledgeable Creative and critical thinker
3 Critically analyse and evaluate assisted reproductive technology practices and quality control principles.	Empowered
4 Identify, describe and evaluate the ethical and regulatory principles that apply to the clinical embryology setting.	Ethical

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

LFS202 or LFS203 or enrolled in Program SC357

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

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

It is recommended that students have prior knowledge and skills in human physiology, human genetics and biochemistry.

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

In weeks 2 and 3 of this course you will participate in tutorial and laboratory classes, these classes have both formative and summative components based on the topics and content covered to date. These will provide you with an opportunity to revise your understanding of each topic.

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	Practical / Laboratory Skills	Individual	50%	Up to 2000 words	Refer to Format	In Class
All	2	Examination - not Centrally Scheduled	Individual	30%	90 minutes	Week 4	In Class
All	3	Oral	Individual or Group	20%	10 min	Week 8	Online Assignment Submission with plagiarism check

All - Assessment Task 1: Practical/ laboratory skills portfolio

GOAL:	You will develop practical laboratory skills, assess and apply quality control measures and ethical practices, and will demonstrate competency in laboratory techniques that are relevant to assisted reproductive technology.																
PRODUCT:	Practical / Laboratory Skills																
FORMAT:	Weeks 2, 3 & 6 Individual professional competencies demonstrated through the completion of a training manual/logbook style laboratory workbook. Key elements include the successful completion of laboratory inductions and practical demonstration of laboratory skills.																
CRITERIA:	<table border="1"> <thead> <tr> <th>No.</th> <th></th> <th>Learning Outcome assessed</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Demonstration of practical laboratory competencies</td> <td>1</td> </tr> <tr> <td>2</td> <td>Description and assessment of quality control measures</td> <td>3</td> </tr> <tr> <td>3</td> <td>Identification and appraisal of ethical practices</td> <td>4</td> </tr> <tr> <td>4</td> <td>Analysis of scientific principles relevant to embryology practices</td> <td>2</td> </tr> </tbody> </table>	No.		Learning Outcome assessed	1	Demonstration of practical laboratory competencies	1	2	Description and assessment of quality control measures	3	3	Identification and appraisal of ethical practices	4	4	Analysis of scientific principles relevant to embryology practices	2	
No.		Learning Outcome assessed															
1	Demonstration of practical laboratory competencies	1															
2	Description and assessment of quality control measures	3															
3	Identification and appraisal of ethical practices	4															
4	Analysis of scientific principles relevant to embryology practices	2															

All - Assessment Task 2: Examination

GOAL:	This examination will explore the theoretical knowledge of the physiology, anatomy, histology, endocrinology and molecular genetics associated with human male and female reproductive systems and the scientific principles behind assisted reproductive technologies.										
PRODUCT:	Examination - not Centrally Scheduled										
FORMAT:	An individual, closed book, mid-semester examination composed of multiple-choice and short answer style questions. The examination will cover course material delivered during via learning materials, tutorial and practical classes held in the first half of the course.										
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2	Analysis of information and explanation of important elements of human reproduction	2 3									

All - Assessment Task 3: Oral Presentation

GOAL:	To research and develop a deeper understanding of an important embryology technique, to integrate relevant assisted reproductive technology principles that have been addressed throughout the course, and to identify and evaluate ethical and regulatory principles of clinical embryology.		
PRODUCT:	Oral		
FORMAT:	A 10 min oral presentation that critically analyses and discusses the scientific basis of an aspect (or aspects) of an assisted reproductive technology (ART). The oral presentation can be completed either individually or in pairs (for pairs it is expected that each student in the pair contribute equally to the presentation).		
CRITERIA:	No.		Learning Outcome assessed
	1	Scientific merit of the content (description, interpretation and analysis)	2
	2	Description of ethical and quality control principles in ART.	3 4
	3	Scientific communication skills and time management	2

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
Required	Martin H. Johnson	2018	Essential Reproduction	8th	John Wiley & Sons

8.2. Specific requirements

You will be expected to purchase the BIM371 Course Practical Manual from USC Mail and Print Services (MaPS). In addition, you will be required to bring a laboratory coat, safety glasses and enclosed non-slip footwear to the course practical classes.

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

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 may be penalised at the following maximum rate (the rates are cumulative):

- 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 after 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 to negotiate an outcome.

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.

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.

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