



# BMSC12001 *Histological and Cytological* *Techniques* Term 2 - 2017

Profile information current as at 03/05/2024 05:08 pm

All details in this unit profile for BMSC12001 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

## General Information

### Overview

This unit will provide you with foundation skills for work in histological (anatomical pathology) and cytological pathology departments. On completion of this unit, you will be able to discuss and perform diagnostic histological techniques including tissue preparation, fixation, routine and special staining, sectioning and mounting. Cytological specimen preparation will also be taught. Development of a high level of skill in efficient use of microscope optics for examination of prepared slides will be facilitated through practical sessions.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

Pre-requisites: BMSC11001 Human Body Systems 1 and BMSC11002 Human Body Systems 2

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

### Offerings For Term 2 - 2017

- Distance
- Rockhampton

### Attendance Requirements

All on-campus students are expected to attend scheduled classes - in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

### Residential Schools

This unit has a Compulsory Residential School for distance mode students and the details are:

Click here to see your [Residential School Timetable](#).

### Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Practical Assessment**

Weighting: 50%

#### 2. **Examination**

Weighting: 50%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## CQUniversity Policies

**All University policies are available on the [CQUniversity Policy site](#).**

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

## Previous Student Feedback

### Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

#### Feedback from Self reflection and peer review

**Feedback**

Comfortable with how the course ran, feel that all adjustments made in 2016 have been advantageous. Res school was successfully ran. External lecturers sometimes got carried away with the time etc.

**Recommendation**

Always follow student and peer feedback. Let the external lecturers know that students lose interest after 2 hours of lectures, so to keep it succinct.

#### Feedback from Student feedback

**Feedback**

Organised and great teaching staff

**Recommendation**

Maintain the same structure

#### Feedback from Student feedback

**Feedback**

Awesome residential School

**Recommendation**

Continue with the same style, small class res school

#### Feedback from Student feedback

**Feedback**

Some monotonous and long lectures - tutorials running after lectures seem to create a 3 hour lecture

**Recommendation**

Look into a more collaborative tutorial method - allows for more student interaction.

## Unit Learning Outcomes

**On successful completion of this unit, you will be able to:**

1. Describe and perform common procedures and techniques relevant to histological specimen receipt, fixation, processing and staining used in pathology laboratories
2. Discuss and demonstrate the safe handling of fixation chemicals
3. Assess staining errors and describe quality control procedures for staining and remedial actions
4. Demonstrate cytological techniques including centrifugation, cell block preparation and smear techniques
5. Demonstrate optimal use of microscope optics

## Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level   ● Introductory Level   ● Intermediate Level   ● Graduate Level   ○ Professional Level   ○ Advanced Level

### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Practical Assessment - 50%	•	•	•	•	•
2 - Examination - 50%	•	•	•		

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication	•	•			
2 - Problem Solving	•	•	•	•	•
3 - Critical Thinking			•	•	•
4 - Information Literacy		•	•	•	•
5 - Team Work					
6 - Information Technology Competence					
7 - Cross Cultural Competence					
8 - Ethical practice		•			
9 - Social Innovation					
10 - Aboriginal and Torres Strait Islander Cultures					

### Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Practical Assessment - 50%	•	•	•	•				•		
2 - Examination - 50%	•	•		•						

## Textbooks and Resources

### Textbooks

BMSC12001

#### Prescribed

#### Cellular Pathology

Edition: 3rd (2015)

Authors: Cook, D.J., Warren, P.J.

Scion

Banbury , OX169UX , UK

ISBN: 9781907904356

Binding: Paperback

[View textbooks at the CQUniversity Bookshop](#)

### IT Resources

**You will need access to the following IT resources:**

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

## Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Ingrid Christiansen** Unit Coordinator

[i.christiansen@cqu.edu.au](mailto:i.christiansen@cqu.edu.au)

## Schedule

### Week 1 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Introduction, fixation and sample cut-up	Chapters 1, 3 and 20	

### Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Tissue processing and embedding	Chapters 4 and 5	

### Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Section cutting, coverslipping and artefacts	Chapters 4, 6 and 10	

### Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Principles of histochemical staining. The H&E stain.	Chapter 7	

### Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Special stains - carbohydrates, connective tissue, muscle	Chapter 8	
<b>Vacation Week - 14 Aug 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Independent study week		
<b>Week 6 - 21 Aug 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Special stains - silver stains, pigments, micro-organisms	Chapters 10 and 11	
<b>Week 7 - 28 Aug 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Special stains - amyloid, lipids, enzyme histochemistry	Chapters 8, 9 and 11	
<b>Week 8 - 04 Sep 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Residential School.		Residential School.
<b>Week 9 - 11 Sep 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Immunofluorescence, immunohistochemistry	Chapter 12	
<b>Week 10 - 18 Sep 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Molecular techniques, electron microscopy	Chapters 15, 16 and 19	
<b>Week 11 - 25 Sep 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Gynaecological and Non-gynaecological cytology	Chapters 13 and 14	
<b>Week 12 - 02 Oct 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Revision.		
<b>Review/Exam Week - 09 Oct 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic
<b>Exam Week - 16 Oct 2017</b>		
Module/Topic	Chapter	Events and Submissions/Topic

## Assessment Tasks

### 1 Practical Assessment

#### Assessment Type

Practical Assessment

#### Task Description

Over the three days of block practical/residential school you will be able to apply some of your theoretical knowledge and begin to develop your technical and scientific skills in processing and staining tissues. You will learn to process tissues, cut sections and stain slides. You will also be required to complete a workbook to hand in with your slide

portfolio. The quality of the finished slide will determine if the medically qualified pathologist can use your slide to interpret what he/she sees and make the final diagnosis. For this reason, the final practical session of the Residential School, will be a practical examination (worth 30%) alongside your workbook (worth 20%) for all unit students. You will be required to section and stain tissues that will be assessed for quality.

### **Assessment Due Date**

Final day of residential school

### **Return Date to Students**

Within 7 days

### **Weighting**

50%

### **Minimum mark or grade**

To demonstrate satisfactory practical skills necessary for this unit, you are required to gain at least 30 of the 50 marks available.

### **Assessment Criteria**

The finished slide must not show any artefacts such as tears, folds, wrinkles or bubbles that obscure part(s) of the section, and the final section is not over-stained or under-stained. The stain must have an even balance showing the expected histological structures. A more detailed breakdown of how the slides will be marked will be provided on the Moodle site, and the terms and features above will become familiar during the early lectures and early lab sessions.

### **Referencing Style**

- [Harvard \(author-date\)](#)

### **Submission**

Offline

### **Learning Outcomes Assessed**

- Describe and perform common procedures and techniques relevant to histological specimen receipt, fixation, processing and staining used in pathology laboratories
- Discuss and demonstrate the safe handling of fixation chemicals
- Assess staining errors and describe quality control procedures for staining and remedial actions
- Demonstrate cytological techniques including centrifugation, cell block preparation and smear techniques
- Demonstrate optimal use of microscope optics

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Ethical practice

## **Examination**

### **Outline**

Complete an invigilated examination.

### **Date**

During the examination period at a CQUniversity examination centre.

### **Weighting**

50%

### **Length**

180 minutes

### **Minimum mark or grade**

50% To pass this unit

### **Exam Conditions**

Closed Book.

### **Materials**

Calculator - all non-communicable calculators, including scientific, programmable and graphics calculators are authorised

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### What can you do to act with integrity?



#### Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



#### Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



#### Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem