



BMSC12001 *Histological and Cytological* Techniques

Term 2 - 2018

Profile information current as at 04/05/2024 07:32 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.

Corrections

Unit Profile Correction added on 03-08-18

Exam Conditions - Closed Book

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 - 2018

- Mixed Mode
- 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 Student feedback

Feedback

Well planned and delivered with excellent residential school

Recommendation

Will maintain the same residential school format (small class sizes, implementation of experienced industry professional, ensuring everyone has equal amount of time on all instruments). Will tweak when newer technology released, or more pertinent technical skills are required.

Feedback from Student feedback

Feedback

Email and forum questions were responded to in a timely manner. The exam revision posted was helpful. The lecturers were always available to answer questions. The text-book for this course was great.

Recommendation

I intend on maintaining due diligence in monitoring the moodle site, and ensuring all questions are answered in a timely manner.

Feedback from Student feedback

Feedback

Long Lectures

Recommendation

In 2018, I still plan on using some external lecturers, but will divide the lectures into 2 x 45 minute lectures when posting them online. I will then survey the students to see when they would prefer to attend a voluntary 30-45 minute tutorial via zoom at a convenient time to as many students as possible, at a time slot 2-3 days following the lecture.

Feedback from Student feedback

Feedback

Please include a smaller assessment item

Recommendation

I plan on including a 10-15% mid-term quiz, making the final examination 35-40% of total weighting (but still require the students to achieve a minimum of 50% in the final examination).

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

Third Edition (2015)

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

Scion

Banbury , 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

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Schedule

Week 1 - 09 Jul 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|-----------------------------------|-----------|------------------------------|
| Introduction, fixation and cut-up | 1, 3, 4.1 | |

Week 2 - 16 Jul 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|---------------------------------|---------|------------------------------|
| Tissue processing and embedding | 4, 5 | |

Week 3 - 23 Jul 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|---------|------------------------------|
| Sectioning, coverslipping and artefacts | 4, 6 | |

Week 4 - 30 Jul 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---------|------------------------------|
| Staining: H&E, Carbohydrates, connective tissue and muscle | 7, 8 | |

Week 5 - 06 Aug 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | |
|--|-------------|
| Pigments, microbiology and silver stains | 7, 10, 11.2 |
|--|-------------|

Vacation Week - 13 Aug 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

Week 6 - 20 Aug 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | | |
|----------------------------------|----------|--|
| Immunohistochemistry and amyloid | 11.3, 12 | |
|----------------------------------|----------|--|

Week 7 - 27 Aug 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | | |
|--|--------|--|
| Gynaecological and Non-Gynaecological cytology | 13, 14 | |
|--|--------|--|

Week 8 - 03 Sep 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | | |
|---|--------|--|
| Non Gynaecological Cytology and Electron Microscopy | 14, 19 | |
|---|--------|--|

Week 9 - 10 Sep 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | | |
|--------------------|--|---|
| Residential School | | Submission of portfolio and laboratory workbook |
|--------------------|--|---|

Week 10 - 17 Sep 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | | |
|---|------------|--|
| Molecular techniques and Immunofluorescence | 15, 16, 12 | |
|---|------------|--|

Week 11 - 24 Sep 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | | |
|-------------------------------|----------|--|
| Andrology, Lipids and Enzymes | 8.6, 9.3 | |
|-------------------------------|----------|--|

Week 12 - 01 Oct 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

| | | |
|----------|--|--|
| Revision | | |
|----------|--|--|

Review/Exam Week - 08 Oct 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

Exam Week - 15 Oct 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

Term Specific Information

A second residential school will be made available in week 8 from 6 September - 8 September if student numbers exceed the capacity of the histology laboratory. This will only be made available if the total cohort exceeds 24 students.

Assessment Tasks

1 Practical Portfolio

Assessment Type

Practical Assessment

Task Description

Over the three full days of 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 macrodissect, embed and process tissues, then cut and stain sections. 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 for all students. You will be required to embed, section and stain tissues that will be assessed for quality. The practical assessment consists of two parts.

1. Workbook. This is to be completed during the residential school and will be graded as pass/fail.
2. Embedded tissue and stained slides.

These will be completed during the residential school and assessed with a grade worth 50% of the overall unit. A minimum grade of 50% is required to pass this assessment.

Both items are to be submitted at the end of the residential school for grading.

Assessment Due Date

Final day of residential school

Return Date to Students

Within 7 days of final day of the final residential school

Weighting

50%

Minimum mark or grade

50%

Assessment Criteria

The portfolio of slides and blocks will be assessed on the following:

Embedding quality, position of tissue, section quality, staining quality, coverslipping and labelling.

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

Referencing Style

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

Submission

No submission method provided.

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

Exam Conditions

Closed Book.

Materials

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

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