



BMSC12009 *Sleep Physiology and Measurement*

Term 2 - 2018

Profile information current as at 28/04/2024 06:11 pm

All details in this unit profile for BMSC12009 have been officially approved by CQU University 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 enables students to relate diagnostic monitoring of sleep behaviour across the lifespan via polysomnography to sleep physiology and specific sleep disorder groups. Common causes and treatments for sleep disordered breathing, insomnia, hypersomnia and sleep related movement disorders will be investigated.

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

BMSC12007 Neurological Physiology and Measurement

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

- 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).

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. **Written Assessment**

Weighting: 20%

2. **Group Discussion**

Weighting: 40%

3. **Examination**

Weighting: 40%

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 evaluation

Feedback

The final exam is not representative of the topics covered in the unit.

Recommendation

Develop a more comprehensive exam with marks evenly distributed across the topics covered in the unit.

Feedback from Student evaluation.

Feedback

Timely return of assessments and provision of useful feedback were appreciated.

Recommendation

Continue providing useful and timely feedbacks to students.

Unit Learning Outcomes

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

1. Describe normal sleep physiology with reference to gender and age specific differences.
2. Define circadian rhythms and factors that influence them.
3. Analyse the diagnosis and consequences of sleep deprivation.
4. Describe the measurement and function of polysomnographic recording of sleep behaviour.
5. Interpret the analysis process for sleep staging of polysomnographic recordings.
6. Explore causes, clinical features and treatment of sleep disordered breathing.
7. Discuss the prevalence, types and treatments for insomnia.
8. Describe symptoms, monitoring and evaluation techniques for hypersomnia.
9. Discuss and differentiate sleep related movement disorders.
10. Evaluate the use of polysomnography in investigating sleep disordered breathing in children.

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes									
	1	2	3	4	5	6	7	8	9	10
1 - Written Assessment - 20%	•	•		•	•					
2 - Group Discussion - 40%			•			•	•	•	•	•
3 - Examination - 40%	•	•	•	•	•	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes									
	1	2	3	4	5	6	7	8	9	10
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 - Written Assessment - 20%	•			•						
2 - Group Discussion - 40%	•			•	•	•				
3 - Examination - 40%	•	•		•						

Textbooks and Resources

Textbooks

BMSC12009

Prescribed

Fundamentals of Sleep Medicine

(2012)

Authors: Richard Berry

Elsevier Saunders

Philadelphia , PA , United States of America

ISBN: 9781437703269

Binding: Hardcover

[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

Sonia Saluja Unit Coordinator

s.saluja@cqu.edu.au

Schedule

Week 1 - 09 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Normal Sleep Physiology	Chapters 6 and 7 Fundamentals of Sleep Medicine (Richard Berry, 2012)	

Week 2 - 16 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Circadian Rhythms	Chapter 26 Fundamentals of Sleep Medicine (Richard Berry, 2012)	

Week 3 - 23 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Polysomnography 1: Basic Sleep Monitoring Types of monitoring devices	Chapters 1, 2, and 13 Fundamentals of Sleep Medicine (Richard Berry, 2012)	Tutorial on content from weeks 1-2

Week 4 - 30 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Polysomnographic analysis of Sleep
 Chapters 3 and 4
 Fundamentals of Sleep Medicine
 (Richard Berry, 2012)

Week 5 - 06 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Polysomnography 2: Monitoring Respiration. Monitoring limb movements	Chapters 8, 9 and 12 Fundamentals of Sleep Medicine (Richard Berry, 2012)	Tutorial on content from weeks 3-5

Vacation Week - 13 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Week 6 - 20 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Sleep deprivation and its consequences	Chapter 6 Fundamentals of Sleep Medicine (Richard Berry, 2012)	Tutorial to discuss group work assessment Written Assessment Due: Week 6 Friday (24 Aug 2018) 11:00 pm AEST

Week 7 - 27 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Obstructive Sleep Apnea	Chapters 15 - 20 Fundamentals of Sleep Medicine (Richard Berry, 2012)	

Week 8 - 03 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Central Sleep Apnea	Chapter 21 Fundamentals of Sleep Medicine (Richard Berry, 2012)	

Week 9 - 10 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Insomnia	Chapter 25 Fundamentals of Sleep Medicine (Richard Berry, 2012)	Tutorial on content from weeks 6-9

Week 10 - 17 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Hypersomnia	Chapters 14 and 24 Fundamentals of Sleep Medicine (Richard Berry, 2012)	Group Work Due: Week 10 Friday (21 Sept 2018) 11:00 pm AEST

Week 11 - 24 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Sleep related Movement Disorders	Chapter 23 Fundamentals of Sleep Medicine (Richard Berry, 2012)	

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
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Exam Week - 15 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Term Specific Information

The teaching team for BMSC12009 Sleep Physiology and Measurement are Sonia Saluja and Sarah Jay. Sonia is the unit coordinator for this unit and will be delivering lectures and tutorials throughout the term. Sarah is a researcher at CQUniversity's Appleton Institute in Adelaide. Sarah has received rigorous scientific training at world class sleep and behavioural laboratories in Australia and New Zealand and has expertise in collecting and analysing physiological data in the discipline of sleep physiology.

You can contact the teaching staff via the unit's Moodle Q&A forum. This forum is a great place to post questions relevant to your study. Please don't feel shy in asking questions as you will often find that other students also share your query. The Q&A forum will be monitored on daily basis and you can expect responses within 24 hours. If your queries are of a personal nature, you are welcome to contact the unit coordinator via email at s.saluja@cqu.edu.au or phone 07 4930 6434.

The General Discussion forum is a social space where students can communicate with other students in this unit. Please ensure that your conduct within this forum is consistent with the Student Charter.

The Clinical Measurement Science major offered at CQUniversity is multi-disciplinary. As the name suggests, the focus of this unit is Sleep science, one of the disciplines of Clinical Measurements. This unit will provide you with the knowledge related to sleep physiology, diagnostic monitoring of sleep behaviour and sleep disorders. The assessment items will strengthen your understanding of Sleep science as required by a clinical measurement scientist.

Live lectures will be delivered each week from Rockhampton campus and will be simultaneously recorded. The recordings of these lectures will be available on the unit's Moodle site for all students to access. Sarah's lectures from weeks 3-6 will be available via ISL/zoom from Adelaide campus.

Tutorials will be conducted from Rockhampton campus as per the schedule in the unit profile. During the tutorials we will discuss the weekly study questions that are provided to you on the Moodle site. The weekly study questions will focus on the key learning objectives for each week and assist in your preparation for the assessment items.

As per Australian education standards, you are expected to commit 150 hours of engagement to your study of this unit. For example, this can be broken as:

- 2-3 hours per week watching recorded lectures and revising content through study notes
- 1-2 hours per week for completing assigned reading
- 2-3 hours per week completing the weekly study questions and attending tutorials
- 3-4 hours per week preparing your assessments or studying for the exam

Assessment Tasks

1 Written Assessment

Assessment Type

Written Assessment

Task Description

In your role as a clinical measurement scientist, you will be required to conduct polysomnography and score sleep studies. This assessment task is designed to present a real world presentation of a sleep study similar to those you may encounter in the clinical environment. You will be presented with a clinical case scenario along with information regarding the sleep study. This assessment item is designed to assess your knowledge of normal sleep physiology, circadian rhythms and sleep staging of polysomnographic recordings. The questions will be short and long answer type and will focus on topics from weeks 1-5 of unit content. Each question will require you to apply your knowledge of normal sleep physiology and polysomnography to the given scenario.

Assessment Due Date

Week 6 Friday (24 Aug 2018) 11:00 pm AEST

Return Date to Students

Week 9 Friday (14 Sept 2018)

Weighting

20%

Minimum mark or grade

To pass this unit, you are required to attain a minimum of 50% of the marks available for this assessment.

Assessment Criteria

Each question will be allocated a specific number of marks. The marking rubric will be available on the unit's Moodle site. Assessment criteria will be based on:

- Knowledge of theory
- Application of foundational concepts
- Correct use of terminology
- Presentation of information
- Referencing

If your assessment item is submitted after the due date/time without an approved extension, it will be penalised 5% per 24 period that it is overdue.

Referencing Style

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

Submission

Online

Submission Instructions

To be submitted as a Word document

Learning Outcomes Assessed

- Describe normal sleep physiology with reference to gender and age specific differences.
- Define circadian rhythms and factors that influence them.
- Describe the measurement and function of polysomnographic recording of sleep behaviour.
- Interpret the analysis process for sleep staging of polysomnographic recordings.

Graduate Attributes

- Communication
- Information Literacy

2 Group Work

Assessment Type

Group Discussion

Task Description

In your role as a clinical measurement scientist, you will be required to conduct tests on patients with a variety of sleep disorders. As such, knowledge of signs, symptoms, risk factors, pathophysiology and diagnostic techniques in sleep disorders is required. In a clinical setting you will also be working in a team environment with other clinical measurement scientists and health professionals. The task is a group work activity in which you will be required to develop a hypothetical clinical case study on a sleep disorder aimed at educating your fellow peers. This activity will require you to research information, recall concepts of normal sleep physiology and measurement and apply the knowledge of sleep disorders and investigations. This assessment is designed to strengthen your knowledge of sleep disorders as discussed in the second half of the term and to give you experience in presenting case studies for clinical meetings or conference presentations.

Students will be randomly designated into groups of three or four students each by the unit coordinator. Group allocation will occur at the end of week 4, after census date. Each group will choose a sleep disorder for their group. Within each group, each student will contribute to the preparation of a hypothetical clinical case study on the chosen sleep disorder.

The group work assessment task has two parts:

Part A: Group Work 15%

Part A is divided into two sections.

1. Case study scenario: 10%

Once each group has chosen a sleep disorder, group members must collectively develop a case study scenario based on their chosen sleep disorder. The scenario will be upto 250 words in length and will provide a description of the case

study specific to the groups' chosen sleep disorder. For example, the scenario may begin as 'A 30 year old man with a BMI of ...' and will proceed to highlight features characteristic of the sleep disorder and provide background information relevant to the case study. Examples of case study scenarios will be provided to you on the Moodle unit page. Students must work collectively in a group to develop this scenario. The sections of the case study which require individual work will be dependent on the case study scenario the group develops collectively.

2. Self and Peer Review: 5%

To assess each member's contribution to the group work, you will take part in two self and peer assessments. Self and peer review will occur using the Self and Peer Assessment (SPA) tool. The SPA is a tool that utilises the ten responses gathered from each group member to quantify the value they have placed on your contribution to the group work. In confidence, each person within a group will score themselves and other team members for their degree of contribution to the group work activity. Since the peer review process may be new to many, a tutorial session will be provided to discuss the process of peer review and working in groups.

Part B: Individual Work 25%

Each team member will individually prepare a section of the case study. This part of the case study will include sections such as:

- Risk factors (if any) for the sleep disorder
- Signs and symptoms the patient may present with
- Pathophysiology of the sleep disorder
- Diagnostic techniques used for the investigation of the sleep disorder

Assessment Due Date

Week 10 Friday (21 Sept 2018) 11:00 pm AEST

Return Date to Students

Week 12 Friday (5 Oct 2018)

Weighting

40%

Minimum mark or grade

Students must obtain at least 50% of the marks available for this group task to pass this unit.

Assessment Criteria

Each question will be allocated a specific number of marks. The marking rubric will be available on the unit's Moodle site. Assessment criteria will be based on:

- Knowledge of theory
- Application of foundational concepts
- Correct use of terminology
- Presentation of information
- Feedback provided to peers
- Referencing

If your assessment item is submitted after the due date/time without an approved extension, it will be penalised 5% per 24 period that it is overdue.

Referencing Style

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

Submission

Online Group

Learning Outcomes Assessed

- Analyse the diagnosis and consequences of sleep deprivation.
- Explore causes, clinical features and treatment of sleep disordered breathing.
- Discuss the prevalence, types and treatments for insomnia.
- Describe symptoms, monitoring and evaluation techniques for hypersomnia.
- Discuss and differentiate sleep related movement disorders.
- Evaluate the use of polysomnography in investigating sleep disordered breathing in children.

Graduate Attributes

- Communication
- Information Literacy
- Team Work

- Information Technology Competence

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

40%

Length

180 minutes

Minimum mark or grade

To pass this unit, you are required to attain a minimum of 50% of the marks available for the exam.

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