



# BMSC11007 Medical Anatomy and Physiology 1

## Term 1 - 2023

Profile information current as at 03/05/2024 09:07 am

All details in this unit profile for BMSC11007 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

In this unit, you will study the gross anatomy and physiology of the musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, nervous, endocrine, urinary, and reproductive human body systems. You will apply this knowledge in laboratory sessions using anatomical models and plastinates through a series of practical exercises. You will study homeostatic mechanisms and physiological responses in the human body. In addition, you will gain an appreciation of the integrative nature of anatomy and physiology of the human body with special emphasis on the study of the pelvic region and the lower limbs.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

This unit is for students from these courses only: CB66 - Bachelor of Health Science (Allied Health), CB84 - Bachelor of Occupational Therapy (Honours), CB85 - Bachelor of Physiotherapy (Honours), CB86 - Bachelor of Podiatry (Honours), CB87 - Bachelor of Speech Pathology (Honours), CM17 Bachelor of Medical Science (Pathway to Medicine), CG93 Bachelor of Medical Sciences (Clinical Physiology)

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 1 - 2023

- Bundaberg
- 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. **Online Quiz(zes)**

Weighting: 50%

#### 2. **Practical Assessment**

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 evaluation and self reflection

##### **Feedback**

Use anatomy model photographs in lectures, rather than only textbook images

##### **Recommendation**

Incorporate model photographs in lectures (from our anatomy bank of images) to assist in transition from the textbook images to the CQU anatomy lab resources

#### Feedback from Student evaluation

##### **Feedback**

Resources including practical videos, tutorial and lecture recordings and model photographs made learning much easier

##### **Recommendation**

Continue to update and provide resources for student engagement and learning

#### Feedback from Student evaluation

##### **Feedback**

Laboratory sessions were very useful and necessary to improve knowledge

##### **Recommendation**

Encourage student attendance to laboratory sessions as they help to build on the theoretical knowledge obtained from lectures

## Unit Learning Outcomes

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

1. Identify the gross anatomical structures of the musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, nervous, endocrine, urinary, and reproductive systems of the human body
2. Describe the physiological mechanisms of the musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, nervous, endocrine, urinary, and reproductive systems of the human body
3. Explain homeostatic mechanisms and their essential role in physiological responses in the human body
4. Describe the anatomical features of the human body focusing on musculoskeletal and neurovascular structures of the pelvis, perineum, and lower limbs
5. Explain the anatomical and physiological relationships of the human body focusing on the pelvis, perineum, and lower limbs.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Online Quiz(zes) - 50%	•	•	•	•	•
2 - Practical Assessment - 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					

## Textbooks and Resources

### Textbooks

BMSC11007

#### Prescribed

##### **GRAY'S ANATOMY FOR STUDENTS**

Edition: 4 (2019)

Authors: Richard Drake, A. Wayne Vogl, Adam W. M. Mitchel

Elsevier Health Sciences

Great Britain

ISBN: 9780323393041

Binding: Paperback

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#### Supplementary

##### **MCMINN AND ABRAHAMS' CLINICAL ATLAS OF HUMAN ANATOMY**

Edition: 8 (2019)

Authors: Peter H. Abrahams, Jonathan D. Spratt, Marios Loukas, Albert-Neels van Schoor

Elsevier Health Sciences

Great Britain

ISBN: 9780702073328

Binding: Paperback

#### Additional Textbook Information

The prescribed textbook can be accessed online at the CQUniversity Library website. Access can be limited, so if you prefer your own copy, you can purchase either paper or eBook versions at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[View textbooks at the CQUniversity Bookshop](#)

### IT Resources

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

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

## Referencing Style

All submissions for this unit must use the referencing style: [American Psychological Association 7th Edition \(APA 7th edition\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Charmaine Ramlogan-Steel** Unit Coordinator

[c.ramlogan-steel@cqu.edu.au](mailto:c.ramlogan-steel@cqu.edu.au)

## Schedule

### Week 1 - 06 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Introduction, Cells and Tissues  
Systemic Anatomy and Physiology:  
Musculoskeletal System 1 - Bones

Gray: Ch 1 - The Body (pp 2-4)  
Martini: Ch 4 - The Tissue Level of  
Organization (pp 161-188)  
Martini: Ch 6 - Bones and Bone  
Structure (pp 226-250)

### Week 2 - 13 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Systemic Anatomy and Physiology: Musculoskeletal System 2 - Joints Systemic Anatomy and Physiology: Musculoskeletal System 3 - Muscles	Martini: Ch 4 - The Tissue Level of Organization (pp 188-190) Martini: Ch 10 - Muscle Tissue (pp 338-357, 361-365, 373-376) Martini: Ch 11 - The Muscular System (pp 383-387)	

### Week 3 - 20 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Systemic Anatomy and Physiology: Cardiovascular and Lymphatic Systems	Gray: Ch 1 - The Body (Cardiovascular and Lymphatic Systems pp 25-28) Gray: Ch 3 - Thorax (Middle Mediastinum pp 185-215) Martini: Ch 22 - The Lymphatic System and Immunity (pp 832-842)	<a href="#">Progress Quiz 1</a> Opens: Wednesday, Week 3 at 9:00 AM (AEST)

### Week 4 - 27 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Systemic Anatomy and Physiology: Respiratory and Gastrointestinal Systems	Gray: Ch 3 - Thorax (Pleural Cavities pp 166-181) Gray: Ch 4 - Abdomen (Abdominal viscera - organs pp 307-338)	<a href="#">Progress Quiz 1</a> Closes: Monday, Week 4 at 9:00 PM (AEST)

### Week 5 - 03 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Systemic Anatomy and Physiology: Nervous and Endocrine Systems	Gray: Ch 1 - The Body (Nervous System pp 29-47) Gray: Ch 2 - Back (Spinal cord pp 101-113) Gray: Ch 8 - Head and Neck (Meninges & Brain and its blood supply pp 861-877) Martini: Ch 4 - The Tissue Level of Organization (pp 190-193) Martini: Ch 12 - Nervous Tissue (pp 436-462)	

### Vacation Week - 10 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
No formal teaching		

### Week 6 - 17 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Systemic Anatomy and Physiology: Urinary and Reproductive Systems	Gray: Ch 4 - Abdomen (Posterior abdominal wall viscera pp 374-387) Gray: Ch 5 - Pelvis and Perineum (Pelvis viscera pp 452-475)	<a href="#">Progress Quiz 2</a> Opens: Wednesday, Week 6 at 9:00 AM (AEST)

### Week 7 - 24 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Regional Anatomy: Pelvis and Perineum	Gray: Ch 5 - Pelvis and Perineum (pp 415-452, 475-524)	<a href="#">Progress Quiz 2</a> Closes: Monday, Week 7 at 9:00 PM (AEST)

### Week 8 - 01 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Regional Anatomy: Hip and Gluteal Region	Gray: Ch 6 - Lower Limb (Introduction until regional anatomy of the thigh pp 527-575)	
<b>Week 9 - 08 May 2023</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Regional Anatomy: Thigh	Gray: Ch 6 - Lower Limb (Regional anatomy of the thigh pp 575-598)	<a href="#">Progress Quiz 3</a> Opens: Wednesday, Week 9 at 9:00 AM (AEST)
<b>Week 10 - 15 May 2023</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Regional Anatomy: Knee and Leg	Gray: Ch 6 - Lower Limb (Regional anatomy of the knee and leg pp 598-627)	<a href="#">Progress Quiz 3</a> Closes: Monday, Week 10 at 9:00 PM (AEST)
<b>Week 11 - 22 May 2023</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Regional Anatomy: Ankle and Foot	Gray: Ch 6 - Lower Limb (Regional anatomy of the foot pp 627-670)	<a href="#">Progress Quiz 4</a> Opens: Wednesday, Week 11 at 9:00 AM (AEST)
<b>Week 12 - 29 May 2023</b>		
Module/Topic	Chapter	Events and Submissions/Topic
Residential School (MIX students) Practical Assessment (All students)		<a href="#">Progress Quiz 4</a> : Closes: Monday, Week 12 at 9:00 PM (AEST) <a href="#">Residential School</a> : MIX students only. Monday to Wednesday, Week 12. Details on Moodle. <a href="#">Practical Assessment</a> : All students. Thursday, Week 12. Times: TBA via Moodle.

## Term Specific Information

The Unit Coordinator is Dr. Charmaine Ramlogan-Steel (c.ramlogan-steel@cqu.edu.au; ph (07) 4930 6393). Dr. Ramlogan-Steel is a medical doctor who has completed 2 post-doctoral fellowships in medical research in areas of cancer, hematology and ophthalmology. She has been the lead lecturer in Medical Anatomy and Physiology at CQU since 2019.

The teaching team will also consist of academics and sessional staff in Rockhampton (ROK) and Bundaberg (BDG). Contact details for teaching staff will be posted to Moodle.

- The lectures will be delivered live each week in ROK (ISL to BDG). It can also be accessed live via Zoom.
- The tutorials will be delivered on campus each week in ROK and BDG. All students enrolled in ROK or BDG need to attend one (1) tutorial session each week.
- Students enrolled as MIX need to attend a Residential school to be held in ROK only in week 12.
- Weekly lectures and tutorials will be recorded and uploaded to Moodle for all students to access.
- Practical Assessment for ALL students will be held in ROK and BDG in Week 12.

## Assessment Tasks

### 1 PROGRESS QUIZZES

#### Assessment Type

Online Quiz(zes)

#### Task Description

An understanding of human anatomy and physiology is essential to many health professions. The fundamentals of this

knowledge must be learnt and understood. The various health professions you have chosen to study have selected the knowledge and concepts taught in this unit as relevant to your future scope of practice.

1. There will be four separate online quizzes to assess your knowledge of the unit material.
2. The topic examined, weighting and the dates that each quiz open and close are outlined below. Each quiz **must be** completed during the specified times. In the absence of an approved extension, there will be no opportunity to complete the task after the assigned date.
3. You are allowed **ONE** attempt on each quiz. Once you start the quiz, you will have a set time to complete it. Further details will be provided on Moodle.
4. This is a **MUST PASS** Assessment. The minimum mark required to pass this assessment task: 50% of the cumulative marks of all four quizzes (1-4).

QUIZ	TOPIC EXAMINED	WEIGHTING	TIME/DATE QUIZ OPENS	TIME/DATE QUIZ CLOSES
1	Weeks 1, 2, 3	10%	9:00 AM (AEST) Wednesday, Week 3	9:00 PM (AEST) Monday, Week 4
2	Weeks 4, 5, 6	15%	9:00 AM (AEST) Wednesday, Week 6	9:00 PM (AEST) Monday, Week 7
3	Weeks 7, 8, 9	15%	9:00 AM (AEST) Wednesday, Week 9	9:00 PM (AEST) Monday, Week 10
4	Weeks 10, 11	10%	9:00 AM (AEST) Wednesday, Week 11	9:00 PM (AEST) Monday, Week 12

#### Number of Quizzes

4

#### Frequency of Quizzes

#### Assessment Due Date

See "Task Description" above

#### Return Date to Students

Immediately upon quiz completion

#### Weighting

50%

#### Minimum mark or grade

50% cumulative

#### Assessment Criteria

Questions will be automatically marked correct or incorrect at the completion of the quiz. The maximum score that can be accumulated from the Four Progress Quizzes equals 50% of the total unit marks. The 50% minimum mark requirement is on the cumulative score of all four quizzes, not on individual quizzes.

#### Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

#### Submission

Online

#### Submission Instructions

Only individual attempts and submission on all quizzes. No group attempts or submission allowed.

#### Learning Outcomes Assessed

- Identify the gross anatomical structures of the musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, nervous, endocrine, urinary, and reproductive systems of the human body
- Describe the physiological mechanisms of the musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, nervous, endocrine, urinary, and reproductive systems of the human body
- Explain homeostatic mechanisms and their essential role in physiological responses in the human body
- Describe the anatomical features of the human body focusing on musculoskeletal and neurovascular structures of the pelvis, perineum, and lower limbs
- Explain the anatomical and physiological relationships of the human body focusing on the pelvis, perineum, and lower limbs.

#### Graduate Attributes

- Communication



- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Ethical practice

## 2 PRACTICAL ASSESSMENT

### Assessment Type

Practical Assessment

### Task Description

In the clinical context, health professionals are expected to have in-depth knowledge and understanding of anatomical structures, physiological systems and their interrelation. In a university simulation setting, you will take part in practical learning activities with anatomical models, bones and real plastinated human bodies for the purpose of familiarization with these structures.

In this practical assessment you will:

1. Identify anatomical structures of the body systems and the skeletal, muscular and neurovascular systems of the pelvis, perineum and lower limb.
2. Describe different physiological mechanisms of body systems.
3. Identify and/or describe individual variations of the human body in relation to systemic anatomy and regional anatomy of the pelvis, perineum and lower limb.
4. Explain how anatomy and physiology are interrelated.

The practical assessment is worth 50% of your overall mark for the unit. It consists of approximately 20 stations set up around the laboratory, each with specimens including models, bones and plastinates where structures will be clearly labelled. At each station, there will be a station identifier and a list of questions. Questions in the practical assessment will consist of brief identification of or stating the function of labelled structures and associated structures, innervation and blood supply. Questions will cover bones, muscles, joints, nerves, blood vessels, viscera and supporting structures in the body systems, pelvis, perineum and lower limb. There will be 2 rest times during the assessment as well as one at the end of the assessment. Students may use this time to review answers but are not allowed to move around the laboratory. Students are responsible for all content covered in class for the entire term, that is visible on the specimens in the anatomy laboratory, with particular emphasis placed on the practical activities.

The practical assessment is approximately 75 minutes in duration. There will be 1 student at each station at a time. After a set period of time, you will rotate to the next station and repeat this process until you have been to all stations. You will be given an answer sheet on which to write your answers. This assessment is closed book so the only things you will be allowed to have on you are pens (blue or black ink only), your answer sheet and photo ID (e.g., student ID or driver's license).

### Assessment Due Date

All students undertake the practical assessment in person in Rockhampton or Bundaberg. The practical assessment will be held on Thursday of week 12. Times TBA via Moodle.

### Return Date to Students

Within 2 weeks of undertaking practical assessment

### Weighting

50%

### Minimum mark or grade

50%

### Assessment Criteria

For the practical assessment, your responses are scored according to the following criteria:

- correctness, relevance and completeness of the response to the question asked
- correct spelling and use of anatomical and physiological terminology

### Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

### Submission

Offline

**Submission Instructions**

Hard copy of answer sheet to be returned directly on completion of the practical assessment.

**Learning Outcomes Assessed**

- Identify the gross anatomical structures of the musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, nervous, endocrine, urinary, and reproductive systems of the human body
- Describe the physiological mechanisms of the musculoskeletal, cardiovascular, lymphatic, digestive, respiratory, nervous, endocrine, urinary, and reproductive systems of the human body
- Describe the anatomical features of the human body focusing on musculoskeletal and neurovascular structures of the pelvis, perineum, and lower limbs
- Explain the anatomical and physiological relationships of the human body focusing on the pelvis, perineum, and lower limbs.

**Graduate Attributes**

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

## 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