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The published on-line version of the Course Profile is the authoritative version and by the publication of the Course Profile on-line the University deems the student has been notified of and read the course requirements.

1. General Course Information

1.1 Course Details

COURSE CODE	3004AHS
COURSE TITLE	Clinical Exercise Testing
ACADEMIC ORGANISATION	SHS School of Health Sciences and Social Work
TRIMESTER	Trimester 1 2023
MODE	In Person
LEVEL	Undergraduate
LOCATION	Gold Coast, On Campus
CREDIT POINT VALUE	10

Restrictions:

Prerequisite: 2001AHS Physiology of Exercise

Course Description:

This course provides a sound theoretical and practical background in clinical exercise testing including specificity, sensitivity, reliability, and validity of selected tests and procedures. Particular attention is given to the interpretation of test results from patients with cardiovascular or lung disease as well as highly trained athletes, and aged persons. Case studies will be widely used. The laboratory sessions are designed to help students develop technical skills needed to conduct a graded exercise test as well as understand the theoretical principles associated with exercise testing.

Assumed Background:

An undergraduate level of understanding of the anatomy and physiology of the cardiovascular, respiratory and muscular systems and how these systems interact in a healthy subject to meet the demands placed on the body by exercise.

1.2 Course Introduction

Heart and lung diseases account for substantial death and disability worldwide. Since the cardiorespiratory system is crucially engaged in physical activity, exercise limitation is a major consequence of such conditions. Using exercise to stress the cardiorespiratory system can yield key diagnostic information about underlying pathologies and can also help guide the management of patients. Clinical Exercise Testing focuses on developing the practical skills needed to properly perform the main types of patient testing and an understanding the core knowledge on which these tests are based. Interpretation of case study data is used to illustrate and reinforce the how clinical judgements are made based on an individual's response to exercise and related measures.

Previous Student Feedback

The themes from previous Student Evaluation of Course (SEC) for 3004AHS were:

- 89% of students felt that the course was well organised.
- 89% of students supported that this course "enabled me to enhance my professional competence".
- The practical assessments were clinically-oriented, and although initially daunting, students resoundingly reported positive outcomes due to the practical assessments in the course.

In 2023, continued focus on practical competencies and work-related skills will be developed.

1.3 Course Staff

Primary Convenor **Dr Michael Simmonds**

EMAIL	m.simmonds@griffith.edu.au
CAMPUS	Gold Coast Campus
BUILDING	Clinical Science 1 (G02)
ROOM	2.22
CONSULTATION	<p>Dr Simmonds will be engaged in providing lectures for most content, and also leading several laboratories.</p> <p>Dr Simmonds will be available for student consultations during teaching weeks:</p> <p>Monday: 11:00 - 12:00 noon</p> <p>Tuesday: 11:00 - 12:00 noon</p> <p>To make an appointment, email the convenor with the subject title "STUDENT CONSULT: 3004AHS". These emails will be prioritised - if the subject title does not include this discrete text, there is a chance that delays to making an appointment/consult will be experienced as it may not be noticed.</p>

Lecturer **Dr Surendran Sabapathy**

EMAIL	s.sabapathy@griffith.edu.au
CONSULTATION	Dr Sabapathy will be engaged in providing an excellent series based on 12-lead ECG interpretation.

1.4 Timetable

Timetables are available on [the Programs and Courses website](#).

NB: Details contained in this section of the course profile and section 4.1 Learning Activities are to be read in conjunction with the official class timetable. The published class timetable which is the authoritative source for timetabling information for all campuses can be located by clicking on the link above.

Additional Timetable Information

It is compulsory for students to enrol in a laboratory session; attendance is required at the same enrolled session each scheduled week. Failure to attend all laboratory sessions (without medical certificate or equivalent) will result in not achieving the required competencies (ESSA/NUCAP) for graduating the accredited program, will present a missed opportunity to attempt the practical assessments, and ultimately lead to failure of 3004AHS. The teaching laboratory for Clinical Exercise Testing is G02 2.34.

1.5 Lecture Capture

It is standard practice at Griffith University that lectures timetabled in lecture capture-enabled venues are recorded and made available to students on the relevant course site, in accordance with the University's [Lecture Capture Policy](#).

The lecture series delivered as part of this course will be recorded and accessible via the Learning@Griffith course site.

1.6 Technical Specifications

This course employs a blended delivery model; in-person requirements pertain to all laboratory sessions, and extend to highly-recommended for the lecture and workshop activities. To participate in online lectures (from home), a contemporary computer/device with a high-speed internet connection is appropriate.

2. Aims, Outcomes & Graduate Attributes

2.1 Course Aims

This course will cover the principles and competencies related to key aspects of clinical exercise testing. Core theoretical and practical information will be covered in lectures and these will be integrated with clinically-oriented laboratory activities focused on developing industry-relevant knowledge and skills. This course is central to many students in the Bachelor of Exercise Science and combined programs. The course will integrate and extend knowledge and information gained in 2001AHS, Physiology of Exercise. Laboratory sessions will allow the student to develop skills needed to perform graded and functional exercise tests, lung function assessment and 12-lead electrocardiogram (ECG) preparation and analysis.

Particular attention is given to the interpretation of test results from patients with cardiovascular and lung disease in relation to a healthy population and with consideration of age and physical fitness. Case studies will be used to underscore the utility of clinical exercise test and related investigations in the diagnosis and management of cardiorespiratory disease.

2.2 Learning Outcomes

After successfully completing this course you should be able to:

- 1 Describe the pathophysiological changes that accompany the following conditions; Coronary Artery Disease; Cardiac Arrhythmias; Heart Failure; Chronic Obstructive Pulmonary Disease; Asthma; Restrictive Respiratory Disease; Pulmonary Hypertension. Explain how each of these conditions typically affects the cardiopulmonary response to an exercise stress. Outline the pharmacological and non-pharmacological management options for each condition.
- 2 Outline the benefits and risks associated with physical activity.
- 3 Understand the rationale and demonstrate proficiency in the procedures for health screening and risk classification prior to recommending or administering exercise in various populations.
- 4 Demonstrate an ability to safely, ethically, legally and effectively plan, perform and interpret a graded exercise test during a variety of clinical scenarios
- 5 Demonstrate acceptable practical competency in undertaking the following clinical procedures in a simulated (student volunteer) environment as detailed in the relevant professional guidelines: Determination of Blood Pressure at rest and during exercise; Measurement of 12 lead ECG at rest and during exercise; Assessment of pre-exercise risk classification including obtaining informed consent; Determination of fasting blood glucose and lipids; Cardiac Stress Testing using the Bruce protocol with measures of perceived exertion; Cardiopulmonary Exercise Testing on a cycle ergometer with workload increment appropriate for subject being tested and including measurement of gas exchange and 3 lead ECG (CM5 configuration); Six Minute Walk Distance Test including measures of oxygen saturation and perceived breathlessness; Assessment of Forced Spirometry and Maximal Voluntary Ventilation; Identifying common cardiac arrhythmias.
- 6 Interpret clinical test results obtained during: Cardiac Stress Testing; Cardiopulmonary Exercise Testing; Lung Function Testing; Blood Gas Analysis.

2.3. Graduate Attributes

For further details on the Griffith Graduate please [click here](#)

Griffith University prepares influential graduates to be:

- [Knowledgeable and skilled, with critical judgement](#)
- [Effective communicators and collaborators](#)
- [Innovative, creative and entrepreneurial](#)
- [Socially responsible and engaged in their communities](#)
- [Culturally capable when working with First Australians](#)
- [Effective in culturally diverse and international environments](#)

This table demonstrates where each of the Griffith Graduate Attributes is taught, practised and assessed in this course.

For further details on the Griffith Graduate Attributes please refer to [The Griffith Graduate policy](#).

University wide attributes

GRADUATE ATTRIBUTE	TAUGHT	PRACTISED	ASSESSED
Knowledgeable and skilled, with critical judgement	•	•	•
Effective communicators and collaborators		•	•
Innovative, creative and entrepreneurial		•	
Socially responsible and engaged in their communities	•	•	•
Culturally capable when working with First Australians		•	
Effective in culturally diverse and international environments	•	•	•

Additional Course Information on Graduate Attributes

This course confers to the following Exercise and Sports Science Australia (ESSA) 2020 Exercise Science standards:

- 3.2.1. Describe the function, regulation and interaction of physiological systems relating to exercise.
- 3.2.2. Describe the individual and integrated physiological responses and adaptations to acute and chronic exercise under normal conditions, in different environments, and by external influences (e.g. ergogenic aids or technologies).
- 3.2.3. Design exercise-based interventions to maintain and/or improve health and fitness, wellbeing and performance that consider the physiological responses to acute exercise, and the adaptations to chronic exercise.
- 7.2.1. Select and apply appropriate assessment procedures, including screening of appropriate social determinants of health, goal setting, obtaining informed consent and a relevant medical history, and performing a pre-exercise risk assessment and understand when onward referrals are warranted.
- 7.2.2. Identify and use the common processes and equipment required to conduct accurate and safe health, physical activity and exercise assessments.
- 7.2.3. Identify and describe the limitations, contraindications or considerations that may require the modification of assessments and make appropriate adjustments for diverse individuals.
- 7.2.4. Explain the scientific rationale, reliability, validity, assumptions and limitations of common assessments.
- 7.2.5. Describe the principles and rationale for the calibration of equipment in commonly used in assessments and recognise and recalibrate equipment when required.
- 7.2.6. Select, develop and conduct appropriate protocols for safe, effective and culturally sensitive assessments including risk management and risk assessment concepts associated with the health and assessment of exercise science.
- 7.2.7. Identify the need for guidance or further information from an appropriate health professional and recognise when medical supervision is required before or during an assessment and when to cease a test.

7.2.8. Analyse, interpret, communicate and record information and results from assessments including the accuracy and limitations of the assessment with the client, and families, carers and other health and exercise professionals where appropriate.

3.2.4. Analyse and interpret physiological data obtained during acute exercise, and compare such data between time points, individuals and populations.

3. Learning Resources

3.1 Required Resources

Details of your Required Learning Resources are available from the [Reading List](#).

3.2 Recommended Resources

Details of your Recommended Learning Resources are available from the [Reading List](#).

3.3 University Learning Resources

The University provides many facilities and support services to assist students in their studies. Links to information about University support resources that are available to students include:

Readings: From the reading list, students can access Required and Recommended Learning Resources through direct links to articles, ebooks, databases, websites, the Library catalogue and digitised readings in one convenient place. Students can also prioritise their readings, add personal study notes, and export citations.

Learning@Griffith: There is a dedicated page for this course at myGriffith.

Student Support: Provides a range of services to support students throughout their studies including personal support such as Counselling and Health Services; Academic support; and Financial and Welfare support.

Careers and Employment: The team provides Career Wellbeing, Career Planning and Decision Making, Finding Jobs, Skills Identification and Development, Graduate Employment Information, LinkedIn Profile Review, Interview Preparation, Online Psychometric and Aptitude Test Preparation, International Student Support, Disability Disclosure Strategies and Higher Degree Research (HDR) Career Consultations.

Library: The Library provides a wide range of quality client-focused services and programs to students, researchers and staff of the University. The Library works in collaboration with the academic community to achieve academic and research outcomes.

Student Computing: The University provides access to common use computing facilities for educational purposes.

[Griffith Information Technology Code of Practice](#).

Academic Integrity Tutorial: This tutorial helps students to understand what academic integrity is and why it matters. You will be able to identify types of academic misconduct, understand what skills you will need in order to maintain academic integrity, and learn about the processes of referencing styles.

Academic Integrity Declaration

Breaches of academic integrity seriously compromise student learning, as well as the academic quality of the University's programs. All breaches of academic integrity are taken seriously.

By enrolling in this course and submitting assessment, I agree that:

- I have read the [Institutional Framework for Promoting Academic Integrity among Students](#) and the [Student Academic Misconduct Policy](#).
- Except where indicated through references/citations, all assessment submitted will be my own work, based on my personal study and/or research.
- I will not collude with another student or person in the production of assessment in this course unless group work and collaboration is an expectation of the assessment item.
- No assessment item has been submitted for assessment in any other course at Griffith, or at any other University or at any other time in the same course without the permission of the relevant Course Convenor.
- I will not copy in part or in whole or otherwise plagiarise the work of other students and/or other persons.
- I will not make any of my assessment in this course available to another student, without the permission of the Course Convenor.
- In the case of online quizzes and examinations, I will only access the materials permitted in the exam instructions and limit my internet usage to what is needed to take the exam.

I accept that should I be found to be in breach of the non-disclosure provision identified above, action will be taken under the [Student Academic Misconduct Policy](#). Penalties may include failing the course or exclusion from the University.

I also **acknowledge** and agree that the course convenor may:

- Give access to assessment to another Griffith staff member for the purpose of marking.
- Submit assessment items to a text-matching service. This web-based service will retain a copy of any assessment item for checking the work of other students but will not reproduce it in any form.
- Use assessment items for the purposes of moderation, or as exemplars, according to University policies.

3.5 Other Learning Resources & Information

Required Reading Assignments

3004AHS LABORATORY MANUAL - available from the campus bookshop.

ACSM's Guidelines for Exercise Testing and Prescription. Chapters 1-6. These chapters are covered in lectures and contain important information relating to correct procedures relating to laboratory activities.

American Heart Association Scientific Statement: Practice Standards for Electrocardiographic Monitoring in Hospital Settings. Drew et al. *Circulation*. 2004;110:2721-2746. These guidelines should be read BEFORE undertaking 12 lead ECG.

American Heart Association Scientific Statement: Recommendations for Blood Pressure Measurement in Humans and Experimental Animals. Part 1: Blood Pressure Measurement in Humans. Pickering et al. *Hypertension*. 2005;45:142-161. These guidelines should be read BEFORE undertaking *Determination of Blood Pressure*.

American College of Cardiology/American Heart Association: Guidelines for Exercise Testing. Gibbons et al. *Journal of the American College of Cardiology* 1997: 30: 260-315 and 2002: 40: 1531-1540 (update). These guidelines should be read BEFORE undertaking *Cardiac Stress Testing*.

American Thoracic Society/ American College of Chest Physicians: Statement on Cardiopulmonary Exercise Testing. Weisman et al. *American Journal of Respiratory and Critical Care Medicine* 2003: 167: 211-277. These guidelines should be read BEFORE undertaking *Cardiopulmonary Exercise Testing*.

American Thoracic Society/European Respiratory Society: Standardisation of Spirometry. Miller et al. *European respiratory Journal* 2005: 26: 319-338. These guidelines should be read BEFORE undertaking *Cardiopulmonary Exercise Testing*.

American Thoracic Society/ Statement: Guidelines for the Six-Minute Walk Test. Crapo et al. *American Journal of Respiratory and Critical Care Medicine* 2002: 166: 111-117. These guidelines should be read BEFORE undertaking *6 Minute Walk Test*.

The above guidelines relating to Practicals are posted on Learning at Griffith. Correct procedures as described in these guidelines, together with key underlying principles, are examinable in the practical exam.

4. Teaching & Learning Activities

4.1 Learning Activities

Week Commencing	Activity	Learning Outcomes
6 Mar 23 - 17 Mar 23	Module 1: Planning for exercise testing (Lecture Series): The rationale for clinical exercise testing will be discussed, prior to the benefits and risks associated with physical activity being examined. A logical progression leading into the correct risk assessment and preparation for safe, legal and ethical clinical exercise testing will be developed. Workshops accompanying this topic will include: a. Pre-participation health screening; b. Blood pressure measurement.	1, 2, 3
13 Mar 23 - 1 May 23	Laboratory 1-4: Clinical Skills (Laboratory): Skills required for safely conducting risk classification prior to Clinical Exercise Testing will be developed. Specifically, pre-participation screening, interviewing, pulmonary function testing, and 12-lead ECG competencies will be developed. Assessment of competencies for the measurement of blood pressure, forced spirometry, and 12-lead ECG will be conducted in each students enrolled laboratory class, time and venue.	4, 5, 6
20 Mar 23 - 24 Mar 23	Module 2: Pulmonary Disorders (Lecture): The disease processes leading to obstructive and restrictive respiratory disease will be examined. A workshop will accompany these lectures to explore the finer points of forced spirometry.	1, 3, 4, 5, 6
27 Mar 23 - 7 Apr 23	Module 3: Interpreting the 12-lead ECG (Lecture Series): Overview of the basic electrophysiology and rationale for utilising 12-lead ECG will be explored. A thorough understanding of the aetiology and identification of arrhythmias, conduction abnormalities, axis deviations, and myocardial ischaemia will be developed. Workshops accompanying this series include: a. ECG preparation; b. Diagnostic Value.	1, 4, 6
10 Apr 23 - 12 May 23	Module 4: Conducting the exercise test (Lecture Series): Knowledge of history taking and understanding of relevant drug classes will be investigated. Best practice standards for obtaining high quality clinical data, utilising appropriate exercise protocols and procedures, will be developed. Interpretation of relevant blood gas and pulmonary function will be examined in detail. Workshops accompanying this series include: a. Corridor Walk Tests; b. Bruce Stress Tests; c. Cardiopulmonary Exercise Tests.	1, 3, 4, 6
17 Apr 23 - 19 May 23	Laboratory 5-7: Field and laboratory based testing (Laboratory): Students will safely conduct 6-minute walk tests, cardiac stress (Bruce) tests, and cardiopulmonary exercise tests.	4, 5, 6
15 May 23 - 19 May 23	Module 5: Cardiac science (Lecture Series): The practical, procedural, and interpretative skills required to work in cardiac science will be covered. Students will explore advanced and contemporary modalities utilised in cardiac science and cardiology.	1, 6
22 May 23 - 2 Jun 23	Module 6: Special Topics (Lecture Series): The effects of various relevant drug classes on 12-lead ECG and exercise responses will be explored. The discipline of sleep science, and how exercise science graduates can utilise their knowledge for employment will be examined. The effects of various disease processes on the cardiorespiratory responses to exercise will also be discussed.	1, 4, 6

4.2 Other Teaching and Learning Activities Information

Notes on Laboratory sessions.

- Laboratories (Lab's) will be undertaken in groups of 3-4 students. Practicals will rotate between groups across given weeks.
- Lab attendance is mandatory. Any student missing more than 1 lab without a legitimate reason (supported by documentary evidence) will fail the course.
- Students need to attend each lab dressed to perform exercise and prepared to have ECG electrodes applied to their chest. Footwear covering the toes, the upper surface of the foot and the heel must be worn even if the student is not participating as a subject. **Students wearing thongs or sandals will be excluded from the lab.**
- Practical activities help students develop the technical skills needed to prepare for, perform and interpret graded and functional exercise tests, pulmonary function assessment and electrocardiogram (ECG). Students are also expected to develop the ability to use cycle and treadmill exercise ergometers, metabolic measurement instruments and other relevant methodologies (including spirometry, sphygmomanometry and oximetry) used to conduct appropriate exercise tests in patients and healthy individuals.
- Students with disabilities and/or health conditions should consult the Course Convenor pertaining to any of the learning activities required in 3004AHS: professional accreditation requirements stipulate demonstration of discrete competencies

delivered in 3004AHS, although limited variation to learning activities may be possible.

5. Assessment Plan

5.1 Assessment Summary

This is a summary of the assessment in the course. For detailed information on each assessment, see [5.2 Assessment Detail](#) below.

ASSESSMENT TASK	DUE DATE	WEIGHTING	MARKED OUT OF	LEARNING OUTCOMES	MAXIMUM EXTENSION PERIOD
<i>Exam - practical/laboratory/clinical</i> Practical Competency: Blood pressure	20 Mar 23 - 24 Mar 23 Students to attend their enrolled class.	10%	10 marks (Must submit)	4, 5, 6	
<i>Exam - practical/laboratory/clinical</i> Spirometry / ECG Practical Assessment	17 Apr 23 - 20 Apr 23 Students to attend their enrolled class.	20%	20 marks (Must submit)	1, 5, 6	
<i>Exam - selected response</i> Summative Content Assessment	24 Apr 23 13:00 - 24 Apr 23 14:00 Normal Lecture Venue	20%	50 marks	1, 2, 3	
<i>Exam - selected response</i> Summative Content Assessment	22 May 23 13:00 - 22 May 23 14:00 Normal lecture venue	20%	50 marks	1, 2, 3, 4	
<i>Exam - practical/laboratory/clinical</i> Clinical Skills Exam	29 May 23 - 2 Jun 23 Students to attend their enrolled class.	30%	30 marks (Must submit)	1, 2, 3, 4, 5, 6	
<i>Log of Learning Activities</i> Laboratory attendance	2 Jun 23	0%	Complete / Not Complete (Must submit)	4, 5, 6	

5.2 Assessment Detail

Title: Practical Competency: Blood pressure

Type: Exam - practical/laboratory/clinical

Learning Outcomes Assessed: 4, 5, 6

Due Date:

20 Mar 23 - 24 Mar 23 Students to attend their enrolled class.

Weight: 10%

Marked out of: 10

Duration: 120 minutes

Exam Type: Closed Book

Exam Format: On Campus

Task Description:

Students will demonstrate their competency in performing a blood pressure measurement on a supine/seated patient. Students must be able to accurately measure blood pressure via brachial auscultation in a **5-min period**. The method to be employed during this assessment is outlined in the American College of Sports Medicine's Guidelines for Exercise Testing and Prescription, 9th Ed. **This assessment will be conducted during each student's scheduled laboratory session during Week 3.**

Please note that the duration provided below (120 minutes) is the duration of the entire laboratory session: each student will only be provided a 5-min period to accurately measure blood pressure.

Criteria & Marking:

Students will be assessed in their capacity to evaluate blood pressure in strict accordance with the ACSM's Guidelines for Exercise Testing and Prescription, 9th Ed. The specific procedures are outlined on Page 45 (Box 3.4) of this text.

Marks will be awarded for:

- i. Preparing the patient and equipment according to published guidelines
- ii. Being able to identify and minimise measurement artefacts / observer error etc.
- iii. Deflating the sphygmomanometer at the rate of 2 mmHg /s
- iv. Accurately identifying and recording the Systolic blood pressure
- v. Accurately identifying and recording the Diastolic blood pressure

Location of Examination: To be conducted during enrolled laboratory session during Laboratory Two (Wk 3).

This assessment item:

- is a school based activity
- is an individual activity
- does not include a self assessment activity
- does not have a re-attempt provision
- is a proctored examination
- contains a mandatory pass component

Title: Spirometry / ECG Practical Assessment

Type: Exam - practical/laboratory/clinical

Learning Outcomes Assessed: 1, 5, 6

Due Date:

17 Apr 23 - 20 Apr 23 Students to attend their enrolled class.

Weight: 20%

Marked out of: 20

Duration: 15 minutes

Exam Type: Closed Book

Exam Format: On Campus

Task Description:

Students will be guided to attend their normal laboratory venue and time, and demonstrate competency for either of the pulmonary function test or the 12-lead ECG as learned in prior laboratory sessions. This assessment is a **mandatory hurdle task**.

Criteria & Marking:

Students will demonstrate practical competency at performing one of two discrete clinical measurements (pulmonary function or 12-lead ECG). Students must pass this assessment to pass 3004AHS. Workshops will be presented outlining the requisite knowledge and skills to focus on this assessment piece; moreover, students will practice this skill during two laboratory sessions.

Marking criteria will be available on learning@griffith.

This assessment is a **mandatory hurdle task** - failure to complete this assessment will result in inability to pass 3004AHS.

Location of Examination: In the normal laboratory venue.

Submission: In Person at the School Department. In the normal laboratory venue.

This assessment item:

- is a school based activity
- is an individual activity
- does not include a self assessment activity
- does not have a re-attempt provision
- is a proctored examination
- contains a mandatory pass component

Title: Summative Content Assessment

Type: Exam - selected response

Learning Outcomes Assessed: 1, 2, 3

Due Date:

24 Apr 23 13:00 - 24 Apr 23 14:00 Normal Lecture Venue

Weight: 20%

Marked out of: 50

Duration: 60 minutes

Exam Type: Closed Book

Exam Format: On Campus

Task Description:

Material covered in weeks 1-5, excluding labs. The quiz will be weighted evenly for each week - i.e., 5 weeks x 10 marks each week = 50 marks total. 60 min will be available to complete the assessment.

Criteria & Marking:

The assessment will be made up of Multiple Choice Questions: student will be required to identify the single correct answer from the available options. 1 mark per question x 50 questions = 50 marks.

Location of Examination: Normal Lecture Venue

Submission: In Person at the School Department.

This assessment item:

- is a school based activity
- is an individual activity
- does not include a self assessment activity
- does not have a re-attempt provision
- is a proctored examination

Title: Summative Content Assessment

Type: Exam - selected response

Learning Outcomes Assessed: 1, 2, 3, 4

Due Date:

22 May 23 13:00 - 22 May 23 14:00 Normal lecture venue

Weight: 20%

Marked out of: 50

Duration: 60 minutes

Exam Type: Closed Book

Exam Format: On Campus

Task Description:

The assessment will be made up of Multiple Choice Questions: student will be required to identify the single correct answer from the available options. 1 mark per question x 50 questions = 50 marks. 60 minutes will be available to complete the quiz.

Criteria & Marking:

Material covered in weeks 6-10, excluding labs. The quiz will be weighted evenly for each topic - i.e., 5 topics x 10 marks each = 50 marks total. 60 min will be available to complete the assessment.

Location of Examination: Normal lecture venue.

Submission: In Person at the School Department. Normal lecture venue.

This assessment item:

- is a school based activity
 - is an individual activity
 - does not include a self assessment activity
 - does not have a re-attempt provision
 - is a proctored examination
-

Title: Clinical Skills Exam**Type:** Exam - practical/laboratory/clinical**Learning Outcomes Assessed:** 1, 2, 3, 4, 5, 6**Due Date:**

29 May 23 - 2 Jun 23 Students to attend their enrolled class.

Weight: 30%**Marked out of:** 30**Duration:** 15 minutes**Exam Type:** Closed Book**Exam Format:** On Campus**Task Description:**

You will be asked to demonstrate competency in two of either pre-specified clinical exercise tests covered in the laboratory sessions. This exam will be held during normal laboratory times, during Week 12. Each student will only be required to attend for a discrete 20 min session - a schedule outlining the times required for each student to attend the exam will be published on learning@griffith. This assessment is a **mandatory hurdle task**.

Criteria & Marking:

Students will be assessed on their competency to prepare for, conduct, and interpret relevant clinical exercise tests during Week 12 laboratory sessions. Marking will be conducted by staff (including the course convenor), and consensus moderation will be applied following the completion of examination.

Marking criteria will be available on learning@griffith.

This assessment is a **mandatory hurdle task** - failure to complete this assessment during Week 12 will result in inability to pass 3004AHS.

Location of Examination: In the normal laboratory venue.

Submission: In Person at the School Department. In the normal laboratory venue.

This assessment item:

- is a school based activity
 - is an individual activity
 - does not include a self assessment activity
 - does not have a re-attempt provision
 - is a proctored examination
 - contains a mandatory pass component
-

Title: Laboratory attendance**Type:** Log of Learning Activities**Learning Outcomes Assessed:** 4, 5, 6**Due Date:**

2 Jun 23

Weight: 0%**Marked out of:** 1**Task Description:**

During 3004AHS, the learning activities are designed to facilitate learning and demonstrate competencies required for accreditation as an Exercise Scientist. Thus, attendance at all laboratory sessions is mandatory; failure to attend >1 laboratory without an official supporting document will result in failure of 3004AHS.

Criteria & Marking:

Students must attend all laboratory learning activities to achieve this pass/fail mark.

This assessment item:

- is a school based activity
 - is an individual activity
 - does not include a self assessment activity
 - does not have a re-attempt provision
 - contains a mandatory pass component
-

5.3 Late Submission

For all courses (other than Honours Dissertation Courses): Refer to the [Assessment Procedure for Students](#).

For all Honours Dissertation courses: Enrolment in an Honours degree shall be cancelled and the candidature terminated if the candidate fails to lodge their Honours dissertation by the prescribed date including any approved extensions.

5.4 Other Assessment Information

Supplementary Assessment is not available for this course.

Please see the [Assessment Procedure for Students](#) for more information.

Final Grades

A student's final grade for this course will be based on the aggregation and weighting of marks across assessment, any

mandatory pass components and grade cut-offs. Grade cut-offs can vary, so you will need to wait for the official release of grades to be sure of your grade for this course.

- This course is a graded course (i.e 7, 6, 5, 4, 3, 2, 1).
- This course contains mandatory pass components.

Mandatory pass component

To be eligible to pass this course, students must:

1. achieve an overall pass mark for this course
2. submit the assessment task: Practical Competency: Blood pressure
3. submit the assessment task: Spirometry / ECG Practical Assessment
4. submit the assessment task: Clinical Skills Exam
5. submit the assessment task: Laboratory attendance

6. Policies & Guidelines

This section contains the details of and links to the most relevant policies and course guidelines. For further details on University Policies please visit the [Policy Library](#)

6.1 Assessment Related Policies and Guidelines

University Policies & Guidelines

The University's policies can be found in the [Griffith Policy Library](#).

Specific assessment policies include:

- [Assessment Policy](#)
- [Assessment Procedure for Students](#)

SHS School of Health Sciences and Social Work

Assessment Guidelines

The American Psychological Association Referencing Style (7th Edition) [APA 7] is the preferred standard for this course.

6.2 Other Policies and Guidelines

University Policies and Guidelines

Students are responsible for ensuring that they have read all sections of the Course Profile for the course/s in which they are enrolled in any enrolment period. The published online version of the Course Profile is the authoritative version and by the publication of the Course Profile online, the University deems the student has been notified of and read the course requirements. Variations to the Course Profile during the trimester of offer are not permitted except in exceptional circumstances and will be advised in writing to all enrolled students and via the Learning@Griffith website. Additional information regarding the content of this course may be published on the [Learning@Griffith](#) website.

Copyright matters

Copyright applies to all teaching materials and materials generated by students which substantially relate to Griffith University courses. *Students are warned against selling Griffith University teaching materials and their student notes online through commercial websites during and after their studies.* You will almost certainly be in breach of copyright law and Griffith's IT Code of Practice if you post these materials on the internet and commercial websites. Please refer to the [Copyright Guide for Students](#) for further information.

Health and Safety

Griffith University is committed to providing a safe work and study environment. However, all students, staff and visitors have an obligation to ensure the safety of themselves and those whose safety may be affected by their actions. Staff in control of learning activities will ensure as far as reasonably practical, that those activities are safe and that all safety obligations are being met. Students are required to comply with all safety instructions and are requested to report safety concerns to the University.

General health and safety information is available on the [Health, Safety and Wellbeing](#) website.

Other Key Student-Related Policies

All University policy documents are accessible to students via the [Griffith Policy Library](#). Links to key policy documents, in addition to those listed in 6.1 above, are included below for easy reference:

- [Student Communications Policy](#)
- [Health, Safety and Wellbeing Policy](#)
- [Student Administration Policy](#)
- [Student Charter](#)
- [Student Review and Appeals Policy](#)
- [Student Review and Appeals Procedures](#)
- [Student Complaints Policy](#)
- [Students with Disabilities Policy](#)

Learning Summary

Below is a table showing the relationship between the learning outcomes for this course, the learning activities used to develop each outcome and the assessment task used to assess each outcome.

Learning Outcomes

After successfully completing this course you should be able to:

- 1 Describe the pathophysiological changes that accompany the following conditions; Coronary Artery Disease; Cardiac Arrhythmias; Heart Failure; Chronic Obstructive Pulmonary Disease; Asthma; Restrictive Respiratory Disease; Pulmonary Hypertension. Explain how each of these conditions typically affects the cardiopulmonary response to an exercise stress. Outline the pharmacological and non-pharmacological management options for each condition.
- 2 Outline the benefits and risks associated with physical activity.
- 3 Understand the rationale and demonstrate proficiency in the procedures for health screening and risk classification prior to recommending or administering exercise in various populations.
- 4 Demonstrate an ability to safely, ethically, legally and effectively plan, perform and interpret a graded exercise test during a variety of clinical scenarios
- 5 Demonstrate acceptable practical competency in undertaking the following clinical procedures in a simulated (student volunteer) environment as detailed in the relevant professional guidelines: Determination of Blood Pressure at rest and during exercise; Measurement of 12 lead ECG at rest and during exercise; Assessment of pre-exercise risk classification including obtaining informed consent; Determination of fasting blood glucose and lipids; Cardiac Stress Testing using the Bruce protocol with measures of perceived exertion; Cardiopulmonary Exercise Testing on a cycle ergometer with workload increment appropriate for subject being tested and including measurement of gas exchange and 3 lead ECG (CM5 configuration); Six Minute Walk Distance Test including measures of oxygen saturation and perceived breathlessness; Assessment of Forced Spirometry and Maximal Voluntary Ventilation; Identifying common cardiac arrhythmias.
- 6 Interpret clinical test results obtained during: Cardiac Stress Testing; Cardiopulmonary Exercise Testing; Lung Function Testing; Blood Gas Analysis.

Assessment & Learning Activities

LEARNING ACTIVITIES	LEARNING OUTCOMES					
	1	2	3	4	5	6
Module 1: Planning for exercise testing (Lecture Series)	●	●	●			
Laboratory 1-4: Clinical Skills (Laboratory)				●	●	●
Module 2: Pulmonary Disorders (Lecture)	●		●	●	●	●
Module 3: Interpreting the 12-lead ECG (Lecture Series)	●			●		●
Module 4: Conducting the exercise test (Lecture Series)	●		●	●		●
Laboratory 5-7: Field and laboratory based testing (Laboratory)				●	●	●
Module 5: Cardiac science (Lecture Series)	●					●
Module 6: Special Topics (Lecture Series)	●			●		●
ASSESSMENT TASKS						
Practical Competency: Blood pressure				●	●	●
Spirometry / ECG Practical Assessment	●				●	●
Summative Content Assessment	●	●	●			
Summative Content Assessment	●	●	●	●		
Clinical Skills Exam	●	●	●	●	●	●
Laboratory attendance				●	●	●

Graduate Attributes

For further details on the Griffith Graduate please [click here](#)

Griffith University prepares influential graduates to be:

- [Knowledgeable and skilled, with critical judgement](#)
- [Effective communicators and collaborators](#)
- [Innovative, creative and entrepreneurial](#)
- [Socially responsible and engaged in their communities](#)
- [Culturally capable when working with First Australians](#)
- [Effective in culturally diverse and international environments](#)

This table demonstrates where each of the Griffith Graduate Attributes is taught, practised and assessed in this course.

University wide attributes

GRADUATE ATTRIBUTE	TAUGHT	PRACTISED	ASSESSED
Knowledgeable and skilled, with critical judgement	•	•	•
Effective communicators and collaborators		•	•
Innovative, creative and entrepreneurial		•	
Socially responsible and engaged in their communities	•	•	•
Culturally capable when working with First Australians		•	
Effective in culturally diverse and international environments	•	•	•