

# REHA 3005 CLINICAL EXERCISE PHYSIOLOGY 1

**Credit Points** 10

**Legacy Code** 400887

**Coordinator** Bobby Cheema ([https://directory.westernsydney.edu.au/search/name/Bobby Cheema/](https://directory.westernsydney.edu.au/search/name/Bobby%20Cheema/))

**Description** In 2017, this subject is replaced by 401145 - Exercise for Health and Disease Prevention. Clinical Exercise Physiology 1 is primarily concerned with teaching students how to design and implement exercise assessments and exercise prescriptions for clinical populations (high-risk). Emphasis is placed on cardiovascular, metabolic, pulmonary and immunological diseases. Subject content relates to how exercise can be applied to prevent, manage and/or treat chronic diseases, informed by an understanding of the pathophysiology and its impact on health status. Students will be involved in designing exercise programs using an evidence-based approach, which will enable a client to achieve optimum results whilst maintaining a high regard for safety, adherence and motivation. Students will be involved in practical sessions aimed at developing the skills necessary for exercise screening, testing and prescription in clinical populations.

**School** Health Sciences

**Discipline** Rehabilitation Therapies, Not Elsewhere Classified.

**Student Contribution Band** HECS Band 2 10cp

Check your fees via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 3 subject

**Pre-requisite(s)** HLTH 2006 AND BIOS 2037

**Equivalent Subjects** REHA 3008 - Exercise Prescription For Special Populations

**Restrictions**

Students must be enrolled in 4658 Bachelor of Health Science (Sport and Exercise Science).

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Apply pre-exercise screening and testing methods for high-risk populations;
2. Understand the physiological principles of exercise testing and prescription as applied to clinical populations;
3. Understand the aetiology and pathophysiology of specific chronic diseases and their impact on health status and quality of life;
4. Design exercise prescriptions to prevent, manage and/or treat chronic diseases;
5. Understand logistical issues that are likely to be encountered when implementing exercise programs in specific clinical populations;
6. Understand electrocardiography (ECG) theory;
7. Demonstrate practical skills including: (a) placement of ECG electrodes for a 12-lead ECG recording, (b) measurement of blood pressure during exercise, and (c) development and interpretation of exercise stress test protocols, including knowledge of contraindications and termination criteria.

## Subject Content

1. Coronary artery disease, stroke, hypertension, dyslipidaemia, diabetes, obesity, chronic obstructive pulmonary diseases, asthma, chronic renal failure, cancer, arthritis, osteoporosis, HIV, neurological diseases, cognitive diseases
2. Incidence and prevalence of diseases, relationship to age, gender and ethnicity; aetiology, pathophysiology and risk factors
3. Effects of disease progression and exercise prescriptions on physiological, psychological and functional health status and quality of life
4. Evidence-base for exercise training for the prevention, management and treatment of chronic diseases
5. National and international guidelines for pre-exercise screening and stress testing
6. Use of metabolic equations for the determination of exercise intensity and caloric expenditure
7. Application and interpretation of 12-lead electrocardiograph (ECG)
8. Pharmacological and other management strategies ? implications for exercise
9. Safety and first aid considerations
10. Methods and strategies for behaviour change
11. Design of safe and effective exercise prescriptions based on the latest scientific research on exercise prescription for special populations
12. Overview of the employment options in clinical exercise physiology
13. The role of exercise in disease prevention