

# HLTH 2006 EXERCISE PRESCRIPTION FOR GENERAL POPULATIONS

**Credit Points** 10

**Legacy Code** 400326

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**Description** In 2016, this unit is replaced by 401143 - Exercise Prescription I. The exercise prescription area is designed to give students an understanding of and experience in exercise prescription and fitness program construction for the general population of all ages and both genders, including pre exercise screening and fitness testing. It will focus on the development of general health related fitness programs, which improve aerobic and anaerobic fitness, flexibility, muscular strength and endurance, including resistance training. Students will design, implement and evaluate a self-prescribed exercise program as well as provide one-to-one training sessions for fellow students.

**School** Health Sciences

**Discipline** Human Movement

**Student Contribution Band** HECS Band 4 10cp

Check your HECS Band contribution amount 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 2 subject

**Pre-requisite(s)** HLTH 2008 AND BIOS 2011 AND BIOS 2037

**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 knowledge of the principles of exercise prescription with particular emphasis on aerobic training, resistance training, and flexibility training methods.
2. Describe how ageing and physical inactivity impact upon health-related physical fitness and how exercise can be used to mitigate these effects.
3. Describe the absolute and relative contraindications to exercise participation and criteria to terminate fitness tests of all types.
4. Administer and interpret a range of pre-exercise health screening tools to determine the risk for an individual and appropriate action.
5. Select, calibrate, implement and interpret (and modify) standard health-related physical fitness tests for low risk individuals.
6. Design, supervise, and evaluate training programs in the primary areas of exercise prescription (outlined in unit content) for low risk clients.

## Subject Content

1. Review:

- Validity, reliability, accuracy

- Exercise measurement and Monitoring equipment set up use and calibration
- warm-up, cool-down, principles of training
- Progression, maintenance, overtraining, aspects of fitness
- Measuring BP, HR and RPE; and their relationships to work rate
- components of fitness
- types of Exercise
- 2. Organisational and legal aspects
  - informed consent
  - client information and record booklets
  - OH&s - Inspections, Risk assessments, Risk reduction, Standard Operating procedures
  - Prohibited persons
  - Privacy acts ? PIPPA and HRIPA
- 3. Health Benefits and Risks of exercise
  - Benefits of Exercise - health related fitness, performance related fitness (everyday life tasks, work, recreation), quality of life
  - Absolute and relative contraindications
  - criteria for terminating tests
  - signs of excessive strain
- 4. Defining the term General Populations
- 5. Aerobic exercise intensity setting and monitoring ? advantages and limitations
  - HR - H<sub>r</sub>max (measured vs predicted, formulas to calculate for different exercise modalities), Heart Rate Reserve
  - RPE
- 6. Pre exercise screening
  - A best practice model Vs PARQ Vs other commonly used tools
- 7. Fitness Testing
  - common tests and their physiological basis
  - Effect of environmental and subject (client) factors
  - fitness test selection, implementation and interpretation of results
  - modifications based on Age, gender
  - medical, environmental and procedural Risk Factors
- 8. Applying Biomechanics in exercise prescription
  - identifying movement patterns
  - common errors in body Alignment & technique
  - identifying potential risks of injury associated with using common Exercise equipment and types
  - prescribing appropriate substitutions for unsafe exercises
- 9. Guidelines for training apparently healthy individuals for health related improvements
  - Endurance
  - Anaerobic capacity
  - resistance training - Muscular strength, Endurance, power and hypertrophy
  - flexibility
  - Coordination and motor control - Falls prevention
- 10. Structure of training sessions
  - warm up, conditioning, cool down
  - order within conditioning component
  - group Vs individual
  - formal Vs informal settings
- 11. Phases of training
  - initial, improvement, maintenance
- 12. Exercise Program Evaluation
- 13. Exercise over the lifespan ? children, adolescents, young adults, older adults
  - Acute responses to Exercise and adaptations to training
  - implications for Exercise prescription
  - Age related Musculoskeletal and cardiovascular problems ? implications for Exercise programs
- 14. Gender and Exercise Prescription
  - Male female differences and similarities
- 15. Pregnancy
  - Maternal changes

- effects on mother and foetus

- guidelines

16. Applying Psychosocial knowledge and skills in fitness testing and program implementation

- Motivating clients

- maximising adherence and compliance

- communication skills

- goal setting

17. Referring clients to other health professionals

## Special Requirements

Legislative pre-requisites

Prior to enrolling in this subject, students must have:

- 1) submitted a Student Undertaking Form and have applied for a National Police Certificate;
- 2) submitted Working with Children Check Student Declaration;
- 3) possess a current WorkCover Authority approved First Aid Certificate.

Prescribed Texts

- American College of Sports Medicine. ACSM's guidelines for exercise testing and prescription. 9th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins Health; 2014.

Teaching Periods