

# HLTH 3016 STRENGTH AND CONDITIONING

**Credit Points** 10

**Legacy Code** 401148

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

**Description** Strength and Conditioning presents the growing body of research evidence supporting specific methods of resistance exercise and training, as well as the role of resistance exercise in disease prevention and health promotion. Students gain an understanding of the energetics and physiology of resistance exercise by also completing and experiencing laboratories focussed on the important applied concepts in resistance exercise and training.

**School** Health Sciences

**Discipline** Human Movement

**Student Contribution Band** HECS Band 4 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 2003 AND  
BIOS 2012 AND  
SPRT 2002

**Equivalent Subjects** HLTH 3015 - Resistance Training and Physiology

## 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. Explain skeletal muscle anatomy and identify the key structures involved with muscle contraction
2. Evaluate contributions to muscle contraction from the nervous system and within the muscle
3. Identify the biological mechanisms that explain different types of training adaptation following resistance exercise
4. Prescribe an evidence based resistance exercise program for a healthy, untrained individual
5. Examine contributing factors to performance of an exercise movement
6. Construct a basic nutritional plan that effectively complements typical resistance exercise prescription
7. Critique the scientific basis and be able to review evidence for modern trends in resistance exercise prescription

## Subject Content

- The Anatomy and physiology of muscle contraction
- The research-based evidence for specific types of resistance training for specific outcomes; such as strength, power and endurance
- exposure to different equipment used in resistance training, and how The equipment differs in promoting specific resistance training outcomes
- training paradigms used in resistance training

- potential Abuse of Pharmacological and Nutritional Ergogenic Aids in resistance training, as well as their performance and health consequences
- The Roles of resistance Exercise and training in Sports and athletics
- The Roles of resistance Exercise and training in disease prevention and rehabilitation
- designing resistance Exercise training programs
- experiencing resistance Exercise training

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Final Exam	2 hours	40	Y	Individual	Y
Applied Project	Up to 8 pages	20	N	Individual	Y
Essay	Up to 2 pages each	20	N	Individual	Y
Professional Task	Up to 6 pages	20	N	Individual	Y

### Prescribed Texts

- Chapter excerpts from the book, Brooks GA, Fahey TD, Baldwin KM. Human bioenergetics and its applications: fifth edition. McGraw-Hill.
- This is an electronic book specially prepared for this subject. <http://www.mheducation.com.au/9781121631915-aus-resistance-training-and-physio>
- This e-book is a compilation of relevant chapters from the above named text, which is already available as a hard-copy in the library for students to access should they not purchase the e-book.

### Teaching Periods

## Spring (2025)

### Campbelltown

#### On-site

**Subject Contact** Dean Norris ([https://directory.westernsydney.edu.au/search/name/Dean Norris/](https://directory.westernsydney.edu.au/search/name/Dean%20Norris/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=HLTH3016\\_25-SPR\\_CA\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=HLTH3016_25-SPR_CA_1#subjects))