



### About the department

Opened in 1994, the Department of Exercise Sciences is at the cutting-edge of science and an established part of the Faculty of Science at the University of Auckland.

The department brings together expertise in the disciplines of biomechanics, movement neuroscience, exercise physiology, exercise metabolism and exercise and sport psychology to understand the role of exercise in sustaining health, improving disease outcomes, and enhancing human performance through sport and physical activity.

In addition to outstanding undergraduate teaching the department hosts a pioneering taught postgraduate (PGDip and MSc) programme in the new allied health profession of clinical exercise physiology (CEP). This is the only internationally accredited postgraduate CEP programme in New Zealand.

Find out more: [www.es.auckland.ac.nz](http://www.es.auckland.ac.nz)



Register online at:  
[es.auckland.ac.nz/teachers-day](http://es.auckland.ac.nz/teachers-day)

### Connect with us

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THE UNIVERSITY OF  
**AUCKLAND**  
Te Whare Wānanga o Tamaki Makaurau  
NEW ZEALAND

**SCIENCE**  
DEPARTMENT OF  
EXERCISE SCIENCES

# EXERCISE SCIENCES Teachers Day

A day designed to engage with teachers and careers advisors about exercise sciences in the high school curriculum and the real world.

**Wednesday 15 November 2017**

Register online at: [es.auckland.ac.nz/teachers-day](http://es.auckland.ac.nz/teachers-day)





## About the day

On Wednesday 15 November 2017, the Department of Exercise Sciences at the University of Auckland is hosting a half-day event (including lunch and networking opportunities) designed to continue the professional development of careers advisers, physical education and science teachers.

You may not be familiar with our department, the research we carry out, the programmes we have on offer, or how it is all relevant to high school teaching, students and subjects (e.g. biology and physical education). Our event seeks to bridge this gap.

Join us to learn about our programmes, the ground-breaking research being carried out in the department and how subjects such as movement neuroscience, exercise physiology, biomechanics and exercise psychology relate to your teaching interests.

We've designed this half-day to be as beneficial as possible to you by listening to what teachers want and feeding your responses into the event programme. You will have the opportunity to meet informally with our staff and students over lunch to discuss up-to-date knowledge that you can take back to your schools and the classroom.

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## Programme

9.15am **Registration opens**

9.30am **Welcome from Associate Professor Greg Anson, Head of Department**

### 9.40am PRESENTATION SESSION ONE

#### **Exercise Physiology**

*Dr Nick Gant, Academic Programme Leader*

Exercise Physiology is a broad applied science discipline that forms the largest component of the teaching programme within the Department of Exercise Sciences. Our work in this area ranges from fundamental biological science to applied industrial and biomedical research. Dr Gant will describe some of the research his students are undertaking in this area and his involvement with Science Scholars; a new and exciting programme for the best and brightest science students.

#### **Psychology of Active Living**

*Dr Borja del Pozo Cruz, Chair, Undergraduate Committee*

Psychology of active living studies the emotional, psychological and health-related consequences of physical activity, but also the consequences of being sedentary. Moreover, the discipline tries to understand barriers, exercise preferences, and goals of people and how to modify undesirable behaviours to promote health and lifelong well-being.

#### **Clinical Exercise Physiology**

*Paul Nolan, Professional Teaching Fellow and PhD candidate*

This section of the day will discuss what Clinical Exercise Physiology is and why it is a growth area for postgraduate students. Paul will also outline the clinical set up of the department and the services that are provided

#### **Teaching in Exercise Physiology/Clinical Exercise Physiology**

*Dr Graeme Carrick-Ranson, Postgraduate Committee*

A brief overview of the undergraduate and postgraduate teaching and research in Exercise Physiology and Clinical Exercise Physiology.

### Morning tea

11.30am Tour of departmental laboratories and clinics

### PRESENTATION SESSION TWO

#### **Movement Neuroscience**

*Professor Winston Byblow, Director of the Movement Neuroscience Laboratory*

An appreciation of neuroscience principles underlying the preparation, planning and execution of movement can lead to a structured approach for developing novel rehabilitation strategies for people with impaired movement ability, such as that which occurs for individuals with movement disorders like Parkinson's disease and dystonia, or after brain injury, such as cerebral palsy and stroke.

#### **Biomechanics**

*Dr Angus McMorland, Lecturer in Computational Neuroscience*

Biomechanics is, principally, the study of the physics of human movement, but also incorporates issues of movement control and muscle physiology. Typical goals of biomechanics research are to understand mechanisms of injury in sports, to enhance high-performance sporting technique, to improve rehabilitation after injury or disease, and to improve the quality of life for those with movement disabilities. For teaching, biomechanics presents a great opportunity for engaging students while exploring classical Newtonian physics concepts by performing real-world sports activities to which they can easily relate.

#### **An overview of the BSc in Exercise Sciences – Dr Nick Gant**

#### **Closing remarks from Associate Professor Greg Anson**

1pm

**Lunch and networking session:** Join us for lunch, meet our students and talk to them about their experiences including current research. View the poster display.