

## TURNING THEORY INTO PRACTICE

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Deakin University's School of Exercise and Nutrition Sciences offers VCE Physical Education classes the opportunity to gain an insight into exercise science testing and evaluation in a laboratory or clinical environment at our Melbourne Burwood Campus.

The program offers you, as a physical education teacher, a great opportunity to reinforce aspects of the VCE curriculum, using Deakin University's first class performance laboratories. Two separate laboratory experiences are offered that link to Unit 1 (Bodies in Motion) and Unit 3 (Physical Activity Participation and Physiological Performance) of the VCE Physical Education curriculum.

Students will participate in a 120 minute program interacting with sport scientists whilst conducting and interpreting a range of laboratory tests. Each lab has been designed as a complete laboratory report, which can be used as an assessment task. Schools may choose one or both of the laboratory sessions as well as take a tour of other facilities within the University.



**DEAKIN**  
UNIVERSITY

## 2017 SCHOOL VISITS PROGRAM

School of Exercise and Nutrition Sciences  
VCE Physical Education

### General Enquiries

Administration Officer  
Faculty of Health  
School of Exercise and Nutrition Sciences  
Deakin University  
221 Burwood Highway  
Burwood VIC 3125

Phone 03 9244 6613  
Fax 03 9244 6017  
Email [ens-enquire@deakin.edu.au](mailto:ens-enquire@deakin.edu.au)

# DEAKIN UNIVERSITY'S VCE PHYSICAL EDUCATION SCHOOL VISITS PROGRAM

We offer two different laboratory experiences that schools can select from. These programs will be offered over a two-week period at Deakin University's Melbourne Burwood Campus. The cost per class is \$450 (ex. GST) for each 120 minute laboratory (one or both may be selected). Class sizes are limited to 25 participants.

## Learning outcomes

- Obtain hands-on experience of laboratory and field assessment methods in exercise and sport science.
- Collect, report and interpret data from the assessment of human performance and participation.
- Explore how science and technology are used to influence coaching practice.
- Understand key concepts related to the VCE Physical Education curriculum.
- Engage with experts to explore challenging topics.



## Lab 1

Kinematics of movement: running and jumping

Linked to VCE Physical Education Unit 1: Bodies in Motion  
Area of Study 2: Biomechanical Movement Principles

In this lab students will perform, analyse and interpret biomechanical principles of sprinting and jumping. Linear kinematics of a 20m sprint will be explored using timing gates and graphical analysis. The principles of conservation and transfer of momentum, impulse and force summation in a vertical jump will be examined and the impulse-momentum theory will be applied to increase jumping performance. We will also evaluate the vertical jump characteristics of the class and discuss appropriate strategies for developing force and how it can be integrated into training programs to improve performance.

## Lab 2

Physiological assessment of physical activity

Linked to VCE Physical Education Unit 3: Physical Activity  
Participation and Physiological Performance  
Area of Study 2: Physiological Responses to Physical  
Activity

In this lab we will explore common laboratory methods to assess aerobic and anaerobic fitness. Aerobic endurance will be assessed during a progressive exercise test to exhaustion ( $VO_2$ max test). Assessment of the lactate inflection point will also be considered, which can be used to calculate pacing strategies. The anaerobic energy systems will be assessed using a 10s and 30s power test on a bicycle ergometer. Discussion of how these tests relate to fitness and energy system utilisation during exercise will then be discussed.



Booking details  
2017 dates

Monday 20th - Friday 24th February  
Monday 19th - Friday 23rd June  
Monday 26th - Friday 30th June

Session duration: 2 hours  
Cost per class: \$450 (ex. GST)

Note: Maximum of 25 students per class  
Contact information  
Ms Linda Lowe  
Phone 03 9244 6613