



# THE UNIVERSITY OF NEW SOUTH WALES

Health and Exercise Science  
School of Medical Sciences  
Faculty of Medicine

## COURSE: HESC3581 PHYSICAL ACTIVITY AND SPECIAL POPULATIONS

**Lectures:** Tuesday 3.00 – 6.00 pm in Central Lecture Block 1

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**Office hours:** Tuesday 1.00-2.00 pm or by appointment

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## **HESC3581 COURSE INFORMATION**

Physical Activity for Special Populations (HESC3581) is a 3rd year Health and Exercise Science elective course worth six Units of Credit (6 UOC). The course is part of study for the degree of Bachelor of Science or Bachelor of Exercise Physiology. The course will build on the information you have gained in Physical Activity and Health (HESC3504) as well as Exercise Physiology (HESC2501). Concepts gained in courses such as anatomy, human physiology, pathology, and behavioural science will contribute to your learning in this course.

## **OBJECTIVES OF THE COURSE**

This course examines the effect of physical activity on special populations. The impact of physical activity on a range of special populations are summarised (e.g., cancer, pregnancy, obesity). The course also covers lifestyle prescription for these special populations. The course will be particularly suited to students involved with lifestyle prescription and physical activity.

It is intended that at the end of the course you will be able to:

- describe the effects of physical activity on a range of special populations
- be able to prescribe lifestyle change programs for a range of special populations
- demonstrate an understanding of the major findings of meta-analyses conducted in the special population area
- demonstrate the ability to present exercise-based health material

## **COURSE STRUCTURE and TEACHING STRATEGIES**

This is a 6 unit course and consists of:

- 3 lectures per week

Students are expected to attend all scheduled activities for their full duration. Students are reminded that UNSW recommends that a 6 units-of-credit course should involve about 150-180 hrs of study and learning activities. The formal learning activities are approximately 36 hours throughout the semester and students are expected (and strongly recommended) to do double number of hours of additional study. The time spent designing lifestyle change programs and preparing for PBLs will add to this time commitment.

Lectures will provide you with the concepts and theory essential for understanding how physical activity impacts on health of special populations. In the lectures the aetiology of lifestyle diseases will be outlined and a description of the effects of exercise on diseases will be given. Lectures will examine the current research regarding exercise and a variety of diseases and special populations.

To assist in the development of prescriptive skill, problem-based learning sessions will be held. These sessions will allow students to engage in a more interactive form of learning than is possible in the lectures. The skills you will learn in your involvement in planning and implementing a lifestyle change program are relevant to your development as professional exercise physiologists.

## **APPROACH TO LEARNING AND TEACHING**

The learning and teaching philosophy underpinning this course is centred on student learning and aims to create an environment which interests, challenges, and enthralls students. The teaching is designed to be relevant and engaging in order to prepare

students for future careers as Exercise Physiologists.

Although the primary source of information for this course is the lecture material, effective learning can be enhanced through self-directed use of other resources such as textbooks and Web based sources. It is up to you to ensure you perform well in each part of the course; preparing for classes; completing assignments; studying for exams, and seeking assistance to clarify your understanding.

### **STUDENT LEARNING OUTCOMES**

HESC3581 will develop the following graduate attributes. These include skills, qualities, understanding and attitudes that promote lifelong learning that students should acquire during their university experience.

#### **Graduate Attributes**

- A. Research, inquiry and analytical thinking abilities
- B. The capability and motivation for intellectual development
- C. Ethical, social and professional understanding
- D. Effective communication
- E. Teamwork, collaborative, and management skills
- F. Information Literacy – the skills to locate, evaluate, and use relevant information.

On completion of this subject students should be able to:

1. describe the effects of regular physical activity on a variety of diseases
2. describe the effects of regular physical activity on a variety of special populations
3. demonstrate a basic knowledge of lifestyle diseases
4. demonstrate the ability to design lifestyle change programs for a range of special populations
5. demonstrate the ability to present exercise-based health material

## **LECTURE OUTLINE – HESC3581 PHYSICAL ACTIVITY IN SPECIAL POPULATIONS**

**Tuesday (3.00 pm – 6.00 pm)**

### **Week 1**

*Lecture* Introduction (**SB**);                      *Lecture* Lifestyle Change Model (**SB**)

### **Week 2**

*Lecture* Weight loss (**SB**);                      *Lecture* Obesity (**SB**);    *PBL* Case study

### **Week 3**

*Lecture* Nutrients and health (**SB**)    *Lecture* Resistance exercise and health (**SB**)

### **Week 4**

*Lecture* Corporate health\* (**SB**);    *Lecture* Vascular disease (**YB**);                      *PBL* Case study

### **Week 5**

*Lecture* The elite runner (**SB**);                      *Lecture* Athletic Triad syndrome (**YB**);

### **Week 6**

*Lecture* Aboriginal health (**TBA**);    *Lecture* HIV (**SB**);    *PBL* Case study

### **Week 7**

*Lecture* Muscular dystrophy (**SH**);    *Lecture* Pregnancy (**YB**)

### **Week 8**

*Lecture* Paediatrics (**CB**);                      *Lecture* Smoking (**SB**);    *PBL* Case study

### **Week 9**

*Lecture* Chronic fatigue syn\* (**UV**);    *Lecture* Cardiac rehabilitation (**SB**)

### **Week 10**

*Lecture* Cancer treatment (**ES**);                      *Lecture* Cancer and exercise\* (**SB**);    *PBL* Case study

### **Week 11**

*Lecture* Drugs, exercise, & disease (**SB**);    *Lecture* Drugs, exercise, & disease (**SB**);

### **Week 12**

*Lecture* Student seminars;                      *Lecture* Student seminars;    *Lecture* Student seminars

\* Lifestyle Prescription write-up (plus multiple sclerosis and menopause; 5 in total; see description on page 9)

**Lecturers:** **SB** Steve Boutcher; **SH** Stewart Head; **CB** Caroline Broderick; **ES** Eva Segelov;; **YB** Yati Boutcher; **TBA** = to be arranged.

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