



# **THE UNIVERSITY OF NEW SOUTH WALES**

**Exercise Physiology Program**

**School of Medical Sciences**

**Faculty of Medicine**

**HESC1501**

**Introductory Exercise Science**

Semester 1, 2012  
Course Outline

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## Course details

**Credit Points:** 6 UOC

### Course Description

This course presents an overview of the vocational activities within the allied health profession of Exercise Physiology. The sub-disciplines of exercise science (exercise physiology, biomechanics, motor control and exercise psychology), and related biomedical sciences, are introduced through examining how the body responds to physical activity. This course includes a clinical practicum component in the university's Lifestyle Clinic.

### Aims of the Course

1. To introduce the sub-disciplines of exercise science: functional anatomy/biomechanics, motor control, exercise physiology, and exercise psychology
2. To introduce the profession of Exercise Physiology, and issues relating to professional conduct
3. To encourage a basic understanding of the relationship between physical activity and health across the lifespan
4. To initiate learning of practical skills in exercise testing

### Student Learning Outcomes

This term is used to describe what it is that you should be able to do, explain or understand if you have learned effectively in the course. For each lecture, tutorial, practical and assessment item, the expected learning outcomes will be explicitly stated. The assessment in the course will be matched as closely as possible to the stated learning outcomes. That is, the assessment will test how well you have achieved the learning outcomes of the course. The general learning outcomes for the course are as follows:

#### At the end of the course you should:

- Have an understanding of the different sub-disciplines of exercise science and an appreciation of the interdisciplinary nature of exercise physiology

- Have an understanding of the basic process of human growth and development and ageing, and how these changes impact physical function
- Describe the role and responsibilities of exercise physiologists in the provision of health care
- Have begun to develop basic competencies in assessing fitness, including the heart rate and blood pressure response during a submaximal exercise test, field tests of aerobic capacity and simple assessments of muscle strength
- Be able to communicate effectively and concisely through written reports of scientific experiments or clinical experiences

### **Graduate Attributes**

- Understand the relationship between physical activity and health
- Engage in independent and reflective learning for the betterment of professional clinical practice, following an evidence-based approach
- Communicate effectively with patients, colleagues and other health professionals
- Display a respect for diversity and a high standard of ethical practice

### **Rationale for the inclusion of content and teaching approach**

***How the course relates to the Exercise Physiology profession*** – This course introduces the scientific basis of the exercise physiology profession. It also includes a series of clinical site visits, and lectures from accredited exercise physiologists, to provide an introductory overview of the activities of exercise physiologists in the workplace.

***How the course relates to other courses in the Exercise Physiology program*** – Basic skills and knowledge introduced in this course will be further developed throughout the program, in particular in Exercise Programs and Behaviour (HESC1511), Biomechanics (BIOM2451), Exercise Physiology (HESC2501), Muscle and Motor Control (NEUR3101) and Physical Activity and Health (HESC3504). Interim courses in anatomy, physiology and biochemistry provide critical background on which to further your understanding.

### **Teaching strategies**

**Lectures** – This approach is used to present relatively large amounts of information within a given time on specific topics throughout the course. PDF copies of the lecture notes will be available online (see below in COURSE RESOURCES section) prior to or after each lecture, so you should be able to think about and develop an understanding of the lecture concepts as they are presented, rather than writing voluminous notes. However, there will be information and explanations presented in lectures in addition to those covered in the notes that you should take down if they help you to understand the material. The lecturer will also try to allow some time for interaction and activities in each lecture to provide you with an opportunity to clarify or reinforce the ideas that have been presented. You should take these opportunities to think about the information that has been presented and ask questions to enhance your understanding.

**QandA session** – These sessions provide the opportunity to ask questions of final year students, academic staff and practicing AEPs. This is valuable in the early part of the program to help you confirm your interest in the field, to improve your understanding of progression through the program and to seek clarification about any areas of concern. These sessions will be highly interactive and you are advised to come prepared with questions in mind. For example, you might like to ask questions about student experiences in the program, including such things as points of interest and tips for different stages in the program. You may also be interested to ask practicing AEPs about aspects of their professional work.

**Laboratories** – The purpose of the practical components of the course are twofold. The first purpose is to help you to develop technical skills that will be relevant in your professional career. It is essential that you obtain some hands-on experience with the major clinical and/or research techniques in exercise testing before you begin your clinical practicum. These skills will be rehearsed and developed further during subsequent courses in the program. The second purpose is to use experiments to demonstrate and reinforce key theoretical concepts that have been covered in lectures. The questions contained in the practical outlines will guide your learning in this respect.

**Tutorials and Clinicals** – This format provides a more informal learning environment than a lecture. Sessions will be structured to encourage your participation in activities and discussions designed to enhance your learning. You will benefit most if you do some preparation prior to attending the session. *The tutorials in this course are conducted in the Lifestyle Clinic to provide early exposure to a clinical environment and*

*exercise physiology practice. It is imperative that you adhere to the Lifestyle Clinic Code of Conduct whilst in that clinical setting.*

**Independent study** – There is insufficient time in the lectures, tutorials and practicals for you to develop a deep understanding of the concepts covered in this course. In order for you to achieve the learning outcomes that will be assessed, you will need to revise the material presented in the course regularly. You will probably also need to do additional reading beyond the lecture materials in order to learn effectively. Relevant additional resources, including textbook chapters, will be cited in each lecture.

**Assessments** – These tasks have been chosen as tools to enhance and guide your learning as well as a way of measuring performance, and are therefore central teaching strategy in this course.

## Assessment

Assessment of your learning in the course will be achieved through examinations and two written reports. The examination format tests your ability to recall and communicate knowledge of the subject matter without outside resources and in a time-constrained context. These requirements are similar to those encountered when dealing with a client or patient in a face-to-face setting, or when communicating with other health professionals or researchers. The examinations will be designed to determine how well you have achieved the general learning outcomes outlined above, and the specific learning outcomes outlined in each lecture/practical/tutorial. The written reports will assess your ability to access and interpret scientific literature in the field of exercise science, and to communicate concisely in a written report based on: 1) a laboratory experiment and 2) clinical site visits. You will be required to perform similar tasks in many professional settings within exercise physiology practice or medical research. For example, you will refer to the scientific literature to inform clinical exercise prescription or present a scientific case for using a particular training method.

Summary of Assessments	Weight	Due Date
ASSESSMENT TASK 1 – VIRTUAL LABS AND FEEDBACK ONLINE QUIZZES	5%	<u>week 3</u> <u>week 6</u> <u>week 8</u> <u>week 10</u> <u>due by 10pm Sunday</u> <u>of these weeks</u>
ASSESSMENT TASK 2 – SYNOPSIS LABORATORY REPORT	15%	week 7 Monday 16 <sup>th</sup> April <u>by 9am</u>
ASSESSMENT TASK 3 – REPORT ON THE CLINICAL EXPERIENCE	30%	week 11 Monday 14th May <u>by 9am</u>
ASSESSMENT TASK 4 – END OF SESSION EXAMINATION	Multiple-choice: <b>25%</b> Written: <b>25%</b>	Exam period

### Assessment Task 1 – Virtual Labs and Feedback Online Quizzes

There will be 4 online activities throughout the course, 3 virtual labs worth 1.66% each and 1 voluntary online quiz that attracts no grade. Marks for this component of course assessment are awarded simply for attempting each of the virtual labs, which are designed to reinforce concepts and skills covered during the physical laboratory classes. You are required to complete this task independently. Of course, you may choose to do this as a group and not test your own individual understanding of the material, but you will get the same marks either way. Voluntary quizzes are available to complete online to provide you with feedback on your understanding of the course material - these do not attract a grade.

## Assessment Task 2 – Synopsis Laboratory Report (from Laboratory 2)

You are to independently summarise the purpose, methods, results and conclusions from the laboratory session conducted in week 6 (i.e. Lab no. 2). You are required to include with this summary a reference to a relevant journal article. Precise instructions for the format and content of this written report are included in the following pages. **THE FORMATTING INSTRUCTIONS MUST BE STRICTLY ADHERED TO.** Pay close attention to the marking criteria below when planning and writing this assignment.

A key purpose of this assessment task is to provide students with feedback on written work early in the course and early in your university studies. You will have the opportunity to improve on the basis of this feedback in the subsequent assessment tasks.

### Learning Outcomes for the Synopsis Laboratory Report

- To develop and refine the skills to concisely and clearly explain the purpose, methods, results and conclusions from a scientific laboratory class in the form of a written report
- To reference a scientific journal article of relevance to the experiment
- To develop your ability to communicate effectively in the format of a written report and to adhere to specified formatting guidelines

### Synopsis Laboratory Report Marking Criteria

	High Distinction	Distinction	Credit	Pass	Fail	Mark
<b>Accuracy of the synopsis</b> <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Techniques/methods</li> <li>• Results and conclusions</li> </ul>	Comprehensive overview of the lab experiment, reporting the key methods and findings, showing original/critical thought	Good overview of the lab experiment, reporting key methods and findings, evidence of some original/critical thought	Good overview of the lab experiment, reporting some key methods and findings, attempt at original/critical thought	Adequate overview of the lab experiment, with details of purpose methods, results and conclusions	Incomplete and inaccurate overview of the lab experiment. Lacking details for all or some of the purpose methods, results and conclusions	5
<b>Inclusion of an appropriate reference to a scientific journal article</b>	Appropriately formatted reference to 2 scientific journal articles with a clear and/or specified relevance to the laboratory experiment for each cited article.	Appropriately formatted reference to 1 or 2 scientific journal articles with a clear and/or specified relevance to the laboratory experiment.	Appropriately formatted reference to 1 or 2 scientific journal articles of specified relevance to the laboratory experiment.	Appropriately formatted reference to a scientific journal article of broad relevance to the laboratory experiment.	Absent or inappropriate reference to a scientific journal article relating to the laboratory experiment.	5
<b>Quality of the writing and presentation</b> <ul style="list-style-type: none"> <li>• Spelling</li> <li>• Grammar</li> <li>• Fluency and style</li> <li>• Adherence to prescribed format</li> </ul>	Clear, fluent and concise writing. No errors in written expression. Adheres to the prescribed format.	Clearly and concise writing. Nil or minimal errors in written expression. Adheres to the prescribed format.	Clearly written. Minimal errors in written expression. Adheres to the prescribed format.	Adequate clarity of writing. Some errors in written expression. Adheres to the prescribed format.	Poorly written. Frequent spelling or grammatical errors, <u>Not</u> adhering to the prescribed format.	5

**The synopsis laboratory report should have a title in Arial 11 point bold font that does not exceed 15 words.**

surname, given name (z3333333) [Arial 11 point normal font]

The body of the report should be formatted in Arial 11 point normal font and must not exceed 400 words.

This section should be 1.5 line spaced. You may choose to use paragraphs or bold type sub-headings, but this is not essential (e.g. **Methods**). The page margins should be 2.54 cm (1") on all sides (left, right, top, bottom). The entire report should be presented on only 1 single-sided page. Introduce the aims and purpose of the experiment in as few as one to three sentences. Please avoid a tendency of many university students (and some scientists) to write things in overly grand terms. Whilst interesting, the experiments you are doing in teaching laboratories are unlikely to yield "ground-breaking discoveries" or answer "age-old questions in science". Also appreciate that scientific reports do not require excessively complicated writing. Certainly, precise expression of detail is often important, but if details are expressed in easy to understand language then critical details will be conveyed more clearly. In the methods, use words sparingly and stick to the relevant details. For example, "the subject exercised on a friction-braked bike", as opposed to "the subject exercised on a stationary exercise bike with white paint, a blue seat and pedals". Use the appropriate S.I. units when reporting results and do not feel compelled to list every data value you collected; stick to the key results. Your selection of the key results forms part of the assessment task. Explain any abbreviations upon the first use and consider using abbreviations sparingly as these can become confusing for readers. The reference to a scientific journal article should be written in the format below, including the heading (Arial 8 point normal font), and an article acknowledged in the text as follows: (Jones et al., 1990). You should reference 1 or 2 articles, but do not reference articles with no purpose. Avoid directly quoting from articles. Plagiarism issues aside (it is acceptable to quote directly if the quoted passage is clearly identified as such, but not acceptable if there is a failure to acknowledge and identify the directly quoted prose), it is just not necessary in this task - our interest is in your writing. [366 words – do not feel it is necessary to exactly reach the 400 word limit]

References

Jones, D.A., Smith, B.C. (1990). The measurement of reaction time and muscle activity. *Journal of Reaction Time*. 12, 3: 330-333.

### **Assessment Task 3 - Report on the Clinical Experience**

Through reading the prescribed material, and through attending the tutorial and the first of the 2 clinicals conducted in the UNSW Medicine Lifestyle Clinic, you will be required to answer 5 specific questions concerning activities observed and completed during these clinic site visits. You are also required to locate and summarise a journal article that addresses the scientific basis of exercise prescription for a selected clinical condition. You are required to complete this task independently. Pay close attention to the marking criteria below when planning and writing this assignment.

### **Learning Outcomes for the Report on the Clinical Experience**

- To develop your understanding of clinical activities in an exercise physiology clinic and professional conduct issues surrounding these activities
- To develop and refine the skills to briefly and clearly summarise a scientific article of relevance to exercise science and clinical exercise physiology practice
- To develop your ability to communicate effectively in the format of a written report

## Clinical Experience Report Marking Criteria

	Q1	Q2	Q3	Q4	Q5	Mark
<b>Answers to questions 1 - 5</b> <ul style="list-style-type: none"> <li>• Accurate</li> <li>• Comprehensive</li> <li>• Well written (<i>bullet points acceptable</i>)</li> </ul>	3 marks	3 marks	3 marks	3 marks	3 marks	15
<b>Q6 – Journal Article Report</b>	High Distinction	Distinction	Credit	Pass	Fail	
<b>Selection of an appropriate scientific journal article and identification of the relevance for exercise physiology clinical practice</b>	Selection of an appropriate original research article. Clear and accurate description of the clinical relevance. Some critical thought.	Selection of an appropriate original research article. Clear and accurate description of the clinical relevance. Possibly critical thought	Selection of an appropriate article (original research article or review). Clear and accurate description of the clinical relevance.	Selection of an appropriate article (original research article or review). Some attempt to identify the clinical relevance.	Selection of an article inappropriate for the assignment (e.g. textbook chapter or not on a clinical condition). No attempt to identify clinical relevance.	5
<b>Accuracy of the synopsis</b> <ul style="list-style-type: none"> <li>• Purpose /aims</li> <li>• Variables/measures</li> <li>• Results and conclusions</li> </ul>	Comprehensive overview of the article, reporting the purpose, key measures, key results and the most pertinent conclusions.	Good overview of the article, reporting the purpose, measures, results and conclusions accurately and clearly. Some attention to the key details.	Good overview of the article, reporting the purpose, methods, results and conclusions accurately.	Adequate overview of the article, reporting the purpose, methods, results and conclusions with fair to reasonable accuracy.	Incomplete and inaccurate overview of the article. Lacking, or inaccurate, details for all or some of the purpose methods, results and conclusions.	5
<b>Quality of the writing and presentation</b> <ul style="list-style-type: none"> <li>• Spelling</li> <li>• Grammar</li> <li>• Fluency and style</li> <li>• Adherence to prescribed format</li> </ul>	Clear, fluent and concise writing. No errors in written expression. Adheres to the prescribed format.	Clearly and concise writing. Nil or minimal errors in written expression. Adheres to the prescribed format.	Clearly written. Minimal errors in written expression. Adheres to the prescribed format.	Adequate clarity of writing. Some errors in written expression. Adheres to the prescribed format.	Poorly written. Frequent spelling or grammatical errors, <u>Not</u> adhering to the prescribed format.	5

## HESC1501 Introduction to Exercise Science: Clinical Placement Assignment (30% of the total mark)

**Clinical Placement will be conducted at the UNSW Medicine Lifestyle Clinic and will involve patient case studies. It is therefore expected that students read the following PRIOR to commencing placement at the Lifestyle Clinic:**

1. The 'HESC 1501: Lifestyle Clinic Clinical Placement' handout;
2. The Lifestyle Clinic website ([www.lifestyleclinic.net.au](http://www.lifestyleclinic.net.au)) to familiarise themselves with the clinical programs and services.
3. The Lifestyle Clinic Code of Conduct to become familiar with basic policies and procedures governing student conduct with the Clinic.

A copy of the assignment document will be available on Blackboard to make notes during the tutorials at the Lifestyle Clinic. A template document will be available online for electronic submission of the completed answers to questions 1 to 5, plus the report for question 6, by 9am Monday 16<sup>th</sup> May.

1. Observe the 'Medical Information Sheet' (i.e. patient's clinical data). List the client's condition and three (3) important pieces of information that the Exercise Physiologist has used to implement risk management procedures (to ensure the safety and welfare of the patient).
2. How was the patient referred (eg Self-referral or medical referral?). List and explain the role of three (3) medical and allied-health professionals involved in the treatment of the patient.
3. An appropriate progression of exercise (volume and intensity) is important for both exercise adherence patient safety. Examine the patient records, and describe the progression of resistance training for that client in terms of volume, frequency and intensity of the exercises.
4. Select and analyse one resistance training exercise that you observed a client performing.
  - a. Perform a basic movement analysis using the protocol in the '**HESC 1501: Lifestyle Clinic Clinical Placement**' handouts and complete the table below.
  - b. Outline the major points to ensure correct lifting technique, and any precautionary advice (e.g. common incorrect techniques to avoid) exercise.
  - c. Explain the functional implications of the exercise (i.e. how does it translate to common activities of daily living)?

BASIC MOVEMENT ANALYSIS			
	JOINT 1	JOINT 2	JOINT 3
JOINT(S) INVOLVED IN ACTION			
MOVEMENT TERM			
MUSCLE(S) RECRUITED AT EACH JOINT			

5. Read the ESSA Code of Conduct. Using the patient case study in the Lifestyle Clinic, explain how the following criteria of the ESSA Code of Ethics are achieved:
  - (a) 'Best Practice';
  - (b) 'Client Care (and Confidentiality)'
  - (c) 'Personal and Professional Integrity (and Scope of Practice)'.
6. Using the PubMed resource, find one scientific article from the literature that examines the clinical effects of resistance or endurance exercise on a selected chronic disease (e.g. chronic fatigue syndrome, prostate cancer, obesity, type 2 diabetes, osteoarthritis). *[Attach the article you have reviewed to this assignment]*. On one page double spaced, describe:
  - a. The aim of the investigation
  - b. The variables being measured before and after the exercise intervention
  - c. The important results/outcomes of the study.
  - d. What conclusions can be drawn from this evidence and how can this inform clinical practice?

#### **Assessment Task 4 – End of Session Examination**

The purpose of this exam is to test your understanding of the concepts covered in the ENTIRE COURSE. The format will be multiple choice, short answer and long answer questions. The exam will be held during the end of session exam period.

#### **Submission of Assessment Tasks**

Assignments are to be submitted electronically through Turnitin via Blackboard.

**Penalties for late submission of assignments** – In cases where an extension has NOT been granted, the following penalties will apply: For assignments submitted after **9:00am** on the due date, a penalty of 50% of the maximum marks available for that assignment will be incurred. A further 25% of the maximum possible allocated marks (i.e. a total of 75%) will be deducted from assignments which are two (2) days late.

Assignments received more than two (2) days after the due date **will not be allocated a mark**, however, these assignments **must** still be submitted to pass the unit.

#### **Academic honesty and plagiarism**

Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft and is regarded by the university as academic misconduct. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. The University has adopted an educative approach to plagiarism and has developed a range of resources to support students.

**The Learning Centre can provide further information via <http://www.lc.unsw.edu/plagiarism>.**

Course Schedule

HESC1501 semester 1, 2012

Week	Week starting:	Lecture 1 Tuesday 2-3pm Biomed B	Lecture 2 Wednesday 10-11 Biomed D	Laboratory Wednesday 2 – 4 <u>or</u> Wednesday 4 – 6 24 Arthur St (wks 4, 12) Wallace Wurth 202 (wks 6, 9*, 10). *BioSciences 329	Online Quiz (completed by Sunday 10pm)	Tutorial (1 session) Week 4 or 5 Lifestyle Clinic 38 Botany St 2hr x1	Clinicals (2 sessions) Weeks <u>6 &amp; 10</u> or <u>7 &amp; 11</u> or <u>8 &amp; 12</u> or <u>9 &amp; 13</u> Lifestyle Clinic 2hr x2
1	27 Feb	<i>Program Introduction,</i> and professional issues (collect clinical uniforms) <b>BB, SC, SM (28 Feb)</b>	<b>No Class</b>				
2	5 Mar	L1 – Anatomical basis of human movement I <b>RW (6 Mar)</b>	L2 – Anatomical basis of human movement II <b>RW (7 Mar)</b>				
3	12 Mar	L3 – Mechanical basis of human movement I <b>RW (13 Mar)</b>	L4 – Mechanical basis of human movement II <b>RW (14 Mar)</b>		Online Task 1: Observing and assessing movements ( <b>completed online via Blackboard</b> )		
4	19 Mar	L5 – Determinants of muscle strength <b>BB (20 Mar)</b>	L6 – Introduction to motor control and learning <b>BB (21 Mar)</b>	Lab 1 – Basic biomechanical analysis of movement <b>RW, MJ, NK</b> ( <u>24 Arthur St</u> )		<b>Groups A to F</b> A: Monday 9-11 B: Monday 2-4 C: Tuesday 9-11 D: Tuesday 11-1 E: Thursday 9-11 F: Friday 9-11	
5	26 Mar	L7 – Q and A session <b>2x staff AEPs &amp; 2x 4<sup>th</sup> year students</b> ( <b>27 Mar</b> )	L8 – Motor control and learning II: Skill Acquisition <b>RW (28 Mar)</b>			<b>Groups G to L</b> G: Monday 9-11 H: Monday 2-4 I: Tuesday 9-11 J: Tuesday 11-1 K: Thursday 9-11 L: Friday 9-11	
6	2 Apr	L9 – Applications of exercise physiology to health <b>CT (3 Apr)</b>	L10 – Introduction to exercise physiology and the cardiovascular system <b>NvD (4 Apr)</b>	Lab 2 – Reaction time and motor learning <b>RW, MJ, NK</b> ( <u>Wallace Wurth 202</u> )	Online Task 2: Voluntary Online Quiz ( <b>completed online via Blackboard</b> )		<b>Groups 1 to 8</b> 1: Monday 9-11 2: Monday 2-4 3: Tuesday 9-11 4: Tuesday 11-1 5: Thursday 9-11 6: Thursday 2-4 7: Friday 9-11*PH 8: Friday 11-1* PH
<b>Mid-session break (6<sup>th</sup> – 15<sup>th</sup> April)</b>							

Synopsis laboratory report due via Turn-It-In on Blackboard Monday 16 <sup>th</sup> April at 9am i.e. start of week 7							
7	16 Apr	L11 – Basic concepts of exercise metabolism <b>NvD (17 Apr)</b>	L12 – Cardiovascular adaptations to exercise (acute responses) <b>NvD (18 Apr)</b>				<b>Groups 9 to 16</b> 9: Monday 9-11 10: Monday 2-4 11: Tuesday 9-11 12: Tuesday 11-1 13: Thursday 9-11 14: Thursday 2-4 15: Friday 9-11 16: Friday 11-1
8	23 Apr	L13 - Cardiovascular adaptations to exercise (chronic responses) <b>NvD (24 Apr)</b>	<b>No Lecture** (25 Apr)</b> <b>** ANZAC DAY</b>	ANZAC DAY	Online Task 3: Exercise Physiology Virtual Lab - BP <b>(completed online via Blackboard)</b>		<b>Groups 17 to 24</b> 17: Monday 9-11 18: Monday 2-4 19: Tuesday 9-11 20: Tuesday 11-1 21: Thursday 9-11 22: Thursday 2-4 23: Friday 9-11 24: Friday 11-1
9	30 Apr	L14 – Motor control changes across the lifespan <b>BB (1 May)</b>	L15 – Exercise Testing and prescription in children <b>KM (2 May)</b>	Lab 3 – Measuring the blood pressure and heart rate response to exercise <b>NvD, MJ, NK (Biosciences 329)</b>			<b>Groups 25 to 32</b> 25: Monday 9-11 26: Monday 2-4 27: Tuesday 9-11 28: Tuesday 11-1 29: Thursday 9-11 30: Thursday 2-4 31: Friday 9-11 32: Friday 11-1
10	7 May	L16 – Using exercise to manage chronic diseases in childhood <b>KM (8 May)</b>	L17 – Growth and maturation <b>CB (9 May)</b>	Lab 4 – Measuring the heart response to exercise using ECG <b>NvD, MJ, NK (Wallace Wurth 202)</b>	Online Task 4: Exercise Physiology Virtual Lab – HR & ECG <b>(completed online via Blackboard)</b>		<b>Groups 1 to 8</b> Tuesday 9-11am or Tuesday 11-1pm or Tuesday 2-4pm or Wednesday 11-1pm or Thursday 11-1pm or Thursday 3-5pm or Friday 10-12pm or Friday 2-4pm
Clinical experience report due via Turn-It-In on Blackboard Monday 14 <sup>th</sup> May at 9am i.e. start of week 11							
11	14 May	L18 – Introduction to exercise psychology <b>SB (15 May)</b>	L19 – Applied growth and development: Changes in sports performance with age and maturation <b>CB (16 May)</b>				<b>Groups 9 to 16</b> 9: Monday 9-11 10: Monday 2-4 11: Tuesday 9-11 12: Tuesday 11-1 13: Thursday 9-11 14: Thursday 2-4 15: Friday 9-11 16: Friday 11-1

12	21 May	L20 – Exercise Psychology: barriers to exercise and healthy behaviours <b>SB (22 May)</b>	L21 - Exercise Psychology: motivational strategies <b>SB (23 May)</b>	Lab 5 – Field tests of aerobic capacity (the beep test) + body composition: body mass index, skinfold and girth measurement <b>NVD, MJ, NK (24 Arthur St)</b>			<b>Groups 17 to 24</b> 17: Monday 9-11 18: Monday 2-4 19: Tuesday 9-11 20: Tuesday 11-1 21: Thursday 9-11 22: Thursday 2-4 23: Friday 9-11 24: Friday 11-1
13	28 May	L22 – Growing old and continuing to exercise <b>MB (29 May)</b>	L23 – Barriers to exercise - clinical example <b>JC (30 May)</b> <b>TBC</b>				<b>Groups 25 to 32</b> 25: Monday 9-11 26: Monday 2-4 27: Tuesday 9-11 28: Tuesday 11-1 29: Thursday 9-11 30: Thursday 2-4 31: Friday 9-11 32: Friday 11-1

BB: Ben Barry  
MB: Martin Bending (AEP)  
GT: Gail Trapp (AEP)  
NK: Natalie Kwai

NvD: Nancy van Doorn (AEP)  
JC: Jennifer Chan (AEP)  
FN: Fiona Naumann (AEP)

RW: Rachel Ward  
CT: Chris Tzarimas (AEP)  
SM: Sally Mildon (AEP)

CB: Carolyn Broderick  
KM: Kelly McLeod (AEP)  
TC: Tina Cheng (AEP)

SB: Steve Boutcher  
CS: Carolina Sandler (AEP)  
MJ: Matthew Jones

## COURSE RESOURCES

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### Blackboard

Information about the course and a number of electronic study resources can be accessed via the UNSW Blackboard system. Blackboard is an internet-based set of Course Tools designed to enable online learning.

You can access the system from the following site:

<http://lms-blackboard.telt.unsw.edu.au/webapps/portal/frameset.jsp>

You can use Blackboard to download lecture notes, access your grades, find reference material in the course (such as this document), and communicate with the lecturer and your peers. Please see the lecturer if you would like more information to help you to make the most of this resource.

### Lectopia

The Lectopia system (iLecture) provides digital audio recordings of lectures that can be accessed via streaming media over the web or as a podcast (if permitted by the lecturer). Lecture slides may be embedded in these presentations.

<http://telt.unsw.edu.au/lectopia/content/default.cfm?ss=1>

### UNSW Library

The University Library provides a range of services to assist students in understanding how to identify what information is required for assignments and projects; how to find the right information to support academic activities; and how to use the right information most effectively.

Homepage: <http://info.library.unsw.edu.au>

### Reserve

Many items (books and journal articles) set as recommended reading for courses will be located in **Reserve**, which is on Level 2 of the Main Library. Some of the journal articles will be available in electronic format via links to Library resources from Blackboard.

### Textbooks

Abernethy, B., Hanrahan, S.J., Kippers, V., Mackinnon, L.T., & Pandy, M.G. (2005). *The Biophysical Foundations of Human Movement*. 2<sup>nd</sup> edition. Palgrave MacMillan, Sydney NSW.

ISBN: 0732997585

Library call no. 612.044/62 H

### Relevant Textbook Chapters

In this course, the textbook chapters are followed reasonably closely.

*Intro Lecture*

*Chapter 1*

*Lectures 1 & 2*

*Chapters 2, 3 & 4 (Part I)*

*Lectures 3, 4 & 5*

*Chapters 5, 6, 7, 9 & 17 (Part II)*

*Lectures 6 & 8*

*Chapters 14, 15 & 17 (Part IV)*

*Lectures 9, 10, 11, 12, 13 & 14*

*Chapters 10, 11, 12 & 13 (Part III)*

*Lectures 15, 16, 17, 18 & 19*

*Chapters 4, 8, 12, 16 & 20*

*Lectures 20, 21, 22 & 23*

*Chapters 18, 19, 20 & 21 (Part V)*

### Suggested Reference Books

Will be included in notes from individual lecturers and/or on Blackboard resource lists for HESC1501.

### Suggested Reference Journals

Journal of Science and Medicine in Sport

Medicine and Science in Sports and Exercise

Journal of Applied Physiology

Exercise and Sport Sciences Reviews

European Journal of Applied Physiology

Acta Physiologica

Sports Medicine

British Journal of Sports Medicine

Journal of Sport and Exercise Psychology

*specific clinical journals*

## Course Evaluation and Development

HESC1501, Introductory Exercise Science, is the first course in the *Bachelor of Exercise Physiology*. In 2009, we introduced a series of clinical site visits at the UNSW Medicine Lifestyle Clinic to enrich learning in the course and to better engage students in the program. In 2010, we further developed the early exposure to clinical activities of exercise physiologists (EPs) by including regular lectures from practicing EPs. In 2011, we are trialling a new Exercise Physiology Virtual Lab to provide the opportunity to practice laboratory or clinical skills after class via Blackboard.

Student feedback is welcome and taken seriously. A Course and Teaching Evaluation and Improvement (CATEI) survey will be provided in the final weeks of the course to formally gather student feedback.

The inclusion of more clinically-oriented training in HESC1501 was partly prompted in response to feedback from previous students. The increased clinical content in 2009 and 2010 has been well received by students.

## Examination procedures and attendance requirements

Attendance is expected at all lectures, practicals and tutorials for this course. Attendance at all practicals, tutorials and clinicals will be recorded. Students who do not participate in these sessions for any reason other than medical or misadventure, will be marked absent and will be awarded a grade of FAIL for the entire course. If absent for medical reasons, a medical certificate must be lodged with the lecturer within 7 days of the time period of the certificate's expiry. No consideration will be given after this time. Although lectures will be available on ilecture, student participation is encouraged in both the lectures and the tutorials and these are important to attend.

## Health and Safety

Class activities must comply with the NSW Occupational Health & Safety Act 2000 and the Occupational Health & Safety (OHS) Regulations 2001. It is expected that students will conduct themselves in an appropriate and responsible manner in order not to breach OHS regulations and ensure a safe work/study environment for themselves and others. Further information on relevant OHS policies and expectations is outlined at: <http://www.ohs.unsw.edu.au/index.html>

## Deferred Exams

If you miss an exam for medical reasons you must supply adequate documentation (including a medical certificate). Your request for consideration will then be assessed and a deferred exam may be granted. You cannot assume you will be granted supplementary assessment. The deferred exam may include a significant oral element.

## Special consideration in the event of illness or misadventure

### **Please note the following Statement regarding Special Consideration.**

If you believe that your performance in a course, either during session or in an examination, has been adversely affected by sickness, misadventure, or other circumstances beyond your control, you should notify the Registrar and ask for special consideration in the determination of your results. Such requests should be made as soon as practicable after the problem occurs. **Applications made more than three working days after the relevant assessment will not be accepted except in TRULY exceptional circumstances.**

When submitting a request for special consideration you should provide all possible supporting evidence (eg medical certificates) together with your student number and enrolment details. Consideration request forms are available from Student Central in the Chancellery or can be downloaded from the web page linked below.

Note that normally, if you miss an exam (without medical reasons) you will be given an absent fail. If you arrive late for an exam no time extension will be granted. It is your responsibility to check timetables and ensure that you arrive on time.

Students who apply for consideration to Student Central must also contact the Course Convenor immediately.

All applications for Special Consideration will be processed in accordance with UNSW policy (see: <http://my.unsw.edu.au/student/atoz/SpecialConsideration.html>). If you miss an assessment and have applied for Special Consideration, this will be taken into account when your final grade is determined. You should note that marks derived from completed assessment tasks may be used as the primary basis for determining an overall mark. Where appropriate, supplementary examination may be offered, but only when warranted by the circumstances.

It is intended that supplementary exams for the School of Medical Sciences in Semester 1, 2011 will be held in the week commencing Monday 11th July, 2011.

**Student equity and diversity issues**

Students requiring assistance are encouraged to discuss their needs with the course convenor prior to, or at the commencement of the course, or with the Equity Officer (Disability) in the Equity and Diversity Unit (EADU) (9385 4734). Further information for students with disabilities is available at <http://www.studentequity.unsw.edu.au/disabil.html>