



# **THE UNIVERSITY OF NEW SOUTH WALES**

**Exercise Physiology Program  
School of Medical Sciences  
Faculty of Medicine**

## **HESC2501**

# **Exercise Physiology**

Semester 2, 2012  
Course Outline



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## Staff Contact Details

Position	Name	Email	Location
Course Convenor	<b>Dr Fiona Naumann</b>	<a href="mailto:f.naumann@unsw.edu.au">f.naumann@unsw.edu.au</a>	Edmund Blackett, POWH Clinical School
Co-Convenor:	<b>Ms. Nancy van Doorn</b>	<a href="mailto:n.vandoorn@unsw.edu.au">n.vandoorn@unsw.edu.au</a>	32 Botany St
Lecturer	<b>Dr Chris Maloney</b>	<a href="mailto:c.maloney@unsw.edu.au">c.maloney@unsw.edu.au</a>	32 Botany St
Lecturer	<b>Dr Ben Barry</b>	<a href="mailto:ben.barry@unsw.edu.au">ben.barry@unsw.edu.au</a>	24 Arthur St
Lecturer	<b>Dr Belinda Parmenter</b>	<a href="mailto:b.parmenter@unsw.edu.au">b.parmenter@unsw.edu.au</a>	24 Arthur St
Lecturer	<b>Mr Stewart Head</b>	<a href="mailto:s.head@unsw.edu.au">s.head@unsw.edu.au</a>	Wallace Worth
Demonstrator	<b>Mr. Andrew Keech</b>	<a href="mailto:andrew.keech@unsw.edu.au">andrew.keech@unsw.edu.au</a>	32 Botany St
Demonstrator	<b>Mr David Mizrahi</b>	<a href="mailto:d.mizrahi@unsw.edu.au">d.mizrahi@unsw.edu.au</a>	32 Botany St
Demonstrator	<b>Mr Zach McKay</b>	Zach_mckay@hotmail.com	University Sydney
Demonstrator	<b>Mr Andrew Daubney</b>	andrew@reboundhealth.com.au	Rebound Health
Demonstrator	<b>Mr Matthew Jones</b>	<a href="mailto:Matthew.jones@unsw.edu.au">Matthew.jones@unsw.edu.au</a>	32 Botany St
Demonstrator	<b>Mr Andrew Harb</b>	<a href="mailto:andrew.harb@hotmail.com">andrew.harb@hotmail.com</a>	
Demonstrator	<b>Ms Ria Arnold</b>	<a href="mailto:r.arnold@neura.edu.au">r.arnold@neura.edu.au</a>	NeuroResearch
Demonstrator	<b>Mr Carl Matthews</b>	carl@reboundhealth.com.au	Rebound Health

**Technical Officer:**           **Mr Balu Daniel**                           [d.balu@unsw.edu.au](mailto:d.balu@unsw.edu.au)  
 School of Medical Sciences

**Program Officer:**           **Ms Sue Cheng**                               [sue.cheng@unsw.edu.au](mailto:sue.cheng@unsw.edu.au)  
 School of Medical Sciences

## Course details

**Credit Points:** 6 UOC

### Course Prerequisites / Assumed Knowledge

BIOC2181 Fundamentals of Biochemistry; PHSL2501 Human Physiology A

### Course Description

The focus of this course is on the physiological adaptations of the respiratory, cardiovascular, endocrine and musculoskeletal systems to acute and chronic exercise, building on knowledge and skills developed in Human Physiology A and concurrently developed in Human Physiology B. Specific adaptations to the different component of exercise (intensity, duration, type) will be presented. Skills and techniques used to monitor and analyse those adaptations will be developed throughout this course, e.g. submaximal and maximal exercise tests, ECG, spirometry.

### Aims of the Course

1. To encourage a comprehensive understanding of the human physiological response (energy utilisation, endocrine, cardiovascular, respiratory, musculoskeletal) to both acute and repeated bouts of exercise
2. To provide knowledge of measurement principles and techniques commonly utilised in exercise physiology
3. To provide confidence in performing basic measurements in exercise testing

### Student Learning Outcomes

This course will enable students to explore and gain further understanding of the response of the human body to physical activity with an emphasis of their application to real situations in the field of Exercise Physiology. This course provides the fundamental knowledge and promotes the development of skills which will work towards the realisation of the overall Bachelor of Exercise Physiology program objectives and skills of an Exercise Physiologist.

*At the end of the course you should be able to:*

- Have developed knowledge of the changes in energy utilisation, endocrine, cardiovascular, respiratory and musculoskeletal systems in response to acute or repeated bouts of exercise.
- Demonstrate basic competencies in skills associated in exercise testing (eg. heart rate and blood pressure measurement; the collection of blood by fingerprick for the analysis of lactate).
- Communicate effectively through written reports of scientific laboratory experiments.

### Graduate Attributes

The students will be encouraged to develop the following Graduate Attributes by undertaking the selected activities and knowledge content. These attributes will be assessed within the prescribed assessment tasks. At the conclusion of this course the student will be able to be:

- Understand the relationship between physical activity and health
- Apply clinical skills and knowledge relevant to health and fitness assessments
- Engage in independent and reflective learning for the betterment of professional practice, following an evidence-based approach
- Work as a member and a leader of a team
- Communicate effectively with patients, colleagues and other health professionals

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

**How the course relates to the Exercise Physiology profession** – The content allows students to develop a fundamental knowledge of the human physiological response to physical activity. This forms the basis upon which further knowledge and skills enable an Exercise Physiologist to deliver lifestyle programs that use exercise with an aim of promoting disease prevention and rehabilitation of chronic disease. This course also

enables students to develop the skills of communication and critical thinking. It reflects the position of the course convenor that their practice within the field will require these skills for ongoing development.

**How the course relates to other courses in the Exercise Physiology program** – The course will build upon material presented in earlier courses in the program, in particular Introductory Exercise Science (HESC1501), Exercise Programs and Behaviour (HESC1511), as well as Human Physiology A (PHSL2501). The skills and knowledge developed in this course will provide a strong base in exercise physiology essential for the clinically oriented courses offered in third stage such as Physical Activity and Health (HESC3504) and Clinical Exercise Physiology (HESC3541).

### Teaching strategies

**Lectures** – Lecture notes are available in PDF format on Blackboard:  
<http://lms-blackboard.telt.unsw.edu.au/webapps/portal/frameset.jsp>

Lectures are considered by the course convenor to be only a summary of the concepts and theory essential for meeting the course objectives and student learning outcomes outlined above. In order to do well in this course it is **ABSOLUTELY ESSENTIAL** that students make use of other resources such as the recommended and additional textbooks (page 8) and Web based sources.

**Laboratories** – Students are expected to behave in an ethical, socially responsible and professional manner within the laboratory class. Punctual arrival is expected as important information including safety precautions are discussed at the beginning of each class and late students will be refused entry and marked as absent. Turn-off mobile phones before entering (mobile phones are not to be used or answered during the class). The use of computers for work not related to the current laboratory is not permitted in class. Eating is not permitted, however students may bring drinking water in a suitable unbreakable container. Students are required to bring to class, a printed copy of the laboratory which they are to download from BLACKBOARD. It is recommended that students take the time to read the laboratory before coming to the designated laboratory session. All students must come prepared for active participation wearing clothing which is suitable for exercise, such as shorts or track pants, T-shirt or light sweater, and runners or cross-trainers. Enclosed footwear is compulsory. Students who do not have suitable attire with them (eg. open footwear) or do not have a legitimate reason for not participating (eg. medical complaint or injury) will be refused entry to the class and will then be marked absent. Students must take care with biological and hazardous material and leave all equipment clean and functional. Those who don't adhere to these basic laboratory rules will be marked absent.

**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 a central teaching strategy in this course.

	<b>Weight</b>	<b>Due Date</b>
<i>ASSESSMENT TASK 1 – MID SEMESTER EXAM</i>	<b>20%</b>	Week 7
<i>ASSESSMENT TASK 2 – END OF SESSION EXAM</i>	<b>40%</b>	End semester exam period
<i>ASSESSMENT TASK 3 – OSCE</i>	<b>30%</b>	Weeks 12&13
<i>ASSESSMENT TASK 4 – LABORATORY ASSIGNMENT</i>	<b>10%</b>	Week 8

### Assessment Task 1 – MID SEMESTER EXAM

*The MID SEMESTER EXAM* is a written exam comprised of multiple choice and/or short answer questions, and analytical interpretation of typical experimental situations. It will cover lecture and laboratory material from weeks 1-6. It will be held in week 7 during the lecture timeslot, and is of 1 hr duration (writing time). In the weeks prior to the mid-semester exam students will be allocated by the course convenor to either one of two rooms (TBA) to allow for adequate spacing between students. Students are required to attend the exam in the

room to which they have been allocated as each particular room will contain a given number of exam papers for allocated students only. No extra time will be given to a student who has arrived at the wrong room and needs to find their way to the other room to sit the exam. As each room will be supervised by one staff member only, there will be no provision made for students who wish to temporarily exit the exam room unsupervised after the exam has commenced for whatever reason (eg. visiting bathroom). Students are only permitted to leave the room after they have submitted their mid-semester exam for assessment.

### Assessment Task 2 – END OF SESSION EXAM

The END OF SESSION EXAM is a written exam comprised of multiple choice and/or short answer questions, and analytical interpretation of typical experimental situations. It will be held during the examination period following the end of semester, and will cover ALL lectures and laboratory material from the ENTIRE semester.

### Assessment Task 3 – OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE)

The OSCE will be held in weeks 12 & 13 during the laboratory timeslot and will be based on the assessment of the student's ability to perform various practical skills commonly used in exercise physiology. Each student will be required to attend on only one of these weeks. Further information confirming the location and times of the skills exam for each individual student will be provided in the weeks prior to the exam by the course convenor.

EACH student will be required to perform the skills listed below, under the supervision of an examiner. Broadly the assessment is based on a given student's ability to perform the skill with regard to the following three categories:

- (1) *exercise physiology competency* [ability to correctly perform the measurement],
- (2) *technical skill* [equipment set up, safety]
- (3) *communication* [the ability to effectively communicate verbally to the client]

The exam venue will be divided into 8 stations.

More specifically the skills which could be assessed during the examination are:

Competency	Task Descriptors. Be able to demonstrate:
<i>Cardiovascular</i>	<ul style="list-style-type: none"> <li>• the manual and electronic measurement of resting &amp; manual heart rate.</li> <li>• the measurement of resting and exercise systolic and diastolic blood pressure</li> </ul>
<i>Blood collection</i>	<ul style="list-style-type: none"> <li>• the collection of blood from a subject by fingerprick</li> <li>• the collection of blood from a subject following an exercise bout and examine for blood lactate</li> </ul>
<i>Respiratory Function</i>	<ul style="list-style-type: none"> <li>• The measurement of vital capacity and FEV<sub>1.0</sub></li> </ul>
<i>Cardiovascular Function</i>	<ul style="list-style-type: none"> <li>• the correct set up of a subject on the Monark bicycle ergometer in preparation for exercise</li> <li>• the adjustment of the workloads on the bicycle to allow the subject to exercise at a power output designated by the examiner</li> <li>• be able to explain the protocols used to assess sub-maximal fitness in healthy populations to a participant</li> <li>• be able to explain the calculation of VO<sub>2</sub>max from sub-maximal heart rate and workload data to a client</li> <li>• the ability to set up an athlete for a VO<sub>2</sub> max assessment, using the metabolic cart</li> <li>• be able to explain a VO<sub>2</sub> max test to an athlete about to undertake a VO<sub>2</sub> max test</li> </ul>
<i>Anaerobic Capacity</i>	<ul style="list-style-type: none"> <li>• a correct set up a client up for a Wingate test</li> <li>• the measurement of peak power</li> <li>• the measurement of anaerobic capacity</li> <li>• the calculation of fatigue index</li> </ul>

<i>ECG</i>	<ul style="list-style-type: none"> <li>the correct placement of the 12 ECG leads for ECG measurement</li> <li>a description of a protocol used in a 12 lead ECG stress test</li> </ul>
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#### Assessment Task 4 – LABORATORY ASSIGNMENT

Laboratory One (1) is to be submitted in week 4 for a brief review and so that students can receive feedback. Laboratory 2, 3 **or** 4 are to be written up and submitted for assessment in week 8. The skill and knowledge content of all Laboratories must be completed and content will be assessed in either the OSCE (practical skill competency) or Final Examination (knowledge and application competency).

#### Marking Criteria for Laboratory Assignments

As indicated above, two (2) laboratories must be written up and submitted. To achieve the highest possible marks each student must do the following:

*Introduction and methods:* must be included in the report simply for completeness, please attach the introduction and method which is made available to you on BLACKBOARD and which you have downloaded and brought to class. The reason for keeping the laboratory in its entire form is that it will serve as a useful reference on which to look back on during this semester as revision for exams and during the later years of this degree.

*Results:* Tables (which are provided in the original assignment handouts) need to be completed with the numerical data obtained in class. Answers to any additional numerical calculations need to be completed and entered in the appropriate space provided in the table. The required graphs (as listed in the original laboratory handouts) need to be completed, with correctly labelled headings and axis labels.

*Discussion:* Indicate your answer to each of the short answer questions directly below each question in the laboratory handout. Answers may range between a sentence, to a small paragraph as indicated by the question. Answers need to be concise and grammatically correct.

*Referencing:* Particular attention and marks will also be given to correct referencing within the document (see APA referencing guidelines). You need to provide the correct reference within the answer to the question in the discussion section and also include the full reference in the reference list at the end of the assignment.

Assignment	Excellent (HD)	Distinction (D)	Good (Cr)	Pass (P)	Unsatisfactory (F)
<b>Introduction &amp; Aim</b> <ul style="list-style-type: none"> <li>Introduction briefly reviews literature and leads into aim?</li> <li>Concise and relevant</li> <li>Aim clearly stated?</li> </ul>	Comprehensive review of literature, explaining all key concepts. Aim clear and concise.	Very good review of literature, explaining most key concepts. Aim clearly stated.	Good review of literature, explaining most key concepts.  Aim stated	Reviewed literature, some key concepts missed.  Aim stated.	Incomplete review of literature.  No aim stated
<b>Methods</b> <ul style="list-style-type: none"> <li>Participants?</li> <li>Procedures explained in adequate detail?</li> </ul>	Comprehensive description of the lab procedures.	Very good description of the lab procedures.	Good description of the lab procedures.	Brief description of the lab procedures provided.	Description of the lab lacked adequate detail. Wrong tense used.
<b>Results</b> <ul style="list-style-type: none"> <li>All data presented?</li> <li>Table and graph labelling?</li> <li>Calculations correct?</li> <li>Brief summary of what the data is showing.</li> </ul>	Comprehensive graphs and figures provided. Concise description of what the graphs are showing.	Graphs and figures provided. Reasonable description of what the graphs are showing.	Graphs and figures provided. Brief description of what the graphs are showing.	Graphs and figures provided. Lacks description of what the graphs are showing.	No tables of graphs. No description of what the graphs are showing.
<b>Discussion</b> <ul style="list-style-type: none"> <li>Adequately discusses expected and/or unexpected results?</li> <li>Supports conclusions with data or previous research?</li> <li>“Overall” findings and application.</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.

<b>Reference, Grammar, spelling and overall presentation.</b> <ul style="list-style-type: none"> <li>• APA format?</li> <li>• Adequate number of articles in support and properly used and referenced.</li> </ul>	Appropriately formatted reference to 6+ scientific journal articles with a clear and/or specified relevance to the laboratory experiment for each cited article.	Appropriately formatted reference to 4 scientific journal articles with a clear and/or specified relevance to the laboratory experiment for each cited article.	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 minimal scientific journal articles with a clear and/or specified relevance to the laboratory experiment for each cited article.	Absent or inappropriate reference to a scientific journal article relating to the laboratory experiment.
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### Submission of Assessment Tasks

Laboratory assignments are to be submitted as an electronic version via BLACKBOARD (Turn it in).

**Penalties for late submission of assignments** – In cases where an extension has NOT been granted, the following penalties will apply:

- For laboratories submitted after **10.00am** on the due date, a penalty of 50% of the maximum marks available for that assignment will be incurred.
- Assignments received two (2) or more days after the due time/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>.

### Referencing for the laboratory assignment

Referencing is a process that identifies the sources of information used in your assignment. Some of the main purposes of referencing are: to justify/support the position you take in your assignment, to show the arguments put forward by different writers, and to allow the reader to locate the sources used. Please refer to examples cited below. Further information can be found at <http://www.apastyle.org>

## Course schedule HESC 2501, 2012

Wk	Wk begin	Lecture 1 (1 hr) Monday 2.00-3.00pm WW LG03	Lecture 2 (1 hr) Monday 3.00-4.00pm WW LG03	Lecture 3 (1 hr) Friday 1.00-2.00pm Biomed F	Lab (2 hrs) Wed 2-4 or 4-6 Wallace Wurth 202	Lab (2 hrs) Wed 2-4, 4-6, Fri 9-11, 24 Arthur St	Suggested Readings  McArdle et al (2010).
2	23rd July	<b>2.1: Introduction to Exercise Physiology.</b> Basic muscle structure and function. <i>Lecturer: FN</i>	<b>2.2: Metabolism</b> ATP and the basics of energy generation  <i>Lecturer: CM</i>	<b>2.3: Energy transfer in the body</b> Glycolysis  <i>Lecturer: CM</i>	<b>LAB 1: Introduction</b> Wingate Test Lab reports, OSCE  <b>VENUE: 24 Arthur St</b>		Ch 18: Skeletal muscle structure and function. CH 5: Intro to energy transfer CH 6: Energy transfer in the Body.  Ch 6: Energy transfer in the body,
3	30 <sup>th</sup> July	<b>3.1: Energy transfer in the human body:</b>  <i>Lecturer: CM</i>	<b>3.2: Energy Sources for Exercise</b>  <i>Lecturer: CM</i>	<b>3.3: Measurement of human energy expenditure</b>  <i>Lecturer: NvD</i>		<b>LAB 2: The VO<sub>2</sub>max</b> <i>Wed 2-4: 14B, 14C</i> <i>Wed 4-6: 16B, 16C</i> <i>Fri 9-11: 9A, 9B</i>	Ch 8-9 Measurement of human energy expenditure.
4	6 <sup>th</sup> Aug	<b>4.1: Energy transfer during exercise.</b> ATP-PCr, Lactic acid, Aerobic system.  <i>Lecturer: FN</i>	<b>4.2: Measurement of performance during exercise.</b> Immediate: Short-term: Long-term <i>Lecturer: FN</i>	<b>4.3 Measurement of human energy expenditure during exercise</b>  <i>Lecturer: NvD</i>	<b>LAB 1 Due: feedback only, Mon 6<sup>th</sup> Aug, 10.00am</b>	<b>LAB 2: The VO<sub>2</sub>max</b>  <i>Wed 2-4: 14D, 14E</i> <i>Wed 4-6: 16E, 16E</i>	Ch 7: Energy transfer during exercise. Ch 11: Energy expenditure during exercise.
5	13 <sup>th</sup> Aug	<b>5.1: Nutritional basis of exercise</b> fuel sources, CHO, lipids, protein <i>Lecturer: CM</i>	<b>5.2: Optimal Nutritional</b> for sports performance Fueling energy supply pre, during and post exercise. <i>Lecturer: CM</i>	<b>5.3: Specific Nutritional</b> requirements of athletes – endurance, strength training <i>Lecturer: CM</i>	<b>LAB 3: CV response</b> to exercise. Exercise HR, BP, RPE, Exercise protocols.		CH 1: CHO, Lipids, Proteins. Ch 3: Optimal nutrition for exercise.
6	20 <sup>th</sup> Aug	<b>6.1: Respiratory response to exercise.</b>  <i>Lecturer: FN</i>	<b>6.2: Cardiovascular response to exercise.</b>  <i>Lecturer: FN</i>	<b>6.3: Cardiovascular response to exercise.</b>  <i>Lecturer: FN</i>	<b>LAB 4:</b> Cardio-Respiratory Response to Exercise. Determining the VT & LT during exercise.		CH 12-14: Respiratory System. CH 15-17: Cardiovascular System
7	27 <sup>th</sup> Aug	<b>Mid-semester exam 2.00-3.00pm</b> <b>Room TBA</b> <b>Supervisors: FN</b>		Review of examination – feedback session. Intro to Lab 5 <i>Lecturer: NvD</i>	<b>Skills Practice Lab for OSCE</b>		CH 15-17: Cardiovascular
	3rd Sept				<b>No formal classes this week</b>		

8	10 <sup>th</sup> Sept	<b>8.1: Overview of the ECG signal, normal rhythm, reading the trace, measuring heart rate,</b> <i>Lecturer: BP</i>	<b>8.2: ECG anomalies: arrhythmias, AV blocks, myopathies, ischemia, flutters</b> <i>Lecturer: BP</i>	<b>8.3: ECG lead placement, response to exercise.</b>  <i>Lecturer: BP</i>	<b>LAB 5:</b> The exercise and diagnostic ECG. <b>LAB REPORT 2 DUE</b> Mon 10 <sup>th</sup> Sept, 10.00am		
9	17 <sup>th</sup> Sept	<b>9.1: Exercise Training principles</b>  <i>Lecturer: FN</i>	<b>9.2: Anaerobic and Aerobic system training response to exercise</b>  <i>Lecturer: FN</i>	<b>9.3: Training methodology</b> Writing an aerobic & anaerobic training program  <i>Lecturer: FN</i>	<b>LAB 6:</b> Assessment of Cardio-respiratory capacity & application to training. Maximal Aerobic Speed (MAS).  <i>Venue: Village Green UNSW</i>		Ch 21: Training for Anaerobic and Aerobic Power.
10	24 <sup>th</sup> Sept	<b>10.1 Strength Training and DOMS</b>  <i>Lecturer: BB</i>	<b>10.2: Muscle Fatigue</b>  <i>Lecturer: BB</i>	<b>10.3: Muscle adaptations to strength training,</b> Muscle fibre type, changes as a result of exercise <i>Lecturer: SH</i>		<b>LAB 7:</b> OSCE Skills Practice 2 <i>Wed 2-4: 14B, 14C</i> <i>Wed 4-6: 16B, 16C</i> <i>Fri 9-11: 9A, 9B</i>	. CH 22: Muscle Strength
11	1 <sup>st</sup> Oct	PUBLIC HOLIDAY	PUBLIC HOLIDAY	<b>11.3: Exercise Physiology for Children and Adolescents</b>  <i>Lecturer: NvD</i>		<b>LAB 7:</b> OSCE Skills Practice 2 <i>Wed 2-4: 14D, 14E</i> <i>Wed 4-6: 16E, 16E</i>	
12	8 <sup>th</sup> Oct	<b>12.1: Overtraining, immune system suppression, iron deficiency</b> <i>Lecturer: DS</i>	<b>12.2: Exercise and the environment: thermal stress.</b>  <i>Lecturer: FN</i>	<b>12.3: Exercise and the environment: altitude</b>  <i>Lecturer: NvD</i>		<b>OSCE EP Skill</b> competency exam <i>Wed 2-4: 14B, 14C</i> <i>Wed 4-6: 16B, 16C</i> <i>Fri 9-11: 9A, 9B</i>	CH 21: Overtraining (p483) CH 24-25: Altitude and thermal stress
13	15 <sup>th</sup> Oct	<b>13.1: Gender Specific Exercise Physiology</b>  <i>Lecturer: FN</i>	<b>13.2 Exercise Physiology &amp; Pre-Post Natal</b>  <i>Lecturer: FN</i>	<b>13.1: Review lecture</b>  <i>Lecturer: NvD</i>		<b>OSCE Skill</b> competency exam <i>Wed 2-4: 14D, 14E</i> <i>Wed 4-6: 16E, 16E</i>	pdf Blackboard Ch 21: p485: Exercise During Pregnancy.

**Please note that there may be some slight alterations to the above schedule.**

Lecturers: Dr. Fiona Naumann (FN), Dr. Ben Barry (BB), Ms Nancy van Doorn (NvD), Dr Chris Maloney (CM), Stewart Head (SH), Dr Belinda Parmenter (BP), Dr David Simar (DS)

Demonstrators: Mr Andrew Keech (AK), Mr David Mizrahi (DM), Matthew Jones (MJ), Andrew Daubney (AD), Zach McKay (ZMc)

Specialist Demonstrators: Mr Andrew Harb (AH), Ria Arnold (RA), Carl Matthews (CMA)

**The mid-semester exam is held TBA, consists of 50 min reading/writing time. Rooms to be advised.**

## Resources for students

### 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.

### 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.

<http://www.library.unsw.edu.au>

### Reserve (*MyCourse*)

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 MyCourse. To search for these items, go to the library website catalogue and search for the course code.

### Textbooks

**McArdle WD, Katch FI, Katch VL (2010)** Exercise physiology. Energy, nutrition and human performance. (7th edition) Lippincott, Williams and Wilkins. Philadelphia, USA.

### Suggested Reference Books

- **American College of Sport Medicine (2005)** ACSM's health-related physical fitness assessment manual. Lippincott, Williams and Wilkins, Philadelphia, USA.
- **American College of Sport Medicine (2010)** ACSM guidelines for exercise testing and prescription. (8th edition) Lippincott, Williams and Wilkins, Philadelphia, USA.
- **Australian Sports Commission (2000)** Physiological tests for elite athletes. (Gore CJ. Editor) Human Kinetics, Champaign, IL., USA.
- **Bourke L, Deakin V (2010)** Clinical sports nutrition. (4<sup>th</sup> edition) WCB/McGraw-Hill, Boston, USA.
- **Brooks GA, Fahey TD, White TP, Baldwin KM (2005)**. Exercise physiology: human bioenergetics and its applications (4<sup>th</sup> edition). Mayfield Publishing Company, Mountain View, CA., USA.
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### Course evaluation and development

Each year feedback is sought from students about the courses offered in Exercise Physiology and continual improvements are made based on this feedback. The Course and Teaching Evaluation and Improvement (CATEI) Process of UNSW is the method used for the collection of feedback. At the end of the semester

students will be asked by UNSW to provide feedback on HESC2501. Significant changes are then communicated to the following cohort of students.

### **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. Further information on relevant OHS policies and expectations is outlined at: [http://www.hr.unsw.edu.au/ohswc/ohs/ohs\\_policies.html](http://www.hr.unsw.edu.au/ohswc/ohs/ohs_policies.html)  
All students must come prepared for active participation in laboratories. No open footwear is permitted. No consumption of food is permitted in class.

### **Examination procedures and attendance requirements**

Attendance is expected at all lectures, practicals and tutorials for this course. Attendance at all practicals, tutorials and laboratories 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 Blackboard, student participation is encouraged in both the lectures and the tutorials and these are important to attend.

### **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. *It is intended that supplementary exams for School of Medical Sciences courses in Semester 2, 2012 will be advised on the SOMS website.*

### **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.

### **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>