



Australia's
Global
University

Faculty of Medicine
School of Medical Sciences

DEPARTMENT OF EXERCISE PHYSIOLOGY

HESC1511

Exercise Programs
and Behaviour

COURSE OUTLINE

TERM 3, 2019

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Please read this manual/outline in conjunction with the following pages on the [School of Medical Sciences website](#):

- [Advice for Students](#)
- [Learning Resources](#)

(or see "STUDENTS" tab at medicalsciences.med.unsw.edu.au)

HESC1511 Course Information

Exercise Programs and Behaviour (HESC1511) is a first year Health and Exercise Science course worth six Units of Credit (6 UOC). The course is required as part of study for the degree of Bachelor of Exercise Physiology. The course will build on the information you have gained in Introductory Exercise Science (HESC1501) and Psychology 1A (PSYC1001). Practical training in this course will encompass: fitness assessments, basic pre-screening and interview techniques, and exercise technique and prescription. Psychological aspects of exercise, in particular motivation, adherence and addiction, will also be addressed. These skills will be put into clinical practice with students developing and delivering supervised exercise sessions for healthy adults.

Credit Points: 6 UOC

Course Pre-requisites:

HESC1501 Introductory Exercise Science

PSYC1001 Psychology 1A

OBJECTIVES OF THE COURSE

Building on basic skills learned in HESC1501, the aims of this course are to:

1. Expose students to the principles underlying motivational interviewing;
2. Develop an understanding of the principles of screening and safe exercise testing;
3. Develop an understanding of the principles of exercise programming;
4. Develop an understanding of the psychosocial factors contributing to exercise engagement and adherence

COURSE CONVENOR and LECTURERS

Course Convenors:

Nancy van Doorn

Rm 205, Level 2 Wallace Wurth Building West

Email: n.vandoorn@unsw.edu.au

Dr Matthew Jones

Rm 202, Level 2 Wallace Wurth Building West

Email: matthew.jones@unsw.edu.au

Students wishing to see the course convenors should make an appointment via email as our offices are not readily accessible.

Lecturers:

Dr Andrew Keech andrew.keech@unsw.edu.au

Mr Alexander Engel alexander.engel@unsw.edu.au

Tutors:

Lauren Marcos (AEP), Angeliki Stivactas (AEP)
Liam Palmer (AEP), Andrew Fyffe (AEP), Leah Harapas (AEP)

Program Officer:

Ms Ina Ismail <http://unsw.to/webforms>

Available to help with problems with enrolment and scheduling, and the first point of contact for administrative problems.

Technical Officer:

Mr Balu Daniel

d.balu@unsw.edu.au**STUDENT LEARNING OUTCOMES**

HESC1511 will develop those attributes that the Faculty of Medicine has identified as important for an Exercise Physiology Graduate to attain. These include; skills, qualities, understanding and attitudes that promote lifelong learning that students should acquire during their university experience.

Graduate Attributes

- Develop a thorough understanding of the relationship between physical activity and health
- Attain competencies in conducting a broad range of exercise-based clinical tests and in delivering lifestyle change programs that use exercise for the primary prevention of disease and the management of chronic disease
- Attain skills and detailed clinical knowledge relevant to cardiopulmonary, metabolic, musculoskeletal and neuromuscular rehabilitation
- Develop advanced problem-solving skills and a capacity for critical thinking
- Develop an ability to engage in independent and reflective learning for the betterment of professional clinical practice
- Develop a broad range of communication skills and an ability to work as a member and a leader of a team, with respect for diversity and a high standard of ethical practice

On completion of this course students should:

1. Develop basic skills in motivational interviewing;
2. Apply basic fitness and health assessments and screening tools;
3. Design and implement an exercise program for a healthy adult;
4. Design and implement a group exercise session;

COURSE STRUCTURE and TEACHING STRATEGIES

Learning activities occur on the following days and times:

- Lectures: Tue 3-5pm (Chemical Sciences M18 – Building F10)
- Labs (Wk 2-10): Wed 1-3pm; Wed 5-7pm; Fri 9-11am; Fri 11-1pm; Fri 1-3pm (CSEP Rooms)
- Clinicals (Wk 5,6,7,8,9): Tue 9-11am (Quad G055); Tue 11-1pm (Quad G055); Wed 9-11am (Quad G055); Wed 11-1pm (Quad G055); Wed 3-5pm (Quad G048); Thu 9-11am (Library 176B); Thu 11-1pm (Library 176B)

Students are expected to refer to their timetable for their allocated class times. They should 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 hours of study and learning activities. The formal learning activities are approximately 75 hours throughout the semester and students are expected (and strongly recommended) to do at least the same number of hours of additional study.

RATIONALE FOR THE INCLUSION OF CONTENT AND TEACHING APPROACH

How the course relates to the Exercise Physiology profession

This course provides students with the basic principles of exercise programming and an understanding of motivation and adherence. These principles underpin your professional requirements for programming physical activity for your clientele.

How the course relates to other courses in the Exercise Physiology program

The course builds on the information gained in HESC1501 and PSYC1001.

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 and challenges students. The teaching is designed to be engaging and relevant in order to prepare students for future careers.

Lectures – This approach is used to present relatively large amounts of information at a time on specific topics throughout the course. PDF copies of the lecture notes will usually be available on Moodle prior to each lecture (some guest lecturers may choose not to make their notes available), 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.

Laboratories – To assist in the development of practical skills and exercise techniques, practical classes will be held. These classes allow students to engage in a more interactive form of learning than is possible in the lectures. The skills you will learn in practical classes are relevant to your professional development as an Exercise Physiologist.

Clinicals – Each student will spend a total of ten hours during the course developing their clinical skills and working towards their major assignment. These ten hours (5x 2 hour sessions) will involve: pre-exercise screening, interviewing, goal setting, exercise training sessions and exercise/fitness assessments. All 5 sessions are compulsory and are required to complete your assignment. Formative feedback will be provided to you on your competencies (ie. Clinical skills). Additionally, assessment of your competencies will occur during your later clinicals and constitute Assessment.

Independent study – There is insufficient time in the lectures, tutorials and laboratories 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 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 PROCEDURES

Summary of Assessments	Weight	Due Date
1: Online Moodle Quiz (20 MCQ)	10%	By 5pm Oct 4th
2: Exercise Programming Assignment		
Part 1:	15%	Week 6 Clinical
Part 2:	15%	Week 8 Clinical
Part 3:	15%	Week 9 Clinical
3: Group Exercise Assignment	10%	Week 10 (during lab)
4. Final Exam	35%	Exam period

ASSESSMENT TASK 1 – DIET ANALYSIS QUIZ

This quiz opens at 9am Mon 30th Sept on Moodle and closes 5pm on Fri 4th Oct. This is an online multiple choice quiz that will assess diet and nutrition content in the course. You will be allowed **one** attempt only. You will receive your mark half an hour after the quiz has been closed on Fri 4th Oct.

ASSESSMENT TASK 2 – EXERCISE PROGRAMMING ASSIGNMENT

Part 1 (15%): Initial Screening & Interview

Due at the beginning of your Clinical 2 (held in Week 6)

In your first clinical (week 5) you would have conducted an initial interview including pre exercise screening and goals of someone from your clinical class. (This person should remain as your client for the remaining clinicals). **Part 1 of the assignment will be a written submission, uploaded into TurnItIn via Moodle.**

You will need to include in your submission:

1. A copy of the client's completed "Pre-Exercise Screening questionnaire" which you designed yourself. Be sure to make it comprehensive.
2. Your client's SMART short term goals (x3) and long term goal (x1)
3. Motivational interviewing summary
4. Exercise history

Marking Criteria

Component	How do I achieve top marks?	Mark Allocation (10%)
Pre-Screening Questionnaire	A self-designed, comprehensive, pre- exercise screening questionnaire that covers all components of screening as outlined in the lecture and lab. Logically and neatly presented.	6
Short Term Goals	There are 3 distinct short term goals listed related to the current exercise program that meet the 'SMART' format.	3
Long Term Goal	There is 1 long term (>6 months) goal listed that meets the 'SMART' format.	1
Motivational interviewing techniques	List examples of "change talk" and/or "sustain talk" that occurred during your interview. In 1-2 sentences, describe how you responded to the change/sustain talk.	2
Exercise History	Provide a comprehensive summary of the client's exercise history (including sporting injury), and their current exercise participation and interests.	3

Part 2 (15%): Training Session
Assessment will occur during the Week 8 Clinical

Come prepared to Clinical 4 (Week 8) ready to train your client for a 30min session that you have designed. You will be marked on the design of your training session and the delivery of your session.

Bring with you to class:

1. TWO copies of your client's Training card (that you have designed for them). Make sure your name and Student ID are clearly listed on this card. (Identify your client by their initials). One is for you to work from during the session, the other is for the tutor.
2. Any notes relating to the exercises you plan to instruct (these notes will not be marked but you may refer to them when training/instructing)

Be prepared to justify your training session (i.e. why did you choose the exercises you did).

Marking Criteria

Component	How do I achieve top marks?	Mark Allocation (15%)
Training Card	Client's useful details and goals listed on card Exercise program arranged in an easy to follow format Design caters to capture any modifications made on the day	3
Justification	You will be asked the following questions to justify the specifics of your training session: 1. How do today's exercises link to your client's goals and/or needs? 2. Which major reference(s) did you base your training session from (eg. ACSM/NSCA) 3. Why did you choose this volume for this exercise? (the tutor will choose one exercise from the card) 4. Why did you choose this intensity & rest periods for this exercise? (the tutor will choose one exercise from the card) 5. Why did you order the session in this way?	5
Practical Training session	Student made appropriate safety considerations for client during the training session.	2
	The training session contained appropriate warm up; conditioning and cool down phases.	1
	Student confidently delivered all aspects of the training session	1
	Student developed a good rapport with the client and was able to motivate them.	1
	Training session appeared appropriate and achievable for client considering their individual circumstances and fitness levels.	1
	Training session was well timed to fit into 30mins	1

Part 3 (15%): Competency assessment Held during your Week 9 clinical

Competency assessment will occur during your week 9 clinical. You will be assessed on:

1. Your ability to undertake:
 - a. Blood pressure measurement
 - b. A strength assessment (using body weight only)
 - c. A 3 min aerobic step test
2. Your ability to interpret the results to your client
3. Based on these results and the Australian physical activity guidelines, explain to your client if they need to modify their current activity levels or not.
 - a. If they do, provide a basic exercise prescription (e.g. Increase to 2 resistance training sessions per week; and add 1 moderate-vigorous intensity aerobic session)
 - b. If they don't, confirm they are meeting current physical activity guidelines and how this affects their cardiometabolic risk.

COMPONENT	How do I achieve top marks?	Mark Allocation (15%)
Competency	Domains assessed: 1. Communication 2. Exercise Physiology Procedural skills Competency is marked as F (2.5) P- (5) P (7.5) or P+ (10)	10
Interpretation of Results to your client	Interpretation of results is correct and communicated to the client using reference to their previous result, if available, and/or normative values	2
Future directions	Accurate and appropriate future directions in terms of their physical activity levels are provided to the client.	3

ASSESSMENT TASK 3 – GROUP EXERCISE PRACTICAL ASSESSMENT

Conducted during your Lab session in Week 10

The purpose of this activity is to provide you with an opportunity to practice group exercise instruction. In groups of four (form from students within your timetabled Lab class), plan an exercise session for a group of apparently healthy, low risk participants from a population of your choice. Work in a group to plan an exercise session that allows each member of the group to lead the instruction for 5 minutes of activities/exercises for the population. A smooth transition between members of your group is ideal.

Your group will be allocated a session time during your Lab class in Week 10. Your group will have 20 mins to run the exercise session (individuals have 5 mins to run their component). It is compulsory for all students to attend these sessions even if you are not presenting, as you will form the class population for the other groups.

Marking Criteria

Component	How do I achieve top marks?	Mark Allocation (10%)
Practical Performance		
Communication	Instruction is clear and able to be understood by the population	1
	Voice is projected and language is upbeat and engages the population	1
	A variety of instruction techniques are applied to cater for different types of learners within the class	2
	Student appeared well prepared and confident	1
Exercises	Exercises chosen are appropriate for the population	1
	Exercise demonstration is provided	1
Group setting	Appropriate modifications or advanced options were given to cater to varying range of ability within the group	1
	Use of space and layout of group was considered (e.g. group were arranged to see and hear instructor, would not bump into one another when performing exercises, health & safety was considered)	1
	Student moved around the group adequately, giving adequate feedback for the task and was able to identify and correct those who needed further instruction	1

ASSESSMENT TASK 4 – FINAL EXAM (35%)

The purpose of the final exam is to test your understanding of the concepts covered in the **entire course**. Material from lectures, clinicals, laboratories and readings may be assessed. The format will be multiple choice. The exam will be held during the end of session exam period.

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.

TEXTBOOKS AND OTHER RESOURCES

Suggested Reference Books

Griffin, JC (2015) *Client Centred Exercise Prescription, 3rd Ed.* Human Kinetics, Champaign, Ill.

Suggested Reference Journals

Abernethy, B. Hanrahan, SJ. Kippers, V. Mackinnon, LT. & Pandy, MG. (2013) *The Biophysical Foundations of Human Movement, 3rd ed.*, Palgrave Macmillan, South Yarra.

Dwyer, GB. & Davis, SE. (2013) *ACSM's Health-Related Physical Fitness Assessment Manual*, 4th ed. Lippincott, Williams & Wilkins, Phil.

Kennedy-Armbruster, CA. & Yoke, MM. (2014). *Methods of Group Exercise Instruction*, 3rd ed. Human Kinetics, Campaign, Ill.

McArdle, WD. Katch, FI. & Katch, VL. (2014) *Exercise Physiology: Nutrition, Energy and Human Performance, 8th ed.*, Lippincott, Williams and Wilkins, Phil.

Norton, K. & Olds T. (eds.) (2007) *Anthropometrica: A textbook of body measurement for sports and health education*. UNSW Press, Sydney.

COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students about the course and continual improvements are made based on this feedback. The myExperience Process of UNSW is the way in which student feedback is evaluated and significant changes to the course will be communicated to subsequent cohorts of students.

Based on the feedback received in 2018, the assessment tasks have been revised to make the experience more practical for students and align well with lecture and laboratory content. We have endeavoured to ensure that lecture and online material falls before laboratories and clinical sessions to ensure students are equipped with the knowledge to better apply themselves in these practical sessions. Furthermore, we have included a quiz in place of a dietary analysis assignment to reduce burden to students and more efficiently cover key content relevant to the Discipline. Clinicals now begin in week 5 to allow students to familiarise themselves with the course and skills required to manage a healthy client.

GENERAL INFORMATION

The Department of Exercise Physiology is part of the School of Medical Sciences and is within the Faculty of Medicine. It is located in the Wallace Wurth building.

Associate Professor Jeanette Thom is Head of Department. Appointments to meet with her may be made via email (j.thom@unsw.edu.au).

Dr Rachel Ward is the Exercise Physiology Program Authority. Appointments to meet with her may be made via email (rachel.ward@unsw.edu.au).

The Honours program is coordinated by **Dr Cristan Herbert** (c.herbert@unsw.edu.au) Ph:9385 8679. Any students considering an Honours year should discuss the requirements with the coordinator.

Honours Administrator: Vicky Sawatt (v.sawatt@unsw.edu.au) Ph:9385 8195.

Postgraduate degrees

The Department of Exercise Physiology offers students the opportunity to enter into the following graduate programs:

- **Research Masters:** For more information contact the post-graduate coordinators A/Prof Pascale Carrive (p.carrive@unsw.edu.au) or Dr Nicole Jones (n.jones@unsw.edu.au)
- **Doctorate (Ph.D):** For more information contact the post-graduate coordinator A/Prof Pascale Carrive (p.carrive@unsw.edu.au) or Dr Nicole Jones (n.jones@unsw.edu.au)

Enrolment and administrative help

Ms. Ina Ismail is available to help with problems with enrolment and scheduling and should be the first point of contact for administrative problems. She can be found in the Education Support Team office (Wallace Wurth Building, Room 260). Contact via <http://unsw.to/webforms>

Health and Safety

Class activities must comply with the NSW *Work Health and Safety Act 2011*, the *Work Health and Safety Regulation 2017*, and other relevant legislation and industry standards. It is expected that students will conduct themselves in an appropriate and responsible manner in order not to breach HS regulations and ensure a safe work/study environment for themselves and others. Further information on relevant HS policies and expectations is outlined at: www.safety.unsw.edu.au

COURSE TIMETABLE

Week	Date	Lecture 1 Tuesday 3-4pm Location: Chem Sci M18	Lecture 2 Tuesday 4-5pm Location: Chem Sci M18	Online	Laboratory Wed 1-3pm, Wed 5-7pm, Fri 9-11am, 11-1pm, 1-3pm, Location: Ground Floor Ex Phys	Clinical (As Timetabled) CSEP
1	17 th Sep	What does an EP do? "Start to Finish" MJ	SOAP and subjective screening MJ	Introduction to nutrition		
2	24 th Sep	Objective Assessments MJ	Models of Behaviour Change, Counselling Strategies and Motivational interviewing NVD	Needs Assessment	1. Screening, body composition and posture	
3	1 st Oct	Principles of Exercise Programming MJ	Contraindications to Exercise / Conducting a Fitness Assessment NVD	Occupational health and safety	2. Motivational Interviewing	
4	8 th Oct	Exercise Prescription for Special Populations NvD	Exercise and Movement Analysis NVD	Movement analysis	3. Objective Assessments: Strength and Movement Analysis	
5	15 th Oct	Resistance training 1 AE	Resistance training 2 AE		4. Objective Assessments: Aerobic	Clinical 1: Initial interview & screening
6	22 nd Oct	Resistance training 3 AE	Cardiovascular/Aerobic Training 1 AK		5. Resistance Training 1	Clinical 2: Fitness assessments
7	29 th Oct	Cardiovascular/Aerobic Training 2 AK	Cardiovascular/Aerobic Training 3 AK		6. Resistance Training 2	Clinical 3: Exercise Training
8	5 th Nov	Flexibility training NVD	Considerations for individual versus group exercise prescription NVD		7. Aerobic Exercise Prescription and Monitoring & Competency practice	Clinical 4: Exercise Training Assessment
9	12 th Nov	Exercise adherence and addiction NVD	Competencies		8. Group exercise instruction Prep	Clinical 5: Competencies Assessment
10	19 th Nov				9. Group Exercise instruction Assessment	
