



Faculty of Medicine
School of Medical Sciences

DEPARTMENT OF EXERCISE PHYSIOLOGY

HESC3581

PHYSICAL ACTIVITY AND SPECIAL POPULATIONS

COURSE OUTLINE

SEMESTER 2, 2018

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

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

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

HESC3581 Course Information

Physical Activity for Special Populations (HESC3581) is a 3rd/4th year Exercise Physiology elective course that will become core in 2019. The course is part of study for the degree of Bachelor of Science or Bachelor of Exercise Physiology. The course will build on the information you have gained in Physical Activity and Health (HESC3504) as well as Exercise Physiology (HESC2501). Concepts gained in courses such as anatomy, human physiology, biomechanics, and behavioural science will contribute to your learning in this course.

Credit Points: 6 UOC

Course Pre-requisites: HESC3504 and HESC3541

COURSE CONVENOR and LECTURERS

Course Convenor, and Head of Department:

A/Prof Jeanette Thom j.thom@unsw.edu.au
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Students wishing to see the course convenor or other staff should make an appointment via email as our offices are not readily accessible.

Program Authority:

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Lecturers:

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Demonstrators:

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Exercise Physiology Coordinator:

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

Technical Officer:

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OBJECTIVES OF THE COURSE

This course examines the effect of physical activity on special populations. The impact of physical activity on a range of special populations are summarised (e.g., mental health, kidney disease, children). The course also covers lifestyle prescription for these special populations.

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

- Describe the effects of physical activity on a variety of clinical conditions / special populations, having an appreciation and understanding of the implications of exercise in these conditions
- Demonstrate an ability to design safe, appropriate and effective lifestyle programs / exercise intervention strategies for a range of special populations that consider the available scientific evidence, treatment goals and specific population needs
- Have an appreciation and understanding of the implications of individual differences in responses to physical activity training
- Gain experience of what the role of an Exercise Physiologist does across a variety of clinical conditions / special populations and be able to reflect on their own role and how they should adapt in these environments for effective intervention strategies.

STUDENT LEARNING OUTCOMES

HESC3581 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. Demonstrate a foundational knowledge of specific populations/ diseases and comorbidities in a multidisciplinary environment, including chronic kidney disease, mental health, children, conditions in women and different cultural backgrounds.

2. Describe the effects of regular physical activity on a variety of clinical conditions / special populations
3. Demonstrate an ability to design safe, appropriate and effective lifestyle programs / exercise intervention strategies for a range of special populations that consider the available scientific evidence, treatment goals and specific population needs
4. Have an appreciation and understanding of the implications of individual differences in responses to physical activity training
5. Gain experience of what the role of an Exercise Physiologist does across a variety of clinical conditions / special populations and be able to reflect on their own role and how they should adapt in these environments for effective intervention strategies.

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 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 (some guest lecturers may choose not to make their notes available) be available on Moodle (see below in STUDENT RESOURCES section) prior to 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.

Tutorials – This format provides a more informal learning environment than a lecture. Sessions will be structured via case studies 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.

Independent study – There is insufficient time in the lectures, tutorials and practical 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.

COURSE STRUCTURE and TEACHING STRATEGIES

Learning activities occur on the following days and times:

- Lectures: 2/week
- Case study Tutorials: 1/week
- Experiences: various times/days

Students are expected to attend all scheduled activities for their full duration (2 hours of lectures per week, and 1 hour of case study tutorial sessions per week). Students are also expected to attend approx. 2-6 hours observing placements across the semester. 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 36 hours throughout the semester and students are expected (and strongly recommended) to do double the number of hours of additional study. The time spent reading the articles provided and designing lifestyle change programs will add to this time commitment.

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

To assist in the development of prescriptive skill, problem-based learning sessions (case studies) will be held. These tutorial sessions will allow students to engage in a more interactive form of learning than is possible in the lectures. The skills you will learn in your involvement in planning and implementing a lifestyle change program are relevant to your development as a professional exercise physiologist. **The case study tutorials are compulsory and follow on directly from the preceding lectures.**

How the course relates to the Exercise Physiology profession

This course is designed for prospective Exercise Physiologists who want to design lifestyle change programs for special populations. The impact of physical activity on a range of special populations are summarised (e.g., including chronic kidney disease, mental health, children, conditions in women and different cultural backgrounds). The course also covers lifestyle prescription for these special populations. The course will be particularly suited to students involved with lifestyle prescription focused on physical activity.

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

The course will build on the information that has been provided in Physical Activity and Health (HESC3504) as well as Exercise Physiology (HESC2501). Concepts gained in courses such as anatomy, human physiology, biomechanics, and behavioural science will contribute to your learning in this course.

TIMETABLE: will be posted on Moodle

ASSESSMENT PROCEDURES

Summary of Assessments	Weight	Due Date
Three full EXERCISE prescription write-ups	45%	Weeks 5, 9, 13
Online Quizzes (x 4)	15%	Week 6, 8, 10, 13
E-PORTFOLIO REFLECTIONS	10%	Week 11
END OF SESSION EXAMINATION	30%	End of session exam period

Full submission guidelines (including dates) and marking criteria for these assessment tasks are available through the “Assessments” section of Moodle.

ASSESSMENT TASK 1 – FULL PRESCRIPTION WRITE-UPS

Three prescription write-ups will be required. There will be a 1,500 word limit for each prescription not including figures, diagrams and references. Scenario 1 is compulsory on cancer and exercise DUE IN WEEK 5. The second and third scenarios are to be created by the student but must be a special population relevant to the course content of HESC3581 DUE IN WEEK 9 AND 13. Prescriptions must be submitted to Moodle. Examples for writing up are included in a case study portfolio that can be accessed through Moodle. See marking criteria and a full description of special population write-ups on Moodle.

Learning outcomes

Task 1 will help develop research, inquiry, and analytical thinking abilities through the process of creating a lifestyle change intervention program. It will also enhance information literacy by developing the skills to locate, evaluate, and use relevant special population information. Covers Learning Outcomes 1-4.

Marking criteria

Fifteen marks are allocated for each of the three scenario write-ups. Assessment for each scenario write-up will consist of 5 components: introduction (3 marks), individual assessment stage (3 marks), conceptual and education stage (3 marks), program composition (4 marks), and quality of presentation (2 marks). Marks will be awarded based on the quality of each of the components (see rubric table on Moodle).

ASSESSMENT TASK 2 – ONLINE QUIZZES

You will be required to log onto Moodle and complete 4 different short quizzes based on the lectures and tutorials in the preceding weeks.

Learning Outcomes

- Demonstrate a foundational knowledge of these specific populations / clinical conditions and comorbidities in a multidisciplinary environment.
- Understand the effects of regular physical activity on a variety of clinical conditions / special populations
- To develop your ability to understand safe, appropriate and effective lifestyle programs / exercise intervention strategies for a range of special populations that consider the available scientific evidence, treatment goals and specific population needs

Marking criteria

Quiz	Content covered	Quiz open	Due date (Quiz closed)	Questions	Marks
1	Weeks 1-5	Week 5	Monday 27th August 9 am	12	6
2	Weeks 6-7	Week 7	Monday 10th September 9 am	6	3
3	Weeks 8-9	Week 9	Tuesday 2nd October 9 am	6	3
4	Weeks 10-12	Week 12	Monday 22nd October 9 am	6	3

The quizzes will be worth a total of 15 marks. For each quiz you need to complete the quiz within the timeframe nominated for that quiz. You **MUST** gain full marks for each quiz to be awarded the marks for that quiz. There are no part marks. You may attempt each quiz multiple times within the allotted period, though each attempt may have different questions.

ASSESSMENT TASK 3 -E-Portfolio reflections (10%)

The e-Portfolio is part of your course assessment and encourages you to reflect on different aspects of your learning journey in this course. You will be asked to make 2 entries into a 'blog' by answering prompt questions from ONE "experience" of an organised placement that you have attended during the semester and ONE from your reflections from a case study tutorial from the course. A range of organised placements relevant to the course will be announced at the start of the semester for which you will be required to attend **ONE**. Some places will have limited number of student availability and/or days/times on which you could attend. You may not be able to get your first choice of preferences. The range of places may cover:

- Children
- Renal patients
- Mental health
- Cancer patients

You will be required to post the reflection entries to via Moodle (via Turnitin for originality checks and marking). See marking criteria and a full description of special population write-ups on Moodle.

Assessment of e-Portfolio will be based on the following criteria: demonstration of engagement with the e-Portfolio; reflective practice; building an awareness of the skills you have developed and would need to further develop (including course-related skills, professional development skills, transferrable skills); development of career awareness and skills for future employability or work experience; personal values; strengths and weaknesses.

Learning Outcomes for the E-portfolio Reflections

- To develop skills in reflective practice
- To develop an awareness of the skills you are developing in this course and their usefulness and applicability to future professional and/or clinical practice.
- Gain experience of what the role of an Exercise Physiologist does across a variety of clinical conditions / special populations and be able to reflect on their own role and how they should adapt in these environments for effective intervention strategies.

Marking criteria

Your response for each should be approximately 600 words. This will include: 1) Reflections on your expectations and observation of the experience; 2) Reflections on what you feel is important in this specific population group regarding lifestyle interventions, including exercise assessment, prescription and compliance; 3) Reflections on what you personally would need in order to further develop your skills to work in this area; 4) Reflections on any unexpected skills or knowledge attained during this course; 5) Reflections on whether you would feel that this is an area that you would like to work in. See marking criteria rubric and a full description on Moodle.

ASSESSMENT TASK 4 -END OF SESSION EXAMINATION

This assessment task will be held during the final examination period in November, and will cover ALL material presented in lectures and tutorials from the ENTIRE semester.

Learning Outcomes for the End of Session Examination

- To demonstrate a foundational knowledge of specific populations/ diseases and comorbidities in a multidisciplinary environment.
- To demonstrate the effects of regular physical activity on a variety of clinical conditions / special populations
- To demonstrate an ability to design safe, appropriate and effective lifestyle programs / exercise intervention strategies for a range of special populations that consider the available scientific evidence, treatment goals and specific population needs
- To demonstrate an appreciation and understanding of the implications of individual differences in responses to physical activity training

The specific date, time and location of the Examination will be released by the UNSW Examinations Office.

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

Moodle

Information about the course as well as lecture material can be accessed via the UNSW Moodle system from the following site:

<https://moodle.telt.unsw.edu.au/login/index.php>

You can use Moodle 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. Home page: <https://www.library.unsw.edu.au/study/information-resources>

Suggested texts

- Skinner, J. (2005). *Exercise Testing and Exercise Prescription for Special Cases: Theoretical basis and clinical application*. 3rd Edition. Lippincott Williams & Wilkins, USA.
- Williamson, P. (2010; 2nd Ed 2018). *Exercise for Special Populations*. Wolters Kluwer, USA.
- John Buckley (2008). *Exercise Physiology in Special Populations*. Elsevier/Churchill Livingstone
- Ehrman, J.K., Gordon, P.M., Visich, P.S., Keteyian, S.J. (2013). *Clinical Exercise Physiology*. 3rd Edition. Human Kinetics, USA.
- LeMura, L.M., von Duvillard, S.P. (2004). *Clinical Exercise Physiology*. Lippincott, Williams & Williams, USA.
- Bouchard, C., Blair, S.N., & Haskell, W.L. (2012). *Physical Activity and Health*. 2nd Edition. Human Kinetics, USA.

Extra reading / Manuals will be available on Moodle

UNSW Learning Centre

The Learning Centre offers academic skills support to all students across all years of study enrolled at UNSW. This includes assistance to improve writing skills and approaches to teamwork. See www.lc.unsw.edu.au

COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students about the course and continual improvements are made based on this feedback. The Course and Teaching Evaluation and Improvement (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.

Student feedback is welcome and taken seriously. The MyExperience survey will be provided in the final weeks of the course to formally gather student feedback. The feedback received will be used to enhance all aspects of the course in its future delivery.

Student feedback from the delivery of **HESC3581 in 2016** indicated that the course content was very relevant to clinical application and was delivered in such a way that students had to further develop research skills and be able to apply their knowledge to different scenarios. However, students had issues submitting assignments via Moodle and would like to have had more feedback during the semester. This year the course content has had to be adapted to fit into the new ESSA accreditation framework. However, the relevance to clinical application has been kept as has the way the course is delivered. The course assessment timetable has been altered in order for students to gain feedback during the semester so that students can gauge how they are progressing. Also, in 2017 the e-portfolio reflections have been added to the course to give students the opportunity to reflect on the development of their professional and clinical skills.

Student feedback from the delivery of **HESC3581 in 2017** demonstrated that students were very satisfied with the newly structured course (5.38/6 and 100% agreement). Students enjoyed the engaging guest lecturers, the variety of relevant topics covered and their relevance to exercise physiology and the case study write-ups. Though students thought that the video assignment was time-consuming to make and difficult to do as a group. Thus, this year we have changed this assignment to online quizzes instead. We will also provide more detailed guidelines and marking criteria for the assessments as asked for in 2017.

GENERAL INFORMATION

Official Communication

All communication will be via your official UNSW email, please see [Advice for Student-Official Communication](#) for more details.

Attendance Requirements

Attendance is expected at all lectures, and compulsory for the tutorials and examinations for this course. Attendance at all tutorials and examinations will be recorded. Students who do not participate in these sessions for any reason other than medical or misadventure, will be marked absent and may 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 except for truly exceptional circumstances. Although lectures will be available on Moodle, student participation is encouraged in the lectures and these are important to attend.

For additional details on the UNSW Policy on Class Attendance and Absence see [Policy on Class Attendance and Absence](#).

Guidelines on extra-curricular activities affecting attendance can be found on the School of Medical sciences Website under <https://medicalsciences.med.unsw.edu.au/sites/default/files/Extra-curricularActivitiesSOMS.pdf>

Special Consideration

Please see [UNSW-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 ask for special consideration in the determination of your results. Such requests should be made by lodging an application with UNSW Student Central 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.**

If you unavoidably miss an assessment task, you must lodge an application with UNSW Student Central for special consideration. Your application must include a medical certificate or other relevant documentation. If your request for consideration is granted an alternative assessment will be organised which may take the form of a supplementary exam, increased weighting of the final exam, or an oral element. You cannot assume you will be granted supplementary assessment.

For the UNSW assessment information and policy, see:

my.unsw.edu.au/student/academiclife/assessment/AssessmentPolicyNew.html

<https://student.unsw.edu.au/assessment>

Academic Integrity 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 [UNSW Student Code](#) outlines the standard of conduct expected of students with respect to their academic integrity and plagiarism.

More details of what constitutes plagiarism can be found [here](#)

Health and Safety

Class activities must comply with the NSW *Work Health and Safety Act 2011*, the *Work Health and Safety Regulation 2011*, 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

Student Conduct

All students must accept their shared responsibility for maintaining a safe, harmonious and tolerant University environment. For further information see

www.student.unsw.edu.au/conduct

Student Equity and Diversity Issues

Students requiring assistance are encouraged to discuss their needs with the course convenor prior, or at the commencement of the course, or with staff in the Disability Unit (previously known as SEADU) (9385 4734). Further information for students with disabilities is available at www.student.unsw.edu.au/disability

Student Support Services

Student support services: [Educational Support Services](#).

Counselling support services: [Counselling and Psychological Services](#).

Appeal Procedures

Details can be found at [Student Complaints and Appeals](#)