



UNSW
AUSTRALIA

Medical Sciences
Medicine

DEPARTMENT OF EXERCISE PHYSIOLOGY

HESC3581

PHYSICAL ACTIVITY AND SPECIAL POPULATIONS

COURSE OUTLINE

SEMESTER 2, 2016

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HESC3581 COURSE INFORMATION

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

Credits: 6 UOC

Pre-requisites: HESC3504

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., type 2 diabetes, pregnancy, obesity). 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.

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

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

COURSE CONVENOR and LECTURER

Course Convenor:

Dr Steve Boutcher
4 Arthur Street

Students wishing to see the course lectures should make an appointment *via* email as our offices are not readily accessible. We will organize to meet you in a convenient location elsewhere in the building.

Phone: 9385 2877

E-mail: s.boutcher@unsw.edu.au

Office hours: Monday 2.00-3.00 pm or by appointment

Lecturers:

Dr Yati Boutcher
4 Arthur Street

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Office hours: Monday 2.00-3.00 pm or by appointment

Exercise Physiology Coordinator:

Mr Ryan Ling exphys.med@unsw.edu.au

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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)

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

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

On completion of this course students should be able to:

1. describe the effects of regular physical activity on a variety of diseases
2. describe the effects of regular physical activity on a variety of special populations
3. demonstrate a basic knowledge of lifestyle diseases
4. demonstrate ability to design lifestyle programs for a range of special populations

COURSE STRUCTURE and TEACHING STRATEGIES

This is a 6 unit course and consists of 3 lectures/case studies per week.

Learning activities occur on the following day and time:

Tuesday 4 pm to 7.00 pm (LG02, Wallace Wurth)

Students are expected to attend all scheduled activities for their full duration. Students are reminded that UNSW recommends that a 6 units-of-credit course should involve about 150-180 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 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.

How the course relates to the Exercise Physiology profession

This course is designed for prospective EPs 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., type 2 diabetes, pregnancy, obesity). 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.

APPROACH TO LEARNING AND TEACHING

The learning and teaching philosophy underpinning this course is centred on student learning and aims to create an environment which interests, challenges, and enthuses students. The teaching is designed to be relevant and engaging in order to prepare students for future careers as Exercise Physiologists.

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

ASSESSMENT PROCEDURES

Five assignments are required for successful completion of this course.

Summary of Assignments	% Total Marks	Due Date
Three full prescription write-ups	45%	8 th November
Meta-analysis summary report	15%	1 st November
Drug and exercise fact file	10%	18 th October
Case study report	20%	25 th October
Case study presentation	10%	During class

ASSESSMENT TASK 1 – FULL PRESCRIPTION WRITE-UPS

Three prescription write-ups will be required. There will be a maximum of 10 pages for each prescription not including figures, diagrams, and references. Scenario 1 is compulsory and then one scenario from the remaining four is to be chosen. The third and final scenario is to be created by the student but must be a special population within the course content of HESC3581. Prescriptions have to be submitted to Moodle by the 8th November (two weeks after the last day of class). Examples for writing up are included in a Case Study Portfolio that can be accessed through Moodle. See marking criteria (page 7) and description of special population write-ups (page 10).

Learning Outcomes

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

Marking Criteria

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

Criteria	High Distinction	Distinction	Credit	Pass
Introduction	Contains all points mentioned under Credit.	Contains most but not all points mentioned under Credit.	Contains a weak introduction. No background, no description of unique characteristics, no mention of special problems.	No introduction
Individual assessment stage	Outstanding individual assessment covering medical, physiological, psychological, and lifestyle.	Good individual assessment covering medical, physiological, psychological, and lifestyle.	Adequate individual assessment covering medical, physiological, psychological, and lifestyle.	Insufficient individual assessment.
Conceptual and education stage	Outstanding conceptual and educational program containing goals, concepts, and education.	Good conceptual and educational program containing goals, concepts, and education.	Adequate conceptual and educational program containing goals, concepts, and education.	Insufficient conceptual and educational program.
The program	An outstanding program containing daily diaries describing the chosen components of the program (e.g., aerobic, strength, flexibility). Containing specific details and appropriate exercises.	A good program containing daily diaries describing the chosen components of the program (e.g., aerobic, strength, flexibility). Containing specific details, and some inappropriate (or missing) exercises, however.	An adequate program containing daily diaries describing the chosen components of the program (e.g., aerobic, strength, flexibility). Generally lacking specific details, and some inappropriate exercises, however.	A brief and superficial program.
Presentation	Excellent use of tables and outstanding presentation.	Good tables and good presentation.	Some tables and reasonable presentation.	No tables and poor presentation.

ASSESSMENT TASK 2 – META-ANALYSIS SUMMARY REPORT

Fifteen sets of answers for fifteen meta-analysis and review articles will be required. Answers have to be filled in and the completed Meta-analysis Report (**MetaAnalReport**) submitted to Moodle by the 1st November (one week after the last day of class). Answering the questions before each lecture is important and will prepare the student for the lecture content. See listing of meta-analysis and reviews (page 9). The **MetaAnalReport** file is available on Moodle.

Learning Outcomes

Task 2 will help develop research, inquiry, and analytical thinking abilities through the process of reviewing 15 key meta-analyses and overviews in the special population area. It will also enhance information literacy by developing skills to evaluate/use relevant special population information.

Marking Criteria

For each meta-analysis there will be 3 questions. Questions 1 and 2 will be multi-choice and will be worth .33% each. Question 3 will be a short answer and will be worth .33% of a mark. Marks will be awarded based on the correctness of the multi-choice answers and the quality of the short answer.

ASSESSMENT TASK 3 - DRUG AND EXERCISE FACT FILE

The one-page drug and exercise fact file will be in the form of a brochure that will consist of one side of A4 paper. The fact file will describe one drug that is used by humans. Areas of information to include: usage information, dosage guidelines, side effects, precautions, and interactions (especially exercise). Drug fact files have to be submitted to Moodle by the 18th October (one week before the last day of class). Students will have access to these fact files at the end of the course.

Learning Outcomes

Task 3 will help develop research, inquiry, and analytical thinking abilities through the process of understanding how drugs affect people and how they interact with exercise and nutrients. The development of a drug fact file will also enhance information literacy by developing the skills to locate, evaluate, and use relevant drug-related special population information.

Marking Criteria

The fact file will be worth 10 marks. Up to two marks will be awarded to five key areas which are: usage information, dosage guidelines, side effects, precautions, and interactions (especially exercise). The inclusion of figures and references is important.

ASSESSMENT TASK 4 - CASE STUDY REPORT

Eight sets of case studies are required. Answers and information has to be filled in and the completed Case Study Report (**CaseStudyReport**) submitted to Moodle on or by the 25th October (the last day of class). Completing the case study before each case study is important and will prepare the student for active discussion. See description of case studies (page 11). The **CaseStudyReport** file is available on Moodle.

Learning Outcomes

Task 4 will help develop research, inquiry, and analytical thinking abilities by creating life style change intervention programs for eight case studies. It will also enhance information literacy by developing the skills to locate, evaluate, and use relevant special population information.

Marking Criteria

Each case study will be worth 2.5 marks for a total of 20 marks. Case study assessment will consist of 5 components: the filling in of sections on the medication table (.5 marks), the exercise programming table (1 mark); the lifestyle modification/nutrition table (.5 mark); and the answering of 10 questions regarding the case study (.05 of a mark each question). Marks will be awarded based on the correctness and quality of the answer.

ASSESSMENT TASK 5 - CASE STUDY GROUP PRESENTATION

Groups of 3 or 4 students will chose one of the eight case studies described in the Case Study Report. Each group will give a 20-minute presentation (5 minutes each student) with 4 minutes of question time for each student. The presentation to include: 1) overview of case study and the major health problems, 2) the major medical interventions and commonly used drugs, 3) use of nutrition and other lifestyle strategies, and 4) the impact of exercise, the optimal exercise, the optimal intensity, how exercise works, and summary.

Learning Outcomes

Task 5 has the potential to develop effective communication through presenting material to an audience. It also provides teamwork, collaborative, and management skills.

Marking Criteria

Task 5 will be worth 10 marks. Up to two marks will be awarded to five key areas which are: the quality of the information presented; the quality of the delivery; the quality and use of figures; and the quality of the slides presented.

WEEKLY READINGS FOR THE META-ANALYSIS REPORT

Students will need to read the 15 meta-analyses or reviews listed below in order to complete the meta-analysis report. Each of these fifteen meta-analysis and reviews highlighted in **RED** have 15 sets of questions that have to be answered in the meta-analysis report. Articles listed in **BLACK** will not have questions but contain important information regarding special populations.

Week 2 - DRUGS, EXERCISE: Culver et al. (2012). *Arch of Int Med*, 172(2), 144-152. **(StatinPostMenoCulver.pdf)**. Salpeter et al. (2008). *Am J Med*, 121, 149-157. **(MetDiabSalpeter.pdf)**. **DEPRESSION:** Schuch et al. (2016). *J Psychiatric Research*, 77, 42-51. **(DepressionExerSchuch.pdf)**.

Week 3 - FAT LOSS: Clarke (2015). *J of Diab & Metab Disorders*. **(ExerDietFatLossClark.pdf)**.

Week 4 - INTERVAL SPRINTING EXERCISE: Boutcher (2011). *Journal of Obesity* **(BoutRevJO.pdf)**. Boutcher (2014). *20X3: eliminate your belly fat in an hour per week*.

Week 5 - NUTRIENTS&HEALTH: Mente et al. (2009). *Archives of Internal Medicine*, 169, 659-669. **(MenteCVDDiet.pdf)**. Vartanian et al. (2007). *Am J of Public Health*, 97, 667-675. **(SoftMet.pdf)**. **CHOLESTEROL:** Mann et al. (2014). *Sports Medicine*, 44, 211-221. **(CholestExerReview.pdf)**.

Week 6 - LIPEMIA: Bravo et al. (2010). *The Open Translational Medical Journal*, 2, 1-13. **(PostPrandBravo.pdf)**. **NON-RESPONDERS:** Boutcher (2012). *Book Chapter*. **(BoutcherChap.pdf)**.

Week 7 - RESISTANCE EXERCISE: Hurley et al. 2011. *Sports Medicine*, 41(4), 289-306. **(ResExerHealthHurley.pdf)**. Snowling et al. (2006). *Diab Care*, 29, 2518-2527. **(DiabExSnowling.pdf)**. **TYPE 2 DIABETES:** Grundy (2007). *Journal Clin Endo & Met*, 92, 399-404. **(MetSynGrundy.pdf)**. Olivera et al. (2012). *Diabetes Res Clin Prac*, 98(2), 187-198. **(DiabExOlive.pdf)**. Gordon et al. (2009). *Diabetes Res Clin Prac*, 83, 157-175. **(DiabRtExGordon.pdf)**.

Week 8 - HYPERTENSION: Boutcher & Boutcher (In press). *Journal of Human Hypertension*. **(ExerBloodPressBoutcher.pdf)**. **CANCER:** Moore et al. (2016). *Journal American Medical Association*, 176(6), 816-825. **(CancerExerMoore.pdf)**. Meneses et al. (2015). *BMC Cancer*, 15, 77, 1-13. **(CancerExerTreatMenses.pdf)**.

Week 9 - MENOPAUSE: Souza et al. (2013). *Aging & Disease*, 6, 320-328. **(MenoReviewSouza.pdf)**. **VASCULAR DISEASE:** Regensteiner et al. (2002). *Am J Med*, 112, 49-57. **(PeriVasDisRevRegen.pdf)**.

Week 10 - PREGNANCY: Kraemer et al. (2008). *Coch Database of Sys Rev, Issue 4*. **(PregExCoch.pdf)**. **DEMENTIA:** Kirk-Sanchez & McGough (2013). *Clinical Interventions in Aging*, 9, 51-62. **(DementExerKirk.pdf)**.

Week 11 - SMOKING: Ussher et al. (2014). *Coch Database of Sys Rev, Issue 2*. **(SmokeExerUssher2014.pdf)**.

Week 12 - STRESS: Treiber et al. (2003). *Pschosomatic Medicine*, 65, 46-62. **(CardReacTreiber.pdf)**. **SLEEP:** Atkinson et al. (2007). *Physiology and Behavior*, 90, 229-235 **(SleepHealthAtkin.pdf)**.

SPECIAL POPULATION PRESCRIPTION WRITE-UPS

Special population prescription write-ups (choose scenario 1, and one other from the four remaining scenarios; the third and final scenario to be created by the student; thus in total there will be 3 scenarios). PDF to Moodle by the 8th November.

Scenario 1 - Corporate Health (must be chosen)

A small company based in Sydney CBD is interested in lowering its health costs and improving the health and work efficiency of its workforce. The company has a small gym (6 m by 6 m) and all staff have email and internet facilities. The company has allocated 1.5 EP positions to the development of a wellness program and \$60,000 for initial equipment set up. The running cost budget for the first year is \$3,000. Currently, there is no exercise equipment. There are 60 staff who will be a part of the new wellness program. Design an exercise-based lifestyle change program for this company. What equipment would you purchase, what programs would you initiate, and what data would you collect to justify your existence at the end of the first year?

Scenario 2 - Fatigue and diabetes

An overweight female (42 years) is constantly fatigued and sleeps poorly. She is also a type 2 diabetic and is on metformin (700 mg, three times per day). She has dyslipidemia and is on a statin (Lipitor; 60 mg nightly). She has two children and two part-time jobs. Recently, she has increased her body fat and feels she has lost a lot of muscle mass. She has a poor diet with too many calories from processed foods. Her weekly physical activity involves 6 minutes of walking to the shop four times per week. Her weight is 80 kilos with 37% body fat. Write up a lifestyle prescription for this case study focusing on strategies to relieve fatigue and help with her insulin resistance, high blood cholesterol levels, and poor quality sleep.

Scenario 3 - Smoking

An overweight male of 34 years comes to you for specific advice about the kind of exercise he can do to help give up smoking. He has been smoking for 16 years and has not been successful in giving it up. He is taking blood thinning medication (warfarin; 5 mg once per day). He feels his health has deteriorated and feels unfit and weak. He is inactive and has a poor diet. His weight is 76 kilos with 28% body fat. Write up a lifestyle prescription for this case study focusing on strategies to help him give up smoking and improve his health.

Scenario 4 - Peripheral vascular disease

An overweight inactive man of 65 years comes to you for specific advice about the kind of exercise he can do to relieve the pain of intermittent claudication. Over the last 10 years he has increased his body fat. He has no weekly physical activity. His weight is 88 kilos with 34% body fat. He suffers from hypertension and is on an ACE inhibitor (Captopril; 20 mg, twice per day). He is also taking anticoagulants and anti-platelet drugs to prevent blood clots from developing. His intermittent claudication medication is cilostazol. Write up a lifestyle prescription for this case study focusing on strategies to help relieve the pain of intermittent claudication.

Scenario 5 - Sleep

An inactive woman (33 years) comes to you for advice about the kind of exercise she can do after recently experiencing poor quality sleep. She has elevated cholesterol levels (6.8 mmol/L) and suffers from hypertension and is on an ACE inhibitor (Captopril; 20 mg, twice per day), a beta blocker (propranolol 50 mg twice per day), and a diuretic (bendrofluazide; 5 mg once per day). Her quality of sleep has been dramatically reduced. She has no weekly physical activity apart from house chores. Her weight is 80 kilos (37% body fat). Write up a lifestyle prescription focusing on strategies to increase quality of sleep and to improve cholesterol levels and fitness.

Remember: Include an introduction describing the disease or condition. Use the Lifestyle Change Model to develop your case study. Describe what aspects of assessment you would carry out. Describe how you would educate your client about their disease or condition, and so forth.

CASE STUDIES DESCRIPTION

Case studies - problem based learning scenarios (eight sets of questions in the Case Study Report to be submitted to Moodle by the 25th October. Groups of four students to choose one of the following case studies for a 20-minute presentation (4 minutes each student).

Case study 1 Joan - Obesity

An overweight inactive women of 43 years comes to you for specific advice about the kind of exercise she can do to lose weight. She has dieted frequently in the past but has never been successful in keeping the weight off. Over the last 10 years she has increased her body fat and is keen to reduce her weight. She now suffers from dyslipidemia and is on a statin (Lipitor; 20 mg nightly). She also possesses high blood pressure and is on a daily calcium channel blocker (Verapamil; 80 mg, three times per day). She also takes anti postprandial medication in the form of orlistat (120 mg, three times per day), acarbose (an alpha-glucosidase enzyme inhibitor, 25 mg three times per day), and white kidney bean extract (an alpha-amylase enzyme inhibitor, 500 mg three times per day). She has no weekly physical activity apart from house chores on weekends. The only supplement she is taking is daily fish oil capsules (1.8 g per day). She has metabolic syndrome and has significant stress in her life and does not sleep well. Her weight is 80 kilos with 34% body fat and she has a poor diet. Research this case study and fill in the tables provided so you can discuss the scenario in class.

Case study 2 Harry - COPD

An inactive man of 48 years comes to you for specific advice about the kind of exercise he can do to improve his chronic obstructive pulmonary disease (COPD). Over the last 12 years he has had increased breathing problems when walking. He has no weekly physical activity. His weight is 82 kilos with 18% body fat. He takes a daily selective beta₂-adrenoreceptor agonist which relaxes bronchial smooth muscle), aminophylline (a bronchodilator), and a thiazide diuretic (controls fluid retention). Research this case study and fill in the tables provided so you can discuss the scenario in class.

Case study 3 David - Cholesterol

An overweight inactive man of 53 years comes to you for help with feeling lethargic and putting on weight. He suffers from dyslipidemia and has just been put on a statin (Lipitor, 10 mg once per day). He also takes soluble fibre before each meal in the form of beta glucans to reduce postprandial lipemia. Over the last 10 years he has increased his body fat and is keen to reduce his weight. He has no weekly physical activity apart from garden chores on weekends. He has high inflammatory (IL-6, C-Reactive protein) and fasting insulin levels. A dietary assessment reveals that he is constantly consuming processed sugar (soda, candy, etc) throughout the day. However, he enjoys his diet and feels it does not impact negatively on his health. His weight is 92 kilos with 30% body fat. How can this client change his lifestyle and increase his metabolic health? Research this case study and fill in the tables provided so you can discuss the scenario in class.

Case study 4 John - Lipemia

A moderately overweight, inactive man of 43 years comes to you for specific advice about the kind of exercise he can do to get fit, lower his belly fat levels, and reduce his postprandial lipemia. His blood cholesterol levels are 6.2 mmol/L and his doctor has advised him to start an exercise program and to change his diet. His LDL is 3.0 mmol/L, HDL is 1.2 mmol/L, and triglycerides 2.2 mmol/L. Since his cholesterol levels have been elevated he feels chronically tired and believes he has lost some muscle mass. He has no weekly physical activity and has a high processed diet with little fruit and vegetables. His weight is 80 kilos with 30% body fat. Research this case study and answer the questions provided so you can discuss the scenario in class.

Case study 5 Ivan - Resistance exercise

An inactive man of 66 years comes to you for specific advice about the kind of exercise he can do to improve his functionality and quality of life. He takes warfarin (10 mg, once per day), a statin (Lipitor, 40 mg once per day), and Lisinopril, 20 mg per day. Over the last 10 years he has decreased his body weight, however, he has put on abdominal fat, has reduced subcutaneous fat, but has lost muscle mass. He has no weekly physical activity. His weight is 68 kilos with 25% body fat. His physician has suggested that he consult with an EP so a resistance exercise program can be designed for him. Research this case study and fill in the tables provided so you can discuss the scenario in class.

Case study 6 Julia - Breast cancer

A moderately, overweight inactive women of 43 years comes to you for specific advice about the kind of exercise she can do whilst receiving chemotherapy (leucovorin, fluorouracil, and oxaliplatin; FOLFOX) treatment for breast cancer. Since starting treatment one month ago she feels chronically tired and sleeps poorly and believes she is losing her muscle mass. She has no weekly physical activity. Her weight is 70 kilos with 26% body fat. Research this case study and answer the questions provided so you can discuss the scenario in class.

Case study 7 Mary - Menopause

A female, aged 51 years, has just experienced menopause and is troubled by the growing amount of visceral fat that is accumulating in her abdominal area. She is also experiencing a number of postmenopausal symptoms such as hot flushes, mood change, and fatigue. She is keen to incorporate regular exercise into her life but doesn't know much about exercise. Over the last couple of years she has increased her body fat and feels she has lost a lot of her muscle mass. Her weekly physical activity involves 5 minutes of walking to the shop daily. Her weight is 78 kilos with 28% body fat. She is also interested in finding out the potential advantages and disadvantages of ingesting coffee, green tea, and wine. Research this case study and answer the questions provided so you can discuss the scenario in class.

Case study 8 Susie - Pregnancy

A pregnant, untrained, relatively inactive woman of 33 years comes to you for specific advice about the kind of exercise she can do whilst pregnant. She is concerned about the type of exercise she can carry out without negatively affecting the health of her baby. Over the last couple of years she has increased her body fat and is keen to reduce her weight after giving birth. Her weekly physical activity involves walking her dog three times per week for 30 minutes. Her weight is 70 kilos with 35% body fat. She is interested in taking folic acid and fish oil as a supplement. She is keen to find out the type of exercise she can do without harming the foetus. She is also interested in finding out the potential dangers of smoking and ingesting caffeine, alcohol, vitamin B₁₂, iron, calcium, and vitamin D during pregnancy. What advice would you give her? Research this case study and answer the questions provided so you can discuss the scenario in class.

Remember: Be prepared. Do some research into the area of the client. Think about the Lifestyle Change Model to develop your case study. Plan what aspects of assessment you would carry out. Think how you would educate your client about their disease or condition, and so forth. Fill in the tables for each Case Study using the Case Study Form.

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:

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

Suggested texts

Boutcher, S.H. (2014). *20X3: Eliminate your belly fat in an hour per week*. Nero, Australia.

Skinner, J. (2006). *Exercise Testing and Exercise Prescription for Special Cases*. Lea & Febiger, USA.

Williamson, P. (2010). *Exercise for Special Populations*. LWWolters Kluwer, USA.

Ehrman, J.K., Gordon, P.M., Visich, P.S., Keteyian, S.J. (2003). *Clinical Exercise Physiology*. Human Kinetics, USA.

LeMura, L.M., von Duvillard, S.P. (2003). *Clinical Exercise Physiology*. Lippincott, Williams & Williams, USA.

Bouchard, C., Blair, S.N., & Haskell, W.L. (2007). *Physical Activity and Health*. Human Kinetics, USA.

Manuals available on Moodle

Cardiac Rehabilitation Guidelines
Case Study Prescription Portfolio
Drug and Exercise Fact File Manual
Food for Health Dietary Guidelines
Lifestyle Manual
Psychological Inventory Directory
Smoking Manual

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 (CATEI) 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.

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).

There is an Honours program conducted by the School. The Honours program is coordinated by Dr Thomas Fath (t.fath@unsw.edu.au), Ph: 9385 8495. Any students considering an Honours year should discuss the requirements with the coordinator.

Honours Administrator: Vicky Sawatt (v.sawatt@unsw.edu.au) Phone: 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 co-ordinators Dr David Simar (d.simar@unsw.edu.au) or Dr Pascale Carrive (p.carrive@unsw.edu.au)
- **Doctorate (PhD):** For more information contact the post-graduate co-ordinators Dr David Simar (d.simar@unsw.edu.au) or Dr Pascale Carrive (p.carrive@unsw.edu.au)

Enrolment and administrative help

Mr Ryan Ling is available to help with problems with enrolment and scheduling, and should be the first point of contact for administrative problems. He can be found in the Medical Education and Student Office (MESO) Ground floor of the Wallace Wurth Building. Ph:9385 2960. Email: ryan.ling@unsw.edu.au

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 for this course and attendance at lectures will be recorded by signing a class role. If students attend less than **eighty percent** of their lectures and problem based learning session they will be refused final project assessment. Thus, their final project (45% of marks) will not be assessed. Students who miss lectures for any reason other than medical or misadventure, will be marked absent. 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. Arrival more than 15 minutes after the start of the class will be recorded as non-attendance. Although lectures will be available on iletecture, student lecture participation is encouraged 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. <http://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:

<https://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 Student Equity and Disabilities Unit (SEADU) (9385 4734). Further information for students with disabilities is available at <http://www.studentequity.unsw.edu.au>

Student Support Services

Details of the available student support services can be found at [Educational Support Services](#).

Details of counselling support services can be found at [Counselling and Psychological Services](#).

Appeal Procedures

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

TIMETABLE

	Lecture 1	Lecture 2	Case study
Week 1 - 2/8/16	Introduction	Lifestyle change model	-
Week 2 – 9/8/16	Drugs and exercise	Depression and exercise	-
Week 3 – 16/8/16	Obesity	Fat loss, diet, and exercise	Joan (metabolic syndrome)
Week 4 – 23/8/16	Interval sprinting and health	Interval sprinting and special populations	Harry (COPD)
Week 5 – 30/8/16	Nutrients and health	Cholesterol and exercise	David (cholesterol)
Week 6 – 6/9/16	Postprandial lipemia and exercise	Non-responders to EP interventions	John (lipemia)
Week 7 – 13/9/16	Resistance exercise and health	Type 2 diabetes and exercise	Ivan (sarcopenia)
Week 8 – 20/9/16	Hypertension and exercise (YB)	Cancer and exercise	Julia (breast cancer)
Break	-	-	-
Week 9 – 4/10/16	Menopause and exercise	Vascular disease and exercise (YB)	Mary (menopause)
Week 10 – 11/10/16	Pregnancy and exercise (YB)	Dementia and exercise	Susie (pregnancy)
Week 11 – 18/10/16	Corporate health and exercise	Smoking and exercise	-
Week12 – 25/10/16	Stress and exercise	Sleep and exercise	-