UNSW Course Outline

EXPT1155 Exercise Physiology and Metabolism - 2024

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General Course Information

Course Code : EXPT1155
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : Faculty of Medicine and Health
Academic Unit : School of Health Sciences
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

In this course you will develop the fundamental knowledge and skills to understand how human physiology facilitates exercise and how our bodies adapt over time following exercise training. You will develop pragmatic exercise physiology assessment skills and begin to understand how

to utlise various forms of exercise stress to drive desired physiological adaptations to improve performance and health.

Course Aims

This course enables you to gain and build on your fundamental understanding of human physiology, specifically allowing you to further understand both the acute and longitudinal human responses to exercise. You will develop a series of pragmatic exercise physiology assessment skills and begin to understand how to utlise various forms of exercise stress to drive physiological adaptations.

Relationship to Other Courses

Assistance with progression checking:

If you are unsure how this course fits within your program, you can seek guidance on optimising your program structure, from staff at the Nucleus Student Hub.

- Progression plans for UNSW Medicine and Health programs can be found on the UNSW Medicine & Health website.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Describe the function, regulation and interaction of physiological systems relating to exercise and metabolism.
CLO2 : Analyse the individual and integrated physiological responses and adaptations to acute and longitudinal exercise training under both normal conditions and with external influencing factors.
CLO3 : Demonstrate competence in the performance and interpretation of key exercise physiology assessment procedures.
CLO4 : Analyse and interpret physiological data obtained during exercise, and compare such data between time points, individuals and populations.
CLO5 : Demonstrate effective laboratory note taking and written communication skills.

Course Learning Outcomes	Assessment Item
CLO1 : Describe the function, regulation and interaction of physiological systems relating to exercise and metabolism.	• Quizzes • Final Exam
CLO2 : Analyse the individual and integrated physiological responses and adaptations to acute and longitudinal exercise training under both normal conditions and with external influencing factors.	• Laboratory Workbook • Quizzes • Final Exam
CLO3 : Demonstrate competence in the performance and interpretation of key exercise physiology assessment procedures.	• Laboratory Workbook • Quizzes • Final Exam
CLO4 : Analyse and interpret physiological data obtained during exercise, and compare such data between time points, individuals and populations.	• Laboratory Workbook • Final Exam
CLO5 : Demonstrate effective laboratory note taking and written communication skills.	• Laboratory Workbook

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

All course materials and course announcements are provided on the course learning management system, Moodle.

By accessing and using the ICT resources provided by UNSW, you are agreeing to abide by the

'Acceptable Use of UNSW ICT Resources' policy particularly on respect for intellectual property and copyright, legal and ethical use of ICT resources and security and privacy.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Laboratory Workbook Assessment Format: Individual Short Extension: Yes (2 days)	40%	Start Date: Not Applicable Due Date: 01/11/2024 05:00 PM
Quizzes Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Weeks 3, 5, 8 and 10 during Tutorial Class Time
Final Exam Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: Final Exam Period

Assessment Details

Laboratory Workbook

Assessment Overview

In this assessment you will develop a laboratory workbook. This assessment will require you to collect data from your laboratory classes and/or utlise data provided to you to complete a series of tasks. You will be required to fill in the laboratory workbook with collected data as well as interpret and use the data to provide exercise physiology outcomes and recommendations. Further guidance for this assessment will be provided on Moodle and in the workbook itself.

This assessment will be due in the final weeks of term. Feedback will be provided online within 10 working days.

Course Learning Outcomes

- CLO2 : Analyse the individual and integrated physiological responses and adaptations to acute and longitudinal exercise training under both normal conditions and with external influencing factors.
- CLO3 : Demonstrate competence in the performance and interpretation of key exercise physiology assessment procedures.
- CLO4 : Analyse and interpret physiological data obtained during exercise, and compare such data between time points, individuals and populations.
- CLO5 : Demonstrate effective laboratory note taking and written communication skills.

Detailed Assessment Description

In this assessment you will develop a laboratory workbook. This assessment will require you to

collect data from your laboratory classes and/or utilise data provided to you to complete a series of tasks. You will be required to fill in the laboratory workbook with collected data as well as interpret and use the data to provide exercise physiology outcomes and recommendations. The lab report will consist of eight (8) sections each with a number of questions. Each question will roughly reflect the practical content covered across the weekly laboratory and tutorial sessions. The workbook template will be provided to you on Monday of Week 7 and will be due on Friday of Week 8.

Feedback will be provided online within 10 working days of submission.

Detailed information about this assessment will be provided on the course Moodle page.

Assessment Length

8 Sections

Submission notes

Refer to Moodle for submission information.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.
If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see here.

For this assessment task, you may use AI-based software to research and prepare prior to completing your assessment. You are permitted to use standard editing and referencing functions in word processing software including spelling and grammar checking and reference citation generation in the creation of your submission. You must not use any functions that

generate or paraphrase passages of text, whether based on your own work or not.

Please note that your submission will be passed through an AI-generated text detection tool. If your marker has concerns that your answer contains passages of AI-generated text you may be asked to explain your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

Quizzes

Assessment Overview

Online quizzes will be conducted continuously throughout the course of the term. Each quiz will focus on a separate content area. The overall quiz result will be immediately provided, and individual question feedback will be provided either once all students have completed the quiz or within 10 working days.

For more specific information about the assessment requirements, due dates and grade contribution please refer to your course Moodle site.

Course Learning Outcomes

- CLO1 : Describe the function, regulation and interaction of physiological systems relating to exercise and metabolism.
- CLO2 : Analyse the individual and integrated physiological responses and adaptations to acute and longitudinal exercise training under both normal conditions and with external influencing factors.
- CLO3 : Demonstrate competence in the performance and interpretation of key exercise physiology assessment procedures.

Detailed Assessment Description

Online quizzes will be conducted in weeks 3, 5, 8 and 10 and each quiz will focus on the preceding content areas. You will gain to the online quiz during your scheduled tutorial time for that week. Please be on time for your tutorial as the quiz will begin 5 minutes past the hour and you will have 10 minutes to complete all the questions. Each quiz will consist of 10 questions.The overall quiz result will be immediately provided, and individual question feedback will be provided either once all students have completed the quiz or within 10 working days.

Each quiz will be worth 5% of your final grade for this assessment. For more specific information about the assessment requirements, due dates and grade contribution please refer to your course Moodle site.

Submission notes

Refer to Moodle for submission.

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
For more information on Generative AI and permitted use please see here.

It is prohibited to use any software or service to search for or generate information or answers. If such use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Final Exam

Assessment Overview

The final examination will consist of MCQ, short, and long answer responses and will cover content from the whole course. This exam will be 2 hours in duration and occur in the final exam period.

Course Learning Outcomes

- CLO1 : Describe the function, regulation and interaction of physiological systems relating to exercise and metabolism.
- CLO2 : Analyse the individual and integrated physiological responses and adaptations to acute and longitudinal exercise training under both normal conditions and with external influencing factors.
- CLO3 : Demonstrate competence in the performance and interpretation of key exercise physiology assessment procedures.
- CLO4 : Analyse and interpret physiological data obtained during exercise, and compare such data between time points, individuals and populations.

Detailed Assessment Description

The final examination will consist of MCQ, short, and long answer responses and will cover content from the whole course. This exam will be 2 hours in duration and occur in the final exam period.

Assessment Length

2 hours

Submission notes

Refer to Moodle for submission.

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
For more information on Generative AI and permitted use please see here.

It is prohibited to use any software or service to search for or generate information or answers. If such use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

General Assessment Information

Detailed instructions regarding assessments for this course are provided on the course Moodle page (or Open Learning).

For student information on results, grades, and guides to assessment see: https://student.unsw.edu.au/assessment

Grading Basis

Standard

Requirements to pass course

In order to pass this course students must:

- Achieve a composite grade of at least 50 out of 100
- Meet any additional requirements specified in the assessment details section and on Moodle.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	Introduction to Exercise Biochemistry
	Laboratory	Assessment of Resting Physiological State
	Tutorial	Understanding Force, Work and Power for Exercise
Week 2 : 16 September - 22 September	Lecture	Exericse Systems and Metabolism (Part 1)
	Laboratory	Assessment of Exercising Physiological State
	Tutorial	Application of Energy Systems to Exercise 1
Week 3 : 23 September - 29 September	Lecture	Energy Systems and Metabolism (Part 2)
	Laboratory	Energy Systems and Exercise
	Tutorial	Quiz 1 and Application of Energy Systems to Exercise 2
	Assessment	Quiz 1 In Tutorial Time
Week 4 : 30 September - 6 October	Lecture	Fuel Utilisation and Energy Expenditure during Exercise
	Laboratory	Assessment of Exercising Energy Expenditure - Efficiency and Economy of Movement
	Tutorial	Calculation of Resting Metabolic Rate and Exercise Energy Expenditure
Week 5 : 7 October - 13 October	Lecture	Muscle Physiology and Exercise
	Laboratory	No Laboratory Classes due to Public Holiday
	Tutorial	Quiz 2 and First Principles of Gas Exchange
	Assessment	Quiz 2 - In Tutorial Time
Week 6 : 14 October - 20 October	Other	NO SCHEDULED ACTIVITIES - FLEXIBILITY WEEK
Week 7 : 21 October - 27 October	Lecture	Neuromuscular Physiology and Exercise
	Laboratory	Assessment of Muscle Performance Properties
	Tutorial	Fundementals of Muscle Physiology
Week 8 : 28 October - 3 November	Lecture	Cardiovascular Physiology and Exercise
	Laboratory	Introduction to Electrocardiogram
	Tutorial	Quiz 3 and Introduction to ECG Interpretation
	Assessment	Quiz 3 - In Tutorial Time
	Assessment	Laboratory Workbook due Friday 5pm
Week 9 : 4 November - 10 November	Lecture	Respiratory Physiology and Exercise
	Laboratory	Assessment of Respiratory Response to Exercise
	Tutorial	Interpretation of Respiratory Response to Exercise
Week 10 : 11 November - 17 November	Lecture	Endocrine System and Exercise
	Laboratory	Collection and Assessment of Capillary Bloods
	Tutorial	Quiz 4 & Exam Preperation/Q&A

Attendance Requirements

Students are expected to attend all scheduled clinical, laboratory and tutorial classes. An Unsatisfactory Fail (UF) may be recorded as the final grade for the course if students fail to meet the minimum requirement of 80% attendance for clinical, laboratory and tutorial classes (unless otherwise specified on Moodle). Course attendance expectations are determined by the requirements of the program accrediting body. Where a student is unable to attend, they are advised to inform the course convenor as soon as possible but no later than 3 days after the scheduled class and, where possible, provide written documentation (e.g. medical certificate) to

support their absence.

General Schedule Information

The times and locations of classes can be found on myUNSW under Class Timetable.

The expected engagement for all UNSW 6UOC courses is 150 hours per term. This includes lectures, tutorials, readings, and completion of assessments and exam preparation (if relevant).

Course Resources

Recommended Resources

Recommended resources for this course are provided on the course Moodle page.

Additional Costs

Some SoHS courses have additional costs. Please check the course Moodle page for information about additional costs for this course.

Course Evaluation and Development

Student feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

We use student feedback from myExperience surveys to develop and make improvements to the course each year. We do this by identifying areas of the course that require development from both the rating responses and written comments. Please spare a few minutes to complete the myExperience surveys for this course posted at the top of the Moodle page at the end of term.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Nattai Borges		Rm 220 Wallace Wurth Building West		Email for availability	Yes	Yes
	Sam Williams					No	No

Other Useful Information

Academic Information

As a student of UNSW Medicine & Health you are expected to familiarise yourself with the contents of this course outline and the UNSW Student Code and policies and procedures related to your studies.

Student Code of Conduct

Throughout your time studying at UNSW Medicine & Health, you share a responsibility with us for maintaining a safe, harmonious and tolerant University environment. This includes within the courses you undertake during your degree and your interactions with the UNSW community, both on campus and online.

The UNSW Student Code of Conduct website provides a framework for the standard of conduct expected of UNSW students with respect to both academic integrity and your responsibility as a UNSW citizen.

Where the University believes a student may have breached the code, the University may take disciplinary action in accordance with the Student Misconduct Procedure.

The Student Conduct and Integrity Office provides further resources to assist you to understand your conduct obligations as a student at UNSW.

Academic Honesty and Plagarism

Academic integrity

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to the principle of academic integrity, and ethical scholarship of learning is fundamental to your success at UNSW Medicine & Health.

Plagiarism, contract cheating, and inappropriate use of generative AI undermine academic integrity and are not tolerated at UNSW. For more information see the Academic Integrity and Plagiarism toolkit.

In addition to the information you are required to review in your ELISE training, UNSW Medicine &

Health strongly recommends that you complete the Working with Academic Integrity module before submitting your first assessment task.

Referencing

Referencing is a way of acknowledging the sources of information that you use to research your assignments. Preferred referencing styles vary among UNSW Medicine & Health disciplines, so check your course Learning Management System (e.g. Moodle or Open Learning) page for information on preferred referencing styles.

For further information on referencing support and styles, see the Current Student Referencing page.

Academic misconduct and plagiarism

At UNSW, academic misconduct is managed in accordance with the Student Misconduct Procedure. Allegations of plagiarism are generally handled according to the UNSW Plagiarism Management Procedure. Plagiarism is defined in the UNSW Plagiarism Policy and is not tolerated at UNSW.

Use of Generative AI and other tools in your assessment

UNSW has provided guiding statements for the use of Generative AI in assessments. This will differ, depending on the individual assessment task, your course requirements, and the course stage within your program.

Your course convenor will outline if and how you can use Generative AI in each of your assessment tasks. Inappropriate use of generative AI is considered academic misconduct.

Options for the use of generative AI include: (1) no assistance (for invigilated assessments); (2) simple editing assistance; (3) drafting assistance; and (4) full assistance with attribution; and (5) Generative AI software-based assessments. See your individual assessment descriptions for the level of permitted use of generative AI for each task and see your course Moodle (or Open Learning) page for the full instructions on permitted use of generative AI in your assessment tasks for this course.

Instructions may include a requirement to submit the original generative AI responses, or drafts of your original work, or provide on request.

Submission of Assessment Tasks

Short extensions and special consideration

Short extension

UNSW has a short extension procedure for submission of assessment tasks. Not all tasks are eligible, and eligible tasks have a predetermined extension length. UNSW Medicine and Health have set School-level extension lengths for eligible assessment tasks. See your course assessment descriptions for more information.

Students must check the availability of a short extension in the individual assessment task information for their courses.

Short extensions do not require supporting documentation. They must be submitted through Special Consideration before the assessment task deadline. No late applications will be accepted.

Late penalties apply to submission of assessment tasks without approved extension.

Special consideration

In cases where illness, misadventure or other circumstances beyond your control will prevent you from submitting your assessment by the due date and you require an extension, you need to formally apply for Special Consideration through myUNSW.

UNSW has a **Fit to Sit/Submit rule**, which means that by sitting or submitting an assessment on the scheduled assessment date, you are declaring that you are fit to do so and cannot later apply for Special Consideration. Examinations include centrally timetabled examinations and scheduled, timed examinations and tests managed by your School.

Important information relating to Short Extension and Special Consideration is available here, including eligibility for Special Consideration, circumstances where students with Equitable Learning Plans can apply for Short Extensions and Special Consideration, and the appeals process.

Examinations

Information about the conduct of examinations in your course is provided on your course Moodle

page.

Timed online assessment tasks

If you experience a technical or connection problem during a timed online assessment, such as a timed quiz, you can apply for Special Consideration. To be eligible to apply you need to contact the Course Convenor and advise them of the issue immediately. You will need to submit an application for Special Consideration immediately, and upload screenshots, error messages or other evidence of the technical issue as supporting documentation. Additional information can be found on: https://student.unsw.edu.au/special-consideration

Other assessment tasks

Late submission of assessment tasks

UNSW has standard late submission penalties as outlined in the UNSW Assessment Implementation Procedure, with no permitted variation. All late assignments (unless extension or exemption previously agreed) will be penalised by 5% of the maximum mark per calendar day (including Saturday, Sunday and public holidays).

Late submissions penalties are capped at five calendar days (120 hours). This means that a student is not permitted to submit an assessment more than 5 calendar days (120 hours) after the due date for that assessment (unless extension or exemption previously agreed).

Failure to complete an assessment task

You are expected to complete all assessment tasks for your courses. In some courses, there will be a minimum pass mark required on a specific assessment task (a “hurdle task”) due to the need to assure clinical competency.

Where a hurdle task is applicable, additional information is provided in the assessment information on your course Moodle page.

Feedback on assessments

Feedback on your performance in assessment tasks will be provided to you in a timely manner. For assessment tasks completed within the teaching period of a course, other than a final assessment, feedback will be provided within 10 working days of submission, under normal circumstances.

Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

Any variation from the above information that is specific to an assessment task will be clearly indicated in the course and assessment information provided to you on your course Moodle (or Open Learning) page.

Faculty-specific Information

Additional support for students

The university offers a wide range of support services that are available for students. Here are some links for you to explore.

- The Current Students Gateway: https://student.unsw.edu.au
- Academic Skills and Support: https://student.unsw.edu.au/academic-skills
- Student support: https://www.student.unsw.edu.au/support
- Student Wellbeing, Health and Safety: https://student.unsw.edu.au/wellbeing

Mind Smart Guides are a series of mental health self-help resources designed to give you the psychological flexibility, resilience and self-management skills you need to thrive at university and at work.

- Mind Smart Guides: https://student.unsw.edu.au/mindsmart
- Equitable Learning Services: https://student.unsw.edu.au/els
- Guide to studying online: https://www.student.unsw.edu.au/online-study

Most courses in UNSW Medicine & Health use Moodle as your Learning Management System. Guidance for using UNSW Moodle can be found on the Current Student page. Difficulties with Moodle should be logged with the IT Service Centre.

- Moodle Support: https://student.unsw.edu.au/moodle-support

The IT Service Desk is your central point of contact for assistance and support with remote and on-campus study.

- UNSW IT Service Centre: https://www.myit.unsw.edu.au/services/students

Course evaluation and development

At UNSW Medicine & Health, students take an active role in designing their courses and their overall student experience. We regularly seek feedback from students, and continuous improvements are made based on your input. Towards the end of the term, you will be asked to participate in the myExperience survey, which serves as a source of evaluative feedback from students. Your input to this quality enhancement process is valuable in helping us meet your learning needs and deliver an effective and enriching learning experience. Student responses are carefully considered, and the action taken to enhance educational quality is documented in the myFeedback Matters section of your Moodle (or Open Learning) course page.

School Contact Information

School guidelines on contacting staff:

Course questions

All questions related to course content should be posted on Moodle or as directed by your Course Convenor.

In cases where email communication with course convenors is necessary, we kindly request the following:

- Use your official email address for any correspondence with teaching staff.
- We expect a high standard of communication. All communication should avoid using short-hand or texting language.
- Include your full name, student ID, and your course code and name in all communication.

Our course convenors are expected to respond to emails during standard working hours of Monday to Friday, 9am-5pm.

Administrative questions

If you have an administrative question about your program of study at the School please submit your enquiry online at UNSW Ask Us.

Complaints and appeals

Student complaints and appeals: https://student.unsw.edu.au/complaints

If you have any grievances about your studies, we invite you to address these initially to the Course Convenor. If the response does not meet your expectations, you may then contact the School Grievance Officer, Dr Chris Maloney (c.maloney@unsw.edu.au)