UNSW Course Outline

PHAR3251 Clinical and Experimental Pharmacology - 2024

Published on the 21 Mar 2024

General Course Information

Course Code : PHAR3251
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Medicine and Health
Academic Unit : School of Biomedical 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

This course deals with the pharmacology of different drug classes, with an emphasis on the mode of drug action, adverse drug effects, and pharmacokinetics. Effects of drugs on the major organ systems will be covered, focusing on the cardiovascular and endocrine systems, as well as

anti-cancer therapies. You will be introduced to emerging therapeutic strategies based on advances in our understanding of cellular physiology and drug action. The practicals will cover basic pharmacological methods from both clinical and experimental standpoints.

Course Aims

Building on basic pharmacology skills learned in PHAR2011, the objectives of this course are to:

a) extend knowledge and conceptual understanding of the use and action of various classes of drugs in the treatment of different human diseases

b) understand and apply pharmacokinetic parameters to predict drug concentration in, and clearance from, the human body

c) develop an appreciation of the need for further research to identify new drug targets for more effective therapies.

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.
- Progression plans for UNSW Science programs can be found on the UNSW Science website.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Discuss the clinical application of a range of drug classes to treat the major types of disease.
CLO2 : Describe the mechanism of action and adverse effects of specified drug classes.
CLO3 : Accurately perform experiments, record and draw conclusions from data to write a scientific communication.
CLO4 : Demonstrate an ability to work in teams to communicate scientific information effectively to a variety of audiences and in a variety of formats.

Course Learning Outcomes	Assessment Item
CLO1 : Discuss the clinical application of a range of drug classes to treat the major types of disease.	• Practical Report Type • End of session examination • Progress test • Student Poster Presentation
CLO2 : Describe the mechanism of action and adverse effects of specified drug classes.	• Practical Report Type • End of session examination • Progress test • Student Poster Presentation
CLO3 : Accurately perform experiments, record and draw conclusions from data to write a scientific communication.	• Practical Report Type • End of session examination • Progress test • Student Poster Presentation
CLO4 : Demonstrate an ability to work in teams to communicate scientific information effectively to a variety of audiences and in a variety of formats.	• Student Poster Presentation

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 (or Open Access).

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
Practical Report Type Assessment Format: Individual Short Extension: Yes (2 days)	20%	Start Date: Week 3 practical class Due Date: 27/03/2024 06:00 PM
End of session examination Assessment Format: Individual	40%	Start Date: In Exam period Due Date: In Exam period
Progress test Assessment Format: Individual	20%	Due Date: 15/03/2024 03:00 PM
Student Poster Presentation Assessment Format: Group	20%	Start Date: Week 1 Due Date: 18/04/2024 02:00 PM

Assessment Details

Practical Report Type

Assessment Overview

You will prepare a research manuscript using the class data collected during one of the practical classes during the course. A marking rubric will be used to evaluate each manuscript, and feedback will be provided via the learning management system.

Course Learning Outcomes

- CLO1 : Discuss the clinical application of a range of drug classes to treat the major types of disease.
- CLO2 : Describe the mechanism of action and adverse effects of specified drug classes.
- CLO3 : Accurately perform experiments, record and draw conclusions from data to write a scientific communication.

Detailed Assessment Description

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

Assessment Length

2000 words

Submission notes

A short extension of two days is available for this assessment task.

Assessment information

During the early phase of this written assessment task, you are permitted to use AI-software for initial planning, drafting key concepts and deciding on structure. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e., what is generated by the software should not be a part of your final submission. You will be required to include a brief reflection of how you used of AI-software in your final the submission.

Please note that your submission will be passed through an AI-text detection tool. If your marker has concerns that your written submission contains passages of AI-generated text that have not been sufficiently modified, 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

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

End of session examination

Assessment Overview

This assessment will be in the format of MCQs and short answer questions. Questions will test your ability to apply the knowledge acquired from lectures, collaborative learning sessions, practical classes and online resources. General cohort feedback will be provided via the learning management system.

Course Learning Outcomes

- CLO1 : Discuss the clinical application of a range of drug classes to treat the major types of disease.
- CLO2 : Describe the mechanism of action and adverse effects of specified drug classes.
- CLO3 : Accurately perform experiments, record and draw conclusions from data to write a scientific communication.

Detailed Assessment Description

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

Submission notes

No short extension is available for this assessment task.

Assessment information

All submitted answers must be your own work and in your own words. If use of AI-software is detected in your submission, it will be regarded as academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

Not Applicable

Progress test

Assessment Overview

The progress test is designed to test your knowledge of drugs used to treat important diseases, as well as your ability to apply the knowledge you have acquired from multiple lectures to clinically relevant scenarios and to identify areas of research on appropriate drug targets. The test will be in the form of multiple-choice and short answer questions. The questions will be based on the material covered in the lectures, online content, practical classes and collaborative learning sessions. Individual results and general cohort feedback will be posted on the learning management system when graded.

Course Learning Outcomes

- CLO1 : Discuss the clinical application of a range of drug classes to treat the major types of disease.
- CLO2 : Describe the mechanism of action and adverse effects of specified drug classes.
- CLO3 : Accurately perform experiments, record and draw conclusions from data to write a scientific communication.

Detailed Assessment Description

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

Submission notes

No short extension is available for this assessment task.

Assessment information

All submitted answers must be your own work and in your own words. If use of AI-software is detected in your submission, it will be regarded as academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

This is not a Turnitin assignment

Student Poster Presentation

Assessment Overview

You will work in teams to research a given topic for presentation as a scientific poster. Posters will be displayed and presented during a designated practical class time slot. You will be expected to answer questions relating to your group's given topic both individually and as a group. Poster presentations will be graded on scientific content, visual communication and verbal presentation. A marking rubric will be used to evaluate poster presentations and feedback will be provided via the learning management system.

Course Learning Outcomes

- CLO1 : Discuss the clinical application of a range of drug classes to treat the major types of disease.
- CLO2 : Describe the mechanism of action and adverse effects of specified drug classes.
- CLO3 : Accurately perform experiments, record and draw conclusions from data to write a scientific communication.
- CLO4 : Demonstrate an ability to work in teams to communicate scientific information effectively to a variety of audiences and in a variety of formats.

Detailed Assessment Description

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

Submission notes

Presentations take place in the practical class of Week 10. No short extension is available for this assessment task.

Assessment information

During the early phase of this assessment task, you are permitted to use AI-software for initial research, developing ideas and planning. However, you must develop or edit those ideas to such a significant extent that what is submitted is the work of you and/or your peers, i.e., what is generated by the software should not be a part of your final submission. You may be required to briefly describe how you used AI-software during the poster presentation session.

If a poster marker has concerns that your poster submission contains passages of AI-generated text that have not been sufficiently modified, you may be asked to explain your work. If you are unable to satisfactorily demonstrate your understanding of your poster you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties

Assignment submission Turnitin type

This is not a Turnitin assignment

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 : 12 February - 18 February	Lecture	Clinical Pharmacology
	Lecture	Pharmacokinetics
	Tutorial	Clinical Pharmacology
	Laboratory	Clinical Pharmacology
Week 2 : 19 February - 25 February	Lecture	Pharmacokinetics 2
	Lecture	Pharmacokinetics 3
	Tutorial	Pharmacokinetics
	Laboratory	Pharmacokinetics
Week 3 : 26 February - 3 March	Lecture	Non-targeted anti-cancer drugs
	Lecture	Targeted anti-cancer drugs
	Tutorial	Anti-cancer drugs
	Laboratory	Cancer Therapies 1
Week 4 : 4 March - 10 March	Lecture	Emerging anti-cancer drugs
	Lecture	Reproductive Pharmacology
	Tutorial	Reproductive Pharmacology
	Laboratory	Anti-cancer therapies 2
Week 5 : 11 March - 17 March	Lecture	Anti-viral drugs
	Lecture	Antibiotics
	Tutorial	Anti-viral drugs and antibiotics
	Laboratory	Poster Feedback
Week 7 : 25 March - 31 March	Lecture	Respiratory Pharmacology
	Lecture	Anti-hypertensive drugs
	Tutorial	Cardiovascular 1
	Laboratory	Antibiotics
Week 8 : 1 April - 7 April	Lecture	Heart failure therapies
	Lecture	Lipid lowering drugs
	Tutorial	Cardiovascular 2
	Laboratory	Beta-blockers
Week 9 : 8 April - 14 April	Lecture	Anti-thrombotic drugs
	Lecture	Diabetes drugs
	Tutorial	Cardiovascular 3 and diabetes
	Laboratory	Diuretic drugs
Week 10 : 15 April - 21 April	Lecture	Obesity drugs
	Lecture	Thyroid and bone
	Tutorial	Experimental Pharmacology
	Assessment	Poster Presentations

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

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, practicals, readings, and completion of assessments and exam preparation.

Course Resources

Recommended Resources

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

Additional Costs

There are no additional costs associated with 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	Marty Le Nedelec		WW3E		By appointment, requests via email	Yes	Yes
Lecturer	Matthew Perry		WW3E		By appointment, requests via email	No	No
Convenor	Jeff Holst				By appointment, requests via email	No	No
	Margaret Morris					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 your assessment tasks. Options for the use of generative AI include: (1) no assistance; (2) simple editing assistance; (3) planning assistance; and (4) full assistance with attribution.

You may be required to submit the original generative AI responses, or drafts of your original work. Inappropriate use of generative AI is considered academic misconduct.

See your course Moodle (or Open Learning) page for the full instructions for individual assessment tasks for your course.

Submission of Assessment Tasks

Short extensions and special consideration

Short extension

Commencing in Term 1, 2024, UNSW has introduced 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 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 short term events beyond your control affect your performance in a specific assessment task you may formally apply for Special Consideration through myUNSW.

UNSW has a **Fit to Sit rule**, which means that by sitting an examination on the scheduled 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-specific Information

Laboratory or practical class safety.

For courses where there is a laboratory or practical-based component, students are required to wear the specified personal protective equipment (e.g., laboratory coat, covered shoes, safety glasses) indicated in the associated student risk assessments. The student risk assessments will be provided on the course Moodle page and must be read and acknowledged prior to the class.

Master of Science in Health Data Science courses

Courses in the Master of Science in Health Data Science are hosted through Open Learning. Additional resources are available on the Health Data Science Student Hub.

School Contact Information

School guidelines on contacting staff:

Course questions

All questions related to course content should be posted on Moodle (or Open Learning) 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, Prof Nick Di Girolamo (n.digirolamo@unsw.edu.au).

For MSc. HDS students: School Grievance Officer, Dr Sanja Lujic (s.lujic@unsw.edu.au), Centre for Big Data Research in Health