



Faculty of Medicine and Health
School of Medical Sciences

PHAR3306

PHARMACOLOGY for OPTOMETRY

COURSE OUTLINE

TERM 2, 2021

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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 medicallsciences.med.unsw.edu.au)

PHAR3306 Course Information

UNIT OF CREDIT (UOC)

Pharmacology for Optometry is a 3rd year Science Course with 6 Units of Credit (UOC). This course builds on the knowledge you have gained in VISN2111 Ocular Anatomy and Physiology, PHSL2101 Physiology 1A and PHSL2201 Physiology 1B, which are prerequisite courses for PHAR3306.

OBJECTIVES OF THE COURSE

The aim of the course is to provide vision science and clinical optometry students with a strong knowledge base in pharmacology and therapeutics that will benefit them in their future career. This will be achieved by providing the essential knowledge of the basic principles of pharmacology with an emphasis on drug action from the molecular and cellular levels to tissue, organ and whole organism levels. The course will provide an understanding of the principles of drug action (pharmacodynamics) in terms of drug-receptor interaction, receptor theory and dose-response relationships. An introduction to receptor-mediated signal transduction, membrane receptors and autonomic pharmacology will be covered. The handling of drugs by the body through the processes of absorption, distribution, metabolism and excretion (pharmacokinetics) will be covered in some detail along with drug analysis and the adverse effects of drugs. In addition, the pharmacology of different drug classes that target the major organ systems will be explored.

COURSE LEARNING OUTCOMES

By the end of the course students should be able to:

1. describe basic pharmacological concepts underlying dose response relationships, sites of absorption, distribution and excretion, as well as chemical and biological factors affecting disposition and metabolism of drugs
2. explain drug activity through interactions with target molecules including receptors, transporters and enzymes.
3. describe the specific pharmacology of common drug classes including their mechanisms of action, indications, clinical uses, contraindications and major side effects.
4. demonstrate an understanding of the effects of drug toxicity and polypharmacy on the human body.
5. explain complex pharmacological information in formats appropriate to both clinical peers and the general public.

COURSE CONVENORS AND LECTURERS

Course Convenor:

Marty Le Nedelec

Wallace Wurth Building, room 261, phone: (02) 9065 2949

m.lenedelec@unsw.edu.au

Course Co-convenor:

Dr Matthew Perry

Wallace Wurth Building, level 3E

m.d.perry@unsw.edu.au

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

Lecturers in this course:

Dr T. Binder

w.binder@unsw.edu.au

Dr J. Carland

j.carland@unsw.edu.au

Dr A. Finch

a.finch@unsw.edu.au

A/Prof L. Liu

lu.liu@unsw.edu.au

Prof M. Morris

m.morris@unsw.edu.au

COURSE STRUCTURE AND TEACHING STRATEGIES

Learning activities occur on the following days and times:

- Lectures: 3 topics per week.
 - Live online lectures will occasionally be delivered Monday 2-3pm (as shown in the interactive timetable on Moodle). These lectures will be recorded.
 - All pre-recorded lectures will be available online prior to the week scheduled
- Tutorials:
 - Thursday 1-2 pm (Group A) or 2-3 pm (Group B) or 3-4 pm (Group C) or 4-5 pm (Group D), in Weeks 1-5, 7-10.
 - Tutorials will be either delivered live via Teams or will be a self-directed learning activity
- Applied Pharmacology Sessions:
 - Tuesday 9am – 12pm. 9-10am will be utilised for preparation work for the practical session (online activities) prior to live online delivery of the Applied Pharmacology Sessions 10am – 12pm.
 - Week 1 (groups A, B, C, D); weeks 2, 4, 7 & 9 – groups A & B; weeks 3, 5, 8 & 10 – groups C & D
- Online Q&A sessions each week (a suitable time will be arranged)
- Mid-session exam: Week 5 (covers Weeks 1-4); Monday 28th June 2021, 2-3 pm (Sydney Time); one-hour online exam
- Information regarding weekly activities will be available via the interactive timetable on Moodle and also in weekly announcements

Students are reminded that UNSW recommends that a 6 units-of-credit course should involve about 150 hours of study and learning activities. The formal learning activities are

approximately 53 hours throughout the term and students are expected (and strongly recommended) to do at least the same number of hours of additional study.

Lectures will provide you with the concepts and theory essential for an understanding of Pharmacology for Optometry. To assist in the development of applied pharmacology skills, tutorials and applied pharmacology classes will be held. These classes allow students to engage in a more interactive form of learning than is possible in the lectures.

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 in optometry or related disciplines. This is achieved through student-centred learning by the use of active learning, student collaboration and self-directed online activities. The applied pharmacology sessions will be directly related to lecture material and will present course content in a collaborative problem-based learning style. Students are encouraged to also undertake self-directed learning via other resources such as textbooks, literature references and web-based sources as well as the provided online tutorials.

TEXTBOOKS AND OTHER RESOURCES

Recommended Primary Texts:

- Katzung GG. Basic & Clinical Pharmacology. 14th Edition (2018); New York: McGraw-Hill.
- Brunton LL, Hilal-Dandan R, Knollmann BC. Goodman and Gilman's the Pharmacological Basis of Therapeutics. 13th Edition (2018). New York: McGraw-Hill Medical.

Textbooks will be available at the UNSW bookshop. They are also available in print and online formats from the library. Links to additional sources to supplement the material covered in the lectures will be placed on the lecture pages on Moodle.

ASSESSMENT PROCEDURES

- | | |
|---|------------|
| • Online Quiz (4 online quizzes; 2.5% each) | 10% |
| • Midsession examination (1 hour duration) | 25% |
| • Group project | 15% |
| • End of session examination (2 hours duration) | 50% |

A penalty will apply for late submissions of assessment tasks (10% per day).

Online quiz

There are 4 online quizzes will be held in Week 2, 4, 8, 10. Feedback will be given immediately afterwards. Each quiz will be based on the materials covered so far in the course, including lectures, applied pharmacology sessions and tutorials.

Examinations

The *midsession examination* will be held in a lecture slot at **2 pm on Monday 28th of June**

(Please refer to the course timetable on Moodle). This exam will give you feedback on how you are progressing in the course.

The *end of session examination* will be held during the official examination period.

Exam questions will be based on the material covered in the lectures, applied pharmacology sessions and tutorials across the whole course.

Final exam period for Term 2, 2021 is Friday, 13 Aug to Thursday, 26 Aug

Supplementary exam period for Term 2, 2021 is Monday, 6 September to Friday, 10 September

Group Project

Student will work in teams of five to create a product (video, webpage, pamphlet etc) to inform the public about a pharmacological topic. All members of the group are required to contribute to this task. You need to research the topic and search for relevant information based on the latest literature. The product will be graded on scientific content, structure, design, critical analysis and presentation. The final product must be submitted via Moodle by the **due date of Friday 23rd July (12pm)**. Details regarding the group project (group allocation, topic titles, marking criteria, etc) and all other assessment tasks will be given during the first applied pharmacology session in week 1 as well as being available on Moodle.

COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students about the courses offered in the Department of Pharmacology and continual improvements are made based on this feedback. The UNSW MyExperience survey is the way in which student feedback is evaluated and significant changes to the course will be communicated to subsequent cohorts of students. Also, a staff-student liaison group will be set up and students are invited to become class representatives, in which they seek feedback from their colleagues and meet with academic staff to discuss any issues that arise. Based on feedback given in these meetings changes will be implemented during the course and for future years. We appreciate student feedback because we are always looking for ways to improve your learning experience in this course.

Previous students told us that :

Unfortunately, in term 2 2020 the myexperience survey didn't ask students to comment on the best things about the course or about what could be improved so we cannot tell you what all the students thought of the course. The student reps reported that the course was very well organised and there was a very good level of communication between the students and the course convenors. They also gave positive feedback regarding the learning activities and stated that there was an engaging and effective learning environment throughout this course. Students appreciated being able to work at their own pace and receiving weekly announcements making it clear what activities were coming up and what topics were covered each week. Having lecture recordings and notes available before the start of each week was something that was important to students.

We have responded to this feedback by:

This year we have introduced applied pharmacology classes to replace the practical classes. These classes will move the structure from analysing data to a more case-based learning style with a focus on the therapeutic use of drugs. The decision to change the style of teaching was based on our desire to ensure our teaching is engaging, interesting and applied. We have also introduced weekly Q&A sessions which will allow students to ask questions in an informal online setting. We will also continue to have weekly announcements which will clearly detail the activities of the following week.

GENERAL INFORMATION

The Department of Pharmacology is part of the School of Medical Sciences and is within the Faculty of Medicine and Health. It is located in the Wallace Wurth building. General inquiries can be made online via UNSW Student Portal Web Forms: <http://unsw.to/webforms>.

Professor Margaret Morris is Head of Department and appointments to meet with her may be made via email (m.morris@unsw.edu.au).

Postgraduate degrees

The Department of Pharmacology offers students the opportunity to enter the following graduate programs:

Research Masters: In Pharmacology. Contact the post-graduate co-ordinators A/Prof Pascal Carrive (p.carrive@unsw.edu.au) and Dr Nicole Jones (n.jones@unsw.edu.au)

Doctorate (Ph.D): In Pharmacology. Contact the post-graduate co-ordinators A/Prof Pascal Carrive (p.carrive@unsw.edu.au) and Dr Nicole Jones (n.jones@unsw.edu.au).

Official Communication

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

Attendance Requirements

For details on the Policy on Class Attendance and Absence see [Advice for Students](#) and the [Policy on Class Attendance and Absence](#).

Special Consideration

Please see [UNSW-Special Consideration](#) and [Student Advice-Special Consideration](#)

If you unavoidably miss the progress exam in PHAR3306, you must lodge an online application via myUNSW for special consideration. If your request for consideration is granted a substitution for this assessment will be organised which will take the form of increased weighting of the final exam.

Student Support Services

Details of the available student support services can be found at [Student Advice-Student support services](#).

Student support service unit, teaching technology or student system regarding online learning:

- Transitioning to Online Learning <https://www.covid19studyonline.unsw.edu.au/>
- Guide to Online Study <https://student.unsw.edu.au/online-study>
- UNSW Student Life Online <https://student.unsw.edu.au/help#main-content>

Equitable Learning Services: Details available at <https://student.unsw.edu.au/els>

Appeal Procedures

Details can be found at [Student-Advice-Reviews and Appeals](#)

Academic Integrity and Plagiarism

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](#)