



UNSW Course Outline

PHAR2011 Introductory Pharmacology and Toxicology - 2024

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General Course Information

Course Code : PHAR2011

Year : 2024

Term : Term 3

Teaching Period : T3

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 will cover 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 chemistry, 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. The laboratory classes will involve students performing real and computer-simulated pharmacological experiments.

Course Aims

The objectives of the course are for you to:

- develop an understanding of how drugs/therapeutics are developed, work and are used safely.
- cultivate skills that allow you to critically analyse, interpret and effectively communicate pharmacological data and literature.
- acquire skills to be able to design and/or execute experiments or other activities to address pharmacological scenarios.

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
CL01 : Describe basic pharmacological concepts relating to pharmacokinetics and pharmacodynamics.
CL02 : Describe the specific pharmacology of common drug classes including their mechanisms of action, indications, clinical uses, contraindications, and major adverse effects.
CL03 : Describe the basic principles of toxicology, including the mechanisms by which excess exposure to certain drugs, toxins, chemicals and poisons can lead to toxic effects.
CL04 : Effectively communicate scientific information
CL05 : Apply analytical skills to pharmacological data.

Course Learning Outcomes	Assessment Item
CL01 : Describe basic pharmacological concepts relating to pharmacokinetics and pharmacodynamics.	<ul style="list-style-type: none">• Quizzes• Data Analysis and Critical Evaluation Activities• Drug Development Elevator Pitch• Final examination
CL02 : Describe the specific pharmacology of common drug classes including their mechanisms of action, indications, clinical uses, contraindications, and major adverse effects.	<ul style="list-style-type: none">• Quizzes• Drug Development Elevator Pitch• Final examination
CL03 : Describe the basic principles of toxicology, including the mechanisms by which excess exposure to certain drugs, toxins, chemicals and poisons can lead to toxic effects.	<ul style="list-style-type: none">• Quizzes• Final examination
CL04 : Effectively communicate scientific information	<ul style="list-style-type: none">• Data Analysis and Critical Evaluation Activities• Drug Development Elevator Pitch
CL05 : Apply analytical skills to pharmacological data.	<ul style="list-style-type: none">• Data Analysis and Critical Evaluation Activities• Quizzes• Final examination

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.

Additional Course Information

Course Communication

The course convenors should be contacted via the course email, phar2011@unsw.edu.au. The convenors will reply to general questions or concerns within 2 to 3 business days, Monday through Friday, during business hours (8:30 AM-5:30 PM). Questions can also be asked via the discussion boards on the course Moodle site.

All digital correspondence, including e-mail and discussion board messages, should be respectful, courteous, and polite.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Quizzes Assessment Format: Individual	25%	Start Date: Not Applicable Due Date: During Workshop, Monday week 2, 4, 7 and 10
Data Analysis and Critical Evaluation Activities Assessment Format: Individual Short Extension: Yes (2 days)	20%	Due Date: Part A: Friday 11th October 5pm. Part B: Monday 28th October 5pm.
Drug Development Elevator Pitch Assessment Format: Group	15%	Due Date: Elevator pitch in the week 9 workshop (Monday) and Report Friday 5pm week 9
Final examination Assessment Format: Individual	40%	Start Date: Official Exam Period Due Date: Official Exam Period

Assessment Details

Quizzes

Assessment Overview

Four in-class 30 min quizzes, consisting of MCQs and SAQs, will be distributed across the timetable to assist students in revising the course content and becoming familiar with the MCQ/

SAQ format. Feedback for MCQs will be available via Inspira, and generalised cohort feedback will be given for SAQs via Moodle once marked.

Course Learning Outcomes

- CL01 : Describe basic pharmacological concepts relating to pharmacokinetics and pharmacodynamics.
- CL02 : Describe the specific pharmacology of common drug classes including their mechanisms of action, indications, clinical uses, contraindications, and major adverse effects.
- CL03 : Describe the basic principles of toxicology, including the mechanisms by which excess exposure to certain drugs, toxins, chemicals and poisons can lead to toxic effects.
- CL05 : Apply analytical skills to pharmacological data.

Detailed Assessment Description

More details will be provided in the "Assessments Hub " on the course Moodle site.

Assessment Length

15-30 minutes

Submission notes

This test will be delivered via the Inspira platform

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](#).

Data Analysis and Critical Evaluation Activities

Assessment Overview

In this task you will be analysing pharmacological data you collected in the practical classes or provided to you in the workshops. Using the worksheets provided you will then communicate findings and the conclusions that can be drawn for the data. The submission of the worksheets will be distributed across the term. Written feedback will be provided.

Course Learning Outcomes

- CL01 : Describe basic pharmacological concepts relating to pharmacokinetics and pharmacodynamics.
- CL04 : Effectively communicate scientific information
- CL05 : Apply analytical skills to pharmacological data.

Detailed Assessment Description

More details will be provided in the "Assessments Hub " on the course Moodle site.

Assessment Length

2 x worksheets

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can 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](#).

Drug Development Elevator Pitch

Assessment Overview

In your team you will identify a target and approach for the treatment of a condition you have been assigned. You will present this as a 3 minute 'elevator pitch' and short report in the second half of the term. Team members will also provide peer evaluation via the 'Moodle Team Evaluation' tool for each members' individual contribution to the team and their grades will be moderated via this tool. Written feedback on the pitch and report will be provided.

Course Learning Outcomes

- CL01 : Describe basic pharmacological concepts relating to pharmacokinetics and pharmacodynamics.

- CLO2 : Describe the specific pharmacology of common drug classes including their mechanisms of action, indications, clinical uses, contraindications, and major adverse effects.
- CLO4 : Effectively communicate scientific information

Detailed Assessment Description

More details will be provided in the "Assessments Hub " on the course Moodle site.

Assessment Length

3 minute elevator pitch and 500 word report

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can 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](#).

Final examination

Assessment Overview

This assessment will be in the format of MCQ and short answer questions. Questions will be based on the material covered in the lectures, practical classes and workshops. Generalised cohort feedback will be provided after the exam via the learning management system.

Course Learning Outcomes

- CLO1 : Describe basic pharmacological concepts relating to pharmacokinetics and pharmacodynamics.
- CLO2 : Describe the specific pharmacology of common drug classes including their mechanisms of action, indications, clinical uses, contraindications, and major adverse effects.
- CLO3 : Describe the basic principles of toxicology, including the mechanisms by which excess

exposure to certain drugs, toxins, chemicals and poisons can lead to toxic effects.

- CLO5 : Apply analytical skills to pharmacological data.

Detailed Assessment Description

More details will be provided in the "Assessments Hub " on the course Moodle site.

Assessment Length

2 hours plus 15 minutes

Submission notes

This will be a centrally timetabled invigilated exam delivered using the Inspira platform

Assignment submission Turnitin type

This is not a Turnitin assignment

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](#).

General Assessment Information

Detailed instructions regarding assessments for this course are provided on the course Moodle page.

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	<ul style="list-style-type: none"> • Introduction to Pharmacology • Pharmacodynamics 1: Drug targets and Signalling
	Laboratory	Pharmacology laboratory skills
	Workshop	<ul style="list-style-type: none"> • Welcome to Introductory Pharmacology and Toxicology • Target Identification addressing an unmet clinical need • Analytical and critical analysis skills development activities
Week 2 : 16 September - 22 September	Lecture	<ul style="list-style-type: none"> • Pharmacodynamics 2: Affinity and Efficacy • Pharmacodynamics 3: Potency
	Laboratory	Concentration response: Agonists (Section W10B and W14B)
	Workshop	<ul style="list-style-type: none"> • Quiz A • Pharmacodynamics: Targets & Signalling • Analytical and critical analysis skills development activities
Week 3 : 23 September - 29 September	Lecture	<ul style="list-style-type: none"> • Pharmacodynamics 4: Selectivity • Pharmacokinetics 1: Absorption and routes of administration
	Laboratory	Concentration response: Agonists (Section W10A)
	Workshop	<ul style="list-style-type: none"> • Pharmacodynamics: Affinity, Efficacy and Potency • Analytical and critical analysis skills development activities
Week 4 : 30 September - 6 October	Lecture	<ul style="list-style-type: none"> • Pharmacokinetics 2: Distribution and Metabolism I • Pharmacokinetics 3: Metabolism II
	Laboratory	Concentration response: Antagonists (Section W10B, W14B)
	Workshop	<ul style="list-style-type: none"> • Quiz B • Pharmacodynamics: Selectivity • Analytical and critical analysis skills development activities
Week 5 : 7 October - 13 October	Lecture	<ul style="list-style-type: none"> • Pharmacokinetics 4: Elimination • Drug Safety
	Laboratory	Concentration response: Antagonists (Sections W10A)
	Online Activity	Self-directed activities <ul style="list-style-type: none"> • Autonomic Nervous System
Week 7 : 21 October - 27 October	Lecture	<ul style="list-style-type: none"> • Autonomic Pharmacology 1 • Autonomic Pharmacology 2
	Laboratory	Ion Trapping & Drug Excretion (Sections W10B and W14B)
	Workshop	<ul style="list-style-type: none"> • Quiz C • Pharmacokinetics and Drug Safety • Analytical and critical analysis skills development activities
Week 8 : 28 October - 3 November	Lecture	<ul style="list-style-type: none"> • Modulation of Neurotransmitters to Treat Disease 1: Serotonin and Noradrenaline • Modulation of Neurotransmitters to Treat Disease 2: Dopamine
	Laboratory	Ion Trapping & Drug Excretion (Section W10A)
	Workshop	<ul style="list-style-type: none"> • Autonomic Pharmacology • Analytical and critical analysis skills development activities
Week 9 : 4 November - 10 November	Lecture	<ul style="list-style-type: none"> • Inflammation 1: Introduction to autacoids and their role in inflammation • Inflammation 2: The treatment of the inflammatory phase of asthma
	Laboratory	Autacoids (Section W10B and W14B)
	Workshop	<ul style="list-style-type: none"> • Elevator Pitch • Neurotransmitters
Week 10 : 11 November - 17 November	Lecture	<ul style="list-style-type: none"> • Inflammation 3: The treatment of arthritis • Toxicology
	Laboratory	Autacoids (Section W10A)
	Workshop	<ul style="list-style-type: none"> • Quiz D • The treatment of Inflammation • Analytical and critical analysis skills development activities

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, ~12 hours per week. This includes lectures, workshops, readings, and completion of assessments and exam preparation.

Course Resources

Recommended Resources

Recommended textbook:

Katzung et al., **Basic and Clinical Pharmacology**. 15th ed. McGraw-Hill. ©2021 ([This e-book is available through UNSW Library Resources database: Access Medicine](#))

Additional Resources:

Rang and Dale's Pharmacology. 9th ed. Churchill Livingstone/Elsevier. ©2020. eBook version of this text book is available via the UNSW library.

Goodman and Gilman's The Pharmacological Basis of Therapeutics. 13th ed. McGraw-Hill Companies, ©2018. ([This e-book is available through UNSW Library Resources database: Access Medicine](#)):

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. Details of changes made to this course based

on previous student feedback can be found on Moodle.

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	Angela Finch		Wallace Wurth Building	9065 1017	By appointment using course email phar2011@unsw.edu.au	No	Yes
	Brendan Wilkins		Wallace Wurth Building		By appointment using course email phar2011@unsw.edu.au	No	No
	Gabrielle van der Kraan		Wallace Wurth Building		By appointment using course email phar2011@unsw.edu.au	Yes	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 Plagiarism

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-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:

School Grievance Officer, Prof Nick Di Girolamo (n.digirolamo@unsw.edu.au)

Master of Science in Health Data Science programs: School Grievance Officer, Dr Sanja Lujic (s.lujic@unsw.edu.au)