UNSW Medicine
Postgraduate programs in
Pharmaceutical Medicine
UNSW Sydney is ranked 45th in the 2017-2018 QS World Universities Rankings.

Best and brightest

Attracting the brightest students who can learn alongside world leading researchers and clinicians.

Delivered by industry experts

Opportunities for training and placement in industry.

Flexible professional training

Expanding career opportunities through up-to-date training.

Global online community

Networking with students and graduates throughout the Asia-Pacific region.

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Welcome from the Dean

It is my pleasure to introduce you to Medicine at UNSW Sydney (The University of New South Wales). UNSW Medicine is one of the world’s top 50 medical faculties and attracts brilliant people from around the world. Our students learn alongside world-leading researchers, clinicians, industry and government-based experts. They also are an intrinsic part of the Faculty’s close affiliation with the nation’s finest hospitals, research institutes and health care organisations.

UNSW Medicine recognises that its students must be alive to rapid innovation so as to meet the formidable global, national and local challenges that human disease continues to impose on society. To improve patient care, UNSW Medicine is changing the way medicine is taught and practised; it is also questioning traditional forms of healthcare delivery.

If we are to capitalise on new technologies we must be able to understand their potential and their limitations. Our graduates will be equipped with expertise to cope with these advances and with new patterns of health and disease as well as changing community expectations.

At the School of Medical Sciences, UNSW Medicine welcomes you to our global community where as alumni of this University you will contribute to the effective, efficient and equitable delivery of therapeutics to patients. We are committed to helping you develop the knowledge, skills and values necessary to further your career and welcome you most warmly.

Professor Rodney Phillips
Dean, UNSW Medicine

Welcome from Head of School

Pharmaceutical medicine is the medical scientific discipline concerned with the discovery, development, evaluation, registration, monitoring and clinical delivery of newly developed medicines for therapeutic treatment. This program is administered by the School of Medical Sciences.

The Master of Pharmaceutical Medicine program provides pathways into different careers in the pharmaceutical/biotechnology/medical technology industries with course offerings that allow students to gain sufficient knowledge and skills for those careers, including regulatory affairs, pharmacovigilance, clinical trials, compliance, health technology assessment, medical affairs or medical science liaison roles.

The program supports the federal government’s innovation package: the program is a unique hub, linking academia with the pharmaceutical industry and government health departments and can be used as a focus to further strengthen these linkages.

We have designed the Pharmaceutical Medicine program with a focus on Australia and the Asia-Pacific region – this provides a breadth of knowledge which is undoubtedly a major strength for our graduates, especially given our geographical location.

Another key advantage of the program is the focus on student-centred learning, collaboration and the development of skills needed for staff in the rapidly changing pharmaceutical industry. Students are exposed to real-world problems and develop their business writing skills by producing documents such as analytical reports, clinical trial protocols and regulatory submissions.

We hope you find our program meets your future career aspirations and would be happy to discuss your plans further with you.

Professor Peter Gunning
Head of School, School of Medical Sciences
The pharmaceutical development process

1. Drug Discovery, Development and Pre-clinical Testing
2. Clinical Trials
3. Registration
4. Marketing Approval
5. Reimbursement
6. Marketing, Post-market Safety, PV, further Clinical Studies

Careers in pharmaceutical medicine

**Developmental Scientist**
- There are many roles for research and development scientists in a pharmaceutical company including being involved in the initial development and screening of potential therapeutic compounds or testing the efficacy and safety of the compounds.

**Clinical Research Associate**
- Clinical research staff oversee clinical trials. They are involved in designing protocols, working with physician investigators, training clinic personnel and evaluating clinical data.

**Regulatory Affairs Associate**
- Regulatory affairs specialists write and submit the product dossiers and liaise with the regulatory agencies, head office and manufacturing sites to resolve any questions prior to approval of new therapeutic products.

**Pharmacovigilance Associate**
- Pharmacovigilance associates work in the area of drug safety and are involved in the collection, detection, assessment, monitoring and prevention of adverse effects with therapeutic products.

**Health Economist**
- Health economists are involved in the pricing negotiations for products. They design, collect and evaluate data pertaining to the cost effectiveness of the products and liaise with the pricing authorities to find an acceptable market price for the product.

**Medical Affairs Manager/ Medical Science Liaison**
- MSLs are field-based therapeutic area specialties. They interact with physicians and scientists in the health care community to maximize proper use of therapeutic products.
Pharmaceutical Medicine program

The Pharmaceutical Medicine program produces graduates with the knowledge and skills to make a meaningful contribution to medicines research, development and access, working across the pharmaceutical industry, academia and government, with the goal of improving the health and wellbeing of the community.

"Based on what I learnt through the UNSW Masters program, I believe I have been able to operate more effectively and confidently in the various roles I have held in the pharmaceutical industry to date. I have found my understanding of the drug development process and the way different departmental functions link together particularly invaluable for my current position within Regulatory Affairs. I thoroughly enjoyed this course and I recommend it to anyone else who wishes to gain a greater understanding of the pharmaceutical industry."

Larissa Hammer
Regulatory Affairs

Pharmaceutical medicine is the medical scientific discipline concerned with the discovery, development, evaluation, registration, monitoring and medical aspects of developing medicines for therapeutic treatment.

Our Pharmaceutical Medicine program was established 21 years ago and has an excellent track record of providing postgraduate level education in the discipline of pharmaceutical medicine. Our program attracts students from a wide range of backgrounds including those who have studied medical science, medicinal chemistry, pharmacy, medicine, law, nursing, veterinary science and medical research. Students come from a wide geographical area - across Australia, New Zealand and Asia-Pacific.

UNSW programs in Pharmaceutical Medicine have been designed to ensure students are well equipped with the skills, knowledge and insights needed to competently perform their roles and future leadership responsibilities in the industry.

Opportunities may take students to careers in pharmaceutical product discovery and development; preclinical or clinical safety testing; regulatory affairs positions within a pharmaceutical company or with a regulatory agency or government health department; part of a team evaluating new products; clinical trial management; medical and scientific communications; pharmacovigilance; product compliance; medical affairs; health technology assessment; or senior managerial positions within biopharmaceutical and medical technology businesses.

Dr Orin Chisholm
Program Authority, Pharmaceutical Medicine program
UNSW Pharmaceutical Medicine advisory committee

Adelle Kuehn
- BPharm
- Medical Science Liaison, Merck
- Student Advisor

David Grolman
- MBCh FCS(SA)
- Medical Director, Pfizer Pharmaceuticals
- President, APPA

Ric Day
- MBBS MD FRACP
- Professor of Clinical Pharmacology UNSW & St Vincent’s Clinical School, UNSW

Eugene Salole
- PhD MPH
- Principal and CEO, Value-Based Access Pty Ltd, Sydney
- Conjoint Professor, UNSW Medicine

Liz de Somer
- BN MMedSc(Drug Develop)
- Director, Policy and Advocacy, Medicines Australia

John Skerritt
- BSc (Hons 1, Univ. Medal) PhD FTSE FIPAA (Vic)
- Deputy Secretary for Health Products Regulation, Australian Department of Health
- Adjunct Professor, Universities of Queensland and Canberra

Victoria Elegant
- MBBS DRCOG FFPM
- Vice President and JAPAC Region Head Medical, Amgen

School governance committee

Peter Gunning
- BSc (Hons I) PhD
- Head of School, School of Medical Sciences, UNSW
- Head, Oncology Research Unit, SoMS, UNSW Medicine
- Board Member, Scientific Advisory Board, Novogen Ltd
- Board Member, Cancer Institute of NSW

Robyn Richmond
- BA MA MHEd PhD DSc
- Associate Dean (Postgraduate Coursework), UNSW Medicine
- Professor, School of Public Health and Community Medicine, UNSW Medicine

Orin Chisholm
- BSc (Hons) GCULT PhD
- Program Authority and Senior Lecturer, School of Medical Sciences, UNSW
- Member, Gene Technology Technical Advisory Committee

Margaret Morris
- BSc PhD
- Professor of Pharmacology, School of Medical Sciences, UNSW
- Head, Environmental Determinants of Obesity Research

John Skerritt
- MBBS MD FRACP
- Professor of Clinical Pharmacology, UNSW & St Vincent’s Clinical School, UNSW

Richard Vickery
- BSc (Hons) PhD
- Senior Lecturer and Deputy Head of School (Teaching), School of Medical Sciences, UNSW

Johnson Liu
- BSc MSc PhD
- Lecturer, School of Medical Sciences, UNSW
Our teachers, tutors and industry specialists

Industry specialists

- Mr Adam Gordois
- Mr Allan Arforth
- Ms Albertine Jean-Louis
- Dr Andrew Heaton
- Dr Belinda Butcher
- Ms Candy Braithwaite
- Mr Cliff Spong
- Dr David Brown
- Mr David Grainger
- Dr David Kingston
- Mr David Wilson
- Ms Deborah Monk
- Ms Elizabeth de Somer
- Prof Eugene Salole
- Dr Franziska Loehrer
- Dr George Papadopoulos
- Ms Hanan McLachlan
- Dr Helen Critchley
- Ms Josie Gabites
- Dr Margaret Doherty
- Mr Matthew Britland
- Dr Mike Parker

Academic experts

- Dr Charlotte Lemech
- Dr Greg Smith
- Dr Johnson Liu
- Dr Michael Kennedy
- Dr Orin Chisholm
- Prof Peter Gunning
- Prof Richard Day
- Dr Sheri Nixdorf
- Dr Wendy Lipworth

TGA experts

- Dr Amanda Craig
- Dr Claire Behm
- Dr Glenn Smith
- Dr Kevin Grant
- Dr Mark McDonald
- Ms Michelle McNiven
- Mr Mounir Mina

Our learning and teaching

The Pharmaceutical Medicine program has been designed to meet the needs of students wishing to undertake part-time education and training while still in employment. A key feature of our learning and teaching is its student-centred focus on individual and collaborative learning experiences.

Our approach is to provide quality learning that is relevant to the real world. This is enhanced by students having access to tutors with specialist knowledge and experience in therapeutic development.

Students normally undertake 2 courses running in parallel per semester. Each course is only delivered once per year. All Pharmaceutical Medicine courses (core and elective) are worth six Units of Credit.

Optional field trips

An optional 2 day on-site, interactive session at the Therapeutic Goods Administration facilities in Canberra is organised once per year to coincide with the Regulatory Affairs course (PHAR9104) and is highly recommended.

Webinar sessions

Webinar sessions are held out of normal business hours, online between 8pm and 9:30pm Sydney time on weekdays. These sessions provide students with the opportunity to ask questions and resolve problems they have faced with the course materials. Students may also be required to deliver presentations in these sessions.

Course evaluation and development

Each year feedback is sought through the myExperience survey system from students about the courses offered in Pharmaceutical Medicine and continual improvements are made and fed back to students based on this feedback.

Non-award study

Those wishing to undertake selected courses for professional development may elect to study as non-award students at UNSW Sydney. This option allows students to select individual courses for study which will not contribute to the conferral of a degree.

Recognition of prior learning

Students who have undertaken study of similar postgraduate courses may elect to have their studies recognised as prior learning. This allows students to obtain credit for these courses, if appropriate.

Research programs in the School of Medical Sciences

The School of Medical Sciences (SoMS) offers a range of Masters by Research and Doctoral programs. Research degrees may be undertaken in any aspect of pharmaceutical medicine, medical education, pharmacology, pathology, anatomy or physiology.

Please visit medicalsciences.med.unsw.edu.au/students/postgraduate-research for further information about our research programs.

Students may also consider undertaking a Professional Doctorate in their workplace after completion of the Master of Pharmaceutical Medicine. For further information, please contact the Pharmaceutical Medicine Unit.
Pharmaceutical Medicine Program outline

<table>
<thead>
<tr>
<th>Program</th>
<th>Total number of courses</th>
<th>Program Duration</th>
<th>Course Selection</th>
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</thead>
<tbody>
<tr>
<td>Master of Pharmaceutical Medicine (9370)</td>
<td>8 courses (48 units of credit)</td>
<td>2 years (part-time) or 1 year (full-time)</td>
<td>3 core courses 1 course for each of the 3 core options 2 electives</td>
</tr>
<tr>
<td>Graduate Diploma in Pharmaceutical Medicine (5371)</td>
<td>6 courses (36 units of credit)</td>
<td>1.5 years (part-time)</td>
<td>Any 6 courses</td>
</tr>
<tr>
<td>Graduate Certificate in Pharmaceutical Medicine (7370)</td>
<td>4 courses (24 units of credit)</td>
<td>1 year (part-time)</td>
<td>Any 4 courses</td>
</tr>
</tbody>
</table>

Please note that direct entry is only granted into the Master of Pharmaceutical Medicine program, with the Graduate Diploma and Graduate Certificate only offered as early exit options from the Masters program – see Program structure below.

Entry requirements can be found on page 20.

DIRECT ENTRY

Program Code: 9370
4 year degree in cognate discipline OR higher qualification OR 3 yr degree in cognate discipline + 1 yr experience

- Successful completion of 8 courses:
  - PHAR9101
  - PHAR9121
  - PHAR9122
  - PHAR9104
  - PHAR9113
  - PHAR9120
  - PHAR9116
  - PHAR9114
  - Plus 2 electives

- Successful completion of 4 courses: Transfer to Program code: 7370
- Successful completion of 6 courses: Transfer to Program code: 5371

List of Pharmaceutical Medicine courses 2018

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Offered</th>
<th>Course Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to the Therapeutics Industry</td>
<td>PHAR9101</td>
<td>Semester 1, 2018</td>
<td>Core</td>
</tr>
<tr>
<td>Medical Affairs</td>
<td>PHAR9122</td>
<td>Semester 1, 2018</td>
<td>Core</td>
</tr>
<tr>
<td>Pharmacovigilance</td>
<td>PHAR9121</td>
<td>Semester 2, 2018</td>
<td>Core</td>
</tr>
<tr>
<td>Clinical Trials</td>
<td>PHAR9120</td>
<td>Semester 2, 2018</td>
<td>Clinical Trials Option 1 of 2</td>
</tr>
<tr>
<td>Clinical Trial Management</td>
<td>PHAR9116</td>
<td>Semester 1, 2018</td>
<td>Clinical Trials Option 2</td>
</tr>
<tr>
<td>Regulatory Affairs</td>
<td>PHAR9104</td>
<td>Semester 2, 2018</td>
<td>Regulatory Affairs Option 1 of 2</td>
</tr>
<tr>
<td>International Regulatory Affairs</td>
<td>PHAR9113</td>
<td>Semester 1, 2018</td>
<td>Regulatory Affairs Option 2 of 2</td>
</tr>
<tr>
<td>Health Technology Assessment in Australia</td>
<td>PHAR9114</td>
<td>Semester 1, 2018</td>
<td>Health Economics Option 1 of 2</td>
</tr>
<tr>
<td>Advanced Health Technology Assessment</td>
<td>PHAR9115</td>
<td>Semester 2, 2018</td>
<td>Health Economics Option 2 of 2</td>
</tr>
<tr>
<td>Pharmaceutics</td>
<td>PHAR9111</td>
<td>Semester 2, 2018</td>
<td>Elective</td>
</tr>
<tr>
<td>Cancer Therapeutics</td>
<td>PHAR9117</td>
<td>Semester 2, 2018</td>
<td>Elective</td>
</tr>
<tr>
<td>Therapeutics</td>
<td>PHAR9118</td>
<td>Semester 1, 2018</td>
<td>Elective</td>
</tr>
<tr>
<td>Pharmaceutical Medicine Internship</td>
<td>PHAR9124</td>
<td>Semester 1 and 2, 2018</td>
<td>Elective</td>
</tr>
</tbody>
</table>

Please note: courses may not be run if student enrolment numbers are low - please contact the Pharmaceutical Medicine Unit if you have questions about offered courses for 2018.

“This Masters Program has given me very comprehensive knowledge of the drug development process right through from drug discovery to post-market surveillance. Of most benefit for me in my role as a Lead CRA was the molecular and therapeutic subjects giving me a broad and well rounded understanding that can easily be translated across therapeutic areas. The subjects are both relevant and progressive, giving me the skills I need to ensure that I can excel in my role.”

Sarah Loomes
Clinical Project Manager
Pharmaceutical Medicine course descriptions

**PHAR9101 Introduction to the Therapeutics Industry (CORE)**  
Offered Semester 1, 2018

This course begins with an introduction to the milestones of pharmaceutical product development and the roles of the people who work to achieve the development of a new product. It will then focus on the role of therapeutics in improving health outcomes; pharmaceutical image and ethics; the history of the therapeutics industries; how companies are created and structured; current and future strategies for therapeutics development; the role of trade, global harmonisation and the evolution of new funding models in future therapeutics development.

**PHAR9121 Pharmacovigilance (CORE)**  
Offered Semester 2, 2018

Pharmacovigilance (PV) is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug-related problems. This course will cover the identification and quantification of risk associated with medicines, recognition and interpretation of adverse drug reactions (ADRs) and their underlying toxicopathology and pharmacology and the regulatory requirements for preclinical testing including toxicity studies. Students will learn to write and interpret a number of documents associated with pharmacovigilance including Risk Management Plans (RMPs), Periodic Safety Update Reports (PSURs), Periodic Benefit-Risk Evaluation Report (PBRER), Development Safety Update Reports (DSURs).

The international and Australian guidelines for adverse event reporting, international (ICH) guidelines, European and US PV systems, the role of the qualified person and compliance will be addressed in the course.

**PHAR9122 Medical Affairs (CORE)**  
Offered Semester 1, 2018

Medical Affairs is an emerging specialisation within the pharmaceutical industry which is responsible for managing key opinion-leader relationships, publishing data from corporate-sponsored trials, presenting educational information about a product or therapeutic landscape, answering questions from healthcare providers regarding product safety or efficacy that is not addressed in a product’s label and supporting research initiatives outside labeled indications for marketed products. This course will cover the international and local ethical, legal and marketing codes of compliance, quality use of medicines as well as the writing and interpretation of key scientific documents such as product information, consumer medicine information and clinical trial results. Off-label use of medicines and access to unlicensed products will be covered.

Product withdrawals will also be discussed. Medical Governance principles and strategic alignment with business goals, development of Medical Affairs plans, understanding Advisory Boards’ objectives, development of local medical research initiatives and how to develop a local publication strategy will be covered in the course.

**PHAR9120 Clinical Trials (Clinical Trials option 1)**  
Offered Semester 2, 2018

Clinical Trials pertains to the design, development, safe conduct and interpretation of trials for therapeutic products in humans. This course is designed to provide students with the skills to interpret the clinical literature, understand Good Clinical Practice (GCP) and clinical development and give students the skills to design and analyse clinical trials from first time in man Phase I through to Phase II, III and IV trials and registries. The course examines the importance of pharmacokinetic, pharmacodynamic and pharmacogenomic studies in humans. Adaptive clinical trial designs are also examined. Novel clinical trial endpoints such as surrogate endpoints and biomarkers will be discussed. Trial designs for different types of therapeutic products will be examined, as will the ethics of clinical trials.

**PHAR9116 Clinical Trial Management (Clinical Trials option 2)**  
Offered Semester 1, 2018

Clinical trials are an essential step in the development of a new therapeutic product. This course is designed to provide students with the skills to implement and manage clinical trials, including obtaining ethics approval. Clinical Data Interchange Standards Consortium (CDISC); electronic data capture and CONSORT will be discussed along with the creation, use, validation and security of electronic databases. Finally, the students will discuss the future of clinical trials in the development of new therapeutics and the global requirements for the conduct of clinical trials.

**PHAR9113 International Regulatory Affairs (Regulatory Affairs option 2)**  
Offered Semester 1, 2018

The course is designed to provide students with the skills in choosing and applying strategies for an application for a Therapeutic product to be registered and approved for marketing within Australia. Students will also examine approaches taken in the European Union and the USA and will be introduced to some regional jurisdictions such as Japan, China and south-east Asian countries. The course also covers the regulation of genetically-modified organisms (GMOs) in Australia and elsewhere. Students will learn about the emerging area of regulatory intelligence. Finally they will investigate the role of regulatory strategy in supporting the commercial needs of the company.

**PHAR9104 Regulatory Affairs (Regulatory Affairs option 1)**  
Offered Semester 2, 2018

Regulatory Affairs is responsible for ensuring the company remains compliant with all legislation and regulations pertaining to the function of the company in a particular jurisdiction. This course will provide an introduction to the regulation of therapeutic products, with particular reference to the Australian context. It will introduce students to the Australian legal system within which the regulation of therapeutic products occurs.

Students will examine the regulation of various therapeutic products including prescription and non-prescription medicines, complementary medicines, biologicals and medical devices.

**PHAR9114 Health Technology Assessment in Australia (Health Economics option 1)**  
Offered Semester 1, 2018

Health Technology Assessment focusses on the cost-benefit analysis of therapeutic interventions and the role of evidence-based medicine in determining the benefits of these interventions in health management. This course introduces students to the requirements for cost-effectiveness for therapeutics and the role of evidence-based medicine in the decision-making process for these products. It covers pricing considerations for ensuring successful applications to the Pharmaceutical Benefits Advisory Committee (PBAC) for entry of medicines on the Pharmaceutical Benefits Scheme (PBS) in Australia. Students will also discuss the different economic methodologies used to determine the cost-benefit analysis of a medicine and when these different methodologies should be used.
Health Technology Assessment (HTA) is a multidisciplinary science, involving a wide range of methodologies, which informs about the benefits and comparative value of interventions and provides a means by which health technologies can be assessed and prioritised against existing health care interventions. This course introduces students to the wider requirements for assessing the cost-effectiveness of medical devices and diagnostics, and the role of evidence-based medicine in the decision-making process for these products. It covers pricing considerations for medical devices and diagnostics in the international arena and future applications and trends in the development of equitable access schemes for therapeutic products. Students will study new modelling strategies which can be used to gain reimbursement for therapeutic products.

**PHAR9124 Pharmaceutical Medicine Internship**

The Pharmaceutical Medicine Internship course (6 UOC) will provide a small number of students with the opportunity to gain real-world experience in the Medical Department of a Pharmaceutical or biotechnology company, the TGA, OGTR or Department of Health, a related organisation (such as a contract organisation) or the Phase I clinical trials centre at UNSW/POWH, through a workplace internship. The internship will be available to students in the Master in Pharmaceutical Medicine program. There are a small number of students progressing through these programs who do not have experience working within a pharmaceutical company and this internship will provide them with valuable work experience to enable them to compete for positions within the industry. The Program Authority will determine, with the student and relevant organisation, a suitable internship placement and the proposed scope and focus of workplace activities with which the student can meaningfully engage and contribute to, for the duration of their internship. The activities and focus of the internship placement will be relevant to the organisation and student and can be either project or normal operations-based.

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**PHAR9115 Advanced Health Technology Assessment (Health Economics option 2)**

Offered Semester 2, 2018

Pharmaceutics deals with the science of making a chemical or biological entity suitable for delivery to humans as a therapeutic product. It therefore covers formulation and manufacture of these products. This course will give students the skills to understand how different types of medicines are formulated and the effect of different formulations on the properties of the medicine and the manufacturing processes for the medicine. It will cover advanced formulations such as extended and modified release tablets, patches, injectables, biologicals (such as cell and tissue therapies) and delivery devices, as well as diagnostics. Stability, bioavailability, bioequivalence and sterility requirements for medicines will be covered as well as repurposing of medicines for new uses and development of new formulations.

**PHAR9117 Cancer Therapeutics (elective)**

Offered Semester 2, 2018

This course will introduce students to various therapeutic areas and enable them to develop an understanding of the molecular basis of disease, how this knowledge is used to develop new therapies and how to apply their learnings from previous courses to develop clinical, regulatory and reimbursement strategies to ensure a new molecule has an optimal chance of making it onto the market. The core therapeutics areas covered will include cardiovascular, endocrinology, neurology and infectious diseases. Other areas will be covered briefly and students may study a specific therapeutic area of their choosing for their main assignment to allow for individual interests.

**PHAR9118 Therapeutics (elective)**

Offered Semester 1, 2018

The course is designed to provide you with the skills to understand the molecular basis of cancer development and progression. It covers the development of various therapeutic treatment options and guides students to an assessment of the optimal treatment options available for various cancers. Students will explore the way cancer medicines are assessed for safety and efficacy and how patients are monitored for response to therapy. Recent advances in pharmacology, pharmacogenetics, molecular biology and data analysis have converged to revolutionise the treatment of cancer, extending patient lifespans and turning some cancers into chronic conditions. Targeted therapies are rapidly improving patient outcomes while reducing unnecessary exposure in patients unlikely to respond to a particular therapy. The future now is how to combine therapies and rationally choose the best treatment options for an individual patient at different stages of their disease. Finally we look into the ethics and economics of cancer therapy and how and who should bear the burden of cost for these new advances in clinical medicine.

"I found the drug development course to be very helpful in establishing a broad knowledge base for the pharmaceutical industry. I found the course to be practical in nature and very relevant to the industry and my role. It also helped me further my career through a transfer to a new role within my company. I am very grateful for the time spent doing the course and would recommend it to anyone who is new to the industry."

Brandon Jones
Health Economics Manager
Entry into our programs is based on the following criteria:

- a 3 year undergraduate degree in a cognate discipline plus relevant industry experience (see below for definition) or
- a 4 year undergraduate degree or higher qualifications in a cognate discipline.

Cognate discipline is defined as a degree in one of the following disciplines:

- biomedical/biological sciences
- pharmacy
- nursing
- veterinary science
- chemistry/medicinal chemistry
- medicine
- other (case-by-case basis)

Relevant experience is defined as:

- one year full-time equivalent experience in a medical department position at Associate level or above in the pharmaceutical or biotechnology industry (such as Medical Information Associate, Regulatory Affairs Associate, Pharmacovigilance Associate, Clinical Trials Associate, etc.), a contract organisation (eg, clinical research, regulatory, economic evaluation, medical) or a clinical trials unit or
- one year full-time equivalent position within a relevant government department (such as State or Federal Department of Health, Therapeutic Goods Administration, Office of the Gene Technology Regulator or other relevant regulatory authority).

Applications can be made online at applyonline.unsw.edu.au/login

Shortly after you've lodged an application, you'll receive a letter of acknowledgment by email detailing your student ID number, and instructions on how to submit the supporting documentation to us.

The following information should be attached to the application form:

- Your Curriculum Vitae
- Employer-provided statements of service
- Originals or certified copies of your academic record and proof of completion of previous degree

English language requirements:

If English is not your first language, or if you did not complete an assessable qualification of at least one year of duration at a university or other post-secondary educational institution within the last two years where the medium of instruction is in English, you'll need to provide evidence to show that you meet the University's English Language requirement. Visit unsw.edu.au/english-requirements-policy for more information.

Closing date for applications:

- End of January for start of Semester 1 at the end of February
- End of May for start of Semester 2 at the end of July
- Late applications will be considered

You may track the progress of your application online at my.unsw.edu.au

Successful applicants will receive a letter of offer by email. Read and follow the instructions contained in your letter to accept your offer and commence your studies with us.

After you accept your offer, you are able to enrol in your courses for study. Please refer to the Pharmaceutical Medicine website for more information: med.unsw.edu.au/pharmaceutical-medicine
Program and course fees

Local program fees

<table>
<thead>
<tr>
<th>Program</th>
<th>A$ per 6 unit course</th>
<th>A$ per annum</th>
<th>Total cost of program</th>
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<tr>
<td>Graduate Certificate in Pharmaceutical Medicine (7370)</td>
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International program fees

<table>
<thead>
<tr>
<th>Program</th>
<th>A$ per 6 unit course</th>
<th>A$ per annum</th>
<th>Total cost of program</th>
</tr>
</thead>
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<tr>
<td>Master of Pharmaceutical Medicine (9370)</td>
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<tr>
<td>Graduate Diploma in Pharmaceutical Medicine (5371)</td>
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Fees are payable on a per semester/course basis. The fees are an estimate only based on the total units of credit of the program. The fees stated here are indicative only for 2018 and are subject to change on an annual basis.

Fee-help

FEE-HELP is an Australian Government loan to assist full fee paying students to help pay part or all of the tuition fees. FEE-HELP is available to students who are Australian citizens or Australian permanent residents with a humanitarian visa. For more information on FEE-HELP, visit studyassist.gov.au. For advice about whether you’re eligible for a FEE-HELP loan, please contact the FEE-HELP enquiry line on 1800 020 108.

Scholarships

Further information about scholarships available to eligible students may be found at the UNSW Sydney Scholarships Home Page.

scholarships.unsw.edu.au

Key dates for 2018

Semester 1 2018 (T1): 26 Feb – 25 Jun 2018
- Semester 1 (T1) begins 26 February
- Semester 1 fee payment deadline end week 1
- Semester 1 census date – discontinuation without failure/financial penalty 31 March
- Mid-semester break 30 March – 8 April

Semester 2 2018 (T2): 23 July – 20 Nov 2018
- Semester 2 (T2) begins 23 July
- Semester 2 fee payment deadline end week 1
- Semester 2 census date – discontinuation without failure/financial penalty 31 August
- Mid-semester break 22 Sep – 1 Oct

New academic calendar (UNSW3+)

UNSW is moving to a new academic calendar from Term 1, 2019 (February 2019). For further information, please see student.unsw.edu.au/new-calendar-dates

“My role is about communicating pharmaceutical medicine. To have an understanding and appreciation about pharmaceutical medicine across the gamut, from drug discovery to delivery, has been imperative to me. So much of my job has been improved because of this program.”

Matthew Britland
Senior Medical Manager
GENERAL AND STUDENT SERVICES ENQUIRIES

Pharmaceutical Medicine Unit
School of Medical Sciences
Wallace Wurth Building
UNSW Sydney
NSW 2052

Email: pharm.med@unsw.edu.au
Web: med.unsw.edu.au/pharmaceutical-medicine

CRICOS Provider Code: 00098G