

UQ School of Pharmacy

# MASTER OF PHARMACEUTICAL INDUSTRY PRACTICE

School of Pharmacy  
The University of Queensland

CRICOS Provider Number 098320G



CRICOS Provider Number 00025B

*“It’s great to be here at UQ”*

US President Barack Obama  
15 November 2014



“Your research led to the vaccine that protects women and girls around the world from cervical cancer.”

*President Barack Obama*

# UQ Master of Pharmaceutical Industry Practice

## Year 1 Course List

### Semester 1

PHIP7121	#4	Drug Design and Formulation
PHIP7141	#2	Clinical Drug Development and Biometrics
PHIP7161	#2	Device Development, Drug Manufacturing, Regulatory Affairs and Government

### Semester 2

PHIP7122	#4	Pre-clinical Drug Development
PHIP7142	#2	Post-registration Life Cycle Management
PHIP7162	#2	Project Management and Commercialisation in the Pharmaceutical Industry

## Year 2 Course List

### Semester 1

PHIP7201	#8	Pharmaceutical Sector Connect I <b>OR</b>
PHIP7280	#8	Independent Research Project

### Semester 2

PHIP7202	#8	Pharmaceutical Sector Connect II <b>OR</b>
PHIP7280	#8	Independent Research Project



# SCOPE OF STUDIES

- 2 years Full-time.
- Year 1: covers the product registration process from discovery and formulation through to post registration surveillance. Delivered on campus at the \$100M Pharmacy Australia Centre of Excellence (PACE).
- Year 2: One or two in-depth placements in the pharmaceutical industry in a national and/or international organisation, or the option of an independent research project in the state-of-the-art laboratories at PACE.
- Start studies in February or July



# WHY CHOOSE UQ TO CREATE A CAREER IN THE PHARMACEUTICAL INDUSTRY?

# PHARMACEUTICAL SECTOR CONTRIBUTIONS

UQ has a proud tradition of major international contributions to pharmaceutical care and the pharmaceutical industry.

- **Spinifex Pharmaceuticals Pty Ltd** is a UQ spin off company who developed a potential first-in-class oral treatment for inflammatory and neuropathic pain (acquired by **Novartis** in a reported \$1 billion deal)
- **Gardasil®** the life-saving cervical cancer vaccine used the technology that was developed at UQ
- **Vaxxas** has secured over \$30 million for the **Nanopatch™** system which was developed at UQ and offers pain and needle-free vaccinations.
- **Admedus Immunotherapies** is a UQ spin off company is developing world-first DNA vaccines for the treatment of various infectious diseases and cancers in humans.
- **Dendright Pty Ltd** established by UQ to focus on ways the body's immune system could “re-educate” the cells that cause tissue damage associated with rheumatoid arthritis.
- **Microba** is a UQ start up microbial genomics company who provides cutting edge technology to analyse the gut microbiome.



# EXCELLENT IN PHARMACEUTICAL SECTOR CONTRIBUTIONS AND EXPERIENCE

UQ alumni hold leading positions in pharmaceutical companies and in pharmaceutical and health care related positions in government and industry

UQ is the highest ranking Australian University in the Nature Index (2018) and the highest ranking Australian university for research impact in Pharmacy and Pharmacology (QS rankings, H-index and citations per paper).



# SUPPORTIVE TEACHING EXCELLENCE

- A comprehensive suite of courses that exposes the graduates to the complete life cycle management of drugs and devices from discovery to market.
- The degree is delivered using contemporary learning approaches; online delivery; face-to-face lectures, workshops and practicum. The program utilises state-of-the-art learning technologies and facilities at the \$100M Pharmacy Australia Center of Excellence (PACE).
- Students are taught and mentored by current leaders in the pharmaceutical industry, internationally recognised award-winning lecturers and internationally renowned researchers.





# SUPPORTIVE TEACHING EXCELLENCE

- The program has a focus on improving the communication, leadership and project management skills that are required for a successful career in the pharmaceutical industry.
- *Welcome to the UQ “Pharmily” program* – The UQ Pharmacy School has student and academic mentors and a comprehensive suite of programs to support students settle and integrate into the UQ student life.
- Students can start their study in February or July



# UNIQUE AND SUPPORTED PLACEMENTS

UQ will assign you to one (mandatory) or two (optional but recommended) full time placements in the pharmaceutical industry.

Students are supported by the placement team throughout this work integrated learning experience.

Get experience in areas such as : pre-clinical; clinical; medical affairs; pharmacovigilance; manufacturing and packaging; regulatory; marketing; health economics; complementary medicine, devices and government.



# UNIQUE AND SUPPORTED PLACEMENTS

Meet pharmaceutical industry experts and build a unique professional industry specific network.

Become an enterprising, independent, creative thinker with leadership and problem-solving skills that empower you to create positive change

Get exposure to a real working environment in the pharmaceutical industry

Work as a part of a team to solve everyday issues to bring a drug/device to market.



# COURSES

# PHIP7121 Drug design and formulation

Topics include:

- Formulation concepts from the basic to innovative drug/drug-device delivery methods
- High throughput drug discovery methods
- Guidelines and regulations such as GLP and GMP
- A project designing a new pharmaceutical product

Students will meet with a career professional mentor in this field to gain an insight into the working environment.



# PHIP7141 Clinical Drug Development and Biometrics

Topics include:

- Good Clinical Practice (ICH GCP) and the Australian application
- Various phases and types of clinical trials
- Overview of the drug/device development
- Informed consent and ethics
- Importance of data collection methods and scrutiny of data generated
- Creation, processing, validation, analysing and security of electronic databases
- Significance of risk management and how to write a risk management plan.

Various career professionals in clinical R&D will speak to the students and impart a real life perspective of life in industry.



# PHIP7161 Device Development, Drug Manufacturing, Regulatory Affairs and Governance

Topics include:

- Guidelines that govern good practice in the R&D of devices.
- Upscaling production to run a phase 3 trial.
- Types of packaging used in different types of trials
- Labelling requirements in the global stage
- The regulation of therapeutic goods in Australia and Internationally

Meet industry and government experts working in the Australian regulatory environment



# PHIP7122 Pre-clinical Drug Development

Topics include:

- Good Laboratory Practice principals and guidelines and their application to animal models
- Practical experience in following the principles of good laboratory practice to analyse and determine components in an unidentified product
- Ethics and the code of practice in pre-clinical research, developing and improving existing pre-clinical models
- What goes into a regulatory dossier for an investigational new drug (IND).
- Importance of preclinical biometrics and role in developing the Investigational Brochure

Students will meet a mentor from the profession in this role in pharmaceutical industry





# PHIP7142 Post-registration Life Cycle Management

Topics include:

- What happens after submission of the dossier and registration
- Understanding Medical Affairs and access to unlicensed products
- Managing advisory boards, DSMBs and steering committees
- The importance of pharmaco-economics and understanding the reimbursement process
- The role of pharmacovigilance and safety reporting in clinical trials
- How is the marketing of a product planned

Meetings with industry professional mentors in these fields.



# PHIP7162 Project Management and Commercialisation in the Pharmaceutical Industry

Topics include:

- Learn about the various industry and government bodies pertinent to product R&D and registration in Australia and their roles
- Principles of project and budget management: know the Business
- Pharma industry's impact on the environment
- Intellectual property and patent law
- Legal responsibilities in research

Meet with specialists in these fields and learn how to build your network



# PHIP7201 Semester 1 & PHIP7202 Semester 2 Pharmaceutical Sector Connect 1 & 2

An assigned and supported real working environment experience

Exposure to the various roles and responsibilities that need to come together to bring a product to market.



# PHIP7280 (semester 1 or 2)

## Independent Research Project

A supervised independent research project in areas such as

- Biomedical Discovery and Development
- Biotherapeutic Delivery and Diagnostic Solutions
- Clinical Pharmacy and Pharmacometrics
- Medication Use, Safety and Health Services Research
- Pharmaceutical Biology
- Pharmacoepidemiology, Pharmacovigilance and Pharmacoeconomics



# WHY STUDY AT UQ?



# PREMIER LEARNING FACILITIES

Students study at the **Pharmacy Australia Centre of Excellence** (PACE) which is:

- A new \$100 million facility **dedicated to Pharmacy students**
- Located in Queensland's world-class biomedical science precinct, adjacent to the Princess Alexandra Hospital in Woolloongabba
- A short pleasant walk from UQ St Lucia Campus





# PACE LIBRARY

*7am – 10:30pm during semester time*





# PACE LECTURE THEATRE

*Audio and video recordings online*



# INNOVATIVE TEACHING SPACES



# School of Pharmacy THE UNIVERSITY OF QUEENSLAND, AUSTRALIA

Contact the school on  
([pharmacy@enquire.uq.edu.au](mailto:pharmacy@enquire.uq.edu.au))

