



**MONASH**  
University

PHARMACY AND  
PHARMACEUTICAL  
SCIENCES

# BACHELOR OF PHARMACEUTICAL SCIENCES (HONOURS)

MAKE A DIFFERENCE TO THE  
WORLD AND YOUR CAREER



Our research students work with Australia's largest, most experienced group of pharmaceutical scientists in the best pharmaceutical research facilities in the country. They collaborate across Monash with some of the world's best medical researchers, and with industry-leading partners, in areas like nanotechnology, pharmacy and pharmaceutical science. The Australian Research Council's Excellence in Research for Australia (ERA) rates us 5/5 (well above world standard).

Our research takes place within the  
[Monash Institute of Pharmaceutical Sciences \(MIPS\)](#)

We work in the following areas:

- [Drug candidate optimisation](#)
- [Drug delivery, disposition and dynamics](#)
- [Drug discovery biology](#)
- [Medicinal chemistry](#)
- [Medicine use and safety](#)

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# OUR FACULTY

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Australia's leading pharmacy and pharmaceutical sciences faculty, and one of the world's best, the Faculty of Pharmacy and Pharmaceutical Sciences offers innovative education and delivers high impact research. It is Australia's oldest pharmacy school and the most innovative.

The Faculty offers research programs in areas involved with the design, development, and evaluation and testing of new drugs and drug formulations. Our themes of research are:

- Drug Discovery Biology
- Medicinal Chemistry
- Drug Candidate Optimisation
- Drug Delivery, Disposition and Dynamics
- Medicine Use and Safety
- Pharmacy and Pharmaceutical Sciences Education

Research students are supervised by leading international experts in the field, and the research conducted by research graduates is highly regarded within Australia and internationally. The Faculty has established a strong reputation with industry, both nationally and internationally, and acts as a resource for industry and research institutes involved in the pharmaceutical and biomedical sciences.

The Faculty of Pharmacy and Pharmaceutical Sciences is located at 381 Royal Parade, Monash University (Parkville Campus) and is home to the Monash Institute of Pharmaceutical Sciences (MIPS).

# FACULTY RESEARCH OFFICE CONTACT DETAILS

Location: Room G39, Ground floor, Building 404

Postal address: Faculty of Pharmacy and Pharmaceutical Sciences  
 Research Office  
 Monash University (Parkville Campus)  
 381 Royal Parade  
 PARKVILLE VIC 3052

## Faculty Research Office Contact Details

Contact Name	Position	Email	Telephone
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A/Professor Joseph Nicolazzo	Associate Dean (Graduate Research)	<a href="mailto:joseph.nicolazzo@monash.edu">joseph.nicolazzo@monash.edu</a>	03 9903 9605
Professor Peter Scammells	Associate Dean (Research)	<a href="mailto:peter.scammells@monash.edu">peter.scammells@monash.edu</a>	03 9903 9542

## Honours Representatives

Contact Name	Research Area	Email	Telephone
Dr Kristian Kempe	Drug Delivery, Disposition and Dynamics	<a href="mailto:kristian.kempe@monash.edu">kristian.kempe@monash.edu</a>	03 9905 1406
Dr Sab Ventura	Drug Discovery Biology	<a href="mailto:sab.ventura@monash.edu">sab.ventura@monash.edu</a>	03 9903 9566
Professor Philip Thompson	Medicinal Chemistry	<a href="mailto:philip.thompson@monash.edu">philip.thompson@monash.edu</a>	03 9903 9672
Dr Johnson George	Centre for Medicine Use and Safety	<a href="mailto:johnson.george@monash.edu">johnson.george@monash.edu</a>	03 9903 9178
A/Professor Elizabeth Yuriev	Pharmacy and Pharmaceutical Sciences Education	<a href="mailto:elizabeth.yuriev@monash.edu">elizabeth.yuriev@monash.edu</a>	03 9903 9611

## Academic Contact Details

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Dr Jennifer Short	Course Director, Bachelor of Pharmaceutical Science	<a href="mailto:jennifer.short@monash.edu">jennifer.short@monash.edu</a>	03 9903 9529
Professor Paul White	Associate Dean (Education)	<a href="mailto:paul.white@monash.edu">paul.white@monash.edu</a>	03 9903 9074

# RESEARCH AREAS

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Our world-class research is undertaken within the Monash Institute of Pharmaceutical Sciences (MIPS). We have expertise and infrastructure to support research in the following areas:

## **Drug Discovery Biology (DDB)**

The DDB research teams within MIPS comprise a critical mass of scientists with broad expertise in receptor-molecular and cellular biology, whole-animal studies and translational discovery research.

<https://www.monash.edu/pharm/research/themes/drug-discovery-biology>

## **Medicinal Chemistry**

The Medicinal Chemistry research teams within MIPS focus on drug discovery—applying chemical principles and techniques to discover and develop compounds to prevent, treat or cure disease.

<https://www.monash.edu/pharm/research/themes/medicinal-chemistry>

## **Centre for Drug Candidate Optimisation**

The Centre for Drug Candidate Optimisation specialises in identifying the optimal physiochemical and biopharmaceutical properties of drugs and translating drug candidates from discovery into clinical development.

<https://www.monash.edu/pharm/research/themes/optimisation>

## **Drug Delivery, Disposition and Dynamics (D4)**

The D4 research teams within MIPS are designing and developing the next generation of drug delivery systems and anti-infective agents to enhance medicine effectiveness and patient treatment.

<https://www.monash.edu/pharm/research/themes/drug-delivery-disposition-and-dynamics>

## **Centre for Medicine Use and Safety**

The Centre for Medicine Use and Safety conducts multidisciplinary research into preventive, acute and chronic care, optimising medication management and patient safety.

<https://www.monash.edu/pharm/research/themes/medicine-safety>

## **Pharmacy and Pharmaceutical Sciences Education**

The PPSEd research teams within MIPS aim to optimise educational processes to be transformative to the next generation of health care and pharmaceutical science experts.

<https://www.monash.edu/pharm/research/educational-research>

# COURSE INFORMATION

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## Course title and course code:

Bachelor of Pharmaceutical Science (Honours) P3701

Bachelor of Pharmaceutical Science Advanced (Honours) P3002

## Structure

Both courses consist of a combination of coursework and research. In the Bachelor of Pharmaceutical Science Advanced (Honours) this applies to the fourth year of the course. In the coursework component you will develop advanced theoretical and/or technical knowledge of the area of research focus within Pharmaceutical Science, that is, medicinal chemistry, drug discovery biology, formulation science and medicine use and safety. In the research component you will develop research methodologies appropriate to your focus and plan and execute a research project under the guidance of at least one academic supervisor.

## Requirements

The courses comprise 48 credit points:

BPS4001 - Advanced Pharmaceutical Science (Coursework) (12 credit points)

BPS4002 – Advanced Pharmaceutical Science (Research) (36 credit points)

## Course outcomes

Upon successful completion of the course it is expected that you will be able to:

- work independently to undertake a scientific literature review and work collaboratively to design, develop and implement a research project;
- collect, organise, manipulate, analyse and interpret data meaningfully using experimental and computational approaches;
- develop, apply, integrate and generate knowledge in professional contexts to analyse challenges and to develop effective solutions;
- demonstrate technical competence to use analytical instrumentation, conduct experimental procedures and methodologies in laboratory-based disciplines; and
- communicate ideas and results effectively to diverse audiences and in a variety of formats.

### **Progression to further studies**

Satisfactory completion of the course may provide credit toward a Monash Master's by coursework degree and provides the preparation necessary to undertake a MPhil degree or a Doctoral (PhD) degree, although admission depends upon results.

### **Degree awarded**

Bachelor of Pharmaceutical Science (Honours) or Bachelor of Pharmaceutical Science Advanced (Honours)

### **Australian Higher Education Graduation Statement (AHEGS)**

The Bachelor of Pharmaceutical Science (Honours) and the Bachelor of Pharmaceutical Science Advanced (Honours) are undergraduate qualifications. The course is taught in English. Students who have completed the course have demonstrated advanced theoretical knowledge and techniques in an area of Pharmaceutical Science and relevant research skills including the capacity to undertake an independent research project and to communicate their findings to a high standard. The course takes one year of full-time study and comprises a fourth year of study following the completion of the normal requirements of the Bachelor of Pharmaceutical Science pass degree or equivalent. The Bachelor of Pharmaceutical Science (Honours) is a level 8 Australian Qualifications Framework (AQF) qualification.



# WHAT DO OUR HONOURS GRADUATES SAY?

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## Meet Siobhonne (Bonnie) Breen



My name is Siobhonne (Bonnie) and I began my journey at Monash in 2019, with a Bachelors of Pharmaceutical Science. In 2021 I decided to undertake my honours year and while it was extremely difficult, it was also very rewarding. This led me to ultimately decide to begin my PhD this year with the faculty. In my spare time, I still like to participate in as many student organised activities as possible.

### **Why did you choose the Faculty of Pharmacy and Pharmaceutical Sciences, Monash University for your honours year?**

While in my third year of Pharmaceutical Science degree here at Monash, I was contemplating what my next steps where and therefore decided to reach out to a few teachers who had taught content I thoroughly enjoyed learning. After discussing my current research topic with my supervisor, I realised it interested me far more then anything other pathways I was researching.

From this, the obvious choice for me was to complete my honours here.

### **What do you see as the benefits of doing honours here?**

The student community, while small, is very active and supportive.

The facilities I have access to are also very good, with an extensive range of laboratory training and equipment at my disposal.

### **Have there been any highlights? What were the challenges?**

My project as a whole has been a massive highlight to me. I really enjoy the research I am completing. There is no better feeling then getting results that you know will make a difference to someone's life one day.

A huge challenge is managing a good work-life balance. It is far to easy to get engrossed in the research, whether that be the laboratory work or the writing. Keeping a very healthy support network of friends and family is extremely important to be able to handle the stresses that come with research.

### **What was the subject of your honours research or what is your project?**

The subject of my PhD is "Optimising rationalized antibiotic combinations against resistant bacterial 'superbugs' " with Associate Professor Cornelia Landersdorfer. In my honours year I specifically investigated *Pseudomonas aeruginosa*, a bacteria which commonly causes life threatening infections in cystic fibrosis patients.

### **What does a typical working day involve?**

A laboratory day would typically include a morning coffee while I plan the day. Then a roughly 9-5 day in the lab, where I am most likely preparing for a future experiment or taking samples of my current one. And a very substantial lunch at some point in there of course!

Days out of the lab would include analysing my data and looking through literature.

### **What did you or what are you hoping to do after you completed your Honours year?**

I decided to complete a PhD after my honours year, with the same laboratory group.

## PROJECTS AVAILABLE IN 2023

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A list of student projects for 2023 will be available online from August 2022. To view the types of projects currently offer, please go to:

<https://www.monash.edu/pharm/future/courses/pharmaceutical-science-honours/honours-projects>

Prospective students must contact supervisors to discuss research projects.

The Honours projects currently available within the Faculty of Pharmacy and Pharmaceutical Sciences are listed by theme:

- Drug Discovery Biology
- Medicinal Chemistry
- Drug Delivery, Disposition and Dynamics
- Medicine Use and Safety
- Pharmacy and Pharmaceutical Sciences Education

# FREQUENTLY ASKED QUESTIONS

## WHY STUDY HONOURS?

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This is your opportunity to study and work with Australia's largest group of pharmaceutical researchers. Our researchers have made ground breaking contributions to the development of treatments and superbugs, flu, malaria, postpartum haemorrhage and other conditions.

We offer a prestigious program of coursework and research in pharmaceutical science for high achieving students who have completed a relevant undergraduate degree. You will undertake research methodology training and carry out an independent research project on your selected topic, working closely with a supervisor who will provide you with individual guidance and academic counselling. The course offers a pathway to higher level research in pharmaceutical science.

You'll have access to the latest equipment and facilities at our recently redeveloped campus in the inner-Melbourne suburb of Parkville.

Studies can be undertaken within the general research themes of:

- Drug discovery biology
- Medicinal chemistry
- Drug delivery, disposition and dynamics
- Medicine use and safety
- Pharmacy and pharmaceutical sciences education

You'll develop skills in research planning, experimental techniques, data analysis and scientific writing, and gain the confidence to continue your higher degree studies and help develop breakthrough medicines or improve medicine use and safety.

With the permission of the Faculty Graduate Research Committee, it may also be possible to undertake a portion of the research in an external institution such as a hospital or industry laboratory. If a substantial portion of the research work is to be carried out in an external institution you will have an internal supervisor from the faculty and an associate supervisor from the relevant institution.

## WHAT ARE THE ENTRY REQUIREMENTS?

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The prerequisite for entry to the honours year is a bachelor's degree in pharmacy, science, pharmaceutical science, medicinal chemistry, formulation science or a related field. You need to acquire an average overall distinction grade (70 per cent) or higher in the final year of the course, or equivalent qualifications and experience deemed by the Course Coordinator to be suitable preparation for the student's proposed field of study.

For acceptance as an Honours student, the applicant must:

- have a suitable academic background;
- be accepted as a prospective student by a supervisor; and
- have a suitable research project as a basis for the degree studies.

### English Language Requirements

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All international applicants must meet the minimum English language proficiency requirements set by Monash University. English proficiency standards must be met and results (if applicable) contained with the application preferably by the application closing date.

- IELTS 6.5 (no band lower than 6.0); or
- TOEFL Paper-based test: 550 with a TWE 4.5; or
- TOEFL Internet-based test: score of 79 overall with minimum scores: Writing 21, Listening 12, Reading 13, Speaking 18; or
- Equivalent approved English test

## WHAT ARE THE COURSE FEES?

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\*Fees listed below are correct at the time of printing. Fees are subject to change annually.

Fees for 2022	
Domestic students	Commonwealth supported place (CSP) The average annual student contribution is <b>A\$8,021</b>
International students	Fees for 2022 are <b>A\$43,300</b>
Other fees	Student services and amenities fees have not been set for 2023. The current fees are <b>A\$315</b>

2023 fees will be released later this year.

## WHAT SCHOLARSHIPS ARE AVAILABLE?

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There are scholarship opportunities available Monash wide. More information on eligibility can be found at the following website:

<http://www.adm.monash.edu/scholarships/opportunities/jubilee-honours.html>

## HOW MANY HONOURS PLACES ARE AVAILABLE?

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We do not have a set number of Honours places available. Applicants should find a research project they're interested in and contact the relevant supervisor to discuss their suitability. The number of students an individual supervisor takes on each year may vary.

## WHAT RESOURCES ARE AVAILABLE?

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Honours students are to provide their own computer or can access computers in the Faculty computer lab. Honours students must save their data/work onto the university drive to keep it secure. There will be software packages and IT support available for free, as well as telephones, and remote internet access. Each student will receive a \$20 printing/photocopying credit on their student card.

Students are also provided with laboratory space, equipment and consumables as required for their project. In addition, students will have access to supervisors and other research staff for support and guidance.

## HOW MANY HOURS A WEEK ARE INVOLVED?

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Honours research is not a standard day. Depending on your experiments, you may find yourself working during the day as well as some evenings and weekends. Experiments may not always run between 9am-5pm. You should discuss and plan your project schedule with your prospective supervisor.

With the exception of public holidays taken by the university, Honours students are expected to work full-time until the end of the course.

You must notify your supervisor and the Faculty Research Office of any leave of absence (such as sick leave or personal leave).

## HOW IS THE COURSE ASSESSED?

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Theme coursework unit **25%**  
Comprising elements developed by the theme/faculty

Research unit **75%**  
Comprising: Written assessment score 50%  
Final presentation score 10%  
Oral Viva 15%

## WHEN WOULD I START?

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The Honours year is a one-year course. Honours students will begin the week of **16th February** and finish in November. There is no mid-year intake in the Honours program and this course cannot be offered part-time.

## IS THERE ANY COURSEWORK?

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This course consists of a combination of coursework (25%) and research (75%). In the coursework component you will develop advanced theoretical and/or technical knowledge of the area of research focus within Pharmaceutical Science, that is, medicinal chemistry, drug discovery biology, formulation science and medicine use and safety.

## ARE THE RESEARCH SEMINARS MANDATORY?

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MIPS provide seminars on various research topics delivered by research staff and high profile invited guests. These seminars are mandatory for all honours and graduate research students to attend.

## IF I RECEIVE AN OFFER, CAN I DEFER?

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You will not be able to defer your place as your project or supervisor may not be available the following year. You are encouraged to maintain contact with your supervisor throughout the course of the year and then reapply.

## IS THERE A STUDENT ASSOCIATION?

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The Parkville Postgraduate Association (PPA) is a student committee, elected by the students. The association provides advice, coordinates guest speakers, sporting activities and entertainment evenings. While honours students are technically undergraduate students, the PPA encourage the participation of honours students in their activities as many of our honours students go onto our PhD program.

## WHAT ARE THE CAREER OPPORTUNITIES?

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Our Bachelor of Pharmaceutical Sciences Honours programs aim to provide students with a higher level of experience in independent analysis and research in their selected area. The one-year honours program also serves as excellent preparation for further study and research and is a pathway to gain entry into the Doctor or Master of Philosophy programs.

This degree will open up exciting opportunities in research and development centres, the pharmaceutical industry and food, agriculture, chemicals, biotechnology and cosmetics companies.

You could work as a medicine researcher and developer, drug analyst, formulation scientist, industry consultant, development chemist, medicinal chemist, patent attorney, academic or clinical-trial specialist.

## WHAT HONOURS RESULT DO I NEED TO ACHIEVE TO GAIN ENTRY INTO THE PHD OR MASTER'S RESEARCH PROGRAM?

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### Doctorate/PhD

Duration: 3-4 years full-time or 6-8-years part-time.

Qualifications and experience equivalent to bachelor's degree in pharmacy, pharmaceutical sciences, science or other related field at a level of honours H1, H2A or a master's degree in pharmacy, pharmaceutical sciences or other relevant field.

You need to have first-class honours (H1), or qualifications considered equivalent, to be considered for all the scholarships listed on the [scholarship eligibility page](#). The H1 standard at Monash is equivalent to an overall grade of 80 per cent or higher.

### Master of Philosophy

Duration: 2-years full-time course.

Qualifications and experience equivalent to bachelor's degree in pharmacy, pharmaceutical sciences, science or other related field at a level of honours H1, H2A or upper H2B (a mark of 65 or above from a recognised tertiary institution).

## HOW DO I APPLY?

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For entry into the Bachelor of Pharmaceutical Science (Honours) in 2023, applicants must complete the following steps:

### Steps

1. Check your eligibility – see entry requirements on page 12 of this booklet.
2. Find your [preferred project](#)
3. Complete and submit the application form. A new online form is coming. If you're a non-Monash student, you must also enclose your academic transcripts and supporting documents.

## WHEN DO APPLICATIONS OPEN AND CLOSE?

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Honours applications open from September 2022 and will close on **Friday, 2<sup>nd</sup> December**. Local and international students may submit their application form at any time before or on this date.

Note: If you're an international student and receive an offer letter, you must complete an additional form with Monash International Recruitment Services (IRS).

## WHERE CAN I FIND OUT MORE INFORMATION?

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For further information about our honours programs, available projects and application information, please visit: <https://www.monash.edu/pharm/future/courses/pharmaceutical-science-honours>

For more information, please contact

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