PHARMACY

SUPPORTING HEALTHIER COMMUNITIES

The world needs pharmacists. As the experts on medicines and the way they interact with the body, pharmacists play a vital role in improving the health of their communities. As the global population grows and ages, and as medicines become more complex, the demand for pharmacists increases. The World Health Organisation estimates there’s potential for the creation of about 40 million healthcare jobs across the world by 2030 – almost double the current number. Pharmacists figure prominently among them.

How do you teach a child to use an inhaler to ease asthma symptoms?
What dosage forms are easier to swallow for patients with dementia?
Why do you have to get a flu shot every year?

Questions such as these are asked of pharmacists every day, so we make sure our pharmacy students get plenty of practice accessing, assessing and communicating medicines information to patients and to other health providers.

Building a better pharmacist

Monash has long been considered the leading pharmacy program in Australia. In 2018, we were named No.2 in the world, with only Harvard in the US ranking higher. In part, this is because we believe the world doesn’t just deserve more pharmacists; it deserves better pharmacists.

That’s why we offer Australia’s first and, so far only, combined Bachelor of Pharmacy (Honours)/Master of Pharmacy. It means our graduates go out into the world equipped with a higher level of learning and a stronger skill set.

From day one of the program, each Bachelor of Pharmacy (Honours)/Master of Pharmacy student is treated as a #pharmacistintraining.

The same length as every other pathway to registration

The pathway to registration as a pharmacist in Australia generally takes five years. Traditionally, this has been structured as a four-year bachelor degree plus a one-year internship. At Monash, our program takes the same amount of time, but you’ll graduate with a master’s degree as well as a bachelor’s.

The fifth year of the course combines a year of supervised practice – which is paid – with intern studies (our Intern Training Program and Intern Foundation Program). This intensive combination of learning and working prepares you for registration as a pharmacist. It’ll be your responsibility to arrange the internship and ensure you have faculty approval.

At the time of writing, tuition fees for the master’s component of the course are charged as a Commonwealth Supported Place (CSP). In the event of any change to the Commonwealth Government policy to restrict access to CSP for graduate study, full domestic fees will apply to the master’s component of the course, which is 24 credit points. Note that the degree required for registration as a pharmacist in Australia is a BPharm(Hons). An MPharm is not required. If you wish, you may exit the course once you have completed the BPharm(Hons) component and complete the other registration requirements elsewhere.

Focus on the skills you need to make a difference

Our course ensures you’ll have a thorough grasp of the underlying scientific disciplines, such as chemistry, biology and pharmacology. But it also focuses on the key skills that make the difference between a good pharmacist and a great one. We call these skills your POWERIT IQ, and you’ll get to practise them in weekly workshops.

P Problem-solving
O Oral communication
W Written communication
E Empathy
R Reflective practice
I Integrity
T Teamwork
IQ Inquiry

You’ll also step up your skills through work placements in community pharmacies, hospitals and other environments, practising these skills while learning from some of Australia’s best pharmacists about primary healthcare, medicines information, and patient-focused pharmacy services.

Innovative teaching

In the Bachelor of Pharmacy (Honours)/Master of Pharmacy, you don’t just sit in lecture halls passively listening to teachers. We’re world leaders in developing pharmacy learning technologies that help our students simulate and engage with practice environments. The educational tools we’ve developed here are now being used in pharmacy programs all over the world.

Our classrooms embrace an active learning model we call ‘DEAR’ that engages students in the learning process. In a typical week, students discover what they need to understand about key pharmacy-relevant concepts, explore their background preparation further through interactive lectures with skilled teachers, apply this knowledge in small group workshops with pharmacists and scientist facilitators, and reflect on their plans for continuing development.

First-year students also meet fortnightly with a ‘skills coach’ who helps them develop and implement personalised learning plans that support their transition from student to intern to practitioner.

Career options

You could have a role in a community pharmacy, government, a hospital pharmacy, the pharmaceutical industry, public health, regulatory bodies, research and clinical trials, among others.

To check out some of the many career paths a pharmacy course can lead to, visit monash.edu/pharmacy-careers
WHY CHOOSE MONASH?

Studying at Parkville offers the best of both worlds. On one hand, with approximately 2000 students and an emphasis on small-group learning, the size of the campus means you’ll get to know your teachers and fellow students well. You won’t just be a number – you’ll forge friendships that last a lifetime.

On the other, you can draw on the resources of Australia’s largest university. Monash is ranked as one of the world’s top 100 universities, with a particular reputation for excellence in the sciences. Wherever your career takes you, the Monash name will be recognised.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Duration (years)</th>
<th>Indicative ATAR</th>
<th>Indicative IB score</th>
<th>Monash Guarantee</th>
<th>Entry Requirements</th>
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<tbody>
<tr>
<td>Bachelor of Pharmacy (Honours) / Master of Pharmacy</td>
<td>5</td>
<td>90.10</td>
<td>33</td>
<td>84</td>
<td>VCE: English: Units 3 and 4: a study score of at least 35 in English (EAL) or 30 in English other than EAL. Maths: Units 3 and 4: a study score of at least 25 in one of Mathematical Methods (any) or Specialist Mathematics. Science: Units 3 and 4: a study score of at least 25 in Chemistry. IB: English: At least 5 in English SL or 4 in English HL or 6 in English B SL or 5 in English B HL. Maths: At least 4 in Mathematics SL or 3 in Mathematics HL or 3 in Further Mathematics HL. Science: At least 4 in Chemistry SL or 3 in Chemistry HL.</td>
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<td>Bachelor of Pharmaceutical Science</td>
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<td>75</td>
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“Since I started at Monash, I’ve seen a big improvement in not only my scientific knowledge but also in my communication skills. Employers want pharmacy graduates who can not only understand how medicines work, but can also work effectively with patients, doctors and other healthcare professionals to get the best outcomes for patients.”

KEVIN WU
Bachelor of Pharmacy (Honours) / Master of Pharmacy
A Pharmaceutical Science degree from Monash will be your springboard into an exciting career where your understanding of the powerful interplay between chemistry and biology will set you apart from the crowd. You’ll learn from internationally-renowned scientists what it takes to invent, develop and prove a new medicine.

How do you design a medicine to sneak a potentially lifesaving compound past the body’s natural defences?

How do so-called “superbugs” survive antibiotic treatments?

Does stress make cancer spread faster, and if so, how?

Questions such as these are the ones that our students and researchers spend their days grappling with – and not just at a theoretical level. The Bachelor of Pharmaceutical Science is a hands-on science course.

Yes, you’ll learn scientific theory from researchers who are leaders in their fields internationally – people who are developing revolutionary treatments for disease. But you’ll also get plenty of time in the lab, working with industry-standard research instrumentation.

When you accept your first job offer after graduation, you’ll hit the ground running. And because the faculty has extensive networks within the sector, you’ll emerge armed with the skills employers want.

Use industry-standard instrumentation

As well as gaining a deep understanding of the fundamental concepts in chemistry and biology, you’ll learn how to design and conduct experiments using sophisticated instrumentation, and most importantly how to interpret your data.

Smaller classes for better learning and skill development

Our emphasis on small-group teaching and innovative ‘active-learning’ techniques ensures you’ll have a thorough understanding of the concepts covered in the course and will be able to apply your learning as you progress.

You’ll benefit from focusing on the skills that are critical to a successful career, including how to communicate scientific concepts, problem-solving, teamwork and, of course, laboratory techniques.

A growing sector

The global pharmaceutical sector is rapidly expanding, with the World Health Organisation projecting a 33 per cent growth between 2016 and 2019, from $US300 billion a year to $US400 billion.

Victoria is a global centre of excellence in medical technology and pharmaceuticals. This sector is our most valuable high-tech export, worth almost $10 billion in 2013–14. With significant support from the government in such initiatives as the Medicines Manufacturing Innovation Centre, which is headquartered at our Parkville campus, the opportunity to interact with industry and undertake placements will allow you to start developing your networks early.

Career options

You could move into biomedical research, biotechnology, clinical trials, drug analysis, the pharmaceutical industry, regulatory affairs, toxicology, academia, research and development, among others.

A wide variety of career options

Although the course is focused on understanding medicines, the skills you learn will translate to a range of chemistry-related or biomedical research opportunities. Our graduates can be found working in industries from paint and coatings to cosmetics and food manufacturing.

The chance to specialise

During the course, you’ll choose one of three specialisations:

Drug discovery biology

This focuses on the biomedical science and pharmacology of drug discovery. You’ll learn about the biotechnological aspects of drug design that lead to: > discovering and evaluating new targets for testing drugs > investigating the biological effects of drug candidates > translating outcomes into pharmaceutical products.

You’ll develop expert knowledge of biological drug targets and their modulation by different types of active drug compounds, a concept that’s at the core of innovative drug discoveries.

Medicinal chemistry

This represents the intersection of biology and chemistry, and involves the development of potential pharmaceutical compounds from conception through to their clinical use.

You’ll study how drugs work, and how they’re designed and made. By applying the principles and techniques of organic chemistry, medicinal chemists discover and develop compounds that prevent, treat or cure disease.

Formulation science

This enables you to understand the principles of making pharmaceutical products and how medicines are absorbed and travel around the body to the site of action.

Drawing on techniques used in the pharmaceutical industry, you’ll learn how to formulate chemicals in a wide range of applications, such as consumer products and cosmetics.

Flexible pathways: three-year bachelor vs the four-year advanced (honours)

Some of our students want to complete their degree, get out there and start working.

For them, the three-year Bachelor of Pharmaceutical Science is the perfect pathway into a career in the pharmaceutical sector or any of its allied industries such as skincare, cosmetics, chemicals or even food manufacturing.

Other students find that their natural curiosity and hunger to work on innovative research leads them on to further study, such as a PhD. For those students, the Bachelor of Pharmaceutical Science Advanced (Honours) is excellent preparation. The third year of the degree includes an extended placement in one of the pharmaceutical research groups, which will give you the skills and independence to conduct a substantial research project in your fourth (honours) year.

Don’t know which of these categories you fall into? Don’t worry – as long as you have a sufficient grade point average, you can transfer between the two courses.
"I’m continually impressed with the labs and equipment we get to use. The research opportunities are incredible – you get to study under internationally-renowned academics, and from as early as third year I’ve had the opportunity to undertake original research."

MICHAELA VERMEULEN
Pharmaceutical science student
A sense of community
Located in Melbourne’s medical and biotechnology precinct, our Parkville campus is just minutes from Melbourne’s CBD. It has excellent public transport links, and is renowned for its strong sense of community.

In addition to smaller class sizes and the opportunity to really get to know your instructors, you’ll be paired with a student mentor who will help you transition to uni life.

The campus is home to a range of clubs and societies, the largest of which is the Monash Parkville Student Union (MPSU). The MPSU is the overarching student body and is responsible for organising social networking events, as well as:

> providing continuous support services
> sitting on university committees
> enhancing university life
> peer mentoring.

There are also smaller clubs that are specific to courses and student backgrounds. These include the Victorian Pharmacy Students Association, the Pharmacy International Students Association and the Pharmaceutical Science Society.

The Monash Guarantee
The Monash Guarantee recognises that your potential to succeed at university is about more than just your ATAR. It ensures fair entry for students to Monash, so that even if your achieved ATAR is below the lowest selection rank to which an offer was made in 2018, you could still land a place at the University.

You’ll be eligible if you:

> have experienced financial disadvantage;
> are an Indigenous Australian; or
> attend a school under-represented at Monash.

Visit the Monash Guarantee website for further information: monash.edu/study/how-to-apply/entry-schemes/the-monash-guarantee

Contact details
Phone: +61 3 9902 6011
Fax: +61 3 9903 9629
register.monash.edu.au/enquiry

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monash.edu/pharm

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