

PHARMACY AND PHARMACEUTICAL SCIENCE

BACHELOR OF
PHARMACEUTICAL SCIENCE
HONOURS (P3701)
ADVANCED HONOURS (P3002)

2018 Information booklet

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Faculty Key Contacts

Location: Building 404, Ground floor, Room G26

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Research Office
Monash University [Parkville Campus]
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PARKVILLE VIC 3052

Faculty Research Office Contact Details

Contact Name	Position	Email	Telephone
Dr Karen McConalogue	Manager, Research Programs	karen.mcconalogue@monash.edu	03 9903 9622
Dr Shannen Lau	Faculty Research Project Coordinator	shannen.lau@monash.edu	03 9903 9593
Ms Karen Drakatos	Postgraduate Research Programs Administrator	karen.drakatos@monash.edu	03 9903 9203
Dr Vanalysa Ly	Research Project Manager	vanalysa.ly@monash.edu	03 9903 9220
A/P Philip Thompson	Associate Dean (Research Training)	philip.thompson@monash.edu	03 9903 9672
Professor Peter Scammells	Associate Dean (Research)	peter.scammells@monash.edu	03 9903 9542

Theme Leaders

Contact Name	Theme	Email	Telephone
Professor Colin Pouton	Drug Delivery, Disposition and Dynamics	colin.pouton@monash.edu	03 9903 9562
Professor Patrick Sexton	Drug Discovery Biology	patrick.sexton@monash.edu	03 9903 9069
Professor Peter Scammells	Medicinal Chemistry	peter.scammells@monash.edu	03 9903 9542
Professor Carl Kirkpatrick	Pharmacy Practice	carl.kirkpatrick@monash.edu	03 9903 9204

Honours Coordinators

Contact Name	Theme	Email	Telephone
Dr Ben Boyd	Drug Delivery, Disposition and Dynamics	ben.boyd@monash.edu	03 9903 9112
Dr Betty Exintaris Dr Sab Ventura	Drug Discovery Biology	betty.exintaris@monash.edu sab.ventura@monash.edu	03 9903 9071 03 9903 9566
A/Professor Phil Thompson	Medicinal Chemistry	philip.thompson@monash.edu	03 9903 9672
A/Professor Simon Bell	Pharmacy Practice	Simon.Bell2@monash.edu	03 9903 9533

Theme Administrators

Contact Name	Theme	Email	Telephone
Ms Nicole McMillan	Drug Delivery, Disposition and Dynamics	nicole.mcmilan@monash.edu	03 9903 9558
Ms Daisy Albanese	Drug Discovery Biology	daisy.albanese@monash.edu	03 9903 9068
Ms Nicki Penny	Medicinal Chemistry	nicki.penny@monash.edu	03 9903 9614
Ms Nicki Penny	Pharmacy Practice	nicki.penny@monash.edu	03 9903 9614

2018 Important dates

Official commencement of course Induction	Induction Day 1 - Thursday, 15 February 2018 Induction Day 2 - Friday, 16 February 2018 Induction Day 3 - Monday, 19 February 2018 Various Venues: please refer to schedule
Laboratory Animal Care Course	Tuesday, 20 th February 2018 http://www.monash.edu.au/researchoffice/animal/moreinfo/training.html Venue: Clayton Campus
Compulsory skills workshops	Session 1: Starting out: Preparing your Proposal – Thursday, 22 February 2018 Session 2: Presenting to an Academic Audience – Thursday, 1 March 2018 Session 3: Putting Together a Literature Review – Thursday, 8 March 2018 Venue: G05 Computer Lab
MIPS Seminars	Compulsory for all students to attend. See program here: http://www.monash.edu/pharm/about/events/facultyseminarseries
Preliminary oral presentations	To be advised by your Honours Coordinator
Compulsory ethics lectures	Ethics session 1 - Understanding the overarching principles of scientific research Ethics session 2 - Roles of the Researcher and Research Team Venue: Cossar Hall Tute rooms 1 & 2
Graduate Research Information evening for prospective PhD and Masters students	September 2018 (Date to be confirmed)
Final oral presentations	To be advised by your Honours Coordinator
13 th Annual Postgraduate symposium	Wednesday, 26 th September 2018 Venue: Cossar Hall and Lecture Theatre 2
Mini-thesis submitted for examination before 5.00pm	Friday, 19 th October 2018
Closing date for postgraduate research scholarships	International Students – 31 st August 2018 Domestic Students - 31st October 2018
Graduate Research Committee – Honours Ranking/Results Meeting (This is for your information only - students are not required to attend)	Friday, 9 th November 2017 (approximate date)

Research degrees webpage

Please save this link to favourites - <https://www.intranet.monash/pharm/students/research>

Research areas

Our world-class research is undertaken within the Monash Institute of Pharmaceutical Sciences (MIPS) and the Centre for Medicine Use and Safety (CMUS).

We have expertise and infrastructure to support research in the following areas:

Centre for Drug Candidate Optimisation

Theme Leader: Professor Susan Charman

We are an innovative, collaborative research centre that provides ADME lead optimisation advice and support for emerging drug-discovery programs within biotechnology and pharmaceutical companies and not-for-profit research institutes.

<http://www.monash.edu.au/pharm/research/areas/optimisation/>

Drug Delivery Disposition and Dynamics (D4)

Theme Leader: Professor Colin Pouton

Our overarching goal is to develop next-generation drug-delivery systems and regimens that can markedly improve patient treatment. Our research programs are both fundamental and applied, and we have technical expertise in drug-delivery science, biopharmaceutics and PK/PD.

<http://www.monash.edu.au/pharm/research/areas/drug-delivery/>

Drug Discovery Biology (DDB)

Theme Leader: Professor Patrick Sexton

Our laboratory is focused on how G protein-coupled receptors, or GPCRs, selectively transmit messages from the outside to the inside of a cell. We investigate new modes of regulation of GPCRs in an effort to identify novel drug-discovery targets and approaches.

<http://www.monash.edu.au/pharm/research/areas/drug-discovery/>

Medicinal Chemistry

Theme Leader: Professor Peter Scammells

We focus on medicinal chemistry for drug discovery. We have successfully contributed to the development of the ground-breaking flu treatment Relenza and other important medicines. Our strengths are in structure-based drug design and synthetic medicinal chemistry, which applies the principles and techniques of chemistry to the discovery and development of compounds to prevent, treat or cure disease.

<http://www.monash.edu.au/pharm/research/areas/medicinal-chemistry/>

Centre for Medicine Use and Safety

Theme Leader: Professor Carl Kirkpatrick

Our research takes place within the Centre for Medicine Use and Safety. Its ultimate goal is to optimise the safe and effective use of medicines through our expertise in health services (development and evaluation), pharmacometrics (pre-clinical, clinical, phase I- IV+), pharmacotherapy (hospital, aged care and community), public health/pharmacoepidemiology and pharmacy education (academic and professional).

<http://www.monash.edu.au/pharm/research/areas/medicine-safety/>

Acronyms

CDCO	Centre for Drug candidate optimisation
CMUS	Centre for Medicine Use and Safety
D4	Drug Delivery, Disposition and Dynamics
DDB	Drug Discovery Biology
FGRC	Faculty Graduate Research Committee
HDR	Higher Degrees by Research
MGRO	Monash Graduate Research Office
MIPS	Monash Institute of Pharmaceutical Sciences
PPA	Parkville Postgraduate Association

Course Information

Course Title & Course Code

Bachelor of Pharmaceutical Sciences (Honours) P3701
Bachelor of Pharmaceutical Sciences (Advanced Honours) P3002

Duration

The Honours course duration is one year full-time.

Starting Date

Full-time students are expected to commence the course in semester one of the undergraduate academic year. The induction days are 18th February and 19th February 2016.

Description

This honours-year course is designed to prepare students for entry to a higher degree by research.

Outcomes

Upon successful completion of this 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.
- communicate ideas and results effectively to diverse audiences and in a variety of formats

Structure

This course:

(a.) compulsory advanced coursework (25 per cent) including an induction program and topics applicable to the research interests of the student

(b.) supervised research (75 per cent) that falls within the general research themes of:

- medicinal chemistry
- drug discovery biology
- drug candidate optimisation
- drug delivery, disposition and dynamics (formulation sciences)
- medicine use and safety.

With permission of the Faculty Graduate Research Committee, it may also be possible to undertake a portion of the research in an external institution (e.g. a hospital or industry laboratory). If a substantial portion of the research work is to be carried out in an external institution, a suitably qualified person within that institution should act as an associate

supervisor. The internal (faculty) supervisor is responsible for the overall research program at an academic level.

Course Units

Students are enrolled in one of the following pairs of units. Each unit contains activities based on one specific pharmaceutical science research area:

Medicinal Chemistry

PSC4111 Advanced medicinal chemistry (12 credit points)

PSC4112 Research in medicinal chemistry (36 credit points)

Pharmaceutics (D4)

PSC4211 Advanced formulation science (12 credit points)

PSC4212 Research in formulation science (36 credit points)

Drug Discovery Biology

PSC4311 Advanced drug discovery biology (12 credit points)

PSC4312 Research in drug discovery biology (36 credit points)

Pharmacy Practice (CMUS)

PSC4411 Advanced medicine use and safety (12 credit points)

PSC4412 Research in medicine use and safety (36 credit points)

Award(s)

Bachelor of Pharmaceutical Science (Honours)

Bachelor of Pharmaceutical Science (Advanced Honours)

Fees

Fees for 2018*	Pharmaceutical Science
Local Students	Commonwealth supported place (CSP) Average annual student contribution - \$9185AUD
International Students	\$41300 AUD
Student Services and Amenities Fee (SSAF)	\$294AUD

*These fees are subject to alteration but were correct at the time of printing.

Fees are subject to change annually.

Australian Government Allowances

Australian candidates may be eligible for financial assistance, such as ABSTUDY, AUSstudy, Youth Allowance or other allowances. Information may be obtained from: Centrelink website <http://www.centrelink.gov.au>

Census dates for 2018

The census date is:

- when you become liable for fees for the units you're enrolled in
- the last day you can discontinue without 'withdrawn' showing on your academic record (there are some exceptions)

If you discontinue a unit after certain dates, your academic record can show **withdrawn late** or **withdrawn fail**. You should understand how discontinuation dates can affect your fees and academic record.

2018 Census dates for the most common teaching periods

Teaching period	Code	Teaching period start date	'Withdrawn no load' starts	Census date	'Withdrawn late' starts	'Withdrawn fail' starts	Teaching period end date
			Academic penalty for some teaching periods only		<u>Academic and financial penalties apply</u>		
							Last day to discontinue units
Semester one	S1-01	26/02/2018	-	31/03/2018	01/04/2018	01/05/2018	25/05/2018
Semester two	S2-01	23/07/2018	21/08/2018	31/08/2018	01/09/2018	25/09/2018	19/10/2018
Full-year	FY-01	26/02/2018	01/04/2018	30/04/2018	01/05/2018	31/07/2018	19/10/2018

Course responsibilities

The university and the theme in which the candidate undertakes the Honours program, the supervisor and the candidate all play vital roles in the successful provision and completion of the academic course. Sections of the Monash University PhD Information Handbook provide a synopsis of guidelines on these matters and the Intellectual Property practices that operate within the university. Although these sections are aimed at Doctoral candidates, the general principles contained therein are equally applicable to Honours students. Please refer to:

<https://www.monash.edu/graduate-research/faqs-and-resources>

Holidays and Leave

With the exception of public holidays taken by the university, Honours candidates work full-time until the termination of the course.

You must be notify your supervisor of any leave of absence (such as sick leave).

Special Consideration

Students may apply for special consideration if his/her work has been affected by serious illness or other serious cause. This may apply to significant difficulties related to completion of the research project or the completion of coursework. The Faculty Graduate Research Committee are responsible for the assessment of the application.

In the case of coursework, consideration may be given to deferring examination or assignment due date. In the case of the research project, the granting of extensions for thesis submission will be considered or the deferral of assessments such as the oral presentations.

To Apply

- A standard application form must be completed. It can be downloaded from: <http://www.monash.edu/connect/forms>

(Applications should be discussed with your supervisor and then submitted to the Postgraduate Research Programs Administrator, Research Office)

Appropriate evidence and documentation must be provided. Documentation can include written statements and statutory declarations; however evidence will only be accepted by professionals who are registered with a professional body, such as social workers, medical practitioners, lawyers and psychologists. Your completed application together appropriate documentation and evidence must be lodged as soon as practicable and no more than two (2) working days after the assessable task for the semester.

*Please note: Special consideration will only grant you an extension of time. This **will not** alter your grade.*

Grievances

If any problems emerge which are either directly related to your research or your candidature at the Faculty which may indirectly affect your ability to continue, it is essential that you make contact with either your supervisor, the Health and wellbeing unit, the Associate Dean of Graduate Research, or the Manager, Research programs.

As well as your immediate supervisor, other research colleagues are available to give advice, interpret regulations, and ensure that your time at the faculty concludes with the successful submission of your mini-thesis.

The Faculty of Pharmacy and Pharmaceutical Sciences student services web page can assist with contact details for all available services at the campus and across the University:

<http://www.pharm.monash.edu.au/students/hwd/index.html>

Occupational Health and Safety (OHS)

The University strives to provide a safe and healthy environment for its employees, students, and visitors at all of its campuses and premises. Work place instructions, policies and procedures are developed and disseminated to ensure the risks associated with work at Monash are minimised as far as reasonably practicable as per the Occupational Health and Safety Act 2004 (Vic).

Note that your department or research area will have specific OHS policies and guidelines in regards to laboratory work or field work, and that it is your responsibility to adhere to these requirements.

You must also take reasonable care of your own and other worker's health and safety by:

- Not wilfully placing others at risk;
- Complying with all OHS instructions, policies, and procedures including departmental safety manuals;
- Ensuring the correct use of all safety devices and PPE as signed and ensure fully enclosed footwear is worn at all times;
- Complying with the instructions given by emergency response personnel such as emergency wardens and first aiders;
- Being familiar with emergency and evacuation procedures and the location of emergency response equipment (training required for its use);
- Not consuming food or drink in laboratories, studios or workshops;
- Reporting all hazards, incidents and 'near miss' incidents using the Monash hazard & incident Procedure; and
- Seeking information, advice and training where necessary before carrying out new or unfamiliar work.

As per Staff Requirements for Students Safety in Laboratories, Studios and Workshops Procedure, March 2013.

Committees and student representation

Faculty Graduate Research Committee (GRC)

The Faculty GRC is a committee that meets to review matters relating to Higher Degree by research (HDR) and Honours program management policy. Please direct any queries to the Postgraduate Research Programs Administrator in the first instance.

Parkville Postgraduate Association (PPA)

The PPA is the representative body for postgraduate students at Monash University's Parkville campus.

They play a diverse and multi-faceted role in all aspects of academic, cultural and social student life. As well as organising a multitude of social events, they provide a means of representation for postgraduate students on the Parkville campus.

The PPA runs many events for postgraduates throughout the semester. If you would like to get involved or find out more about PPA functions, please refer to webpage:

<http://intranet.monash.edu.au/pharm/students/ppa.html>

Facilities and Support services

The health and well-being unit provides many services and facilities including:

- Accommodation
- Childcare
- Counseling and mental health
- Disability support
- Employment and career development
- Financial assistance
- International student support
- Medical and health
- Motivation, stress and time management
- Safer community
- Safety and security
- Spirituality
- Student equity
- Student grievances
- Student rights officers

For more information go to webpage:

<http://intranet.monash.edu.au/pharm/students/hwd/index.html>

Professional Development and training

As an Honours student at the Faculty of Pharmacy and Pharmaceutical Sciences, it is compulsory to attend the following professional development and training sessions during your candidature.

Training Topics	Date	Time	Venue
Honours Induction	Refer to schedule		
Session 1: Starting out: Preparing your Proposal	22 nd February	10am-12pm	Computer lab G05
Session 2: Presenting to an Academic Audience	1 st March	10am-12pm	Computer lab G05
Session 3: Putting together a Literature Review	8 th March	10am-12pm	Computer lab G05
Ethics 1 - Understanding the overarching principles of scientific research	19 th April	9.30-11am	Cossar Hall Tute Room 1 & 2
Ethics 1 - Roles of the Researcher and Research Team	26 th April	9.30-11am	Cossar Hall Tute Room 1 & 2

Guidelines for a well maintained research lab notebook

Every researcher must keep a clear and detailed lab notebook. The notebook provides an accurate record of what you have done and is the basis for reports and publications.

Below is a list of criteria that should be met to ensure that your lab notebook is produced and maintained to the highest standards:

- Find a durable hard-bound lined notebook. Do not use a spiral bound notebook as they are more difficult to maintain in good condition during the course of your experiment.
- Label your lab notebook with your name, phone number and supervisors name, project title and date of thesis submission in a prominent location on the outside of the notebook. Make entries in pen, not pencil. This is a permanent record of all your activities associated with your research.
- Number pages before you commence. This will make it easier to locate specific information at a later date.
- Always date every entry, like a journal. Entries should be brief and concise. Full sentences are not required, but if someone else were to read what you have written, writing would be legible and the key messages would be identifiable.
- Include all observations made and data produced during your research in sequential order. Even if it seems insignificant, it could later be very useful.
- Glue or tape any loose papers, photocopies of important items into your notebook.
- Detail all mistakes, problems and changes to procedure as well as lapses in data collection, so that you are able to fully explain any inconsistencies on completion of your research.
- Description of research methods for achieving data should be: accurate, complete, reliable and verifiable.

***Note: DDB students use Electronic Lab Notebooks (ELN).

Guidelines on how to write a mini-thesis

The following is a set of basic guidelines for writing a mini-thesis for Honours candidates at Faculty of Pharmacy and Pharmaceutical Sciences (Monash University). However, please consult your Supervisor for further, specific requirements that may pertain to your particular theme, subject or field of research.

Structure Requirements:

The structure of the mini-thesis follows **lab report** formatting utilising the following chapter headings:

Title page:

Provide the title of your mini-thesis.

Provide your name, qualifications, student ID number and date.

Table of contents:

A list of division headings and the pages on which they start.

Abbreviations/Glossary:

Explain any abbreviations or special terms (you may not have any to be included).

Abstract: gives a very brief indication of:

- The aim/s of the report.
- What was done? (the experiment)
- How it was done? (the method)
- What was discovered?
- What was concluded?

An abstract should be a short paragraph of approximately 200 words and should be written last, when you know what exactly you did and what was achieved.

Introduction: provides the context for the report. It commences with a **Literature Review** which will provide:

- a clear statement of the topic or problem including the actual hypothesis.
- a clear presentation of the range of research on the topic.
- an evaluation of the research.
- an indication of any further research necessary.

The remainder of the introduction will state the following:

- what you hope to learn from the research? (Aims and objectives discussed)
- why this research is important?

Procedures/Methodology: sets out what you did in sequence. Specifically it:

- Explains how your research was performed (i.e. via quantitative and/or qualitative methods).
- Identifies what materials, techniques and equipment you used.
- Provides sufficient information for another researcher to replicate the study.

Results and discussion: presents the results of the experiment and what the results mean.

- Includes clearly titled and labelled graphs, tables and figures where appropriate (If you insert any of the above, you must refer to them within your text. Please use proper shading/patterns if colour graphs are not used).
- Detailed calculations should be provided in the appendices, not in the main body of the text.
- Indication of whether the results confirm, verify, or support the hypothesis, or refute, negate, or contradict it.
- An explanation of possible sources of error and an indication of how the experiment could be improved in future should be included.

- Alternatively, this section could be divided into 2 chapters, with one headed Results and the other headed Discussion. Check with your supervisor as to their preference on this matter.

Conclusions:

- Briefly summarises the main results.
- Briefly explains the significance of the findings.

Bibliography:

- Provides a list of sources of information which you have used, following the Vancouver* method of referencing.
- Include all works that were used in preparation, whether cited or not.
- Should only contain references you have actually read.

Appendices:

- Provides supporting information such as calculations.
- There should only be one appendix per page.

***Vancouver referencing style**

The Vancouver or Endnote referencing style is the style that is to be used in all work presented at the Faculty of Pharmacy and Pharmaceutical Sciences (Monash University). It is a numeric system style of referencing that is predominantly used in the science/medical field.

When referencing your work in the Vancouver style, it is very important that you use the right punctuation and that the order of details in the reference is also correct.

Why Reference?

Referencing is necessary to avoid plagiarism, to verify quotations, and to enable readers to follow-up and read more fully the cited author's arguments.

Steps involved in Referencing

1. Note down the full bibliographic details. In the case of a book, 'bibliographical details' refers to: author/editor, year of publication, title, edition, volume number, place of publication and publisher. (Not all of these details will necessarily be applicable depending on the source).

2. In the case of a journal article the details required include: author of the article, year of publication, title of the article, title of the journal, volume and issue number of the journal, and page numbers. For all electronic information, in addition to the above you should note the date that you accessed the information, and database name or web address (URL).

For further information and examples of the Vancouver referencing system, please refer to: <http://www.lib.monash.edu.au/tutorials/citing/vancouver.html> and see the Library Manager for Vancouver/Endnote classes.

Mini-Thesis Format Requirements

It is advised that your mini-thesis adhere to the following formatting requirements:

Maximum number of pages: The mini-thesis is restricted to a maximum length of 35 A4 pages **excluding** title pages, figures, tables, appendices and bibliography.

Line spacing: 1.5

Font style: Arial or Times New Roman

Font size:

Heading: 16 and Bold

Sub Heading: 14 and Bold

General text: 12

Margins: standard margins of 2.54cm at top and bottom of page, and 3.17cm on left and right margins. (Margins are found in the page set up function, under File in Microsoft word).

Item Numbering: Roman numerals should be used from Table of Contents through until the Abstract. From that point on in the mini-thesis, use of Arabic numerals is expected.

Page breaks: Insert page breaks at the end of each section (as per above).

Page numbering: Page numbers should be inserted on the bottom right hand side of the page.

Printing: The mini-thesis is to be printed in portrait (with the exception of tables/figures which should be printed in landscape). Printing should be single-sided only.

Paper: The mini-thesis should be printed on any one of the recognised sizes of quarto paper, namely International A4, American Quarto or Imperial Quarto.

Binding: It is expected that all mini-theses be hard or spiral bound. Three copies must be bound at student expense. Your supervisor will require two copies, one of which will be kept at the library. You will be required to keep the third copy for your own record.

Overall Do's and Don'ts in writing your mini-thesis

- Do keep concise, accurate, dated records (this is very important as you will be randomly audited at some stage this year and assessed on clarity and accuracy of record keeping). Understand your hypothesis and what it is you are doing and the reasons why.
- Scientific writing must be unambiguous (you must communicate clearly, specifically and accurately to minimise the possibility of misinterpretation).
- All research must be derived from either English or officially translated works only.
- Don't present an opinion as a fact.
- Don't falsify data.
- Don't plagiarise.

Thesis Submission

Please prepare an electronic copy of your mini-thesis and send to your supervisor on the due date. Your final copy should be re-edited (following the marking process) and submitted to the Faculty Library once all corrections are made. Those mini thesis that are subject to Intellectual Property (IP) clauses need to speak to the Postgraduate Research Programs Administrator.

Three examiners will mark the mini-thesis with expertise in the area of research (generally from the department in which the research has been performed). In marking the mini-thesis, the following guidelines are used.

70% is allotted to content
30% to presentation

The mini-thesis is restricted to a maximum length of 35 pages (single-sided 1.5 spaced) **excluding** title pages, figures, tables, appendices and bibliography. It is impossible to impose strict requirements on the form of the mini-thesis since, to some extent, this will be determined by the nature of the research and the results obtained. Nevertheless, it should contain information of the type normally found in a good scientific paper i.e., the background to the research, the methods used, the results obtained and a discussion that embraces the results obtained, their place within the general area of research and possible future directions for investigation. **Themes may apply specific additional requirements (eg. formatting to a specific journal template manuscript requirements).**

It is important to recognise that the supervisor is responsible for giving the candidate **advice** regarding the presentation and preparation for the mini-thesis. However, the responsibility for the final product is in the hands of the candidate. With this in mind, supervisors are instructed that they may **comment, make suggestions** and **provide advice** on a **draft** of the thesis **provided by the candidate**, but they **should not** be involved in details concerning the final preparation of the thesis, proof reading or correcting the draft.

A supervisor cannot act as an examiner for the oral presentations or mini-thesis of his/her student. However, the supervisor does provide a mark and a report to the Graduate Research Committee that covers areas such as motivation, problem solving, initiation of ideas, technical skills and written and oral communication skills etc.

(See pages 15-17 Guidelines: how to prepare a mini-thesis)

Assessment of course

Assessment of Course

The following marking scheme is utilised for the assessment of candidates Bachelor of Pharmaceutical Science (Honours).

Coursework unit

Compulsory coursework activities will generally be confined to first semester and include a combination of tutorials, research specific lectures, non-assessable and assessable written work (i.e.: examinations/essays, presentations) relevant to the unit the candidate is enrolled.

Assessment items are managed within relevant theme.

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

Research unit **75%**
Comprising Thesis score¹ 50%
 Final presentation score² 10%
 Viva³ 15%

[100 %]

Oral Presentations

In the **preliminary oral presentation**, candidates will be allowed 10 minutes for the presentation and 5 minutes will be allowed for questions from the audience. In this presentation, candidates will be expected to outline the background to their project, address the aims of the research, outline the methods they will use and provide an overall research plan. There is no expectation that the candidate will present detailed experimental findings at this stage.

In the **final oral presentation**, the candidate will present the results of their research; 15 minutes will be allowed for presentation and 5 minutes for questions.

Oral presentations will be assessed by academic staff members of the Faculty.

¹ The thesis will be assessed by three examiners, with an examiners report detailing the basis for the assessment based upon the criteria in the assessment guidelines. The score will be the average of the 3 assessments. A new assessment form will be developed.

² The final presentation assessment is to be geared to assessing the quality of the oral presentation as distinct from the results that are presented.

³ The scope of the viva will be clearly set out to students. The objective of the viva is to assess the student's independent understanding of their research and research area.

Guidelines for assessment for Honours Oral Presentations for supervisors and GRC members

The Honours presentations should be weighted as follows:

Preliminary Honours Presentation

Content
Presentation
Answering Questions

Final Honours Presentation

Content	50%
Presentation	30%
Answering Questions	20%

The following are suggested guidelines in assessing the preliminary and final honours presentations.

Content

- Has the project been put in perspective? (prelim & final)
- Is the literature appropriate? (prelim & final)
- What are the objectives, hypotheses? (prelim & final)
- Has the methodology been clearly presented? (prelim & final)
- Is the methodology suitable for addressing the objectives? (prelim & final)
- Has the methodology been validated, if appropriate? (final)
- Are the methods of analysis appropriate? (prelim & final)
- Have proper statistical or numerical methods of data treatment been used and are they appropriate? (final)
- Are the interpretations of the results correct? (final)
- Have the methods addressed the objectives? (final)
- Has the hypothesis been tested? (final)
- Did they comment on limitations of the methodology? (final)

Presentation

- Does the presentation flow logically?
- Did the student communicate the message well (speaking, confidence, appearance)?
- Did the student utilise the visual medium appropriately (readability, information, use of medium)?

Answering Questions

- Was the question appropriate?
- Did the student answer the question appropriately?
- Did the student lack some knowledge of the area?

Guideline for Thesis examiners

In their detailed report the internal/external examiners should state concisely the grounds on which their assessment is based, indicating the strengths and weaknesses of the thesis, and any amendments required. In particular, they may wish to address the following areas:

Organisation of the thesis

- Is the thesis well laid out and clearly structured?
- Is the material well presented?
- Is sufficient material present?
- Is the organization suitable for the type of work being conducted?
- Is there a clear statement of the following:
 - the contribution of the thesis to theory and practice;
 - justification of the research topic;
 - an explanation of the importance of the topic;
 - a sitting of the project within the relevant research context.

Grasp of the problem

- Does the student clearly understand what they are trying to achieve?
- Are the terms and concepts clearly explained and the aims of the thesis clearly set out?
- Is the scope of the project made clear?
- Are the research questions clearly specified?

Review of relevant literature

- Has the student grasped the essence of what they have read?
- Are the important and seminal references present?

Description of method

- Has the appropriateness of the method chosen been justified?
- Has the method been validated?
- Have possible alternatives been considered?

Quality and presentation of results

- Have the results gained been presented in sufficient detail?
- Are their implications clearly set out and have conclusions been drawn?
- Has the student provided in adequate detail the findings on which they have based the answers to their research questions?

Analysis of results

- Has the student described clearly the conclusions they have drawn from their findings, and the answers they provide to the research questions being investigated?
- Has the student used appropriate methods of analysis including statistical approaches?
- Does the student understand the limitations of their results and method?
- Have they described ways in which the limitations of their approach might be addressed?

Conclusions and suggestions for further work

- Are suggestions for further work present?
- Have they been extrapolated from the research carried out and are they sensible and feasible?
- Has the student shown how their research contributes to the larger context of the theory or practice of their research area?

Presentation and clarity of expression

- Is the presentation structure appropriate?
- Is the quality of the figures and diagrams satisfactory?
- Is the thesis free from typographical and grammatical errors?
- Are ideas well expressed?
- Do they flow logically from topic to topic?

Guidelines for Grading

The following guidelines are provided in order to assist internal and external examiners in assigning a particular grade to a thesis. They are not intended to be prescriptive. Rather, they indicate some important areas to consider as part of the examination process. These guidelines have been developed by the Graduate Research Committee of the Faculty of Pharmacy and Pharmaceutical Sciences using the framework of the Masters of Information Management and Systems Examination Guidelines.

In marking candidates, the grading scheme used will be:

H1	≥	80%
H2A	=	70-79%
H2B	=	60-69%
H3	=	50-59%

H1 (80-100)

There should be no major omissions in the content of the thesis. The student should demonstrate an excellent understanding of the area of research, and possess the ability to critically evaluate the literature and the research method employed. In particular, the thesis should present a significant depth of analysis of the topic of study and should make a strong contribution to theory or practice within the field of investigation. The quality of research material should be equivalent to that of publishable material. This grade indicates that the student has the aptitude and research ability to make an excellent candidate for further postgraduate research study.

H2A (70-79)

There should be no significant omissions in the content of the thesis. The student should demonstrate a good overall understanding of the topic area and the research method, but some minor gaps are acceptable. The critical evaluation of the project and the research method must be comprehensive. This grade indicates that the student has sufficient aptitude and research ability to undertake further postgraduate research study.

H2B (60-69)

The thesis should at least cover the major components of the research project, i.e., literature review, research design, data collection and analysis of results, but may be weak in several areas. Although critical evaluation of the project and research method may be subject to recommended changes, a reasonable explanation of the project details themselves should be present. This grade indicates that the student probably does have the aptitude and research ability to make a successful candidate for further research postgraduate study.

H3 (50-59)

The thesis is likely to cover only some of the major components of the research project, i.e., literature review, research design, data collection and analysis of results. In particular, the critical evaluation of the project and research method is poor, and the basic explanation of the objectives and conduct of the research is flawed. This grade indicates that the student should not be recommended to progress to further research study.

Fail (0-49)

It may be necessary to award a fail in the case of a student who has not described in even the most basic and straightforward manner the nature, objectives and conduct of the research. This will be the case when the examiner feels the changes necessary to bring the work thesis to a satisfactory level require significant additional work beyond the time limitations of the course of study. This grade may also be awarded in the case a research project has not been completed in time or the work presented is not adequate in relation to the percentage of the research component.

Honours final results

Following a meeting of the Faculty Graduate Research Committee which acts as a Board of Examiners, candidates are given an Honours grading based on course assessments. Candidates who wish to proceed to postgraduate studies at the Masters or PhD level are also ranked. This ranking is largely based on course assessments, but may also take into account such things as experience, scientific communications and publications to determine the placement of individuals who have similar course assessments.

Recommendations regarding postgraduate studies and scholarship distributions are determined by the Faculty Graduate Research Committee.

The Scholarships Committee of the University is the body that finally determines the distribution of Research Training Program (RTP) and Monash Graduate Scholarships (MGS). The Faculty Graduate Research Committee determines the distribution of any faculty-based scholarships.

A H1 grade can be regarded as the minimum requirement for potential success in gaining RTP or MGS awards and a H2A grade is the minimum requirement for entry into:

- (a) PhD candidature, or
- (b) Consideration for other scholarships.

Further information on postgraduate studies and scholarship support may be obtained from Faculty Research Coordinator.

Attachment A – Supervision

This section states that it is for doctoral and research masters candidates, however we have also applied the same polices to our Honour's Candidates.

Chapter 5: Supervision of doctoral and research master's candidates

5.2 Code of practice for supervision of doctoral and research master's candidates

This section comprises the ***Monash University Code of practice for supervision of doctoral and research master's students*** and is based in part upon the principles outlined in the *Australian Code for the Responsible Conduct of Research*. It also draws on responsibilities and requirements as outlined in the Higher Education Standards Framework (Threshold Standards) 2015.

This *Code* identifies the reciprocal and shared responsibilities of the University, academic units/schools/programs and faculties, research supervisors and graduate research students to ensure that the finest quality of research and research training is maintained. The *Code* is regularly updated and refined by the Graduate Research Committee (GRC) and the Monash Postgraduate Association (MPA).

Special Guidelines exist for circumstances in which supervision is remote from the student.

The Code is divided into seven parts:

- (A) Responsibilities at the University level
- (B) Responsibilities at the faculty level
- (C) Responsibilities at the academic unit level
- (D) Responsibilities of academic units/schools/programs in relation to supervisors
- (E) Responsibilities of supervisors
- (F) Responsibilities of the student
- (G) Conflicts of interest

To view this chapter in full, please go to:

<http://www.monash.edu/graduate-research/faqs-and-resources/content/chapter-five/5-2>

Attachment B – Intellectual Property

6.1 Forms of intellectual property

Intellectual property is a term that covers a range of legal rights for the protection of creative effort, particularly the protection of economic investment in that creative effort. Intellectual property rights can be bought, sold, leased and dealt with like any other form of property such as land and goods.

One of these rights is the right to *prevent* other people using the ideas or inventions. Ownership bestows on the owner:

- exclusive rights to make, use or sell the property
- the right to assign, transfer, waive rights, license, donate, etc.
- entitlement to registration where applicable
- legal rights to protect property or to seek damages for improper use
- exclusive ability to control development of the intellectual property
- liability for ownership, including taxation, legal action in negligence, etc.

6.1.1 Copyright

6.1.2 Patents

6.1.3 Designs

6.1.4 Trade marks

6.1.5 Circuit layouts

6.1.6 Plant variety rights

6.1.7 Trade secrets

To view this chapter in full, please go to:

<http://www.monash.edu/graduate-research/faqs-and-resources/content/chapter-six/6-1>

6.2.1 Copyright

6.2.1.1 Copyright in a thesis

6.2.1.2 Using the copyright of others in the thesis/third party copyright

6.2.1.3 Moral rights of the originators of copyright

6.2.2 Authorship and publication

6.2.2.1 Introduction

6.2.2.2 Determining authorship

6.2.2.3 Co- or multi-authoring and record-keeping

6.2.2.4 Publication of multiple research outputs on the same material

6.2.2.5 Publication in professional journals and the public media

6.2.2.6 Vanity and predatory publishing

6.2.2.7 Publication and sources of financial support

6.2.2.8 Restrictions on publication

6.2.2.9 Higher Education Research Data Collection (HERDC) Specifications

6.2.2.10 Attributing affiliation to Monash University in publications

6.2.3 Transfer or assignment of intellectual property to the University

6.2.3.1 Retention of copyright

6.2.3.2 Assignment and licensing

6.2.4 Collaborative research activity

6.2.5.1 Patents

6.2.5.2 Background intellectual property

6.2.5.3 Legal obligation to transfer IP rights

6.2.6 Collaborative research undertaken with a third party

6.2.6.1 General considerations

6.2.6.2 Confidentiality agreements

6.2.6.3 Examination and confidential material

6.2.6.4 Publication and confidential material

6.2.6.5 Confidentiality and thesis copy placed in the library: choosing to embargo a thesis

6.2.7 Monash University intellectual property regulations and statute

To view this chapter in full, please go to:

<http://www.monash.edu/graduate-research/faqs-and-resources/content/chapter-six/6-2>