



School of Mathematics and Statistics

# Becoming a PhD student

## Questions:

1. Do I want to do a PhD? (Why?)
2. Can I do a PhD? Should I?
3. Is mathematics the most suitable discipline?

Check out:

<https://amsi.org.au/publications/advancing-australias-knowledge-economy/>

# What does the degree involve?

The handbook says:

The PhD program involves a minimum of three years full-time study. Students undertake supervised research leading to the production of the thesis.

The length of a doctoral thesis normally should not exceed 100,000 words of text and should be submitted for examination within 4 years of full-time study.

...but what do you actually do for 3(+) years?

# What it really involves!

To learn how to be an independent mathematical researcher.

To do this you will need to

- Learn some more maths
- Learn how to find (and solve) problems
- Learn how to write mathematics for publication
- Learn how to present mathematics at seminars and conferences
- Learn how to collaborate with other researchers

# Entry requirements

- Almost all universities have the same entry requirements: **at least a II-1 Honours degree.**

**In reality, you should probably have a 1<sup>st</sup> class Honours degree (ie 85+ at UNSW)**

.... with exceptions

**+ Money!**

# First steps

**. You need to decide where you want to study!**

## **Important points to consider:**

- **What area of maths are you interested in?**
- **Who are the main people in that area?**
- **What sort of postgrad environment does the university provide? What reputation does the university have? Number of PhD students?**
- **Are there special requirements? Courses? Languages? Opportunities to teach?**
- **What sort of funding is available? (Scholarships and research support)**

# The Master's Apprentice (or mistress's)



**You'll need to find your Yoda!**

## **Do some research**

**First: ask your Honours supervisor for advice!**

**Check the research web pages of different maths departments.**

**Look people up on MathSciNet? (Are they publishing?  
Do they have good collaborators?)**

## **What are the application deadlines?**

**Eg UNSW for 2020: Applications close 20 September  
Offers: from 26 Nov. (Before end of T3!)**

**Highly variable and not always obvious!**

**(deadlines mainly for scholarship purposes)**



# Making an application

Line up some referees. Prepare a CV.

Email some possible supervisors

- Most places require you to have done this before applying!
- Write them a **personal** email, not a generic one!
- Send them a transcript and a description of your Honours project.
- If they respond positively, you may need to prepare some sort of research proposal with them.
- Visit if you can – some places require an interview.

Make the formal application to the university.

Wait for the offers to roll in .....

# Funding

Full Fees are expensive!

Almost all domestic research students have their tuition fees waived via the government's Research Training Program (RTP)

**Living allowance scholarships:** Most local PhD students receive an RTP scholarship worth roughly **\$27.5k pa**. You need a 'good' H1 degree to get one. Uni's often offer additional scholarships to try to fund all local H1 applicant, and/or offer 'top-ups' to some students.

Often some money from teaching/marking.

# Funding

**Some supervisors have funding specifically for their project.**

**Or Industry funding.**

**There are some 'high prestige' higher value scholarships, (eg UNSW Scientia Scholarships \$41k pa + ....)**

**Any Questions?**