

The first six months of candidature,
Postgraduate Research Student
Orientation Program, 2002

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My background

- did my PhD at the University of Adelaide in the late 1980's.
- took 3.5 years to complete
- Associate Professor in Applied Mathematics at the University of Wollongong
- I have supervised three PhD and one Masters student to completion
- I currently have two PhD students who will both submit this year
- all my students, so far, have finished within the required 3.5 years for a PhD, with no big problems in the examination process

Why is a research degree hard?

- In coursework degrees the content is broken down into small pieces (subjects) which can be completed as you go via assignments/essays/tutorials/exams
- In research degrees the main formal requirement is to submit a thesis in two (masters) or three (PhD) years time
- the other requirements are a formal review after six months and annual project reports
- coursework material is not new, while the content of a research degree must be original
- the achievement of originality in your thesis is a challenging task, but good fun too!

Read the journals

- make a list of the key journals in your field, with supervisor help
- read all the relevant articles that have been published in these in the last 10 years
- look at the new issues every month
- hardcopy access via the library or electronic access via the web
- the Current Contents database or the journal homepages are good for looking at abstracts of current papers.
- journalsearch option on the library website finds all electronic subscriptions
- use the library's document delivery service to obtain others
- read and reread the key papers in your field until you understand them properly. Make notes/reviews of these for your bibliography

Know your facilities

- ask for a machine of your choosing to sit on your desk. Learn about its operating system, eg UNIX, Windows etc
- learn a word processing package. In Maths this is Latex, it might be Word in other fields
- also learn a package suitable for seminar presentations, e.g. Slitex or Powerpoint
- learn how to use computer languages or software packages that you will need
- familiarize yourself with laboratory facilities and techniques that you will need

Be a creature of habit

- see your supervisor regularly, at least once a week
- keep regular hours, eg 9am to 5pm, 5 days a week
- set yourself weekly targets; your supervisor can help with this at your weekly meetings
- set longer term targets too. Review these targets and your achievements every three months
- keep a diary or logbook to record all that you do
- write up draft material regularly
- at any one time have a primary task and a number of secondary tasks on your schedule.
- do some tutorial work in your school

Don't be a hermit

- develop a profile in your academic unit, independent of your supervisor
- make friends with the other postgraduates in your academic unit
- besides making your workplace more interesting and enjoyable, they are a valuable source of information about how things work
- go to morning/afternoon tea occasionally. Other staff members can give useful advice about your thesis and academia generally
- if you are from interstate or overseas join a club or society. You will need an outside focus besides your study
- attend relevant conferences. Valuable contacts can be made and advice received

Publish or perish

- break down your thesis into manageable chunks of about six months to a year's work each
- in our School it is common for research students to do a number of related, but independent, problems
- publish your work in stages in peer-reviewed international journals and conferences
- this gives valuable feedback and validates your work
- some of your thesis will already be in a polished form when you come to write it up
- you will also have some confidence that your thesis will be accepted
- potential employers give a lot of weight to publications

List of useful UOW web-addresses

- uow.edu.au/research/current, lists rules and information for current research students
- uow.edu.au/informatics/maths/postgraduate.html
- the School of Mathematics and Applied Statistics lists three documents written by staff and former students
- tips for giving a good presentation
- writing projects, reports, theses and papers
- tips on successfully completing a PhD
- this talk can be downloaded from www.uow.edu.au/~tim/phdstud