

REPORT  
PATHWAYS TO THE PHD WORKING PARTY  
30 NOVEMBER 2014

## Recommendations from Pathways Working Party

### Background

An Honours qualification from an Australian university has been the common benchmark entry standard for Australian PhD programs. ANU has required Honours 2A or equivalent for entry and H1 equivalent for scholarships. Increasingly common practice internationally is to enter research programs after completing a Master qualification. Master programs vary from 1 to 2 years following a 4 year undergraduate program (US) to 2 years following a 3 year undergraduate degree (UK and Bologna).

Over the last 5 years (at least) Australian universities have debated whether the predominantly Honours entry system should change. A Go8 2010 discussion paper on the future of Honours as an entry pathway to the PhD raised a number of issues, including:

- Whether a different structure would improve the level of preparedness compared with Honours and the time taken to complete the PhD;
- Desirability of expanding research training coursework to address employment needs;
- Whether traditional Honours limits domestic student mobility and access to overseas institutions, and impacts the recruitment of international students.

The Deans of Graduate Studies in the Go8 favour a pathway that includes at least 18 months of research and research training; specifically they favour an 18 or 24 month Master program following an undergraduate degree.

A discussion paper presented as a “Hot Topic” for Academic Board 5/2013 on Pathways to the PhD, gave several reasons for looking at additional or alternative pathways beyond the traditional Honours degree, ranging from improved research training to better international mobility. The paper may be accessed at

[https://alliance.anu.edu.au/access/content/group/b917e539-887b-4c7d-b47a-be541f204433/2013/AB%205\\_2013/AgendaAB5\\_2013sep2013.pdf](https://alliance.anu.edu.au/access/content/group/b917e539-887b-4c7d-b47a-be541f204433/2013/AB%205_2013/AgendaAB5_2013sep2013.pdf)

Versions of this paper were also discussed at HDRC (4/2013) and URC (4/2013). The range of views is described below.

At HDRC there was consensus that Honours is highly valued and should remain as an available (parallel) pathway to the PhD but there was also strong support for further development of the concept of a Research Master degree pathway.

The URC discussion focussed on:

- Whether a different entry pathway would improve both the level of preparedness compared with Honours and the time taken to completion. Presentation of views from opposite ends of the spectrum had been invited. Earth Sciences made the case in support of a new 2-year research-led program before PhD entry as a preferred path because it would enable students to start work on developing an independent and original project from the beginning of the PhD. Creative Arts expressed support for Honours because it provides both an exit qualification and an entry to PhD. Their Honours was rigorously structured and provided a quicker entry route to the PhD which was a competitive advantage over a longer pathway.

- More data to support the claim about limits to mobility for Australian Honours graduates in the international PhD space would be desirable but it was noted that there no data are currently available. There are individual anecdotes on this.
- The committee was reminded that there is broad recognition in the sector, and in government and industry commentary, of the need to build generic skills and better prepare students for future employment. Discussion is therefore needed about the other elements of training within the PhD to address this. Only one-third of the PhD program is available for coursework under AQF standards. If it is fully utilised, the available time for research in the four-year PhD is curtailed. The desired characteristics of the ANU PhD program, including high quality supervision, need to be further discussed.
- Adopting the mixed model, with Honours and Master pathways run in parallel, would accommodate different needs both between and within disciplines. Multiple pathways are necessary because of the variety of students entering the PhD.

Views expressed at Academic Board ranged from strong support for retaining Honours as the main pathway, to a preference for an alternative Master pathway. Comments included:

- Direct entry bachelor honours degree programs () have not encountered problems in providing adequate training for PhD entry. For this reason, and mindful of the funding factor, they and the PhB should be retained.
- The number of units of research in pathway programs is a critical issue. A Master model would need to have 'at least 24 units' for flexibility and to be comparable to honours (which can include up to 48 units of research). The Graduate Coursework Working Party had not been asked to consider the Master by Research pathway specifically. The model adopted in the Review would require further development for it to align with the Master of Research proposed by Go8 DDOGS.
- While recognising that Honours is an outstanding tool for preparation for the PhD, it was also suggested that students encounter problems when applying for entry to European universities and may be rejected because the Honours degree is not well known or they lack the training of a Master degree. If top universities move in the direction of the Master of Research, there was a greater chance that the level of performance of the Honours degree may be misinterpreted. A 'Master' degree label may assist students. In time Honours may naturally fall away if students find the Master label more valuable.
- As at URC, there was support for parallel arrangements as a way of accommodating different needs both between and within disciplines and students with different backgrounds.
- A more structured coursework program within the PhD has allowed ANUCBE to accelerate students' progress and enable overseas access for students with different levels of preparation.
- The need to comply with professional accreditation requirements was also noted, for example for engineering the model would be 4 + 1 + 3 (rather than 3 + 2+ 3).
- Recognition that government policy on funding issues will have an impact but this should not prevent decisions on educational grounds. If several G08 universities promote a Master pathway then discussion on changes to funding models would be likely to follow.

Academic Board requested the PVC (RRT) to set up a Working Party to consider pathways to the PhD and to report by the end of 2014. The Pathways Working Party was asked to take account of the Working Group on Coursework Masters (UEC 444b/2013) and the work of the Honours Working Group (2014). The Honours Working Group has now reported and recommended clarified requirements for a substantive research project and for an element of summatively-assessed research training in Honours programs that are intended as pathways to the PhD.

The PtP Working Party was also aware that the introduction of “vertical double” degrees incorporating Master coursework into the final year of the Bachelor degree and allowing students to transition into graduate study earlier than otherwise, is an important recent development.

### **Meetings**

The Pathways to PhD Working Party began meeting after the Honours Working Group process was well advanced, since the issues for Honours were wider than just the pathway to PhD. The Pathways group held meetings on:

20 May 2014, 8 August 2014, 12 September 2014, 1 October 2014, 16 October 2014, 28 October 2014, 12 November 2014, 26 November 2014

**Membership** of the committee was Prof Corbett (Chair), Dr Nolan, Dr Cowan, Dr Gustavson, Assoc/Prof Zwikael, Mr Erickson, Prof Tacconi, Dr Kyung, Dr Hermann, Mr Evans. Dr Sankaranarayana from CECS joined the committee from 1 October.

### **The Terms of Reference:**

1. to establish the required competencies for entry into an ANU PhD;
2. to describe the current pathways at ANU and the implied range of current expected competencies;
3. to establish preferred pathways and their content and structure;
4. to examine implications of adopting a Master-only pathway versus the dominant Honours model;
5. to consider the issues required to implement the recommended pathways;
6. to make recommendations to Academic Board on the preferred pathways to the ANU PhD.

### **Timeline of Reporting:**

The Working Party's draft report to URC was discussed on November 12. A revised report was discussed at UEC on Dec 1. College feedback was received between those meetings and incorporated into this final report for the Academic Board meeting on December 12.

### **Working Party Assumptions**

The Pathways Working Party began from the starting points that:

1. The Australian Qualifications Framework (AQF: [www.aqf.edu.au](http://www.aqf.edu.au)) provides a useful set of definitions of expected skills and knowledge outcomes from different program levels.
2. The characteristics of the PhD (AQF Level 10) are:

- a research degree in which candidates demonstrate an original contribution to knowledge on the basis of an externally-examined thesis and such other examined work as required by their program.
  - The expected duration is 4 years and the maximum 5 years.
3. To succeed applicants require at least the skills and competencies to enable them to understand prior work in their discipline; to undertake independent, creative and original research; to manage a research project sustained over several years and to write and communicate their findings.
4. Within the relatively short Australian PhD program, which typically contains little or no compulsory coursework, some additional training and support to develop these skills can be provided but it is critical for success that candidates have a high level of skill, competencies and research potential on entry. The challenge is to identify those characteristics at the admission stage and to identify what evidence will be used to establish them. The WP also recognised that entry requirements alone cannot fully address the issue about the adequacy of research training in the Australian PhD.

### **Working Party approach to entry requirements**

1. Recognising the range of views expressed in URC, Academic Board and the Honours Working Party, the Pathways to PhD Working Party felt it was useful to establish principles that identified what we look for in candidates for the PhD, rather than trying to specify a small range of particular degree programs that would be accepted as pathways. The aim is to have a flexible, but transparent and easily implemented, set of principles to guide admission.
2. The Working Party took the competencies, skills and knowledge outcomes expected at the completion of Bachelor Honours (AQF Level 8) or Master (Research)(AQF Level 9) qualifications and developed a set of descriptors of “capabilities” or “competencies” (column one in Table 1).
3. The Working Party then developed indicators of the types of evidence that would establish those competencies.
4. The Working Party compiled a general list of prior degree structures, other training, outputs and experience that would provide evidence for the competencies and has listed indicative combinations of academic record, components of degree programs and other evidence that would meet the requirements (column two, Table 1).

It was not considered useful to specify a single degree pathway to the PhD but preferable to define the elements that should be included in degree pathways. The following elements were considered essential:

A research thesis or independently-conducted research project worth a minimum of 6 months credit, which could be cumulated from elements within a 4 year undergraduate program or two year graduate program. Where projects were collaborative, evidence of equivalent individual contribution.

Research training in relevant research methods accounting for 3 months work, which could be in separate courses or could be an identifiable element of the research project (e.g. lab techniques).

Advanced courses in the discipline or related subjects. In a 4-year program these could be 3<sup>rd</sup> year courses.

5. Programs in Law, Engineering, Computer Science, and Medicine that have specific requirements and different patterns of undergraduate training (e.g. embedded Honours and professional accreditation) will be asked to develop appropriate, specific lists organised around the principles of the recommended indicators. A first draft example is provided from Law (Table 2).

## **Recommendations against the TOR**

**TOR 1:** *to establish the required competencies for entry into an ANU PhD*

**Recommendation 1** That the table of competencies (column 1, Table 1) and the list of generic qualifications to establish academic record and research potential (column 2, Table 1) be adopted as defining the entry requirements for the PhD, subject to the additional information noted in Recommendation 2.

**TOR 2:** *to describe the current pathways at ANU and the implied range of current expected competencies*

Discussion: The current pathway to PhD is based on a requirement for an Australian Bachelor Honours H2A or equivalent academic record. There is an agreed formula for calculating GPAs that enables equivalence to be established with undergraduate qualifications in all Australian institutions and many international ones. It is also possible to enter the PhD with a Master degree with a “significant” element of research (usually assumed to require a thesis component of at least 6 months but not spelled out as such at the University level). In practice a range of other information is also considered for admission, including thesis proposals, contact or interview with supervisors, publications. These have not been transparently described either for students or for staff making admissions decisions.

Furthermore, the structure of Honours had not previously been clearly articulated. The new ANU Honours structure proposed by the Honours Working Party and now adopted by UEC and AB, sets out clearly the way in which Bachelor Honours AQF Level 8 competencies will be achieved and is more specific about structure of the degree. The current HDR admissions processes would not automatically take into account that level of detail in the structure of the prior degree, being based largely on the Honours grade achieved. The recommended new PhD admissions requirements do take into consideration the content of the prior degree (whether Honours or Master).

**TOR 3:** *to establish preferred pathways and their content and structure*

Discussion: The PtP Working Party considered it was preferable to use the competencies to define the elements that should be included in degree pathways rather than to specify a specific degree pathway. The WP therefore developed indicators of the types of generic evidence that would establish those competencies including a general list of prior degree characteristics, other training, outputs and experience that would be considered to establish the competencies. It has listed indicative combinations of academic record, components of

prior degree programs and other evidence that would combine to meet the requirements. These are shown in Table 1.

The recommendations of HWP for Honours degrees contained a clear statement of a basis for the pathway to PhD: that is, a pathway degree should contain a “thesis” or similar independent piece of research or project work worth at least 6 months credit (half a FT year) plus research training equivalent to at least 3 months credit. This approach is consistent with the thinking of the PtP WP.

Table 1 refers to “thesis” or research project throughout. “Thesis” is defined in Recommendation 17.1 of the Honours Working Party as “Thesis (Coursework). The product of a research project of at least 24 units that investigates a research question through the application of an advanced knowledge of the research principles and methods and theoretical concepts of one or more disciplines or specialisations.” The PtP Working Party also adopted this meaning for a coursework thesis (as opposed to an HDR thesis). In disciplines that do not have a traditional Honours structure including a thesis, the evidence presented against competencies may include projects that are not theses and these would need to be equivalent in weight and degree of independence to a thesis.

The definition of research training in the HWP Recommendation 2.2 is adopted here: training so that students develop “an advanced knowledge of the research principles and methods and theoretical concepts of their discipline/s or specialisation such that they can design and implement research projects that lead to the development of new understandings or that provide solutions to complex problems.” The HWP Recommendation 2.2.1 was that “The research training minimum in an Honours plan must be equivalent to 12 units of summative assessment tasks at a minimum of AQF Level 8.” In embedded Honours programs these do not need to be in the final year of the program. Research training will preferably be in summatively-assessed courses but, recognising discipline variations in lab-based subjects and in 4-year embedded Honours structures, programs in those areas should develop guidance on the equivalent amount of research training that prepares candidates for PhD-level research.

The PtP WP took the same approach to research training in Master degrees. Research training will preferably be in summatively-assessed courses but may be in other forms. In most disciplines it should be an additional element of the Master program, beyond the thesis.

**Recommendation 2** That programs in Law, Engineering, Computer Science, and Medicine (which do not have a 3 + 1 Bachelor Honours program structure) should prepare program-specific descriptions of the required portfolio of qualifications (similar to the draft example given for Law in Table 2). The program-specific lists of qualifications, standards and supplementary evidence for Law, Engineering, Computer Science, and Medicine should be reviewed by HDRC in early 2015.

**Recommendation 3** That pathways programs should include a thesis (as defined) or similar independent piece(s) of research or project worth at least 6 months of credit plus research training worth at least 3 months credit.

**TOR 4:** *to examine implications of adopting a Master-only pathway versus the dominant Honours model*

The WP does not recommend a Master-only pathway. Its recommendations do imply that neither a Bachelor Honours nor a Master degree would necessarily guarantee entry unless they contained the elements to demonstrate the required competencies. Other evidence may be used to demonstrate competencies where candidates' prior degrees do not contain all the evidence required.

**TOR 5:** *to consider the issues required to implement the recommended pathways*

**Recommendation 4** That as soon as practicable, the Registrar should be asked to develop a tool (or tools) for self-assessment and pre-screening so that candidates would be able to assess whether they meet the basic requirements for admission and a similar tool to aid admissions decision-makers, based on the list of evidence and qualifications against competencies. The WP discussed how these tools should be structured so that they build on the principles of Table 1 but provide applicants, and admissions officers and committees, with easy to use admissions processes. This work will be built into an implementation schedule.

**Recommendation 5** That the University develop a PhD Admissions Policy and revise the Research Award Rules, if required, to reflect the required competencies approach.

There is currently a statement of basic admissions criteria in the Research Award Rules (which refer to a minimum standard of Hons 2A or equivalent and therefore will need to be revised to reflect the recommendations here) but there is no Policy on PhD Admissions.

**TOR 6:** *to make recommendations to Academic Board on the preferred pathways to the ANU PhD*

Discussion: The WP prefers a variety of pathways to give flexibility of entry but all must meet the criteria defined by the table of competencies. At a minimum, a pathway program will require both a thesis (or independent research/project experience of similar weight) and a minimum level of research training. We adopted the definitions of thesis and of research training used by the Honours Working Party (see above) and note again that Honours programs without a 24-unit thesis should develop guidance on how their research experience and training demonstrate the competencies.

The implications are that not all ANU (or other Australian universities') Honours and Master degrees will automatically be pathways. Bachelor Honours with only a 12 unit thesis would not automatically be a pathway. Master degrees with a 12 unit thesis would also not automatically be a pathway. The Vertical Double degree, which allows Bachelor students who attain a certain standard to begin cognate Master's level courses in their final year and so complete a cognate Bachelor/Master in 4 years, would not necessarily qualify, depending on the structure of the Bachelor and Master components. If flexible-double students completed a Bachelor Honours (meeting the thesis and research training requirement), and then the flexible double Master, it would meet the pathway threshold. Similarly a student in a non-pathway Bachelor Honours program who added the missing elements via Master level work could demonstrate the required competencies.



The Working Party considered the value of creating an additional pathway consisting of an 18 or 24 month Master of Research Training (in a named discipline) for those without a pathway Level 8 or 9 qualification at the required level. This structure would align with the recommendations from Go8 Deans of Graduate Studies but the WP view was that our existing suite of Master degrees could, with modifications, provide the same level of research experience and training.

The new structure proposed for the ANU Master (Advanced) by the Graduate Coursework Working Party did not include an explicit research training element but the requirements outlined here for a pathway degree would require this. Recommendation 6 addresses this issue.

The MPhil degree will fulfil requirements for a pathway program if it contains the necessary research experience and research training elements. At present the MPhil structure requires 2/3 research but does not explicitly require separate research training and Recommendation 7 addresses this point. Noting that the entry requirements for the MPhil are no longer the same as those for the PhD following the decision by HDRC in 2013, an appropriately restructured MPhil will be an entry pathway and would be RTS funded.

**Recommendation 6** That the ANU Master (Advanced) should include research training equivalent to a minimum of 12 units assessed work if it is to be a pathway (as described in the discussion of TOR 3).

**Recommendation 7** That the MPhil should include research training equivalent to a minimum of 12 units assessed work if it is to be a pathway.

**Recommendation 8** That ESQC be asked to reconsider the terminology used for the classifications of Master degrees, taking account of the terms used in the Bachelor with Honours. At present, as specified in ANU's conversion table, First Class Honours requires an average High Distinction grade. The equivalent qualification at Master level (with average marks of High Distinction) is designated Master "with Distinction". Similarly, Second Class Honours Division A requires Distinction average while a Master degree with Distinction average marks is designated "with Merit". The different usage of the terms Merit and Distinction for Master degrees is confusing and we recommend clarification.

**Recommendation 9 Implementation timing**

- i) That the current PhD admissions criteria continue be used for admissions up to and including 31 December 2015. Between 01 January 2016 and 31 December 2017 either of a) the current or b) the new admissions criteria should be used for PhD admissions; the choice may be applied at either a College level, plan level, or the level of each individual student.
- ii) That the new admissions criteria are required to be used for PhD admissions on or after 31 December 2017.

While the working party would prefer to have the new admissions criteria apply from 01 January 2017, we recognise that students commencing in a 2 year Master (Advanced) program in 2015 will typically graduate either at the end of 2016, or mid 2017 if they commence in mid-2015. As a result, the ability to decide on which admission criteria should be applied would need to be carried through to the end of 2017 so as not to disadvantage students who are commencing their pathways under current requirements.

**Attachment A:**

Minutes of Pathways discussions at University committees

**Attachment B: Tables of Competencies and Evidence for PhD Applicants**

Table 1 Competency Requirements and Generic Evidence of Competencies

Table 2 Example of Discipline Specific Equivalencies (Law – draft only)

## **Attachment A**

### **Extracts from minutes of Pathways discussions at HDRC, URC and AB**

#### **HDRC 4/2013, Item 5.1 Pathways to the PhD**

The PVC (RRT) presented a discussion paper outlining the background to debates about new models for pathways to PhD entry; describing international and domestic innovations that address the shortcomings of the current Honours to PhD route; and initiating discussion at ANU about possible alternative pathways. The Committee discussed the adequacy of current levels of research preparedness at PhD entry, the value of traditional Honours, and the benefits for ANU of the introduction of a new pathway Master degree for PhD entry that incorporates a research project, advanced coursework to meet disciplinary requirements and generic research skills development. While there was strong support for further development of the concept of a Research masters, the general consensus was that Honours remains highly valued (as both a completing program and as a pathway to professional accreditation) and should be retained as a parallel pathway to the PhD.

#### **URC 4/2013, Item 7 Pathways to the PhD**

The Chair introduced discussion about whether Honours should be retained as the primary entry qualification to the PhD, or replaced by a Master of Research, or whether parallel pathways of Honours and Masters should be retained. Currently, discussion of structures was being driven around funding models but it is desirable to consider the substantive issues first and make the case about funding separately. A review of the RTS was on hold while the Government was in care-taker mode. It was also too soon to know the effectiveness of the Master program at Macquarie University funded by special agreement negotiated with Government, on reducing completion times and improving graduate outcomes. Whether a two-year Master program would be attractive at ANU should be discussed on academic grounds assuming an appropriate new funding model is in place. The Go8 'Discussion paper on entry pathways to the PhD' raises a number of issues, including:

- Whether a different structure would improve the level of preparedness compared with Honours and the time taken to complete the PhD;
- Desirability of expanding research training coursework to address employment needs;
- Whether traditional Honours limits domestic student mobility and access to overseas institutions, and impacts the recruitment of international students.

The Pro Vice-Chancellor (R&RT) advised that there is a range of related discussions in progress across campus. She noted that possible alternative pathways may become available following from the review of the Master degree earlier in 2013 by the Graduate Coursework Reform Working Party, the introduction of vertical degrees from 2014, and the current review of Honours.842a/2013 University Research Committee 4/2013: Minutes

Professor Hermann provided a summary of the program in earth sciences. Although there was more than one view with some staff favouring Honours, a Master by Research pathway to the PhD option was broadly supported by RSES. A two year research-led program would enable PhD projects to be fully realised and completed and lead to publications. Feedback from students, and especially from top students, shows a preference for a Master degree with pressures to complete and mobility cited as reasons. The School also considers that a structure which includes designated coursework in a Master program would assist the School to achieve critical mass in post-graduate courses and help to better prepare domestic students for the challenges of a PhD project.

Dr Ferris commented on the need to take account of differences between disciplines for HDR around entry and exit skills. The Honours program in the School of Art was highly structured, comprising a sub-thesis, intensive research training and development of individual independent research projects. The experience of the School is that serious practitioners and scholars undertake Honours, resulting in a high level skill set entry to the PhD. While the PhD is not an essential route for students, it is required to progress in some areas, e.g. academic areas of the discipline, but is not required as an "industry standard" for practitioners. Exit skills are therefore framed both for an academic career path and for an industry model that is very broad. Forty-six percent of SoA Honours students enroll in a PhD program. About one-third of the PhD cohort is part-time with over 50% of total enrolments completing in minimum time. The one-year intensive Honours program is preferred by the School for reasons associated with resources, materials, and scholarship support. An overarching concern is remaining competitive in relation to the time of study offered by other eminent art schools in Australia. Competitors offer a one-year Honours into PhD pathway.

Key comments in discussion were that:

- Knowing what the incoming Government's position will be on funding is essential. DIICCS RTE is undertaking a review of research training arrangements which may explore different funding models;
- Student access to top universities overseas has been raised as an important issue. Claims about an impact on access are anecdotal with ANU experience indicating that the four-year honours degree is widely recognised and accepted in the UK and elsewhere. Some data on this would be useful;
- The impact of the new degree structure at Melbourne University and any flow-on effect to the PhD should be examined;
- Adopting the mixed model run in parallel, as in the UK, would accommodate different needs both between and within disciplines. Multiple pathways are necessary because of the variety of students entering the PhD;
- What skills and attributes does ANU want students to have on completion and how does it want to structure the PhD program to respond to changes in the sector, the introduction of coursework, etc. referred to in the Go8 paper? Addressing these questions should precede discussion of what is needed for entry;
- Honours is compulsory for engineering and the two-year Master pathway is used mostly for international students to achieve a standard to proceed to the PhD. The PhD requires four years and Learning Outcomes have been introduced as part of the program, e.g. writing skills. Management of the program would be easier if four years was recognised as the normal length;
- The current RTS model funds places for four years, but APA scholarships are only able to be held for a maximum of 3.5 years. Typically, students need to change their enrolment to part-time and work after 3.5 years. Lobbying Government to allow four-year APAs has been unsuccessful. Flexibility in the APA funding grant to fund fewer scholarships for longer would be beneficial but would reduce the number of APA scholarships ANU could offer from the grant;

- A Master by Research would be undertaken after the Bachelor degree (3+2+3). The program would be more structured than the Master of Philosophy degree by research which has the same entry requirement as the PhD and continues to have a place in the suite of graduate programs on offer.

Dr Gustavson spoke to the Honours Working Party review and informed members about the ANUCASS honours review resulting in a single model for the College comprising a 24-unit sub-thesis and 24-units of coursework. A two-year Master degree, with provision for 24-units of credit for a cognate degree, has been adopted from the Graduate Coursework Review for implementation by 2015. Another initiative in this area is the introduction of three 'vertical double degrees' which incorporates Master coursework into the final year of the Bachelor degree, allowing students to transition into graduate study a year earlier.

The Chair commented that the need to build generic skills and better prepare students for future employment in their discipline and for industry is broadly recognised in the sector. One-third of the PhD program is available for coursework tailored for graduates. Characteristics of the ANU PhD program, including high quality supervision, and other indicators, need to be worked through and discussed.

The Committee noted that a discussion paper on 'Pathways to the PhD' would be the 'Hot Topic' for the Academic Board meeting on 27 September 2013.

### **AB 5/2013, Item 11 (Hot Topic) Pathways to the PhD**

The Board considered the background paper and the Group of Eight (Go8) Discussion paper on entry pathways to the PhD.

Members noted that entry routes to qualifications and training before acceptance into the PhD has been under discussion by the Go8 and international peer universities. The Pro Vice-Chancellor (Research and Research Training) observed that the case for new or replacement pathways was now open for discussion in the context of ANU's educational strategy and pedagogy. Reasons for looking beyond the honours pathway were:

- To achieve international comparability that also enhances mobility. It has been claimed that our students are less able to access postgraduate study in countries which have Master level programs along the lines of the Bologna model;
- To improve research readiness and the chances of success. Domestic students take longer to complete than international students who have more extensive preparation. This suggests that one honours year of research preparation may not equip students adequately for high-level research;
- Internally, admission standards are becoming harder to interpret and implement. The rules governing admission are clear but, increasingly, applications are being assessed individually for equivalency and consistency, i.e. with H2A and above.

New models described in the background paper include a Master degree that incorporates a significant research project plus research training and conventional discipline training. Views are varied on whether the Master to PhD pathway should be the main route and honours phased out. The Macquarie and Melbourne Universities offer both in parallel with the intention of abandoning honours. This approach is very resource intensive.

Professor Corbett advised that she and the Chair of the Graduate Coursework Working Party are of the view that a Master degree could be designed that is compatible with the

Graduate Coursework reform principles, builds on graduate coursework, and connects with the University's higher degree research strategy.

Discussion was wide-ranging about retaining honours (or honours equivalence) as the primary entry qualification to the PhD, replacing honours with a Master of Research while retaining the branded PhB, and retaining parallel pathways of honours and Master. The following comments were noted:

- The Colleges of Science response is diverse ranging from strong support for honours, to support for Masters, to a preference for running both in parallel.
- The number of units of research is a critical issue. A Master model would need to have 'at least 24 units' for flexibility and to be comparable to honours (up to 48 units of research). It also raises a question about the extent of research to be available in a 96-unit coursework program especially where credit is given for previous studies, i.e. the program would largely comprise the research thesis.
- There are many reasons for supporting a 48-unit research program. Honours is an intensive program that provides excellent training in certain disciplines in particular and has funding support. Compared with a 48-unit honours program, a Master program of 24-units minimum, and if 48-units of research are not permitted, would disadvantage students.

The Graduate Coursework Working Party had not been asked to consider the Master by Research pathway specifically. The model adopted in the Review would require further development for it to align with the Go8 program.

- Direct entry bachelor honours degree programs have not encountered problems in providing adequate training for PhD entry. For this reason, and mindful of the funding factor, they and the PhB should be retained.
- Would there be any impact on funding for international students from the introduction of a Master of Research? The proposal would mean a shorter time for completion of the PhD but funding for the Master degree would require consultation.
- While recognising that honours is an outstanding tool for preparation for the PhD, it was also suggested that students encounter problems when applying for entry to European universities and may be rejected because the honours degree is not well known or they lack the training of a Master degree. If top universities move in the direction of the Master of Research, there was a greater chance that the level of performance of the honours degree may be misinterpreted. A 'Master' degree label may assist students.
- Adopting parallel arrangements received support in discussion as a way of accommodating different needs both between and within disciplines and students with different backgrounds entering the PhD. A more structured coursework program has allowed ANUCBE to accelerate students' progress and enable overseas access. It was suggested that in time, honours may naturally fall away. The need to comply with professional accreditation requirements was also noted, for example for engineering the model would be 4 + 1 + 3 (rather than 3 + 2 + 3).

Members noted that if the Go8 supports the Master of Research, high level discussions around funding would follow. Some assertions in the Go8 paper were open to challenge, e.g. that students are not industry/employer ready and require more skills; students are not completing on time; students have difficulty accessing top universities overseas. There is no evidence that students would complete the PhD in three years in a 3 + 2 + 3 structure. For example, programs requiring extensive fieldwork, social research etc would continue to find completion in three years challenging. It was also too soon to know the effectiveness of the Master program at Macquarie on reducing completion times and improving graduate outcomes. To support the status quo, data would need to be compiled that students complete in good time and are employable.

The Board:

1. Indicated broad support for a full examination of the issues around pathways to the PhD and for exploring the Master of Research as an alternative entry pathway;
2. Requested that the Working Party to be established by the Pro Vice-Chancellor (Research and Research Training) prepare a report and recommendations for consideration by the Academic Board;
3. Noted that questions about the number of research units in a Master of Research will be taken-up in consultation with the Chairs of the Honours Working Party and Graduate Coursework Working Party.

**Attachment B – Tables of Competencies, Evidence and Qualifications****Table1: Competency Requirements and Generic Evidence of Competencies**

<b>Entry competencies for ANU PhD</b>	<b>Generic Definitions<sup>1</sup> of Evidence</b>
<b>Knowledge</b>	<b>Evidence</b>
1. Coherent and advanced knowledge of the underlying principles and concepts in one or more relevant disciplines	<i>All of</i> Academic Record Thesis Research Proposal
2. Understanding of recent developments in one or more relevant disciplines	<i>All of</i> Academic Record Thesis Research Proposal
3. Advanced knowledge of research principles and methods applicable to the proposed field of research or a related field	<i>All of</i> Academic Record Thesis Research Proposal Research Methods Training
<b>Skills</b>	<b>Evidence</b>
4. Cognitive skills to demonstrate understanding of theoretical knowledge and to reflect critically on theory and its application (“theoretical thinking”)	<i>All of</i> Academic Record Thesis Research Proposal Referee Reports <i>Possible additional evidence:</i> <i>Work Experience</i>
5. Cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories at an abstract level and, where relevant to the discipline, to apply established theories to different bodies of knowledge or practice (“review, synthesise and generalise”)	<i>All of</i> Thesis Research Proposal Research Methods Training Referee Reports <i>Possible additional evidence:</i> <i>Work Experience</i>
6. Cognitive skills to provide solutions to complex problems with intellectual independence (“independence”)	<i>One or more of:</i> Thesis Research Proposal Publications Standing <i>Possible additional evidence:</i> Referee Reports
7. Cognitive skills to exercise critical thinking and judgement in developing new understanding or knowledge (“originality”)	<i>One or more of:</i> Thesis Research Proposal Publications Referee Reports
8. Cognitive and technical skills to design, use and evaluate research and research methods and to develop research that makes a contribution to knowledge (“research methods”)	<i>One or more of:</i> Thesis Research Proposal Research Methods Training Publications Standing



	Referee Reports <i>Possible additional evidence:</i> <i>Work Experience.</i>
9. Communication skills to present a clear and coherent exposition of knowledge and ideas to a variety of audiences ("communication")	Interview (at least via Skype) <i>One or more of:</i> Thesis Research Proposal Publications Standing <i>Possible additional evidence:</i> <i>Work Experience, Referee Reports</i>
10. English language competency	<i>All of</i> IELTS/TOEFL <sup>c</sup> Interview Thesis Research Proposal
<b>Additional desirable attributes relevant to Research Potential <sup>d</sup></b>	<b>Evidence</b>
11. Ability to organise and lead projects	<i>One or more of:</i> Thesis Research Proposal Project Management Referee Reports, Work Experience
12. Exceptional level relative to peers <sup>e</sup>	Prizes Referee reports Standing

**Definitions:**

**Academic Record:** Academic Record as defined in one or more of <sup>a, b</sup>:

- Australian Bachelor Honours (AQF Level 8 qualification) or equivalent ,
- Master degree (AQF Level 9) with thesis and research training,
- Equivalent qualification appropriate to the program as defined by areas of Engineering, Computer Science, Law and Medicine.

**Interview:** Candidates should be interviewed, at least by phone or Skype, by potential supervisor or other member of admissions committee.

**Prizes:** Scholarships, prizes, and awards where these indicate exceptional performance.

**Project Management:** Academic or non-academic experience of project management

**Publications:** Scholarly publications *within the past five years* that contain original work or substantial original analysis:

- Scholarly publications published or accepted for publication by a reputable publisher in the relevant field of research; examples are:
  - a published book or chapter in an edited book;
  - a published research article in a refereed journal;
  - a published or refereed conference paper.

The number and quality of publications, as well as authorship position should be taken into consideration. Programs will use discipline-appropriate lists for consideration of quality. Examples include the Thomson Reuters' Master Journal (ISI) list –<http://ip-science.thomsonreuters.com/mjl/>, or the Scopus database

(<http://www.scopus.com/home.url>). Journals would be verified as peer-reviewed on Ulrichsweb: <http://ulrichsweb.serialssolutions.com/>

- Patents relevant to the applicant's proposed research field that have been granted after an examination process by a government agency.
- Significant output in the areas of art or music in the relevant field of research; examples include:
  - An exhibition (with published catalogue) in one or more venues of international standard, or a series of performances of international standard, for which reviews in significant outlets are available.
  - An exhibition in a Public Gallery or Museum (with published catalogue) but excluding regional galleries, or in a Private Gallery of standing in which the artist is asked to exhibit by invitation (subject to documentary evidence).
  - Visual work(s) held in significant National and/or International Collections or commissioned by Government Bodies and/or the Corporate Sector.
  - A significant published musical composition or a significant commercially published CD of a musical performance.
  - Visual documentation of performance, installation and electronic creative works in significant National and/or International Collections.
  - Participation (as presenting author or equivalent) in significant National or International Festivals or professional conventions.
- Equivalent relevant to the discipline, such as conference papers, policy papers, Government or think tank or NGO reports, parliamentary submissions.

**Referees:** Referee reports

**Research Methods Training:** Summatively-assessed research methods coursework in previous degree (minimum of 3 months) or equivalent. Equivalency includes:

- Formatively-assessed research methods training in previous degree (not necessarily separate from the research project or thesis but demonstrable as an additional element of equal weight)
- Other evidence of research training outside of the degree (e.g. work experience or publications indicating methodological experience)

**Research Proposal:** Research proposal that shows knowledge of discipline, ability to formulate research question and to choose appropriate research methods.

**Standing:** Demonstrated distinguished record of professional achievement and/or leadership in the discipline (relevant to the applicant's proposed research), for example:

- completion of a specialist medical qualification or fellowship equivalent to those required by Australian specialist medical colleges,
- significant public policy contribution including written reports,
- other to be defined as appropriate by areas.

**Thesis:** thesis or project that shows use of research skills, methods and development of knowledge, which may be one or more of:

- An undergraduate or postgraduate thesis or project equivalent to a minimum of 6 months full time work with a minimum mark of a Distinction (70% at ANU);
- An ungraded thesis (e.g MPhil): with the standard being assessed based on, for example marking criteria, examiners reports, and evaluation of the thesis content, at a standard equivalent to at least a Distinction
- Work equivalent to a thesis: alternative evidence of examined research work (where a traditional thesis has not been completed); for example: research projects involving independent work.

**Work Experience:** Relevant work experience (e.g. lab experience, judicial associate, research officer, policy officer or other external research experience) supported by written evidence

#### Notes

- a) Equivalence tables are available for other Australian and many international universities.
- b) Previous degree must include thesis or research project equivalent to 6 month's work over the period of the program.
- c) All applicants for admission to ANU programs or courses delivered in Australia or overseas, whether domestic or international, must provide evidence their English language abilities meet the minimum requirements for admission. For further information refer to the [English Language Admissions Requirements](#).
- d) "Additional attributes" are not a necessary condition for Admission but may be used to compensate for other missing elements except where these are essential.

Elements *not* considered in assessing research potential:

- Conversion from Masters to PhD without completion of the previous degree;
  - Involvement in vacation research projects at the undergraduate level;
  - Multiple degrees e.g Masters by coursework and MPhil where the degrees together do not meet the required minimum standard;
  - Position on class list (except where this is used as a proxy for Honours grading in a discipline such as Law);
  - Posters, abstracts, conference presentations and non-refereed conference papers;
  - Professional experience that is not directly relevant to the applicant's proposed research topic;
  - Provisional patent applications and journal articles that have not yet been accepted for publication;
  - Quality of supervision, available resources, research/training environment at hosting area and strategic fit. These may all influence the decision to offer admission to a student but should not be used to rank the applicants research potential.
- e) Candidates for entry are not required to demonstrate "exceptional performance"; this will be a more important element in consideration for scholarships.

**Table 2: Example of Discipline Specific Equivalencies (Law – draft only)**

<b>Entry competencies for ANU PHD</b>	
<b>Knowledge</b>	<b>Evidence/application</b>
<p>1. Coherent and advanced knowledge of the underlying principles and concepts in one or more relevant disciplines</p>	<p><b>Academic Record:</b></p> <ul style="list-style-type: none"> <li>• LLBHons award</li> <li>• JD [NB AQF precludes honours for JD (Level 9 extended)]</li> <li>• LLM</li> <li>• Other variants if approved by Delegated Authority: eg. BCL/MJur (Oxon)</li> </ul> <p><b>Thesis or research project:</b></p> <ul style="list-style-type: none"> <li>• LLBHons supervised research thesis (eg. 12 unit 13000 word Supervised Research Paper at ANU)</li> <li>• JD with distinction (GPA 80-100) / with merit (70-79); individual supervised research component within a compulsory capstone requirement for JD final year [NB AQF precludes honours for JD (Level 9 extended)]</li> <li>• LLM with distinction (GPA 80-100) / with merit (GPA 70-79) plus supervised thesis (eg. 12 unit 13000-16000 word LAWS8309 Graduate Research Unit in ANU LLM program)</li> <li>• JD with distinction (GPA 80-100) / with merit (GPA 70-79) plus supervised thesis (eg. 12 unit 13000-16000 word LAWS8309 Graduate Research Unit from ANU LLM program)</li> <li>• A supervised research experience undertaken for a degree or elsewhere approved by the Delegated Authority, possibly including the publication of an LLM or LLB or JD essay on suggestion and under guidance of an academic, or possibly including G Work experience (eg. judicial associate, research officer eg. Aust Institute of Criminology or a Law reform Commission)</li> </ul> <p><b>Research proposal</b></p>
<p>2. Understanding of recent</p>	<p>Academic Record</p>

developments in one or more relevant disciplines	Thesis Research Proposal
3. Advanced knowledge of research principles and methods applicable to the proposed field of research or a related field	Academic Record Thesis Research Proposal Research Methods Training Work Experience
<b>Skills</b>	
4. Cognitive skills to demonstrate understanding of theoretical knowledge and to reflect critically on theory and its application (theoretical thinking)	As for Generic
5. Cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories at an abstract level and, where relevant to the discipline, to apply established theories to different bodies of knowledge or practice (review, synthesise and generalise)	As for Generic
6. Cognitive skills to provide solutions to complex problems with intellectual independence (independence)	As for Generic
7. Cognitive skills to exercise critical thinking and judgement in developing new understanding or knowledge (originality)	As for Generic
8. Cognitive and technical skills to design, use and evaluate research and research methods and to develop research that makes a contribution to knowledge (research methods)	As for Generic
9. Communication skills to present a clear and coherent exposition of knowledge and ideas to a variety of audiences (communication)	As for Generic Moot or court room experience

10. English language competency	As for Generic
<b>Additional desirable attributes relevant to Research Potential</b>	
11. Ability to organise and lead projects	As for Generic
12. Exceptional level relative to peers	Only to be used where grading is not used in the prior degree and ranking is a proxy for the level of the degree. Prizes

Note: This draft has been provided by Dr M Nolan and may be subject to further review by ANU College of Law.