HDR GUIDELINES ON ELIGIBILITY TO ENROL IN A MASTERS BY RESEARCH OR PHD

by Simon Moss

Introduction

Each year, CDU receives numerous applications to enrol in the PhD or Masters by Research at CDU; however, a sizeable portion of these applicants are rejected. These rejections are unfortunate, because applicants, and often their supervisors, have usually invested significant time to apply. This document, therefore, is designed to clarify which applicants are likely to be eligible to enrol in a PhD or Masters by Research. Specifically, this document

* initially summarises the criteria that are utilised to evaluate applications
* justifies these criteria

**Which sections should you read?**

Rather than read the entire document, you could confine your attention to the sections that are relevant to you. The following table helps you identify which sections to read.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Section to read if the  answer is Yes | | | | | | |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| I want to roughly ascertain whether I might be eligible | ✓ |  |  |  |  |  |  |
| I want to roughly ascertain whether someone else might be eligible | ✓ |  |  |  |  |  |  |
| I want to understand the rationale of these decisions |  | ✓ |  |  |  |  |  |
| I want to ascertain whether my publications will enable me to enrol |  |  | ✓ |  |  |  |  |
| I want to complete a thesis by creative output |  |  |  | ✓ |  |  |  |
| I want to know whether I could receive a special exemption to enrol |  |  |  |  | ✓ |  |  |
| I am a supervisor seeking a special exemption to support a potential candidate |  |  |  |  | ✓ |  |  |
| I want to roughly ascertain which candidates can study offshore |  |  |  |  |  | ✓ |  |

## 0. Summary of criteria

To determine whether applicants are eligible to enrol in a PhD or Masters by Research, CDU may consider

* their university qualifications
* their research experience
* their creative output, or
* exceptional circumstances

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| **Criterion 1: University qualifications** |

To be eligible to enrol in a Masters by Research, applicants must have completed at least half a semester FTE of relevant research activity at AQF Level 8 or above. In contrast, to be eligible to enrol in a PhD, applicants must have

* completed at least one semester FTE of relevant research activity at AQF Level 9 or 10 or
* completed at least one semester FTE of relevant research activity at AQF Level 8 and achieved a GPA that exceeds average.

Research activity is defined as research practice that entails a review of the literature, design of a research project, application of research methods, and communication of this research. In Engineering and IT, this research activity may entail design projects.

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| **Criterion 2: Other research experience** |

Applicants may also be eligible to enrol in a research degree if they have published peer-reviewed research that is comparable in standard to these university qualifications--provided they have completed at least one research unit at a postgraduate level. As an illustration

* one article as sole author or two articles as one of two authors may be enough to enrol in a PhD
* one article as one of two authors may be sufficient to enrol in a Masters by Research

Other tangible evidence of research competence may be considered, such as medical fellowships, patents, or awards. To illustrate, Fellows of the Royal Australasian College of Physicians are eligible to enrol in a PhD.

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| **Criterion 3: Thesis by creative output** |

Some applicants would like to complete a thesis by creative output. These theses usually entail a creative work—such as an art exhibition, music composition, film, play, novel, program, or invention—together with an exegesis or discussion of this work. If applicants have completed an Honours or postgraduate degree and now want to complete a thesis by creative output, past creative output may be considered to determine eligibility. Specifically

* past exhibitions or performances may be considered
* for example, a sole international exhibition, two national exhibitions, or two joint international exhibitions may be sufficient to be eligible to enrol in a PhD

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| **Criterion 4: Exceptional circumstances** |

Typically, applicants need to have fulfilled the minimum criteria to enrol, such as research activity at a postgraduate level or published scholarly articles. In exceptional circumstances, however, exemptions may be considered. For example, an applicant might have acquired a suite of skills that are scarce but relevant to a significant program of research at CDU. Although the algorithms that CDU apply to reach these decisions are complicated, the following table outlines the attributes that are considered.

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| Attributes that may permit exemptions |
| * GPA above 85% at a university ranked in the top 500 |
| * 4 or more years of university study, full time equivalent |
| * the research project does not demand quantitative or qualitative research methods |
| * one year of research employment as a research assistant, lecturer, or similar |
| * six months of research employment in the college or institute in which they want to enrol |
| * the proposed research overlaps with the research priorities of CDU |
| * the insights from this research are likely to be applied in practice |
| * one of the supervisors has published at least 2 Q1 papers in the last 5 years or equivalent |

Applicants do not necessarily need to have fulfilled all these attributes. For example

* if applicants fulfil 6 of these criteria, they may be eligible to enrol in a PhD
* if applicants fulfill 4 of these criteria, they may be eligible to enrol in a Masters by Research

## Underlying principles

**The AQF framework**

To decide who is eligible to enrol in a Masters by Research or a PhD, CDU must comply with the Tertiary Education Quality and Standards Agency or TEQSA—and, specifically, the policy this body endorses: the Australian Qualifications Framework or AQF. According to this framework

* a Masters is deemed to be AFQ Level 9;
* therefore, applicants should not be permitted to enrol in a Masters by Research unless they have completed relevant study or work at AQF Level 8—such as an Honours or Postgraduate Diploma—in a relevant discipline
* a PhD is deemed to be AQF Level 10
* so, applicants cannot enrol in a PhD unless they have completed relevant study or work at AQF Level 9 or excelled at AQF Level 8—in a relevant discipline

If applicants have not attained the necessary university qualifications or research experience, they need other evidence to demonstrate they have achieved the skills or capabilities that coincide with the relevant AQF levels. The first column in the following table outlines these skills and capabilities.

|  |  |  |
| --- | --- | --- |
|  | Academic excellence | Research capability |
| Application of literature to solve problems |  |  |
| Extensive technical skills in a discipline |  |  |
| Critical thinking and analysis |  |  |
| Communication of technical information |  |  |
| Capacity to learn independently |  |  |
| Relevant skills in research methods |  |  |
| Application of skills in diverse settings |  |  |
| The capacity to plan and execute scholarly projects |  |  |

In practice, universities cannot readily evaluate these eight skills and capabilities. However, as the previous table shows, applicants are likely to have acquired these skills and capabilities if they demonstrate

* academic excellence—as defined by exemplary academic grades in a discipline that is relevant to the proposed research
* research capability—as defined by experience in the management of research or similar projects and expertise in the research methods that are relevant to the proposed research. For example, in Engineering and IT, this research might include design projects.

## Research publications and experience

In lieu of postgraduate qualifications, applicants who have published research may be deemed to have fulfilled the relevant AQF levels. Typically, a refereed journal article may be comparable in scope, but usually better in quality, than an Honours thesis. Therefore, a refereed journal article could be deemed as equivalent to an Honours degree with a GPA that exceeds average. Two limitations challenge this perspective, however. The following table outlines these limitations and possible solutions.

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| Limitations | Solutions |
| **Limited contribution**. Applicants might be co-authors on journal articles but may not have contributed to all phases of the project | * Applicants are more likely to have contributed to all phases of the project if they were the only author * Sole-authored publications should thus be assigned more weight than other publications * First-authored publications should be assigned more weight than other publications |
| **Supervision and mentoring**. Applicants might not have received adequate supervision—and hence their knowledge on research integrity and research culture might be limited. | * Applicants should not be accepted into the program unless they have studied research methods at the postgraduate level—or completed some equivalent study |

To convert these solutions to practice, the university should apply two approaches. First, the university should utilize an algorithm that assigns more value to sole-authored or first-authored works. The following box presents a possible algorithm.

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| Equation 1.1 | | |
| Value assigned to each work = | | 1 - (No of authors before student)/(Number of authors) - (Number of authors after student/(Number of authors + 1) |
| **Examples** |  | |
| Student | =1 – 0/1 – 0/2 = 1 thesis | |
| Student, Other | =1 – 0/2 – 1/3 = 0.67 thesis | |
| Other, Student | =1 – 1/2 – 0/3 = 0.5 thesis | |
| Student, Other, Other | =1 – 0/3 – 2/4 = 0.5 thesis | |
| Other, Student, Other | = 1 – 1/3 – 1/4 = .041 thesis | |

To illustrate, suppose an applicant has published two refereed journal articles—both as first author but with two other co-authors. In this instance

* each journal article would be equated to 0.5 of a thesis
* combined, the two journal articles would be equated to 1 thesis

Because the articles were refereed and accepted, they are likely to equate to a GPA that exceeds average if the work

* could have been rejected—by referees of a journal or editors of a book for example
* is scholarly—and, for example, comprises many references
* is relevant to the proposed research project

Second, applicants should not be accepted into the program unless they have received the knowledge they would usually have acquired from a supervised research degree—such as knowledge about research integrity, research philosophy, and research practice. To achieve this criterion, research publications are sufficient to reach the minimum entry standards only if applicants have studied research methods at a postgraduate level or completed some equivalent study.

## Creative outputs

To complete a thesis by creative work, past creative output, such as a previous film, could fulfill the minimum AQF standards, provided three limitations are resolved. The following table outlines four limitations as well as potential solutions to these limitations.

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| Limitations | Solutions |
| **Limited quality**. The creative output might not equate to the quality of an Honours or postgraduate thesis that exceeds average | * International exhibitions or performances are more likely to be higher in quality than national exhibitions or performances |
| **Limited contribution**. The creative output might be more limited in scope than an Honours or postgraduate thesis | * Solo exhibitions or performances are greater in scope than joint exhibitions or performances |
| **Scholarly capacity**. The applicant might not have developed the capability to justify their work in an exegesis | * To be eligible to enrol in a Masters by Research, the applicant must have attained a GPA in the Bachelor degree that exceeds 70% * To be eligible to enrol in a PhD, the applicant must have completed a degree of one year or longer at AQF 8 |
| **Relevance to creative output**. The capacity to produce creative output may not predict the capacity to produce a very different output | * Past creative output that is not in the same field as the proposed creative output is discounted from these calculations. |

To convert these solutions to practice

* PhD applicants should be excluded if they have not completed a one year or longer degree at AQF 8
* Masters by Research applicants should be excluded if they did not attain over 70% in their Bachelor degree—usually defined as their GPA divided by the maximum GPA
* only creative output that is in the same field as the proposed creative output should be considered
* the university should utilize an algorithm that assigns more value to sole or international exhibitions and performances. The following box presents a possible algorithm.

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| Equation 1.2 | |
| Weighted number of exhibitions or performances = | Number of times applicant presented a creative work at an international exhibition or performance solo +  Number of times applicant presented a creative work at a national exhibition or performance solo x 0.5 +  Number of times applicant presented a creative work at an international exhibition or performance jointly x 0.5 +  Number of times applicant presented a creative work at a national exhibition or performance jointly x 0.25 |

* To be deemed as national, the exhibition or performance would need to have been advertised in a major national press and presented at a recognised national gallery, theatre, or equivalent
* To be deemed as international, the exhibition or performance would need to have been advertised in a major international press and presented at a recognised international gallery, theatre, or equivalent.
* Creative works may include art, music, film, theatre, literature, and inventions

Provided the applicants have attained the necessary degrees, these individuals should be

* eligible to enrol in a PhD if the weighted number of exhibitions or performances is 1 or more
* eligible to enrol in a Masters by Research if the weighted number of exhibitions or performances is 0.5 or more

If applicants feel their creative works have been underestimated, they could arrange to submit their portfolio to the research office. The research office could then arrange a suitable academic to equate this portfolio to a weighted number of exhibitions or performances.

## Exceptional circumstances

If applicants have not reached the minimum criteria, but supervisors believe these applicants should be exempted because of special circumstances, the Dean of Graduate Studies will consider these applications. In particular, the Dean will evaluate academic excellence and research capability—as well as the extent to which the project overlaps with the strategic research priorities of CDU.

**Academic excellence**

To measure academic excellence, the research office can utilise the formula that appears in the following box. In this formula

* GPA% is the GPA the applicant received on a course, as a percentage of the maximum GPA
* If the university in which this applicant derived this GPA is ranked in the top 500—according to an average of the QS and THE ranking—the right side of this equation will boost this GPA
* If the university in which this applicant derived this GPA is ranked outside the top 500, the right side of this equation will diminish this GPA
* If the applicant has completed more than one course, in which the AQF exceeds 6 and the minimum duration exceeds 6 months, each course is subjected to this formula and the highest value is utilized.

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| Academic excellence = Highest GPA % x | 4000 .  University ranking + 3500 |

To illustrate the properties of this formula, a GPA of 70% is adjusted to 80% if the university is ranked 10 but adjusted to 62% if the university is ranked 1000

**Research capability**

To measure research capability, the research office estimates the percentage of necessary research skills the applicant demonstrates. To achieve this goal, the research office, together with the supervisor

* determines which of several research skills, such as quantitative data analysis or qualitative data analysis, are relevant to the proposed research
* calculates indices that measure the extent to which the applicant demonstrates these skills
* computes the percentage of research skills the applicant seems to demonstrate

Some research skills are relevant to most, if not all, research projects. These skills include the capacity to

* conduct a literature review and evaluate the literature critically
* communicate the research effectively
* enhance the quality of this research
* manage the research project

In contrast, other research skills are relevant to only a subset of research projects. These skills include the capacity to

* apply sophisticated methods to collect data
* analyse quantitative data, and
* analyse qualitative data

To illustrate, in the field of philosophy, history, law, and engineering, researchers often do not need to collect data, analyse quantitate data, or analyse qualitative data. So, the research office, in consultation with the supervisors, need to ascertain which of these skills are relevant to the proposed research project. The research office then calculates a series of indices, each measuring the degree to which the applicant demonstrates one of these skills. Specifically

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| * Appendix 5A specifies the procedure that CDU applies to calculate each index * Appendix 5B delineates the procedure that CDU utilizes to convert these indices to a measure of research capability |

**Strategic priorities**

Not all applicants who are eligible to enrol in a PhD or Masters by Research can be admitted. Instead, CDU will admit these applicants only if

* the project overlaps with the research priorities of CDU
* the thesis is likely to generate at least one Q1 journal article or equivalent
* the insights from this research are likely to be applied in practice

To assess whether applicants fulfil these goals, these individuals should answer a series of questions—either during an interview or over email. The following table outlines these questions. To evaluate these answers, two staff members with relevant expertise, at least one of whom is not a supervisor, should estimate the likelihood these three goals will be fulfilled.

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| Questions |
| How does the proposed research overlap with the research priorities of CDU—such as the priorities of a research institute, a research centre, the College of Business and Law or the field of Education? |
| Please summarise at least one Q1 publication, or equivalent, that is likely to emanate from this research project. That is, specify the aim and method of this publication as well as a possible outlet |
| Please outline how you plan to apply the insights from this research to practice |

**Final decision**

Ultimately, applicants should be rejected if

* the perceived likelihood the applicant will fulfill the three strategic goals is less than 50%
* none of the designated supervisors have published two or more Q1 papers, or equivalent, in the last five years
* the referees indicate the applicant might not have developed the requisite academic excellence or research capabilities, such as the capacity to review literature, to apply the technical skills, to choose research methods, or to manage the project

Furthermore

* applicants will be admitted into the PhD program if the average of their academic excellence and research capability exceeds 80%
* applicants will be admitted into the Master by Research program if the average of their academic excellence and research capability exceeds 70%

**Procedure**

These criteria are sometimes cumbersome to calculate. To simplify the procedures, perhaps the supervisor, together with another staff member, should first interview the applicant. During the interview, the supervisor could also glean information that could be used to calculate the indices and then enter this information into a form. This information includes

* actual and maximum GPA of each university course
* THE and QS ranking of the university
* number of thesis units, quantitative research units, and qualitative research units the applicants have completed
* the marks on these units and the level of these units, such as Year 2 or 3
* the publications of this applicant
* the research experience of this applicant—such as research employment

If supervisors are still interested in the applicant after the interview, they can then enter this information, together with the research proposal, into a form. The research office can then calculate academic excellence and research capability to reach a decision on whether to admit or reject the applicant

# 5 Offshore candidates

If candidates want to study offshore throughout their candidature, they should also fulfil several other conditions. In particular

* the data should be collected at home, such as an online survey, at the current workplace of candidates, or at an organization that is affiliated with CDU or Menzies
* a Contact Officer will be informed of the location in which the candidate is operating and available to the candidate at all times
* public liability, professional indemnity, travel insurance, and health insurance must be covered
* at least one member of the supervision or advisory panel should be an academic who candidates can visit in person, who is active in research, who has completed a degree that is equivalent or higher to the degree they are supervising, and who collaborates with CDU or Menzies
* the candidate should be embedded with a team of four or more researchers who are affiliated with CDU or Menzies, as indicated by an MOU, research grant, or similar mechanism
* this team of researchers should have supported HDR candidates previously
* the candidate must be able to access reliable internet connections
* all the relevant training can be completed at the location

## Appendices

**Appendix 6A**

To ascertain whether the applicants have developed the necessary research skills, the research office calculates a series of indices. In the following table

* the first column enumerates these indices
* the second column defines these indices.
* each index is capped at 100 and ranges from 0 to 100.

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| Index | Definition |
| Relevant academic excellence | * Apply the previous formula to calculate academic excellence * However, restrict this index to degrees that overlap with the subject matter of the proposed research |
| Thesis activity | * Compute the number of semesters of research activity—such as thesis units—the applicant completed in one course * Consider only courses at AQF 8 or above, including Honours, Graduate Diploma, or Masters * Multiply this number by 100 |
| Quantitative units | * Identify the highest mark in a quantitative research unit and then add Year x Number of units * Year refers to the year level of this unit, such as 2, 3, 4, 5, or 6 * Number is the number of quantitative research units completed |
| Qualitative units | * Identify the highest mark in a qualitative research unit and then add Year x Number of units as defined previously |
| Thesis quality | * Average the marks of all thesis units * Multiply this value by thesis activity and divide by 100 |
| Weighted publications | * Rather than merely count the number of publications, this index assigns greater weight to single author or first author publications * For each publication, the research office utilises this formula:   1 - No of authors before applicant Number of authors after applicant  Number of authors (Number of authors + 1)   * Sum the outcome of this formula across the publications * Multiply this number by 100 |
| Publication quality | * Multiply the field weighted citation by 100 |
| Research employment | * Determine the number of years, full time equivalent, in which the applicant has worked in research—as a research assistant, research fellow, or similar role * Multiply this number by 100 |

**Appendix 6B**

The following table shows how the research office can utilise the indices to estimate the degree to which applicants demonstrate the relevant research skills.

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| Phase | Procedure | When to omit this phase |
| 1 | To measure the capacity of applicants to conduct and to evaluate the literature, determine the maximum of   * relevant academic excellence * weighted publications * thesis activity * research employment |  |
| 2 | To gauge the capacity of applicants to collect data, determine the maximum of   * relevant academic excellence * weighted publications—but only if the publications often correspond to the same field as the proposed research * thesis activity—but only if the thesis corresponds to the same field as the proposed research | Omit if the applicant will not need to collect data or can apply methods that do not demand technical skills to collect data |
| 3 | To gauge the capacity of applicants to analyse quantitative data, determine the maximum of   * quantitative units * weighted publications—but only if publications tend to report quantitative data * thesis activity—but only if the thesis reported quantitative data | Omit if the research project will demand basic statistics or no analysis of quantitative data |
| 4 | To gauge the capacity of applicants to analyse qualitative data, determine the maximum of   * qualitative units * weighted publications—but only if publications tend to report qualitative data * thesis activity—but only if the thesis reported qualitative data | Omit if the research project will demand no analysis of qualitative data |
| 5 | To gauge the capacity of applicants to communicate the research effectively, determine the maximum of   * publication quality * thesis quality |  |
| 6 | To gauge the capacity of applicants to enhance the quality of this research, determine the maximum of   * publication quality * thesis quality |  |
| 7 | To gauge the capacity of applicants to manage the research project effectively, determine the maximum of     * publication quality * thesis quality |  |
| 8 | To generate a measure of research capability, average all the maximum values you generated in the previous phases |  |