**RESEARCH SCHOOL OF PHYSICS AND ENGINEERING**

**GUIDELINES ON THESIS BY PUBLICATION**

**MAY 2014**

**BACKGROUND**

Some time ago the University introduced a policy that outlined ways that PhD students could submit their PhD thesis as a collection of the publications produced during the term of their study. The policy was updated in 2013 and, while acknowledging the differences in publishing culture and practices across disciplines, it has a number of central tenets:

* The student is required to give not less than 6 months, and preferably 12 months, notice of the intention to submit a thesis by publication
* It is expected that the published work would normally constitute at least 4-5 papers
* Where joint authorship is involved a statement on the students contribution to each publication must be made and signed by all co-authors
* In addition to an introduction, a context statement of at least 10,000 words is required that ties the published content together and provides context for the publication within the thesis

Although there is an expectation that in Physics students normally submit by narrative rather than publication, it would appear that this method of thesis production is becoming commonplace across the ANU, and there are now many examples of such production within the sciences.

Discussion amongst Heads of Departments of RSPE, where the practice has not been commonplace up until this time, has revealed some considerable reservations around such a method of thesis preparation. A number of key issues were raised:

* It was considered rare, in the experience of many, that papers produced and written in the course of a thesis could be considered as being solely the work of the student. Indeed in many laboratories such outputs were clearly the result of a team effort, with contributions from many to all phases of the work from experiment to analysis and writing up
* Many considered the act of planning and writing a thesis as an important aspect in the development of a student. Many students are poor writers and the discipline involved in the thesis production was seen as a critical phase of their overall development as scientists
* For experimental work in particular, the thesis should represent a record of the experimental design, and of techniques and details of apparatus operation, that are never contained in published works, where the emphasis is always on the scientific output
* Little guidance is provided in the University policy on both the quantity and quality of publications that are expected.

As a result of these concerns a small working group was formed within the School to consider the University Policy and any additional guiding principles that might be required within RSPE for such an approach. As a result the following School Guidelines on Thesis by Publication has been developed.

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Professor Yuri Kivshar HoD, NLPC

Professor Christine Charles HoD, SP3

Professor Stephen Buckman Director, RSPE

**RSPE GUIDELINES**

**THESIS BY PUBLICATION COMPILATION**

**MAY 2014**

The School acknowledges and supports the following key elements of the ANU Policy on Thesis by Publication Compilation:

* Supervisors should discuss the option early in the student’s candidature and offer practical guidance about realistic peer‐review and publication timeframes in their discipline.
* The student must give at least 6, and preferably 12 months, notification of their intention to submit a thesis by Publication to their Head of Department, and through them to the Delegated Authority
* The thesis should be based on typically 4-5 substantive pieces of published work, and this work should clearly represent the totality of the thesis studies
* Where the candidate is not the sole author of a paper, they must provide evidence that they have made the significant contribution to the paper
* The thesis must be presented in a logical and coherent fashion and may require linking text to establish the relationship between one Chapter (published paper) and the next. This could be achieved, for example, by the inclusion of a foreword to each chapter
* An extended context statement, of the order of 10,000 words in length is required to demonstrate the relationship between the publications that are presented
* Outcomes of the project and the conclusions of the work will either be covered in the context statement or in a concluding chapter to the thesis
* The thesis must include a signed declaration that specifies the title, authorship and outlet for each publication, the current status of the paper, the contribution of the candidate to both the research and authorship of the paper
* For each paper where the candidate is not the sole author, the collaborating authors must also sign the declaration.

In addition to the above requirements, RSPE also acknowledges that there are other potential issues that may arise in our discipline, and requires that the Supervisor and Head of Department formally address, in writing, the following specific issues:

* Do the selected papers accurately represent the PhD program and paint a clear and coherent story
* Are you satisfied that the candidate has made the major contribution to the research and authorship of the publications concerned
* Does the student have the demonstrated ability to write a clear and concise story about their research work (i.e. a thesis) – if not then it is in their best interests that they should produce a thesis as part of their development
* Is there material, for example apparatus design, laboratory techniques, computational techniques, etc., which has not been published, but which would otherwise form an integral part of a thesis? If so it should be appropriate to recommend such material was presented in an additional “technical chapter”.

It is proposed that each case for Thesis by Publication Compilation will be assessed by HDR Convenor or a small Committee which will be chaired by the HDR Convenor whenever necessary. This committee will provide a timely response to the student, supervisor and Head of Department.

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|  | | 266/2013  **Thesis by Compilation Guideline** | |
| **Purpose** | There is an increasing expectation in many disciplines, that PhD students should publish journal articles during and shortly after their degrees. A thesis by compilation allows a student to focus their writing on publishable journal articles and book chapters. | |
| **Guideline** | **Preamble**  Because of disciplinary variability, the guidelines are not prescriptive in details such as number of papers required. Overall, the quantity and quality of the material presented for examination needs to equate to that which would otherwise be presented in the traditional thesis format. The guidelines assume a vital role for Colleges, Schools and supervisory panels thus aiming to embrace sensible disciplinary differences while ensuring an ANU PhD remains of the highest quality.  Submission of a thesis by compilation requires approval by the Delegated Authority. The approval process ensures that the student has received important, discipline‐specific guidance on the appropriate quantity and quality of papers for submission as a thesis. Only in exceptional circumstances will approval be given to a candidate for a Master of Philosophy or Professional Doctorate to submit a thesis by publishable papers.  **Guidelines**  The papers must have been researched and written during the course of the candidature, except in the case of students admitted to a program under the ANU staff provisions (Research Award Rules  2.3(3) and 2.3(4)). A thesis by compilation may include video recordings, film or other works of visual or sonic arts, computer software, digital material or other non‐written material for which approval has been given for submission in alternative format.  *Approval*  The option to submit a thesis by compilation will require the support of the supervisory panel and the approval of the Delegated Authority well in advance of the submission. Typically, students should commit to this form of submission and seek approval at least 12 months from completion, no less than 6 months out, although in some disciplines a commitment to thesis by compilation would be appropriate much earlier. Supervisors should discuss the option early in the student’s candidature and offer practical guidance about realistic peer‐review and publication timeframes in their discipline.  *Number and status of papers*  The thesis will be based on a number of papers published in, accepted by, under review at, or in preparation for high‐quality, peer‐reviewed journals. In some disciplines (e.g. mathematics) a single long monograph may be acceptable; in others the discipline expectation might be 4–5 peer‐ reviewed papers. Normally it would be expected that the majority of papers were published, or accepted for publication. Those papers that have not been accepted for publication will be examined in the same manner as traditional thesis chapters. Colleges, Schools and supervisory panels should provide sound disciplinary advice on appropriate number and publication status.  *Authorship*  Students who are undertaking a thesis by compilation should seek advice before signing publisher's agreements to ensure each agreement does not preclude the inclusion of the published work in their thesis.  Whether or not the candidate is sole author of all, some or any of the papers will vary by discipline and Colleges, Schools and supervisory panels should provide advice on what is most appropriate within particular disciplines. Where the candidate is not the sole author of a paper, they must demonstrate that they have made appropriately significant contributions to the paper.  *Construction of the thesis*  A number of distinct papers are expected, and while some overlap between related papers is acceptable, they should nevertheless be substantially different in focus or content. A thesis constructed of chapters/papers/manuscripts must be presented in a logical and coherent way and will require the addition of linking text to establish the relationship between one chapter and the next. This could, for example, be achieved by the inclusion of a foreword to each chapter.  An extended context statement demonstrating the relationship between all aspects of the research is also required as part of the thesis. This will include an introduction to the field of study and the hypothesis or research questions, how these are addressed through the ensuing chapters, and a general account of the theory and methodological components of the research where these components may be distributed across separate papers/chapters. The context statement should be in the order of 10,000 words in length. The outcomes of the project and the author’s conclusions will either be summarised in the context statement, or covered in a concluding chapter.  The thesis may also include relevant appendices containing raw data, programs, questionnaires and other material that would normally appear in a standard PhD thesis.  A thesis by compilation must include a signed declaration that specifies:  • Title, authorship and publication outlet of each paper.  • The current status of each paper (In press, Accepted, Under Review, In preparation).  • The extent of the contribution of the candidate to the research and the authorship of each paper.  • For each paper where the candidate is not the sole author, the collaborating authors must also sign the declaration.  The entire thesis, including the published papers, must be formatted in an acceptable PhD thesis style, although journal formatting can be preserved. The papers and supplementary material should be on A4 paper (or similar), bound together in a single volume.  *Examination*  Following submission of the thesis the standard ANU examination procedures will apply. | |

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| **Responsible Officer** | Pro Vice-Chancellor (Research & Research Training) |
| **Date Approved** | to be advised |
| **Approval Authority** | Vice-Chancellor |
| **Contact area** | Office of the Pro Vice-Chancellor (Research & Research Training) |
| **Date of Commencement** | to be advised |
| **Related Policies, Procedures, Guidelines, Forms** | [Research Awards Rules 2012](http://about.anu.edu.au/governance-structure/legislation/rules)  [Research Theses Submission and Examination: Information for Higher Degree Research Students](http://policies.anu.edu.au/guidelines/research_theses_submission_and_examination___information_for_higher_degree_research_students/guideline)  [Theses by Creative Works](http://policies.anu.edu.au/guidelines/theses_by_creative_works/guideline)  [Editing of Research Theses by Professional Editors](http://policies.anu.edu.au/policies/editing_of_research_theses_by_professional_editors/policy) |
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