## Department of Mathematical Sciences: Standard Milestones for PhD Students

Milestones	Criteria for progress	Deliverables	Deadline
M1: Progress to Year 2 (or equivalent for part-time students)	A: Assess training needs and knowledge required to undertake research project and complete the thesis.	<ul> <li>Training Needs         Analysis to be completed.     </li> <li>Attend Proficio courses and plan for further courses to attend, as appropriate.</li> </ul>	<ul> <li>Term 1 for full-time students; Term 2 for part-time students</li> <li>By end of Term 3 for full-time students; Term 6 for part-time students</li> </ul>
	B: Choose/narrow down the research topic and demonstrate significance/impact of research.	Research Project Proposal, including (dependent on subject area):  Write central research problem/questions to be answered.  Methodological considerations.  Feasibility Report – identifying sources, access and ethical considerations  Create project plan, outlining objectives for each stage.	By the second board Meeting (or Term 3 for full-time students; Term 6 for part-time students)
	C: Demonstration of effective project management through the setting of research goals and prioritisation of activities.  D: Subject-specific milestones	<ul> <li>Create a detailed, realistic plan of work/ timetable for Year 2.</li> <li>Produce supervisory board report written in a clear and self-reflective style</li> </ul>	By the second board Meeting (or Term 3 for full-time students; Term 6 for part-time students)
M2: Confirmation	A: Demonstrate understanding of chosen topic within the context of the field.	Critical Literature     Review (where     relevant)	By Confirmation Board (Term 4 for full-time students; Term 7 for part-time students)
	B: Demonstrate the ability to produce work of the quality and quantity in order to complete within the four year maximum period.	<ul> <li>Evidence that academic writing is of standard and ability expected at PhD level, including adequate referencing and language skills.</li> <li>clearly identify the major research questions which have not been addressed by others</li> <li>confirm that</li> </ul>	By Confirmation Board (Term 4 for full-time students; Term 7 for part-time students)

		adequate resources	
	for completion of the		
		thesis are available	
	C: Subject-specific milestones  Students must have gained an in depth understanding of their chosen field of study. They must have made significant progress on experimental or theoretical work proposed, with some early results. Students should demonstrate an ability to analyse in depth, and critically evaluate, key published work.	Full progress report (8 - 10,000 words in most cases, but a shorter report accompanied by a clear summary of relevant results /work may be acceptable [with the supervisor's approval]  If appropriate, evidence of the draft of a first journal, workshop, symposium, or conference paper is desirable.	
M3: Progress from Year 2 to Year 3 (or equivalent for part-time students)	A: Review training needs and knowledge required to continue with research project and complete the thesis.	<ul> <li>Training Needs         Analysis to be         reviewed.</li> <li>Attend Proficio         courses and plan for         further courses to         attend, as         appropriate.</li> </ul>	<ul> <li>Term 4 for full-time students; Term 7 for part-time students</li> <li>By end of Term 6 for full-time students; Term 12 for part-time students</li> </ul>
	B: Demonstrate work of the quality and quantity expected at the end of Year 2	<ul> <li>Produce 2 draft chapters</li> <li>Report on research undertaken to date</li> </ul>	By end of year Supervisory Board (Term 6 for full-time students; Term 12 for part-time students)
	C: Review significance and impact of research and articulate output.	For example:     Deliver workshop     Present research to students and staff at seminars/conference s     Write journal articles	By end of year Supervisory Board (Term 6 for full-time students; Term 12 for part-time students)
	D: Demonstration of effective project management through the setting of research goals and prioritisation of activities.	<ul> <li>Create a detailed, realistic plan of work/ timetable for Year 3.</li> <li>Produce supervisory board report written in a clear and self- reflective style</li> </ul>	By end of year Supervisory Board (Term 6 for full-time students; Term 12 for part-time students)
	E: Subject-specific milestones Half of experimental or theoretical work should be essentially complete. Further publications or plans	If possible, submission of first journal, workshop, symposium, or conference paper.	

M4: Progress from Year 3 (or equivalent for part-time students) to Completion Year	for publications should have occurred, possibly involving a journal publication.  A: Ability to reflect on skills and knowledge development and its application to the research project	•	Training Needs Analysis reviewed	By end of year Supervisory Board (Term 9 for full-time students; Term 18 for part-time students)
	B: Demonstrate work of the quality and quantity expected at the end of Year 3 (or equivalent for part-time students)		Research completed (experimental, empirical and theoretical work, where relevant) Produce 3 draft chapters	By end of year Supervisory Board (Term 9 for full-time students; Term 18 for part-time students)
	C: Demonstrate ability to complete within the maximum period.		Produce a realistic completion year plan. Produce supervisory board report written in a clear and self-reflective style	By end of year Supervisory Board (Term 9 for full-time students; Term 18 for part-time students)
	D: Subject-specific milestones	•	Review publication(s) so far and plan further ones if enough unpublished results have been produced.	
M5: During Completion Year	A: Clear evidence of progress towards submission	•	Completed final draft of thesis for supervisor(s)/ supervisory board comment	By interim Supervisory Board prior to submission/Term 2 of completion year (Term 11/12 for full-time students; Term 20/21 for part-time students)
	B: Subject-specific milestones	•	Review publication(s) so far and plan further ones if enough unpublished results have been produced.	