



# The School of Mathematics, Statistics and Actuarial Sciences

## Faculty of Science and Health

### PhD Students

Postgraduate Research milestones are used to ensure students are making sufficient progress during their studies, and to provide a supportive framework to guide students through the various stages of their research. The Milestones should also help to keep students on track to submit within the appropriate period. PGR supervisors should talk through the relevant milestones during supervisory meetings, and they should be referred to on a regular basis.

Supervisory Panels and Research Students' Progress Boards will use the milestones to reflect on the level of progress being made, ahead of making a recommendation. Whilst the milestones are specific for each department and type of course, it is recognised that every research journey is different, and that whilst the milestones provide an overarching framework of expectations, a degree of flexibility should be given, based on the trajectory and scope of research.

Students and supervisors are encouraged to supplement these milestones with individual research plans which take into account the specifics of an individual research project and the individual circumstances of the PGR student.

### Contents

- Year 1 (Full time), Year 1 and 2 (Part time)..... 2**
  - Ahead of the first Supervisory Panel..... 2**
  - Ahead of the second Supervisory Panel ..... 2**
- Year 2 (Full time), Year 3 and 4 (Part time)..... 3**
  - Ahead of the third Supervisory Panel (Confirmation Board) ..... 3**
  - Ahead of the fourth Supervisory Panel..... 3**
- Year 3 (Full time), Year 5 and 6 (Part time)..... 4**
  - Ahead of the fifth Supervisory Panel..... 4**
  - Ahead of the sixth Supervisory Panel ..... 5**
- Completion Period..... 5**



**Year 1 (Full time), Year 1 and 2 (Part time)**

**Ahead of the first Supervisory Panel**

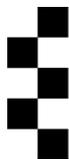
Milestone	Requirement	Full Time term	Part Time term
M1.1	<p>Assess training needs and knowledge required to undertake research project and complete the thesis.</p> <ul style="list-style-type: none"> <li>▪ Training Needs Analysis to be completed.</li> <li>▪ Attend Proficio (internal) / MAGIC/APTS (external) courses and plan for further courses to attend, as appropriate. Achieve adequate grades in assessed courses according to Supervisory Panel expectations (e.g. passing grades).</li> </ul> <p>Choose/narrow down the research topic and demonstrate significance/impact of research.</p> <p>It is recommended to take total 100 hours of modules from MAGIC/APTS/Coursera/our own PG modules throughout the PhD course, ideally in Year 1.</p> <ul style="list-style-type: none"> <li>•MAGIC modules: <a href="https://maths-magic.ac.uk/courses">https://maths-magic.ac.uk/courses</a></li> <li>•APTS modules: <a href="https://warwick.ac.uk/fac/sci/statistics/apts/students/resources">https://warwick.ac.uk/fac/sci/statistics/apts/students/resources</a></li> <li>•Coursera modules: <a href="https://gb.coursera.org/">https://gb.coursera.org/</a></li> <li>•PG modules: <a href="https://www1.essex.ac.uk/modules/modules.aspx?department=MA&amp;filter=PG&amp;year=23&amp;campus=CO&amp;level=&amp;zs=true">https://www1.essex.ac.uk/modules/modules.aspx?department=MA&amp;filter=PG&amp;year=23&amp;campus=CO&amp;level=&amp;zs=true</a></li> </ul>	1-3	1-3

**Ahead of the second Supervisory Panel**

Milestone	Requirement	Full Time term	Part Time term
M1.2	<p>Research Project Proposal, including (dependent on subject area):</p> <ul style="list-style-type: none"> <li>▪ Write central research problem/questions to be answered.</li> <li>▪ Methodological considerations.</li> <li>▪ Feasibility Report – identifying sources, access and ethical considerations.</li> <li>▪ Create project plan, outlining objectives for each stage.</li> </ul>	3	6
M1.3	<p>Demonstration of effective project management through the setting of research goals and prioritisation of activities.</p> <ul style="list-style-type: none"> <li>▪ Create a detailed, realistic plan of work/ timetable for Year 2.</li> <li>▪ Produce supervisory panel report written in a clear and self- reflective style.</li> <li>▪ Attend Proficio (internal) /MAGIC/APTS (external) courses and plan for further courses to attend, as appropriate. Achieve adequate grades in assessed courses according to Supervisory Panel expectations (e.g. passing grades).</li> <li>▪ Share any assessment from courses undertaken so far with the Supervisory Panel.</li> </ul>	3	6

Has the student and supervisory team considered whether the research will be using human participants, and if so, has sought and received formal university ethics approval.

Has the student and supervisory team considered whether the research uses security-sensitive material, and if so, has sought and received formal university registration of this material.



The Supervisory Panel will make a recommendation to the Research Students' Progress Board, ahead of the next academic year. Further information regarding Supervisory Panels and Research Students' Progress Boards can be found here: <https://www.essex.ac.uk/student/postgraduate-research/pgr-progress>

### Year 2 (Full time), Year 3 and 4 (Part time)

#### Ahead of the third Supervisory Panel (Confirmation Board)

Milestone	Requirement	Full Time term	Part Time term
M2.1	<p>Review training needs and knowledge required to continue with research project and complete the thesis.</p> <ul style="list-style-type: none"> <li>▪ Training Needs Analysis to be reviewed.</li> <li>▪ Attend Proficio (internal) / MAGIC/APTS (external) courses and plan for further courses to attend, as appropriate. Achieve adequate grades in assessed courses according to Supervisory Panel expectations (e.g. passing grades).</li> <li>▪ Share any assessment from courses undertaken so far with the Supervisory Panel.</li> </ul>	4	8
M2.2	<p>Demonstrate understanding of chosen topic within the context of the field.</p> <ul style="list-style-type: none"> <li>▪ Critical Literature Review (where relevant).</li> </ul>	4	8
M2.3	<p>Demonstrate the ability to produce work of the quality and quantity in order to complete within the standard period.</p> <ul style="list-style-type: none"> <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 adequate resources for completion of the thesis are available.</li> </ul>	4	9
M2.4	<p><u>Subject-specific milestones.</u></p> <p>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.</p> <ul style="list-style-type: none"> <li>▪ 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.</li> </ul>	4	9

#### Ahead of the fourth Supervisory Panel

Milestone	Requirement	Full Time term	Part Time term
M2.5	Review training needs and knowledge required to continue with research project and complete the thesis.	5	10



	<ul style="list-style-type: none"> <li>Attend Proficio (internal) / MAGIC/APTS (external) courses and plan for further courses to attend, as appropriate. Achieve adequate grades in assessed courses according to Supervisory Panel expectations (e.g. passing grades).</li> <li>Share any assessment from courses undertaken so far with the Supervisory Panel.</li> </ul>		
M2.6	<u>Demonstrate work of the quality and quantity expected at the end of Year 2.</u> <ul style="list-style-type: none"> <li>Produce 2 draft chapters</li> <li>Report on research undertaken to date</li> </ul>	6	11
M2.7	<ul style="list-style-type: none"> <li>Demonstration of effective project management through the setting of research goals and prioritisation of activities.</li> <li>Create a detailed, realistic plan of work/ timetable for Year 3.</li> <li>Produce supervisory panel report written in a clear and self-reflective style</li> </ul>	6	12
M2.8	<u>Subject-specific milestones.</u> <ul style="list-style-type: none"> <li>Half of experimental or theoretical work should be essentially completed. Further publications or plans for publications.</li> <li>If possible, submission of first journal, workshop, symposium, or conference paper.</li> </ul>	6	12

Has the student and supervisory team considered whether the research will be using human participants, and if so, has sought and received formal university ethics approval.

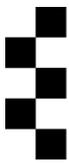
Has the student and supervisory team considered whether the research uses security-sensitive material, and if so, has sought and received formal university registration of this material.

The Supervisory Panel will make a recommendation to the Research Student Progress Board, ahead of the next academic year. Further information regarding Supervisory Panels and Research Student Progress Boards can be found here: <https://www.essex.ac.uk/student/postgraduate-research/pgr-progress>

### Year 3 (Full time), Year 5 and 6 (Part time)

#### Ahead of the fifth Supervisory Panel

Milestone	Requirement	Full Time term	Part Time term
M3.1	<u>Ability to reflect on skills and knowledge development and its application to the research project.</u> <ul style="list-style-type: none"> <li>Training Needs Analysis reviewed.</li> <li>Attend Proficio (internal) / MAGIC/APTS (external) courses and plan for further courses to attend, as appropriate. Achieve adequate grades in assessed courses according to Supervisory Panel expectations (e.g. passing grades).</li> <li>Share any assessment from courses undertaken so far with the Supervisory Panel.</li> </ul>	7	13
M3.2	<u>Demonstrate work of the quality and quantity expected at the end of Year 2.</u> <ul style="list-style-type: none"> <li>Produce draft of all core chapters.</li> <li>Report on research undertaken to date.</li> </ul>	7	14
M3.3	<u>Review significance and impact of research and articulate output.</u>	7	15



	<p>For example:</p> <ul style="list-style-type: none"> <li>▪ Deliver workshop.</li> <li>▪ Present research to students and staff at seminars/conferences.</li> </ul>		
M3.4	<p><u>Key experimental or theoretical work should be essentially completed. Further publications or plans for publications should have been agreed.</u></p> <ul style="list-style-type: none"> <li>▪ Review publication(s) so far and plan further ones if enough unpublished results have been produced.</li> <li>▪ Final plan for journal, workshop, symposium and/or conference paper submissions.</li> </ul>	7	15

**Ahead of the sixth Supervisory Panel**

Milestone	Requirement	Full Time term	Part Time term
M3.5	<p><u>Demonstrate work of the quality and quantity expected when nearing submission.</u></p> <ul style="list-style-type: none"> <li>▪ Research completed (experimental, empirical and theoretical work, where relevant).</li> </ul>	9	16
M3.6	<p><u>Clear evidence of progress towards submission</u></p> <ul style="list-style-type: none"> <li>▪ Completed final draft of thesis for supervisor(s)/ supervisory panel comment.</li> </ul>	9	18
M3.7	<ul style="list-style-type: none"> <li>▪ Review publication(s) so far and plan further ones if enough unpublished results have been produced.</li> </ul>	9	18

Has the student and supervisory team considered whether the research will be using human participants, and if so, has sought and received formal university ethics approval.

Has the student and supervisory team considered whether the research uses security-sensitive material, and if so, has sought and received formal university registration of this material.

The Supervisory Panel will either confirm to the Research Student Progress Board that the student is ready to submit their thesis or recommend that a period of completion is required (see below).

**Completion Period**

If, at the 6<sup>th</sup> supervisory Panel, a student isn't on track to submit their thesis by the end of year 3 (year 6 for Part time students), a recommendation for a period of completion can be requested from the RSPB, for approval by the Faculty Dean (Postgraduate)

Milestone	Requirement	Term to undertake work <i>(To be used as a guide only)</i>
C1.1	<p><u>Clear plan to submission.</u></p> <ul style="list-style-type: none"> <li>• Submission date agreed</li> <li>• Detailed schedule to submission</li> </ul>	Timeline agreed by Supervisory panel.