

## Progression Milestones Guidance: Chemistry & Chemical Engineering

Each progression milestone requires you to submit a written report in advance of the review meeting summarising your progress to date. The guidance below outlines the submission requirements as per your academic discipline for each progression milestone.

### Planning and training

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#### **Tasks for first 3 months:**

Supervisory team update (completed by the supervisor)

Data management plan (in PGR Manager) – discuss with supervisor and use online resources.

Ethics assessment (in PGR Manager) – even students whose project has no ethical constraints need to complete it.

Professional Development planning. Discuss with supervisor the training needs you may require. See induction slides and links to doctoral college pages (i.e., the PGR Development Hub).

#### **Mandatory training:**

Mandatory modules may vary over the years, following the guidelines from the Doctoral College. Mandatory on-line modules may include Health&Safety, Equality&Diversity, Research data management (helpful for data management plan above), Ethics awareness, Research Integrity, Presenting your research and Technical writing. The Orientation to teaching and Demonstrating is mandatory only for students who wish to contribute to teaching.

All research student in Chemistry and Chemical Engineering need to complete CHEM8053, our own Health and Safety module.

Additional mandatory modules are discipline dependent, to provide access to certain, local facilities. Refer to induction slides on training within Chemistry and Chemical Engineering for further details.

Mandatory module completion will be checked at progression review, and may lead to progression failure if mandatory training is not completed within a certain date.

### Expectation on reports and vivas

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#### **Recommendation to write your Report timely and professionally:**

- Draft your Report with support from your supervisory team.
- Discuss with your supervisory team the date by which you should aim to provide them with a draft of your Report. This should be well before the Report submission deadline.
- Agree how your supervisory team will provide feedback on your draft Report.
- If you require an extension due to exceptional circumstances, you will need to complete a Special Considerations form via PGR Manager.
- Report presentation: Use suitable software to write a rigorous report, taking care of consistent numbering of sections, chapters, figures, tables, references and so on. You are recommended to use a bibliographic software to be rigorous and consistent throughout with your references. Make sure tables and figures have high quality images, informative captions and are properly formatted, well-presented and discussed.
- Language: Spell check your report (including typographical errors, mislabelling, bad referencing etc), through software and the support from friends and peers when appropriate. This is not expected from your supervisory team.
- Do not exceed the word or page count for maximum report length, as it will cost you significant time and bring no actual benefit. If your report is excessively long and extends beyond the guidelines provided below, the examiners are entitled to ask for an executive summary (less than 10 pages), or they may choose to read only a portion of your report.

**Documents to be submitted:**

- an up-to-date research Data Management Plan;
- an up-to-date list on completion of mandatory training modules (see above)
- an up-to-date list of other personal development modules attended or planned.
- your Progression Review Report.

Non-completion of mandatory training may lead to failure of progression review.

**The Review (viva):**

- Your main supervisor will arrange the date, time and location of the Review meeting – but please be pro-active! If it has not happened, please inform the Faculty Doctoral College team.
- The Progression Review viva should take place within one month of the submission of your Report. If this has not happened, you should inform your Faculty Doctoral College Office.
- At the start of the Review Panel meeting, you will typically be expected to give a short summary (approximately 3-5 minutes) of your work.
- During the Review Panel meeting, you will be asked technical questions on your work as well as more general questions to probe your wider knowledge and understanding within your field of research. Use this as an opportunity to challenge yourself, to explore new ideas and also to practice defending your work in readiness for your PhD viva.
- It is better to have a tough internal viva, rather than an unexpectedly tough PhD viva!
- You are expected to have a good grounding in your field, so read around your basics before a viva.
- The Review Panel is allowed to ask you about topics that you have not covered. They are seeing how well you think on your feet.
- Be prepared to defend yourself and your approach (saying “because my supervisor told me to” is not sufficient...)
- If the Review Panel makes a good point, acknowledge it - they may be giving you some good ideas.
- Personal development plans – any activities or modules you may wish to attend or have attended can be discussed with you. These should be discussed during supervisory meetings, but discussion of further personal development with the assessors is encouraged.

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**First Progression Review**

The First Progression Review will be assessed by an independent assessor and a member of your supervisory team. The deadline for submission of your Review Report will be between months 7 and 9, it will appear on your PGR Manager timeline. The assessment at this milestone will be based upon your written Report and your performance at a viva which must be held within 30 days from submission.

**Report length:**

Your Report should be typically 4000-12000 words (e.g., ~20-60 pages for the report, 12 point font, including figures, equations, tables etc.). There is a great breadth of variation in report styles and lengths within different Chemistry and Chemical Engineering research areas. Please consult your supervisory team as well as other PGR students in your research group or research sections for further guidance.

**Report Submission:**

- Submission takes place via PGR manager.
- It does not need to be printed.
- The report may contain diagrams (part of the page count).
- Include a list of references (part of the page count) in University of Southampton format.
- Relevant analytical data may be included as appendices (not included in the page count)

**The report should contain:**

- title of report, name of candidate, date of submission and supervisor names;
- tablet of content;
- list of abbreviations (if relevant);
- abstract – one page;
- a generic introduction, providing substantial background on the project and extensive literature review
- a definition of your main research problems and objectives;
- a substantive and critical literature review – i.e. not simply a history of published papers, but a discussion of disputed areas, and the gaps that need to be filled (describe how the proposed research relates to other work in the same area) – this will typically be the longest part of the report;
- the methodology;
- the results;
- a critical analysis and discussion of findings so far;
- a clear and detailed plan of future work, leading to the final stages of your PhD programme, including a work plan, e.g. a GANTT chart;
- highlight of any paper publications/submission planned, completed or in progress.

**Assessors' expectations:**

- made an appropriate and critical survey of the literature;
- defined the preliminary objectives and scope of the research;
- displayed an appropriate knowledge and understanding of the research methods;
- developed a viable research plan to be completed within the degree period;
- have begun discussing the potential ethical implications of your research (as appropriate) with your supervisory team and can articulate how these are incorporated into your research plans;
- have made satisfactory progress to date, i.e., though acquisition of new practical skills or theoretical knowledge, through achievement of important milestones in the project, original research results, etc.

**Assessment outcome:**

First attempt	Second attempt
<ul style="list-style-type: none"> <li>- Pass</li> <li>- Resubmit report</li> </ul>	<ul style="list-style-type: none"> <li>- Pass</li> <li>- Termination of candidature</li> </ul>

Note: if you are required to resubmit your Review Report you will be expected to attend a second *viva*. However, if it is deemed by the Review Panel that your resubmitted Report is of sufficient quality to permit progression, the repeat *viva* will be cancelled and you will be deemed to have passed.

**Second Progression Review**

The Second Progression Review (Confirmation) will be assessed by a Review Panel consisting of two independent assessors. The deadline for submission of your Review Report will be between months 17 to 20 and should appear on your PGR Manager timeline. The assessment at this milestone will be based upon your written Report and your performance at a *viva* which must be held within 30 days from submission.

**Report length:**

Report length: typically 10000-30000 words, plus tables, figures etc (~40-100 pages for the report, 12 point font, including figures, equations, tables etc.). There is a great breadth of variation in report styles and lengths

within different Chemistry research areas. Please consult your supervisory team as well as other PGR students in your research group or research sections for further guidance.

**Report Submission:**

- Submission takes place via PGR manager.
- It does not need to be printed.
- The report may contain diagrams (part of the page count).
- Include a list of references (part of the page count) in University of Southampton format.
- Relevant analytical data may be included as appendices (not included in the page count)

**The report will contain:**

- title of report, name of candidate, date of submission and supervisor names;
- abstract of less than 200 words;
- a detailed contents page with chapter headings planned to be used in the PhD thesis;
- list of abbreviation (if relevant);
- a generic introduction, providing substantial background on the project and extensive literature review;
- a summary of your own project's research problems and research objectives;
- the methodology;
- the results;
- a critical analysis and discussion of findings so far;
- a clear and detailed plan of future work including a work plan, e.g. a GANTT chart;
- highlight of any paper publications/submission/planned.
- draft your Report with support from your supervisory team.
- You should discuss with your supervisory team the date by which you should aim to provide them with a Report outline and/or Report drafts. This should be well before the Report submission deadline (starting around two months before the submission deadline).
- You should discuss with your supervisory team how they will provide feedback on your Report drafts, e.g. chapter-by-chapter, or whole draft.
- You are allowed to use portions of your first report as starting point, for instance to discuss background information and methodology (you need to refer clearly to your previous work in this instance). You will be expected to have developed more depth and understanding in your research area by this stage.
- If you require an extension to your second Progression Review, you will need to complete a Special Considerations form available from the Faculty Graduate School Office.
- Report presentation: Use suitable software to write a rigorous report, taking care of consistent numbering of sections, chapters, figures, tables, references and so on. You are recommended to use a bibliographic software to be rigorous and consistent throughout with your references. Make sure tables and figures have high quality images, informative captions and are properly formatted, well-presented and discussed.
- Language: Spell check your report (including typographical errors, mislabelling, bad referencing etc), through software and the support from friends and peers when appropriate. This is not expected from your supervisory team.

**Assessors' expectations:**

- a good knowledge of the general research field and specific problems that are the subject of the project, and have made clear progress in the project;
- displayed a good understanding of the methods and techniques used in your research and their limitations (e.g. analytical errors, assumptions, etc.);
- the ability to write in clear scientific English;
- developed a well thought-out plan for the remainder of the project;

- manage the research project;
- become proficient in the special field of research involved;
- on track to achieve success at PhD level given adequate motivation and perseverance;
- the project being undertaken is of sufficient scope, originality and theoretical interest to constitute a genuine contribution to the subject in the form of the understanding of a problem, the advancement of knowledge or the generation of new ideas. This is a requirement from the Code of Practice (section 18)

**Assessment Outcomes:**

First attempt	Second attempt
<ul style="list-style-type: none"> <li>- Pass</li> <li>- Resubmit report</li> </ul>	<ul style="list-style-type: none"> <li>- Pass</li> <li>- Transfer to the Master of Philosophy programme</li> <li>- Termination of candidature</li> </ul>

Note: if you are required to resubmit your Review Report you will be expected to attend a second *viva*. However, if it is deemed by the Review Panel that your resubmitted Report is of sufficient quality to permit Confirmation, the repeat *viva* will be cancelled and you will be deemed to have passed.

**Third Progression Review**

The Third Progression Review will be assessed by at least two members of your supervisory team. If you are required to resubmit your Report, the second attempt at the Third Progression Review will be assessed by an independent assessor and a member of your supervisory team. The deadline for submission of your Review Report will be between months 29 to 32 and should appear on your PGR Manager timeline. The assessment at this milestone will be based upon your written Report and your performance at a *viva* which must be held within 30 days from submission.

**Report length:**

You should discuss the Report length and content in advance with your supervisory team, as there may be variations to the required information and format.

There is no required minimum word limit, but a maximum guideline of 4000 words is advised.

**Report Submission:**

The report will contain:

- An outline of thesis structure.
- A summary of any research work not yet completed and an estimated completion date for each section of remaining work.
- A projected thesis submission date.
- A list of publications and/or publications submitted.

Alternatively, it is also acceptable to provide a draft version of the thesis with a clear structure. This should nevertheless include also a summary of the work still to be done and an outline of the plan for submission of the thesis.

**Assessors' expectations:**

You will be expected to evidence that your research project has made clear progress and a credible plan for the submission of a defendable thesis exists. The Third Progression Review does not take the form of a *viva*, and is usually a discussion between the student and their supervisory team, which results in an agreement of a finite timeline to final submission. You and your supervisory team must discuss if/when you will enter nominal registration.

**Assessment Outcomes:**

First attempt	Second attempt
<ul style="list-style-type: none"> <li>- Pass</li> <li>- Resubmit report</li> </ul>	<ul style="list-style-type: none"> <li>- Pass</li> <li>- Transfer to the Master of Philosophy programme</li> <li>- Termination of candidature</li> </ul>
Note: if you are required to resubmit your Review Report you will be expected to attend a second Review meeting with an independent assessor.	

**Interim Progression Review**

All part-time research students who have not undergone a Progression Review in the previous twelve months of candidature should undergo an Interim Progression Review. The Interim Progression Review will be assessed by all members of your supervisory team. The deadline for the report will be on your PGR Manager. The assessment of this milestone will be based upon a written Report and your performance at a viva. The review is not necessary if the PhD thesis submission is expected within 3 months.

**Report length:**

Your Report is typically 2000-8000 words (e.g., ~10-40 pages for the report, 12 point font, including figures, equations, tables etc.).

**Report Submission:**

The report must at least contain:

- Work carried out to date
- An outline for the plan for submission of Thesis, or for the following progression milestone (as applicable).

**Assessors' expectations:**

You will be expected to evidence that your research project has made clear progress and a credible plan of work for the submission of a defendable thesis, or towards the next main progression review milestone, within the expected timeline.

This Progression Review does not take the form of a viva, and is usually a discussion between the student and their supervisory team. Following the Review, you will be provided with written feedback and, if necessary, guidance on actions to be taken to support progress in your candidature. An unsatisfactory Interim Progression Review may lead to an Exceptional Progression Review.

**Assessment Outcomes:**

Following the Review, you will be provided with written feedback and, if necessary, guidance on actions to be taken to support progress in your candidature.

An unsatisfactory Interim Progression Review may lead to an Exceptional Progression Review, in line with the [Procedures for Circumstances that may lead to Withdrawal or Termination](#).