

Part A – University of Southampton Doctoral Programme Profile 2017/18

Part A of this document is the University of Southampton Doctoral Programme Profile, which provides a concise summary of the main features of a doctoral programme at the University of Southampton, and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

Part B of this document is a programme-specific Doctoral Profile, which provides more Faculty and programme-specific detail.

This profile should be read alongside the University of Southampton's [Regulations for the degrees of Master of Philosophy and Doctor of Philosophy](#) and the [Code of Practice for Research Candidature and Supervision](#).

Research Environment

The University of Southampton is strongly committed to providing the very best learning experience to all our students in a friendly and stimulating environment. Our mission is to change the world for the better, working with industry, governments and research institutions to make a global impact. We are a world-class research-intensive Russell Group University; over 97% of our research has been assessed as world-leading and internationally excellent in the Research Excellence Framework (REF) 2014. We are known nationally and internationally for our excellence in research and teaching, and are continually improving the scope and delivery of our activities, we aim to generate a community of doctoral graduates equipped to act as research leaders in the most pressing challenges of the 21st century.

Support for student learning

There are numerous facilities and services to support the learning of research students at the University of Southampton, some of which are accessible to students across the University and some of which will be geared more to students within particular Faculty or discipline areas. Information about support offered across the University can be found on the '[University life](#)' pages of the website. Information about Faculty/programme specific support is detailed in programme-specific profiles.

Programme Outcomes

Having successfully completed a doctoral programme, a research student will be able to demonstrate:

- the creation and interpretation of new knowledge through original research or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline and merit publication
- a systematic acquisition and understanding of a substantial body of knowledge which is at the forefront of an academic discipline or an area of professional practice
- the general ability to conceptualise, design and implement a project for the generation of new knowledge, applications or understanding at the forefront of the discipline, and to adjust the project design in the light of unforeseen problems
- a detailed understanding of applicable techniques for research and advanced academic enquiry

Professional Development and Transferable Skills

It is University policy that research students have access to a suitable programme of research skills, professional development, and transferable skills training which address individual needs and help research students to prepare for their subsequent careers. The Doctoral College delivers a range of skills training and personal development opportunities to meet the needs of researchers from across all of our disciplines. The provision has been informed by the Researcher Development Framework (RDF) and an extensive range of development opportunities aligned with the RDF is listed on the [Doctoral College webpages](#).

Programme Structure

The following summary should be read in conjunction with your Faculty Postgraduate Handbook and the University Regulations as specified in Section V of the [Calendar](#).

Research students will be required to undertake three Progression Reviews during their studies within the timescales shown in the table below. In all cases, the time windows refer to periods in which progression decisions must be made. These timings may be adjusted on a pro-rata basis for students registered on non-standard research programmes where other duties are a formal part of the programme.

Assessment in each Progression Review will be based on a piece of submitted work, followed by a viva with a Progression Review Panel. Two attempts at each review are permitted; and failure to meet the criteria for a successful progression review will lead to a termination of candidature in line with the [Procedures for Circumstances that may lead to Withdrawal or Termination](#). Interim Progression Reviews will take place for part-time students who have not undergone a Progression Review in the previous 12 months. Exceptional Progression Reviews may be scheduled, on the direction of the Director of Faculty Graduate School, if significant academic concerns have been raised about a research student's candidature. The format of assessment for each milestone can vary by Faculty, and by discipline. Details on the formats of assessments are stated in Faculty handbooks.

	Full time		Part Time	
	First attempt	Second attempt	First attempt	Second attempt
First Progression Review	Months 8-10	Before the end of month 12	Months 18-21	Before the end of month 24
Second Progression Review (Confirmation)	Months 18-21	Before the end of month 24	Months 30-42	Before the end of month 48
Third Progression Review	Months 30-33	Before the end of month 36	Months 61-66	Before the end of month 72

Confirmation of PhD status/Transfer/Upgrade from MPhil to PhD

Research students must successfully meet the requirements of a Confirmation panel to submit for a PhD. The Second Progression Review will form the Confirmation. The student must meet the criteria set, and provide the supporting evidence, as detailed in the [Code of Practice for Research Candidature and Supervision](#). The format of assessment can vary by Faculty, and by discipline. Students should be aware that the Panel may recommend that a student is transferred to an MPhil programme if the criteria are not met. With regards to the transfer of programme, the University will comply with its obligations under the relevant immigration legislation which may be updated from time to time. A student who is concerned about his/her entitlement to remain in the UK following a failure to progress should seek urgent advice from the Student Visa Guidance Service. Full details can be found in the [Code of Practice for Research Candidature and Supervision](#).

Thesis Submission and Examination

The maximum period of candidature, including nominal registration but excluding periods of suspension is four years (48 months) for full-time candidature and seven years (84 months) for part-time candidature. A research student who fails to submit a thesis by the end of the maximum period of study shall be deemed to have withdrawn from the course.

The maximum length of a thesis is 75,000 words in the case of a PhD, or 50,000 words in the case of an MPhil. The thesis is considered by at least one internal and one external examiner and a viva held. Both the written thesis and the performance of the candidate at the viva are assessed independently.

Please note: As a research-led University, we undertake a continuous review of our programmes to ensure quality enhancement and to manage our resources. As a result, this programme may be revised during a student's period of registration; however, any revision will be balanced against the requirement that the student should receive the educational service expected. Please read our [Disclaimer](#) to see why, when and how changes may be made to a student's programme.

Fees, Additional Costs and Funding

The current fees charged for doctoral programmes are found on the [University Postgraduate Fees and Funding website](#) which also gives details of some opportunities to obtain funding for your PhD

Research students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. If there are additional costs, these will be detailed in the programme-specific profile.

Intermediate exit points (where available)

MPhil: In some cases, research students may not or cannot continue through to completion of the PhD. Students may make such decisions for themselves, or it can be based on unsatisfactory performance at one of the formal milestones described above. If a student decides to carry out research, but at MPhil, they will need to transfer onto an MPhil programme. In any case, an MPhil may be awarded only after successful examination of a suitable thesis by an internal and external examiner and passing a viva voce. See the University [Calendar](#) for further details on the award of an MPhil

Other intermediate exit points may be available; these will be detailed in the programme-specific profile.

Admission

At a minimum, successful applicants must meet the admissions requirements of the [University Code of Practice for Research Candidature and Supervision](#). Additional admissions criteria may be set in programme-specific profiles.

Applications are submitted using the University [online application form](#). A full guide to this process may be downloaded from the [accompanying guidance notes](#). Applicants may be interviewed and references will be taken up. A formal project proposal is not required, but applicants should indicate the area of their research interests at the time of application.

Part B - Doctoral Programme Profile

Chemistry 2017/18

This Chemistry Doctoral Programme Profile accompanies the University of Southampton **Doctoral Programme Profile 2017/18**, and details additional Faculty/programme-specific information.

Awarding Institution	University of Southampton
Teaching Institution	University of Southampton
Mode of study	Full time/part time
Duration in years	3-4 years following standard progression for a FT student.
Accreditation details	N/A
Final award	PhD
Name of award	PhD
Interim Exit awards	MPhil
FHEQ level of final award	8
QAA Subject Benchmark or other external reference	QAA Doctoral Degree Characteristics Statement (2015)
Programme Lead	Dr Peter Birkin
Date specification was written	10/10/2016
Date Programme was validated	
Date specification last updated	

All Doctoral Programme Profiles should be read alongside the University of Southampton **Doctoral Programme Profile 2017/18** and the University of Southampton's [Regulations for the degrees of Master of Philosophy and Doctor of Philosophy](#) and [Code of Practice for Research Candidature and Supervision](#).

Programme Overview

Brief outline of the programme

Chemistry, at Southampton, has a vibrant research community spanning many areas of stimulating science. These range across a wide variety of topics and collaborations are common within the University (for example with Biological Sciences, other physical sciences and Engineering). In addition, many projects also involve collaboration with other UK and international Universities as well as extending to industry. The structure of Chemistry and its staff allow for a stimulating research environment designed to facilitate the development and training of postgraduate researchers. The facilities available give the opportunity for leading research to be undertaken, exploited and reported to the wider science and general audience.

Aims of the Programme

The aims of the programme are to:

- *provide knowledge and understanding of a chosen area of chemistry at an advanced level and training in established research techniques appropriate to the area;*
- *develop a capacity in students for original research based on a thorough understanding of their chosen field in collaboration with their supervisor;*
- *provide students with a broader and deeper knowledge of graduate level chemistry and its application;*
- *produce theses and subsequent publications that contribute to the development of and understanding of the chosen area of chemistry;*
- *offer students a supportive environment so that they feel that they are part of a community of scholars and are well placed to pursue a career building on their accomplished research;*
- *give students the opportunity to present their work to colleagues, and to bring the student into contact with the wider research community, enabling them to build networks with others researching in the same field.*

Programme Structure

The following summary should be read in conjunction with the Faculty Postgraduate Research Handbook and the University Regulations as specified in the [Calendar](#).

Unlike undergraduate study, the open-ended nature of research means it is not possible to always predict the structure of a programme of study leading to a thesis. Research students are however, all required to undertake three Progression Reviews during their studies, as detailed in the [Code of Practice for Research Candidature and Supervision](#). The timetable is outlined below is indicative of what you can expect.

Maximum candidature is 48 months in full-time registration, 84 months in part-time Registration. Candidates may be in receipt of funding for shorter periods. The timings listed below are those for a full-time student. Timings for a part-time student are adjusted suitably.

Programme details

Year 1

By the end of three months you should have completed your academic needs analysis and highlighted any modules or training that should be attended to enhance your studies, confirmed your full supervisory team and written an outline of the motivation for your research, together with a plan of work for year 1. It is expected that you will take a mixture of substantive, technical and skills training courses throughout the year to develop the skills that you need for the whole PhD process.

Throughout the year you will be expected to develop knowledge in your chosen area of research through reading and developing a review of previous work in the area. You will also be initiating your research project and starting to conduct analyses, where appropriate. The relative timescales for these tasks will be discussed with your supervisors.

At the end of your first year there will be a review meeting (first progression review) conducted by at least one of your supervisors and an independent assessor. This is to ensure that the research is progressing well and on target, and provide an opportunity for issues to be raised about the programme or the supervisory arrangements.

Students have the opportunity to feedback information to the Graduate School, through post graduate representatives or through direct communication with their supervisory team and the Director of the Graduate School.

Year 2

Your progress on the programme will continue to be monitored and assessed as specified in the University's [Code of Practice for Research Candidature and Supervision](#). In this year you are expected to expand on the work started in year 1.

Between months 18 and 24 of your candidature (months 36 to 42 for part time students) it is expected that you will submit a confirmation thesis. This confirmation thesis and a viva undertaken with two independent assessors. You must successfully meet the requirements of the **Confirmation of PhD Registration** (Second Progression Review) if you wish to submit for a PhD. The criteria you must meet in order to be confirmed to PhD status and the process which must be adhered to is outlined in the University's Code of Practice and the Faculty's PGR Student Handbook. Candidates unsuccessful at this review may be allowed to transfer to the MPhil degree programme.

If you meet the requirements for confirmation you will remain on the PhD programme, otherwise you may either request to be transferred to an MPhil, or be given further time to meet the requirements of the Confirmation Panel. Failure to meet the criteria for a successful progression review will lead to the termination of your PhD candidature.

Training requirements for year two will be discussed with your supervisory team and this training will be followed up throughout the year.

Year 3

Evidence of continued progress is provided by publications and presentations in a suitable venue (e.g. an international conference). It is unlikely that further major training will be needed at this stage. The target date for submission of your thesis is normally at the end of year 3 as this may coincide with the end of any supporting studentships.

Towards the end of your third year there will be a review meeting (the Third Progression Review) conducted by your supervisors. In most cases you will be required to produce a short report on your progress since confirmation, identify publications and other research outputs, the work left to complete your thesis and a thesis plan. If your progress at this review is deemed to be unsatisfactory, a full review will be conducted with an independent assessor.

Year 4 (and higher for part time)

For students in full-time registration, the final thesis (whether MPhil or PhD) must be submitted *at the latest* by the end of the 48th month (excluding periods of suspension) unless special dispensation is granted by the Graduate School. (For candidates in part-time registration the deadline for submission is 84 months). The latter will only be granted rarely, in the case of exceptional and unforeseen circumstances.

Programme Outcomes

Having successfully completed this programme you will be able to demonstrate:

- the creation and interpretation of new knowledge through original research or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline and merit publication
- a systematic acquisition and understanding of a substantial body of knowledge which is at the forefront of an academic discipline or an area of professional practice
- the general ability to conceptualise, design and implement a project for the generation of new knowledge, applications or understanding at the forefront of the discipline, and to adjust the project design in the light of unforeseen problems
- a detailed understanding of applicable techniques for research and advanced academic enquiry

Knowledge and Understanding

Having successfully completed this programme you will be able to demonstrate knowledge and understanding of:

- Current scientific and technical principles underlying your PhD topic in Chemistry, including the terminology used in your PhD topic
- Current research issues relevant to your PhD topic in Chemistry.
- Theory, practice, analysis and (where relevant) interpretation of data in your PhD, including relevant general Chemistry techniques and approaches
- Theoretical and empirical developments at the research frontiers in your PhD topic in Chemistry.

Learning and Teaching Methods

You will develop core knowledge and understanding through your own research and guided independent study via individual supervision meetings. In addition, you will further develop via technical module lectures, tutorials, seminars and presentations as well as group meetings.

Assessment methods

Assessment methods will include, progression reviews including **Confirmation of PhD Registration** and a thesis with viva voce as described in part A

Subject Specific Intellectual and Research Skills

Having successfully completed this programme you will be able to:

- Interpret and critically evaluate information from academic papers, patents, technical manuals, government, industrial and other sources.
- Synthesise ideas and apply creative and original thought to the solution of complex scientific problems.
- Develop, modify and apply existing theory in novel situations and circumstances.
- Create and evaluate new knowledge through research of a quality to satisfy peer review and merit publication.

Learning and Teaching Methods

Guided and independent research which can include projects carried out with industrial sponsors. Methods will include lectures, seminars, laboratory work and extended periods of self-study.

Assessment methods

Progression reviews including **Confirmation of PhD Registration**, theses, viva voce exams as described in Part A

Support for student learning

Learning and Supervision

You will develop core knowledge and understanding through your own research and guided independent study via individual supervision meetings. In addition, you will further develop your skills via technical modules, tutor-led and student-led tutorials, student-led seminars and presentations, laboratory and practical classes.

Research students are allocated a supervisory team of at least two members, one of whom will be the main supervisor. The supervisory team typically either consists of a main supervisor and a second supervisor, or for a multi-disciplinary project more than one co-supervisor (one of whom must still be designated as the main supervisor).

Applicants may indicate a preference for the supervisory team on their application form, but the names will not be confirmed until a formal offer is made. In some cases, the composition of a supervisory team may change as the research project evolves and in response to other circumstances.

In addition to the University-wide learning support, students studying on the Chemistry Doctoral Programme will be able to access:

- Academic supervisory team who will provide advice and support throughout the programme and who are actively engaged in research closely related to your chosen area.
- Access to other staff in the Academic Unit
- Systems for the support of student learning within the Faculty.
- Dedicated office accommodation.
- Appropriate laboratory (or equivalent) space.
- A computer for your exclusive use.

The Faculty also offer the following learning support:

- Induction programme for orientation, introduction of the programme and staff, and dissemination of materials.
- Postgraduate Student Handbook, including guidance on selection of technical modules.
- Access to all administrative and academic material on the Faculty, Programme and individual module web sites and Blackboard.
- An opportunity to interact with the Graduate School (which comprises an academic representative from each Academic Unit as well as the Director of Graduate School) through the postgraduate representatives. This gives ready access to an independent and impartial source of advice about any issues you may be having during your studies.
- Infrastructure to support your research.
- Access to other staff of the Faculty.
- Access to centrally managed computing resources.

Any sponsoring company (where appropriate) may also offer the following learning support:

- An industrial mentor who will act as a link with the company and will provide significant technical support throughout the programme.
- The infrastructure and resources required for the research whilst you are based at the company.
- The agreed contribution/sponsorship to the University.

Fees, Additional Costs and Funding

Fees and funding (if appropriate) will be indicated at application through liaison with the Post Graduate admissions team.

Intermediate exit points (where available)

See transfer to MPhil as part of year 2 confirmation.

Admission

Non UK students are expected to liaise with the Post graduate admissions team to ascertain the exact qualifications required for the PhD program. The table below indicates our standard admissions requirements.

Qualification	Grade/GPA	Subjects requirements	Specific requirements
Typically BSc or MChem degree (or equivalent bachelors or integrated masters)	1 st class or 2:1 (or equivalent)	Chemistry or other appropriate quantitative disciplines	
Master's degree (e.g. MSc)	Merit or Distinction	Chemistry or other appropriate quantitative disciplines	

Recognition of Prior Learning (RPL)

The University has a [Recognition of Prior Learning Policy](#). Candidates for PhD projects are assessed on a case-by-case basis. Prospective students are asked to contact the Postgraduate admissions team for further details as appropriate.

English Language Proficiency

The University's Admissions policy on English Language requirements can be found [here](#). Non UK students are expected to liaise with the Post graduate admissions team to ascertain the exact language qualifications required.

Career Opportunities

Career opportunities are wide ranging and varied. Chemistry PhD graduates take up a range of positions in UK and international industry, as in many other settings. Opportunities also exist as a member of a research team in academia, leading to future leadership positions within an academic context. The nature of the generic and discipline-specific skills obtained during your study make your experience and skills attractive to a range of organisations post qualification.

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. More detailed information can be found in the programme handbook (or other appropriate guide).

Appendix 1:

Additional Costs

Students are requested to discuss any possible additional costs with their prospective project supervisor at time of application.