

## Programme of study for Doctor of Philosophy – Aerosol Science 2023/24

School: Chemical and Process Engineering

**Entry Requirements:** Applicants will normally be required to have obtained a relevant degree *at least* equivalent to a UK upper second class (2:1) honours degree. International PGRs will normally be required to have achieved at least 6.0 on IELTS (with no component below 5.5) or an equivalent English language qualification.

There is normally one entry point for the integrated degrees of PhD and Master in September/October of each academic session.

### Year One

- Month 1: Completion of the training plan
- Taught assessed modules: 120 taught credits at the University of Bristol and 60 credit research project to be assessed by the University of Bristol

Core Aerosol Science I	30 credits
Core Aerosol Science II	30 credits
Aerosol Science: Research Methods	30 credits
Aerosol Science: Professionalism and Translation	30 credits
Aerosol Science: Thematic Broadening Sabbatical	60 credits

- Location of study:

Months 1 – 7: University of Bristol  
Months 8 – 10: Thematic Broadening Placement  
Months 11 -48: University of Leeds

Successful completion of the taught elements of the programme in year one is required in order for PGRs to progress on the programme.

### Year Two

- The candidate will carry out research under the direction of their supervision team and expected to meet with their supervisors at least 10 times per year.
- Month 18: First Formal Progress Report
- Month 24: Candidates will be required to undergo the formal assessment procedure for transfer to PhD status before the end of the second year of study.
- 2 weeks of summer school
- Industrial Placement (or in year 3)

### Year Three

- The candidate will carry out research under the direction of their supervision team and expected to meet with their supervisors at least 10 times per year.
- Month 36: Annual Progress Review
- 2 weeks of summer school
- Industrial Placement (or in year 3)

### **Year Four**

- The candidate will carry out research under the direction of their supervision team and expected to meet with their supervisors at least 10 times per year.
- Month 48: Annual Progress Review (unless thesis submitted)
- 2 weeks of summer school
- Industrial Placement (or in year 3)

### **Exit Award**

An MRes in Aerosol Science may be awarded by the University of Bristol to candidates exiting the programme who have successfully completed the taught modular requirements for award in year one of study.

## **Learning Outcomes / Transferable Key Skills / Learning Context / Assessment for PhD**

### **Learning Outcomes**

On completion of the research programme PGRs should have shown evidence of being able:

- to discover, interpret and communicate new knowledge through original research and/or scholarship of publishable quality which satisfies peer review
- to present and defend original research outcomes which extend the forefront of a discipline or relevant area of professional/clinical practice
- to demonstrate systematic and extensive knowledge of the subject area and expertise in generic and subject/professional skills
- to take a proactive and self-reflective role in working and to develop professional relationships with others where appropriate
- to independently and proactively formulate ideas and hypotheses and to design, develop, implement and execute plans by which to evaluate these
- to critically and creatively evaluate current issues, research and advanced scholarship in the discipline
- to demonstrate systematic knowledge of and be able to critically assess, analyse and engage with the ethical and legal context of their research and any ethical and legal implications of their research.

### **1. Transferable (Key) Skills**

PGRs will have had the opportunity to acquire the following abilities through the research training and research specified for the programme

- the skills necessary for a career as a researcher and/or for employment in a senior and leading capacity in a relevant area of professional/clinical practice or industry
- evaluating their own achievement and that of others
- self-direction and effective decision making in complex and unpredictable situations
- independent learning and the ability to work in a way which ensures continuing professional development

### **2. Learning Context**

This will include the critical analysis of, and decision making in, complex and unpredictable professional and/or clinical situations. The structure of the programme will provide research and/or professional training, breadth and depth of study and opportunities for drawing upon appropriate resources and techniques. Opportunities will be provided for PGRs to:

- develop to a high level interests and informed opinions
- develop to a high level their design and management of their learning activities
- develop to a high level their communication of their conclusions
- make an original contribution to the field

PGRs will be expected to engage in the exercise of autonomous initiative in their study and work in professional environments.

### **3. Assessment**

Achievement will be assessed by the examination of the candidate's thesis<sup>1</sup> and performance under oral examination. Assessment will involve the achievement of the candidate in:

- evidencing an ability to conduct original and independent broad and in-depth enquiry within the discipline or within different aspects of the area of professional/clinical practice normally leading to published work
- drawing on and/or developing a range of research techniques and methodologies appropriate to enquiries into the discipline/area of professional practice
- demonstrating independent critical ability in the application of breadth and depth of knowledge to complex issues within the discipline or specialist area of professional/clinical practice
- drawing on a range of perspectives on the area of study
- evaluating and criticising received opinion
- making reasoned and well-informed judgements on complex issues within the specialism whilst understanding the limitations on judgements made in the absence of complete data
- the written style and overall presentation of the thesis

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<sup>1</sup> or alternative form of thesis