



UNIVERSITY OF
CAMBRIDGE

BBSRC DTP
Student Handbook
2019 - 2020



Contents

| | |
|---|----|
| Contents | 2 |
| Welcome..... | 3 |
| Programme structure | 4 |
| BBSRC research themes..... | 5 |
| Advancing the frontiers of bioscience discovery..... | 5 |
| Understanding the rules of life | 5 |
| Transformative technologies | 5 |
| Tackling strategic challenges..... | 6 |
| Bioscience for sustainable agriculture and food..... | 6 |
| Bioscience for renewable resources and clean growth | 6 |
| Bioscience for an integrated understanding of health | 6 |
| BBSRC DTP committees | 7 |
| Rotation projects | 7 |
| Starting the PhD: Changing your Department or Faculty | 8 |
| Professional Internship for PhD Students (PIPS) | 8 |
| Student Charter | 9 |
| Training and cohort building..... | 11 |
| Coursework and evaluation | 11 |
| Rotation project report..... | 12 |
| PhD project proposal | 13 |
| Assessment during the PhD | 14 |
| Plagiarism | 14 |
| Impact and publishing work | 15 |
| Annual leave and Intermission | 16 |
| Sickness, Maternity, Paternity and Adoption leave..... | 16 |
| Working | 17 |
| Laptops and internet access | 17 |
| Leaving the BBSRC DTP Programme | 17 |
| Finances | 17 |
| Student support and wellbeing | 18 |
| Useful Contacts..... | 19 |
| Appendix 1: General Safety in Research Labs..... | 20 |
| Appendix 2: Training Schedule (first two weeks) and key dates | 21 |

Welcome

Welcome to Cambridge and to the BBSRC DTP (Doctoral Training Partnership), your academic home for the next four years. The various University Departments and Institutes and affiliated Institutions in the region which make up the DTP have joined forces to establish an innovative interdisciplinary programme for graduate students in the biosciences. This builds on the excellent research training for which Cambridge is renowned, but offers a broader experience and greater flexibility than the more traditional PhD based on direct entry into a single research group.

You will be able to take advantage of the unparalleled research community around which the DTP is based by undertaking two rotation projects in different research groups, alongside training in *Exploiting New Ways of Working*, including statistics and computational biology. In April next year, you will start your main PhD project, and later in your training period you will carry out a *Professional Internship for PhD Students* (PIPS) in a non-academic environment. As well as gaining experience in the wider world of work, you will also have the opportunity to see directly the ways that scientific research impacts the lives of people or the wellbeing of the planet.

Our aim is for you to graduate in four years' time with a deep understanding and enjoyment of science and scientific research, and a network of colleagues and friends who will have shared your experience. Our hope is that you can aspire to become a future leader in research, or use your expertise in other ways to help society meet its future challenges. Four years, as you will find out, is not long, so make the most of the opportunities provided by the DTP, by your Department or Institute, and by Cambridge more generally.

Good luck in your studies—I look forward to hearing about your progress.

Professor Chris Smith
Director of the University of Cambridge BBSRC DTP

Programme structure

The BBSRC DTP Programme is studied on a full-time basis. In the first six months you will undertake two 10-week rotation projects, either in a University Department or one of the Partner Institutes, as well as complete training in data analysis with R, lab book management, statistics, and reproducible research. You then finalise your choice of PhD project, to start in April, and complete a PhD project proposal. As this is a structured year, we would only permit students to be absent from the Programme in exceptional circumstances (see the section on Annual Leave) but have factored in holidays over the Christmas and Easter periods.

During the PhD project, you will continue to undertake further research skills and subject-specific training, and spend 12 weeks undertaking a *Professional Internship for PhD Students* (PIPS).

The Programme is four years in duration; therefore, students must submit their thesis no later than 48 months after their start date. For students starting in October 2019, the final date for submission of a thesis is 30 September 2023. (Please note 30 September 2023 is a Saturday).

The Programme is a partnership between several Departments and Institutes at the University of Cambridge and five research organisations (Partner Institutes) situated nearby.

The Programme allows students to carry out research in any of the Departments and Partner Institutes listed (subject to the scope of the relevant theme). Students undertaking research in Partner Institutes remain registered with the University, receive their award from the University and have access to facilities at both the University and the Partner Institute.

The Departments and Institutes

School of the Biological Sciences

Department of [Biochemistry](#)
Department of [Genetics](#)
Department of [Pathology](#)
Department of [Pharmacology](#)
Department of [Physiology, Development and Neuroscience](#)
Department of [Plant Sciences](#)
Department of [Psychology](#)
Department of [Veterinary Medicine](#)
Department of [Zoology](#)
[The Sainsbury Laboratory \(SLCU\)](#)

Other University Departments

Department of [Applied Mathematics and Theoretical Physics](#) (DAMTP)
Department of [Chemical Engineering and Biotechnology](#)
Department of [Chemistry](#)
Department of [Physics](#)
Department of [Pure Mathematics and Mathematical Statistics](#) (DPMMS)
Institute of Metabolic Science (IMS) – [Metabolic Research Laboratories](#)

Partner Institutes

[Animal Health Trust](#) (AHT)
[Babraham Institute](#)
European Molecular Biology Laboratory – [European Bioinformatics Institute](#) (EBI)
[National Institute of Agricultural Botany](#) (NIAB)
[Wellcome Trust Sanger Institute](#)

BBSRC research themes

BBSRC-funded research and training at Cambridge emphasises research aimed at improved understanding of basic biological mechanisms, from the study of biological molecules, to cellular and physiological processes, including genetic and genomic approaches. This means the work will drive innovative discoveries; for example, new leads for drugs or disease prevention strategies, or underlying principles of cellular function, as well as interfacing with physical sciences and mathematics through improved understanding of biological mechanisms that underpin normal growth and development. Our bioscience research projects will help sustain the biotechnology and pharmaceutical industries in the UK where the flow of ideas, skills and key capabilities provides mutual benefit.

The Programme has themes, outlined below, which align with the strategic research priorities of the BBSRC. Your rotations and PhD will align with one of these themes.

Advancing the frontiers of bioscience discovery

Understanding the rules of life

Understanding living systems and how they function is at the very heart of bioscience research and innovation. From the structure of DNA, to the processes by which cells divide and replicate, the UK has a rich history of contributing ground-breaking discoveries in bioscience that have begun to reveal the basic operating 'rules of life'.

However, for all that is already known about biological systems, there is much still to learn and tremendous excitement about the opportunities that future discoveries in bioscience will unlock. For example, understanding how cells communicate with one another, or being able to predict how the interplay between an organism's genetic make-up and its environment will affect its physical characteristics.

Transformative technologies

Advances in research often involve the development or application of new tools and technologies and, increasingly, data-intensive and predictive approaches to biological discovery. To understand biological processes and organisms better, researchers need to measure many different parameters across multiple scales (e.g. molecules, cells, organs), ideally under physiologically relevant conditions. Greater integration of bioscience with innovation in the engineering and physical sciences is a huge opportunity to improve on existing technologies and create new ones.

The increasing complexity and scale of biological data arising from technologies such as next-generation sequencing and high-resolution imaging present both a challenge and an opportunity. The use of artificial intelligence (e.g. machine learning) and other innovative data science approaches is key to unlocking new understanding, value and scientific leads from the enormous quantities and diversity of data available.

The broader availability of, or access to, advanced tools and technologies supports the embedding of advanced methodologies across the research community and the wider democratisation of science through, for example, citizen science and crowd-sourcing approaches.

The emergence and exploitation of disruptive technologies can open up transformative new opportunities for research and business innovation. For example, major developments in genome-editing tools (e.g. CRISPR/Cas9) mean that it is now possible to make precise, targeted changes to the genomes of cells and organisms. Alongside the tools of synthetic biology, this enhances our ability to design and engineer biological systems, fuelling major advances in both fundamental bioscience research and its applications in areas such as agriculture, materials, chemicals, and bio-medicine.

Tackling strategic challenges

Bioscience for sustainable agriculture and food

Predictions of population growth suggest that by 2050 the world's population will have expanded to over 9 billion and 60% more food will be required. Reducing the amount of food waste is part of the solution, but a huge, sustainable boost in agricultural productivity will also be needed to meet this demand. It is not simply about using more land for food production, but maximising efficiency of land use and resources. We must increase the resilience of food supply chains in the face of challenges such as climate change, growing threats from pests, pathogens, extreme weather and soil degradation, whilst also protecting the environment.

Advances in 'omics technologies, crop and livestock breeding, coupled with the convergence of sensor technologies, robotics and autonomous systems, big data, machine learning and artificial intelligence, offer an unprecedented opportunity to revolutionise food supply chains. Bioscience will contribute essential knowledge and evidence for farmers, food producers, processors, retailers, consumers and governments, to enable them to farm sustainably, producing healthy, nutritious and affordable food, while reducing impacts on the environment, protecting biodiversity and enhancing our natural capital.

For the UK's strengths in bioscience to have an impact on global food security and drive innovation and clean growth in the agri-food sector, effective user engagement and knowledge exchange will be essential, as will integration with other disciplines such as environmental and social sciences and engineering.

Bioscience for renewable resources and clean growth

Harnessing the power of biology through industrial biotechnology has the potential to transform a wide range of industries and supply chains, reducing reliance on chemical processes and fossil fuels, helping to meet international climate change targets and driving productivity and growth in the bioeconomy. The move to bio-based processes offers opportunities to generate materials, biopharmaceuticals, chemicals and energy with improved performance, lower operational costs and reduced carbon emissions, leading to more sustainable, cleaner manufacturing and greater use of residues or wastes in a more circular bioeconomy.

The industrial biotechnology sector is growing at a rate of 8-10% pa, which is predicted to continue beyond 2025. Recent investments have increased the UK's capacity for industrial biotechnology research and innovation in academic and business communities, encompassing engineering, physical, chemical and biological sciences. However, for UK industry to realise its full potential will require sustained support and specialist infrastructures to enable the translation of world-leading UK bioscience into innovative, bio-based products and processes at industrial scales.

Bioscience for an integrated understanding of health

The UK has an ageing population, but, as our average lifespan increases, our healthspan is not extending as fast. Changing lifestyles are having significant impacts on health across the lifecourse, and declining health and wellbeing in later life are placing increasing pressure on health and social services. In addition, globalisation presents specific and urgent health challenges in zoonotic infections and antimicrobial resistance. There is a pressing need for integrated approaches across a range of disciplines, organisms and scales that generate new insights to improve animal and human health and wellbeing, inform strategies for the prevention of disease, and underpin innovation in health-related industrial sectors.

Bioscience has a crucial foundational role in health-related research and innovation, providing a deep, integrated understanding of the 'healthy system' across the lifecourse, and of the factors that maintain health and wellness under stress and biological or environmental challenge. However, its impact on health challenges depends on effective integration and translation across different areas of bioscience research, with other disciplines such as the medical, social, environmental and physical sciences, and between academia, industry and policy-makers.

BBSRC DTP committees

The BBSRC DTP at Cambridge is governed by a number of different committees. These are the Management Committee, Research Committee and Training Committee. We are also guided by an External Advisory Board which has representatives from other BBSRC DTP programmes from across the UK. The Degree Committee for the Faculty of Biology oversees your progress through the degree and will make the final recommendation to award you the PhD.

Each committee has a distinct remit and during your time at Cambridge you may be told that a matter will need to be approved or discussed at a meeting of one of these committees.

Details of each committee's membership is available on Moodle. The remit of each committee is outlined below.

The Management Committee; overall responsibility for the DTP including data collection, financial and strategic decisions, liaising with the University Departments and Partner Institutes, reporting and communication.

The Research Committee; selecting projects and rotations, recruitment to the DTP, monitoring rotation and PhD project reports, organises mentors and advisors.

The Training Committee; monitors the training portfolio and professional development, oversees PIPs and industrial placements and manages DTP cohort activity.

The Degree Committee for the Faculty of Biology oversees all research courses within the Faculty of Biology. It is responsible for appointing your supervisory team and examiners, monitoring your progress including the first year registration, reviewing any applications for a change in circumstances (for example to intermit or work away) and resolving any conflicts where these cannot be resolved at a local level. At the end of your programme, the Degree Committee will recommend the award of the PhD to the Board of Graduate Studies (on the recommendation of you examiners). See Paragraph 4-10 page 5-6 of the Code of Practice for more information. <https://www.cambridgestudents.cam.ac.uk/new-students/manage-your-student-information/graduate-students/code>

Rotation projects

You will carry out two 10-week rotations projects during the first six months of the programme. These rotations will allow you to gain experience of two different research environments and make an informed choice about your PhD project.

During the summer you received a list of available rotation and PhD projects. Prior to arriving in Cambridge you will have selected and confirmed your choice of project for Michaelmas Term (October – December). You should have also indicated a preference for a Lent Term (January – March) and PhD project.

Once project choices are confirmed, each student will be notified of the start date and given contact details of their project Supervisor. Students are encouraged to contact supervisors in advance of starting the project as there may be background reading to complete. The supervisor will arrange access to facilities and any specific training required.

Each rotation project is 10 weeks in duration and is spent carrying out research, either in a laboratory or elsewhere depending on the requirements of the project. Following the rotation project there is a two-week period to write the rotation project report. The two-week writing period is to complete the analysis and write

up of data; we would therefore not expect that research is undertaken during this time. Further information on what should be included in the project report is contained in the rotation project reports section of this handbook.

Starting the PhD: Changing your Department or Faculty

Work for the PhD should start in the Easter Term 2020. You might be required to transfer to another Department or Partner Institute as part of the transition to the PhD element. It is vitally important that you complete the process because this is linked to your Department or Partner Institute receiving funds from the BBSRC DTP funding allocation to support your research, and it adds the correct supervisor to your CamSIS record for completing Termly reports. Start the process of changing Department by visiting the CamSIS self service area. You will need to **print two copies** of the **Changing your Department or Faculty** form; one copy will go to your old Department (usually Plant Sciences), and the second copy will go to your new Department or Partner Institute.

Further guidance is available at <https://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/changing-your-departmentfaculty>

Professional Internship for PhD Students (PIPS)

All Standard and Targeted students will need to undertake a 60-working-day internship during the 4-year PhD programme. We recommend that the internship should take place during the second or third year of your studies. The exact timing will depend on when it will fit with your PhD project and also the availability of the internship you wish to do.

The professional internship needs to be unrelated to your PhD project. It is a chance to explore working in a different area or in industry. You will continue to receive your stipend throughout the internship, which means that you retain the benefits of being a student such as not paying Council Tax or income tax yet retaining University insurance. Funds are available to cover some expenses related to PIPS such as for travel or accommodation. The host organisation might also contribute to the cost of your expenses.

There is an online platform to support PIPS with guidance on how to prepare for your internship, find a suitable placement and the necessary forms to complete.

Presentations about preparing for PIPS will take place yearly to provide guidance. The BBSRC DTP Programme Office will also provide support throughout the process on an ad hoc basis.



UK Research
and Innovation



The BBSRC DTP Student Charter

Students will:

- Be integral members of the Department / Partner Institute they join. Fellow students, staff and visitors will be treated with respect.
- Act as ambassadors for the BBSRC DTP programme and the University of Cambridge at all times.
- Be aware of and adhere to good research practices and behave professionally.
- Have intellectual ownership of, and assign top priority to, their PhD to enable thesis submission within the 4-year timeframe, taking into account the time required to complete rotations, PIPS or industrial placement as per the programme of which they are part.
- Recognise that taking part in educational activities, such as PIPS, is a compulsory part of the DTP programme.
- Report to their supervisor and BBSRC DTP Co-ordinator any issues likely to impact on their ability to undertake their PhD work.
- Attend BBSRC DTP organised training and cohort activities and take responsibility for their own development by attending courses, journal clubs, conferences.
- Engage with scientific literature.
- Respond to requests from the BBSRC DTP Programme Office in a timely fashion and submit all reports and documents by the agreed deadlines.
- Familiarise themselves with literature relating to their PhD studies, both scientific and administrative, including the BBSRC DTP guidelines and the University of Cambridge Code of Practice for Research Students.
- Understand that non-compliance will result in exclusion from the DTP programme.

Supervisors will:

- Assign high priority to students and their rotation and/or PhD research to ensure thesis submission within the 4-year timeframe.
- Regularly monitor student progress and meet with students to discuss their development and/or research project on a regular basis (at least fortnightly and ideally weekly).
- Support and encourage student attendance at BBSRC DTP training and cohort building sessions. Attendance at these sessions is a condition of student funding.
- Work with the student to develop their research aims throughout the course of the PhD and provide the necessary resources (including sufficient lab space, computational resources, all essential materials and consumables funding) and clearly delineate risks and back-up plans.
- Provide an environment where good research practice is the norm. Mentor students in the scientific method and encourage them to present their work at conferences and write scientific papers.
- Understand that PIPS is a compulsory and integral part of the BBSRC DTP:
 - Support students in their selection of PIPS.
 - Discuss during the first term of the PhD suitable timings for the PIPS to help reduce disruption to the students PhD work.
 - Release students from all work related to their PhD during PIPS.
 - Ensure the student is informed of any important information or training they may have missed during PIPS.
- Respond to requests from the BBSRC DTP Office in a timely fashion and support the student to submit all reports and documents by the agreed deadlines, and to attend events relevant to their development.
- Engage with the BBSRC DTP Programme Office by providing written feedback on student rotations and/or PhD reports and termly CamSIS reports by the deadlines provided. Ensuring assessors you have nominated also provide feedback by the agreed deadlines.
- Familiarise themselves with the BBSRC DTP and the University of Cambridge Code of Practice for Research Students.
- Understand that failure to comply with the above points may result in their lab being excluded from receiving future BBSRC funded students.

Approved at BBSRC DTP Management Committee, 17 September 2019

Training and cohort building

Throughout your four years at the University of Cambridge the BBSRC DTP Programme Office will arrange for various training and cohort building activities. These are a compulsory element of the programme you are joining and attendance at such events will be monitored.

In addition to the training organised by the Programme Office you will also have access to a plethora of training opportunities offered by the University Training service and your Department or Partner Institute.

You will also have access to a fund of £920 which can be used during your PhD to cover attending conferences and for travel.

Before you start work in any laboratory you must attend the University Health and Safety and the Lab and Chemical Management training sessions. You will not be covered by University insurance unless you have completed the training. You will need to sign up for these online. A link has been emailed to you.

During your first day in the lab you should be shown the fire evacuation procedures. If not, please ask to be shown where to go in the case of a fire.

We have also asked the labs to include you in their own health and safety training.

Coursework and evaluation

Progression within the DTP Programme relies on satisfactory completion of the following:

- Completion of any reports relating to training
- Reports on your two rotation projects
- PhD project proposal
- Module 1 of the Moodle course *Preparing for PIPS*
- Attendance at DTP Programme events

Students must achieve the following:

- Satisfactory attendance at and completion of formal training assignments
- Completion of the SysMIC online course (if applicable)
- At least a Satisfactory mark for each of the rotation project reports
- At least a Satisfactory mark for the PhD project proposal

You will receive feedback and a mark (Excellent, Very Good, Good, Satisfactory or Requires Improvement) for each rotation project report and PhD project proposal. Students whose reports or proposal are marked as 'Satisfactory' or 'Requires Improvement' will be asked to meet with their Theme Leader and/or PhD Supervisor to discuss training and skills development. The DTP Programme reserves the right to withdraw financial support if a student is not adequately progressing (i.e., repeatedly receiving 'Requires Improvement' marks) through the Programme.

The review process is overseen by the Research Committee who will review feedback and marks from supervisors and assessors.

Upon starting the PhD proper in April 2020, progression will be determined according to the procedures of the graduate programme in your Department or Partner Institute. Funding from the DTP Programme is contingent on satisfactory reports of progress submitted via CamSIS by your Department or Partner Institute, and

completion of PIPS. Students are expected to submit their thesis within 48 months of starting the Programme. The Programme recommends that students submit a traditional thesis.

All supervisors are required by the University to provide a termly feedback report for the students they supervise. Students can access this report via CamSIS by logging into CamSIS, clicking on Academics and then view reports.

Rotation project report

Rotation project reports will not exceed 5,000 words in length, including figure legends but excluding the bibliography (and words in figures and tables). Your **word count** (excluding the bibliography) must be given on the title page.

Reports should be properly referenced. Information on referencing can be found on the Student Registry website: www.admin.cam.ac.uk/univ/plagiarism/students/referencing/

Students must include in the report a preface with a **signed statement** along the following lines: "I confirm that the material in this report is not copied from any published material, nor is it a paraphrase or abstract of any published material unless it is identified as such and a full source reference is given. I confirm that, other than where indicated as above, this document is my own work."

Reports should be broken down into: summary, introduction, methods, results, and discussion.

Introduction: this section should give the non-specialist reader, **in a concise manner**, the background information necessary to understand your project and set the results in context. It should not be a full literature review. You should explain why you are doing the research (why is it important or why should the public care) and its wider economic, societal or cultural impact (www.bbsrc.ac.uk/funding/apply/application-guidance/pathways-impact/).

Methods: this section should **be concise**, yet contain sufficient information to allow someone else to repeat the work: give priority to novel approaches and condense standard molecular methods by citing previous publications or manufacturer's instructions.

Results: this section should flow as a logical, coherent description of the project, including the rationale for doing each experiment. This will not necessarily be the order in which you carried out the experiments. Make use of figures and tables. Remember that this is a report of what you did in your rotation, not a paper for publication: don't just put in your best (or only positive) results, but discuss problems encountered and/or troubleshooting.

Discussion: this section should NOT be a repetition of the Results section, but should critically evaluate the significance of your results in relation to published works, which should also be critically appraised. It will usually contain ideas of further work required to clarify your findings. This is a valuable inclusion in a project report where you may not have had sufficient time to complete the research as you might have wished. It is recommended that you write parts of the report alongside conducting the research. You will have a two-week writing period at the end of the rotation, but during this time you will need to submit the report to your rotation project supervisor. You should plan your time accordingly so that your Supervisor has time to read the report and provide feedback and you have time to implement the feedback before the submission deadline. Reports should be .pdf (make sure that the report has not changed once saved in this format) and emailed to the Programme Co-ordinator (bbsrcdtp@admin.cam.ac.uk) before 12:00 (noon) on the deadline (see Appendix 2). Hard copies are not required.

Each rotation project report will be read by the rotation project supervisor and an assessor, nominated by the supervisor, who will provide feedback and a mark.

PhD project proposal

PhD project proposals should be a maximum of 6,000 words in length including figure legends, but excluding the bibliography (and words in tables). The word count (excluding the bibliography) must be given on the title page. Project proposals should be properly referenced and further information on referencing can be found on the Student Registry website: www.admin.cam.ac.uk/univ/plagiarism/students/referencing/

The proposal should be broken down into: aims, background, methods and experimental design, controls, and budget, plus any health and safety considerations.

Aims of the project

This section should be succinct, with perhaps a few sentences of overview explaining the general focus and then listing some specific objectives/goals.

Background and work that has led up to the project

This section should set the scene for the research, so needs to be a summary of the relevant literature, perhaps beginning more broadly and getting more specific. It may include some preliminary unpublished data from your work or from other work in the lab, if it is relevant. It may also include some diagrams or pictures of data if they are helpful. You should explain the impact of this research (see section Rotation Project Reports). We suggest that about one-third of the proposal might be background, but there is no set rule.

Experimental design and methods to be used in investigating this problem

This section should describe your plan of investigation. It is often helpful to subdivide this into sections. These might represent sequential steps in the investigation (e.g. genetic screen; molecular characterisation of genes; etc.) or parallel approaches (e.g. loss of function studies; gain of function studies; etc.) or different questions to be addressed (e.g. Does X regulate Y? Is X essential for mesoderm development?). See what works best for your proposed work.

Remember to think about issues such as: what controls you will use to test whether your results are meaningful; do you foresee any pitfalls and if so, how might you circumvent them if they arise; what are your back-up plans in case this project fails to work out as expected? You should include a time-line, or flow diagram, to show you have a realistic idea of how long each part of the project is likely to take.

***In vivo* skills training budget** (not required, but may be included)

This should be an Appendix (and does not count towards the word limit) and should include details of funding required if project involves *in vivo* skills training. This could be split into budgets for different elements of the training such as: animals and animal costs, consumables, equipment (if you need any specific equipment). You should try to find as much of this financial information out for yourself as possible, but must liaise with your Supervisor.

Reports should be completed in time for your PhD Supervisor to read and provide feedback before final submission.

Reports should be .pdf (make sure that the report has not changed once saved in this format) and emailed to the Programme Administrator (bbsrcdtp@admin.cam.ac.uk) before 12:00 on the deadline (see Appendix 2). Hard copies are not required.

Each proposal will be read by the PhD Supervisor and two Assessors, nominated by the Supervisor, who will provide feedback and a mark.

Assessment during the PhD

On successful completion of the required elements of the initial Programme, students will be provisionally registered for the award of PhD. At some point during the second year of the Programme (exact timings will differ according to the host Department or Partner Institute) students will be required to submit a report (First Year Report) which will be examined in a *viva voce* examination. This process will be managed by the Graduate Administrator in your Department/Institute. Courses on how to complete this report are available through the Graduate School of Life Sciences (GSLS) Researcher Development Programme (www.gradschl.lifesci.cam.ac.uk/). On passing this, students become fully registered for the PhD, back-dated to October 2019.

Before the end of the fourth year, students must have completed and submitted their thesis for examination. Further information is available on the GSLS website. The DTP also organises a Thesis and Viva Preparation workshop during the final year of the Programme.

Plagiarism

At all stages of the Programme you must adhere to the University and School Guidelines for assessed work. The University's statement on plagiarism is below. More information is available here: www.plagiarism.admin.cam.ac.uk and here: www.biology.cam.ac.uk/exams/AllExams/plagiarism

The General Board, with the agreement of the Board of Examinations and the Board of Graduate Studies, has issued this guidance for the information of candidates, Examiners and Supervisors. It may be supplemented by course-specific guidance from Faculties and Departments.

Plagiarism is defined as submitting as one's own work, irrespective of intent to deceive, that which derives in part or in its entirety from the work of others without due acknowledgement. It is both poor scholarship and a breach of academic integrity.

*Examples of plagiarism include **copying** (using another person's language and/or ideas as if they are a candidate's own), by:*

- **quoting verbatim** another person's work without due acknowledgement of the source;
- **paraphrasing** another person's work by changing some of the words, or the order of the words, without due acknowledgement of the source;
- **using ideas** taken from someone else without reference to the originator;
- **cutting and pasting** from the Internet to make a pastiche of online sources;
- **submitting someone else's work** as part of a candidate's own without identifying clearly who did the work. For example, buying or commissioning work via professional agencies such as 'essay banks' or 'paper mills', or not attributing research contributed by others to a joint project.

*Plagiarism might also arise from **colluding** with another person, including another candidate, other than as permitted for joint project work (i.e. where collaboration is concealed or has been forbidden). A candidate should include a general acknowledgement where he or she has received substantial help, for example with the language and style of a piece of written work.*

Plagiarism can occur in respect to all types of sources and media:

- text, illustrations, musical quotations, mathematical derivations, computer code, etc;
- material downloaded from websites or drawn from manuscripts or other media;
- published and unpublished material, including lecture handouts and other students' work.

Acceptable means of acknowledging the work of others (by referencing, in footnotes, or otherwise) is an essential component of any work submitted for assessment, whether written examination, dissertation, essay, registration exercise, or group coursework. The most appropriate method for attribution of others' work will vary according to the subject matter and mode of assessment. Faculties or Departments should issue written guidance on the relevant scholarly conventions for submitted work, and also make it clear to candidates what level of acknowledgement might be expected in written examinations. Candidates are required to familiarize themselves with this guidance, to follow it in all work submitted for assessment, whether written paper or submitted essay, and may be required to sign a declaration to that effect. If a candidate has any outstanding queries, clarification should be sought from her or his Director of Studies, Course Director or Supervisor as appropriate.

Failure to conform to the expected standards of scholarship (e.g. by not referencing sources) in examinations or assessed work may affect the mark given to the candidate's work. In addition, suspected cases of the use of unfair means (of which plagiarism is one form) will be investigated and may be brought to one of the University Courts or disciplinary panels. The University courts and disciplinary panels have wide powers to discipline those found to have used unfair means in an examination, including depriving such persons of membership of the University, and deprivation of a degree.

The University makes use of text-matching software for the purpose of plagiarism education and detection, and reserves the right to submit a candidate's work to such a service. For this purpose, candidates consent to the submission of their papers to the service and for the submitted papers to form part of the service's comparative source work database. To facilitate use of the service, students (and participating Examiners and Assessors) may be required to agree to the service provider's end-user agreement and provide a limited amount of personal data upon registration to the service, for instance, their name, email address, and course details.

(July 2016): www.admin.cam.ac.uk/univ/so/2016/chapter02-section19.html#heading2-17

The Faculty Board of Biology's Statement on Plagiarism can be found here:
www.biology.cam.ac.uk/undergrads/exams/plagiarism

Students based in Departments outside the remit of the Faculty of Biology can access guidance from:
www.admin.cam.ac.uk/univ/plagiarism/students/depts.html

Impact and publishing work

It is important that we are able to report the impact of the research carried out by BBSRC DTP students. Each term students will be emailed to ask for details of any work they have had published or any activities they have taken part in that are noteworthy. This information will be reported back to the BBSRC and also shared on the programme website.

All work published by the students should be accredited to the BBSRC DTP, the code to use is **BBSRC BB/M011194/1** for students who joined the programme during DTP2 start years 2015-2019.

Further guidance to ensure that funders are acknowledged in a standardised way can be found at:
<https://www.ukri.org/manage-your-award/publishing-your-research-findings/acknowledging-your-funding/>

Each student will be asked to create a [Research Fish](http://www.researchfish.net) account. This is usually only required once you have entered the third year of your studies. ResearchFish (www.researchfish.net) is a central repository for all impact related work carried out as a result of funding from public bodies, such as the UKRI which ultimately funds the BBSRC DTP programme. Any published work that is credited to the student after graduation should also be entered on ResearchFish by the supervisor.

You can also use Cambridge Open Access <https://www.openaccess.cam.ac.uk/> to publish your work.

Annual leave and Intermission

Due to the structured nature of the first year of the Programme, it is not possible for students to take annual leave outside of the designated holiday periods in December and Easter. In subsequent years of the Programme, students are entitled to a total of eight weeks of annual leave, to be taken at times agreed with their PhD Supervisor.

Students who are unable to work on their project for medical or other reasons can apply to intermit by completing an application form, which is available from their CamSIS self-service page. Further information can be found on the Student Registry webpage at:

www.admin.cam.ac.uk/students/studentregistry/current/graduate/programme/intermission.html

Sickness, Maternity, Paternity and Adoption leave

Sickness

Students who have a university authorised period of medical intermission will continue to receive their stipend for up to 13 weeks, within any 12-month period. Medical absences beyond 13 weeks will not automatically be funded by the programme but will be considered on a case by case basis by the Management Committee.

Maternity

Students are entitled to 52 weeks of maternity or shared parental leave. The first 26 weeks should be paid at full stipend rate. The following 13 weeks should be paid at a level commensurate with employee entitlements to statutory maternity pay. This is c. 41% of the minimum doctoral stipend. The final 13 weeks are not paid. Partners are entitled to up to 10 days paid Ordinary Paternity Leave on full stipend. Partners may be entitled to up to 50 weeks of Shared Parental Leave; this may include paid and unpaid leave, depending on the individual circumstances, any paid leave should be at full stipend. There is no qualifying period for maternity, paternity, or shared parental leave.

It is acceptable for a student to return to study on a part-time basis as long as it is at least 50% FTE.

There is no limit to the number of periods of Maternity, Ordinary Paternity, Shared Parental or Adoption Leave that can be taken during a studentship.

Paternity leave and shared parental leave

Students are entitled to 10 days Ordinary Paternity Leave. A total of 10 days Ordinary Paternity Leave may be taken at any time during a partner's pregnancy or within three months following the birth.

Students are entitled to 50 weeks Shared Parental Leave. While recognising that students are not employees, the Shared Parental Leave should be calculated on the same basis as an employee with an employment contract.

If a student becomes pregnant such that the expected date of confinement will occur during the period of their award, the student is entitled to 52 weeks of maternity or shared parental leave. The first 26 weeks should be paid at full stipend rate. The following 13 weeks should be paid at a level commensurate with employee entitlements to statutory maternity pay. This is c. 41% of the minimum doctoral stipend. The final 13 weeks are not paid. Additionally, their studentship will be extended by a commensurate period.

Adoption leave

Adoption leave should be granted on the same basis as maternity leave (please see above).

Working

Students are permitted to undertake up to eight hours paid employment per week during the course of their studies, usually teaching (demonstrating or supervising). However, we would advise that you do not work during the first year of the Programme.

Laptops and internet access

You will need to bring your own laptop to Cambridge. Once you start your full PhD your consumables fund can be used for IT software/ upgrades if necessary. Please discuss your needs with your PhD supervisor.

You will need access to the internet on your laptop during the induction week of the programme. For this you will need to access the Eduroam network. For information on how to do this please follow instructions at this link: <https://help.uis.cam.ac.uk/service/devices-networks-printing/network-services/wi-fi>

Leaving the BBSRC DTP Programme

For those students who do not proceed to the PhD degree, there is the option of converting to one of the following:

- Certificate of Postgraduate Studies (CPGS)—not openly available but can, in some circumstances, be awarded by the Degree Committee for Biology
- MPhil by dissertation

The exact route will be determined after discussion with your project supervisor, the BBSRC DTP Programme Office, and the agreement of the Research Committee and Management Committee.

Finances

Students funded by BBSRC will have their University tuition fees paid directly from the School of the Biological Sciences. Should you need to inform your College of invoice details, they are below.

Please ensure the invoice states that it is for BBSRC DTP fees and your name.

School of the Biological Sciences
BBSRC DTP
17 Mill Lane
Cambridge
CB2 1RX

Students who are eligible to receive a maintenance stipend from BBSRC will receive payments on the 26th of each month once the forms supplied by the BBSRC DTP Programme Office have been completed. Your first payment will be on the 26th October 2019 and the final payment on the 26th August 2023. You will receive an additional payment on the 26th October 2019 to ensure you have received 48 months of maintenance payments.

Your stipend payments will stop as soon as your PhD thesis is submitted.

As part of the BBSRC DTP Studentship each BBSRC-funded student is awarded:

- Up to £1,500 for consumables for each rotation project
- £15,000 for consumables for the duration of the PhD
- £920 for travel/conferences for the duration of the PhD

These funds are paid directly to Departments and Partner Institutes. Students should therefore discuss expenditure requests with their Rotation Project and PhD Supervisors and liaise with their Department/Institute Graduate Administrator if they wish to spend these funds.

There is also up to £1,500 available to support you during your PIPS if required for transport or accommodation. For these expenses please ask your Department to pay for the costs initially and then invoice the BBSRC DTP at the address stated above and we can reimburse your Department.

Student support and wellbeing

There are a number of support mechanisms available to students, in addition to your Rotation Project and PhD Supervisor.

BBSRC DTP Programme Office

The BBSRC DTP Programme Office can be contacted via email or phone and we are available to offer help, guidance and support throughout your time in Cambridge. We can also put you in touch with other people or groups within the university as appropriate.

Email: bbsrcdtp@admin.cam.ac.uk

Telephone: 01223 766878

College Pastoral Support:

Your College is responsible for your pastoral support and there are a number of different people in College who you can turn to for help and advice. In the first instance, students will be assigned a Graduate Tutor, who is normally a Fellow of the College and will take an interest in your wellbeing and progress. Graduate Tutors, as well as the College Senior Tutor, can offer advice on academic, social, financial, medical and personal matters. Tutorial Office staff, student MRC Welfare Officers and, where available, the College Nurse, Chaplain and College Counsellor can also provide pastoral care and help to students. Further information on the advice and support provided by Colleges can be found here:

www.cambridgestudents.cam.ac.uk/welfare-and-wellbeing/college-tutorial-support

University Counselling Service

The Counselling service provides meetings with counsellors and workshops as well as a number of self-help resources. Information can be found on their website at:

www.counselling.cam.ac.uk/studentcouns

GRASP

The GSLS Graduate Student and Postdoc forum (GRASP) represents graduate students and Postdocs from each University Department and Partner Institute from Life Sciences. GRASP was developed in 2011 to provide postgraduate students and early career researchers with a platform for the communication of ideas and mutual concerns, and for the coordination of academic activities. Further information about GRASP can be found on the GSLS website:

www.gradschl.lifesci.cam.ac.uk/grasp

Other

General information on being a student at Cambridge can be found here:

www.cambridgestudents.cam.ac.uk/

Students should ensure that they have read the University's Code of Practice for Graduate Research Degrees:
www.cambridgestudents.cam.ac.uk/new-students/manage-your-student-information/graduate-students/code

Information specific to graduate students in Life Sciences can be found on the Graduate School of Life Sciences website: www.gradschl.lifesci.cam.ac.uk/

Information for graduate students in Colleges can be found at: www.graduate.study.cam.ac.uk/colleges

Useful Contacts

| | | |
|------------------------|------------------------------|--|
| Sandra Di Eleonora | Programme Co-ordinator | bbsrcdtp@admin.cam.ac.uk / 01223 766 878 |
| Professor Chris Watson | Programme Director | cwjs1@cam.ac.uk |
| Dr Holly Canuto | Programme Deputy Director | hcc36@cam.ac.uk |

BBSRC DTP Programme Office
Room F39
School of the Biological Sciences
17 Mill Lane
Cambridge
CB2 1RX

Appendix 1: General Safety in Research Labs

www.safety.admin.cam.ac.uk

Chemicals: All labs contain biologically hazardous chemicals, which are not always immediately obvious. To protect from accidentally exposure to these chemicals, each laboratory holds COSHH forms listing the chemicals used in the lab, how to store and handle them and action to take in case of an accident. You should read the forms before using any listed substances. Your supervisor has a responsibility to ensure that you fully understand the potential hazards in the lab and the appropriate safety measures. You should seek the advice of technical or academic staff on the procedures for using dangerous substances before you start using them.

Radiochemicals: All students who expect to use radioisotopes must be registered with the relevant Departmental Radiation Officers before using isotopes. You must have received basic training on safe handling procedures in order to be registered. You are responsible for ensuring that you are fully aware of both handling and disposal procedures for each radioisotope you use and should therefore contact your supervisor before using any radiochemicals.

Equipment: All electrical equipment is routinely checked. You must not tamper with the power supply to any device. If you suspect a piece of equipment to be faulty, you should report it to the relevant Departmental electricians.

Animals: If you conduct a research project involving any procedures that may have the effect of causing pain, suffering, distress or lasting harm to animals protected by the Animals (Scientific Procedures) Act 1986, you must hold a Home Office licence. This will require attendance at training courses and reading relevant guidance documents. You must not begin any work with animals until you have received the licence, and even then you must work under the close supervision of your supervisor or other appointed persons.

Appendix 2: Training Schedule (first two weeks) and key dates

| | | |
|----------------------------------|---|-----------------------------|
| Monday 30 September, 2pm-5pm | Introduction to R Software Environment | Mill Lane Lecture Theatre 2 |
| Tuesday 1 October, 2pm-5pm | Data analysis with R – Visualisation | Mill Lane Lecture Theatre 2 |
| Wednesday 2 October, 2pm-5pm | Data analysis with R – Manipulation | Mill Lane Lecture Theatre 2 |
| Thursday 3 October, 10am-5pm | Data analysis with R – Programming | Mill Lane Lecture Theatre 2 |
| Friday 4 October, 10:00am-4:00pm | “Cohort building” | Milton Country Park |
| Tuesday 8 October, (various) | University Health and Safety Training University Chemical Handling | Babbage Lecture Theatre |

You will be contacted at various times during the first year with details of other training you are required to take.

An example of an additional event is:

| | | |
|----------------------------|------------------------|------------------------|
| Friday 1 November, 2pm-4pm | How to keep a notebook | Biffen Lecture Theatre |
|----------------------------|------------------------|------------------------|

(sign-up for the event at <https://training.csx.cam.ac.uk/gsls/event/3109983>)

Rotation dates

Rotation 1:

| | |
|--------------------|-----------------------|
| Start | 14 October 2019 |
| End | 20 December 2019 |
| Project report due | 6 January 2020 (noon) |

Rotation 2:

| | |
|--------------------|---------------------|
| Start | 13 January 2020 |
| End | 20 March 2020 |
| Project report due | 6 April 2020 (noon) |

PhD project proposal deadline

Monday 18 May 2020 (noon)