Welcome Note

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 who 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 choosing 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. If you think there are ways that we can improve the Programme so that it is more effective or efficient, please let us know. As well as your Theme Leader, you will have various project supervisors, and a student representative on the Partnership Management Committee who will all listen and respond to your views.

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

Alison Smith
Chair BBSRC DTP Management Committee
October 2016
Programme Structure

The 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 Maths, Statistics, Systems Biology and Research Skills (Exploiting New Ways of Working). 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 below) 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 2016, the final date for submission of a thesis is 30 September 2020.

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

School of 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

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.
BBSRC Research Themes

BBSRC-funded research and training at Cambridge will emphasise 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. By 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 four themes, outlined below, which align with the strategic research priorities of the BBSRC. Each student is allocated to a theme, based on their choice during the application process. If you have any questions about your theme allocation, please contact the Programme Administrator: bbsrcdtp@lifesci.cam.ac.uk

Bioscience for Health

Basic bioscience is vital to reveal the biological mechanisms underlying normal physiology and homeostatic control during early development and through life. The Programme aims to achieve a deep, integrated understanding of the healthy system at multiple levels and the factors maintaining health under stress and biological or environmental challenge. Projects encompass basic bioscience research topics where the goal is to help sustain lifelong health and wellbeing—through prevention strategies or new treatments—in the modern environment. These include fundamental and comparative studies of human, animal and microbial biology, which may lead to improvements in both human and animal health; for example, regulatory networks underlying biological rhythms; metabolic medicine and mechanisms of dietary choice; the ageing process (but not involving targeting of specific biology for medicinal purposes).

The Theme Leader for 2016/17 is Professor John Doorbar from the Department of Pathology (www.path.cam.ac.uk/directory/john-doorbar). He works on human papilloma viruses (HPV) and seeks to understand how HPV infection leads to disease.

Industrial Biotechnology and Bioenergy

Bioenergy will play an important role in helping the UK to maintain its energy security in the context of diminishing worldwide stocks of fossil fuels, as well as providing the opportunity to reduce greenhouse gas emissions. However, to produce liquid biofuels commercially at scale will require integration of both biological and engineering solutions. At Cambridge the Bioenergy Initiative (www.bioenergy.cam.ac.uk/) encompasses research groups in biological as well as physical sciences, engineering and mathematics, and is part of a larger Energy@Cam strategic research initiative. Projects include those addressing the study of plant cell walls for lignocellulosic ethanol production, algae for bioenergy and remediation of waste-water and CO₂ emissions, as well as artificial photosynthesis.

Similarly, industrial biotechnology (IB) applies cross-disciplinary approaches to the use of biological resources for non-food applications, such as producing and processing materials and chemicals as replacements for petrochemical feedstocks, with the aim of helping the UK to become a low carbon economy. Thus, projects may address production of chemicals by metabolic engineering approaches, or optimise enzymes for biocatalysis, as well as developing new IB hosts, such as algae. Synthetic biology is an emerging discipline at the engineering/biology interface.
that offers considerable potential for all aspects of IB research and many of the projects use synthetic biology approaches.

The Theme Leader for 2016/17 is Dr Finian Leeper from the Department of Chemistry (www.leeper.ch.cam.ac.uk). His research focuses on applying organic synthesis to help solve biological problems.

**Agriculture and Food Security**

Research in this area aims to support the sustainable production of sufficient, safe, nutritious and affordable food to supply the world's growing population. It encompasses crop science, animal health and livestock production, as well as understanding of the links between diet and health, and food safety. At Cambridge and its collaborating institutions, research programmes range from the fundamental—for example, understanding the molecular mechanisms of how RNA initiates epigenetic effects on the genome—to much more applied projects, such as establishing strategies to deal with plant pathogens. Similarly, research into animal disease, welfare and productivity is complemented by studies of the molecular basis of the immune response, as well as genomics of pathogens and viruses. This theme also includes the investigation of developmental programming of health and disease by early life nutrition from the *in vivo* systems to the molecular levels, and how to optimise both agricultural productivity and conservation of natural habitats.

The Theme Leader for 2016/17 is Dr Alison Bentley from the National Institute of Agricultural Botany (www.niab.com/pages/id/398/Dr_Alison_Bentley). She is Director of Genetics and Breeding at NIAB, chair of the UK MonoGram small grain and grasses community and is interested in the application of genomics in the breeding of high yielding, climate resilient cereals.

**World-Class Underpinning Bioscience**

This theme seeks to promote strength in core underpinning disciplines such as molecular, chemical, cellular and structural biology. Major breakthroughs in recent years, including those recognised by Nobel Prizes awarded to Cambridge scientists, have depended on basic cellular and molecular research in areas including nerve function, the cell cycle, stem cells and molecular biology. Projects will be aimed at improved understanding of basic biological mechanisms, including (but not limited to) the study of biological molecules, cellular and physiological processes, genetic and genomic studies, integration with modelling and mathematical approaches, and interfacing with novel chemical and physical methods for the study of biological systems.

The Theme Leader for 2016/17 is Dr Cahir O’Kane from the Department of Genetics (www.gen.cam.ac.uk/research-groups/okane). He is interested in organisation and trafficking of intracellular membranes, particularly in axons and synapses, and the consequences of these processes for neuronal function and dysfunction, using *Drosophila* as a model.
Training in Exploiting New Ways of Working

As well as the four themes from which projects can be selected, the DTP has an enabling theme Exploiting New Ways of Working (ENWW) (www.bbsrc.ac.uk/research/new-ways-of-working/).

In the past decade new technology has led to a fundamental change in the nature and volume of data that biologists generate and must analyse. Training in modern computational and statistical techniques to deal with "big data", together with other mathematical techniques to allow the complexities of biological interactions to be modelled, is a very important component of the DTP Programme. During the first year there are three ways in which training in ENWW is delivered:

- Two formal training courses
  - *Statistics for Biologists* in Michaelmas Term that focuses on the practical statistics, teaching you how to perform simple analyses using the statistical package R
  - *Analysis of Biological Data* in Lent Term that introduces simple programming in R, basic bioinformatics and some further elements of statistics
- The *SysMIC* (Systems Training in Maths, Informatics, Statistics and Computational Biology) course in Michaelmas and Lent Terms that focuses on reinforcing/developing skills in mathematical modelling and computing (via the programming language MATLAB). Students with a strong background can select a more advanced version of this course.
- Personalised training in ENWW, consisting of a brief interview with each student early in the Michaelmas Term to identify how elements of ENWW can be applied to a rotation project, which is assessed by brief write-up via students’ ENWW Learning Log

The Theme Leader for 2016/17 is **Dr Nik Cunniffe** from the Department of Plant Sciences (www.plantsci.cam.ac.uk/research/nikcunniffe). He works on mathematical modelling of plant disease. Nik and Deputy Theme Leader Dr Simon Frost, from the Department of Veterinary Medicine (www.vet.cam.ac.uk/directory/sdf22@cam.ac.uk), are responsible for the entire cohort, irrespective of their theme.

**Statistics for Biologists**

**Aims**

- To help you to acquire the data analysis and statistical skills necessary for research projects and for evaluating literature
- To provide practical experience in performing common statistical analyses using the R programming language and environment

**Learning outcomes**

- Detailed learning outcomes are given in the hand-out for each lecture/practical. After each session, you should be able to independently perform the data analysis and statistical techniques covered on novel datasets.
- At the end of the course, your understanding is expected to be sufficient for devising and analysing simple experimental designs independently. For more complex statistical problems, you should be able to design experiments and surveys, and analyse your data correctly, on the basis of specialist advice.

**Course Structure**

The course is comprised of nine combined lecture-practical sessions each lasting 2-3 hours. Each session will start with a 30-40 minute lecture in which any concepts and theory will be explained.
The remaining time will be devoted to a practical session where you will work through exercises designed to improve your understanding and ability to implement the techniques practically. The course material should meet the requirements of most projects. Your Supervisor will advise you if more specialised techniques are needed. For further advice, contact those who teach on this course.

**Analysis of Biological Data**

**Aims**

- To help you to acquire further skills in data analysis, programming, bioinformatics and statistical skills necessary for research projects
- To provide practical experience in computer programming and simple bioinformatics using the R programming language and environment

**Learning outcomes**

- Detailed learning outcomes are given in the hand-out for each lecture/practical
- At the end of the course, your understanding is expected to be sufficient to do simple computer programming and to perform simple bioinformatics analyses in R

**Course Structure**

The course follows the same structure as the *Statistics for Biologists* course, although there will be five (rather than nine) 2-3 hour long lecture-practical sessions.

**SysMIC Training Modules**

The SysMIC (Systems Training in Maths, Informatics, Statistics and Computational Biology) modules are online training courses developed by a consortium of UK Universities and funded by BBSRC. All students on the BBSRC DTP Programme will be registered for, and expected to complete, either Module 1 or 2 of the online SysMIC course, which will start in November 2016.

Details of the course are available at: [http://sysmic.ac.uk](http://sysmic.ac.uk). Throughout the course there will be online support provided by the SysMIC team and a Moodle forum for Cambridge DTP students.

Your progress on the SysMIC course will be monitored and satisfactory completion of Module 1 or 2 is a pre-requisite for progression into the second PhD year. This requires submitting write-ups for 12 assignments, which involve using simple MATLAB programming to solve mathematical problems in a biological context. You will also be strongly encouraged to progress through Modules 2 (if you have not already done it) and 3 during the course of your PhD.

**Personalised Training in ENWW**

The final component of ENWW training in the first year is the requirement to submit a 1-2 page learning log alongside the second rotation project. This should describe how mathematics, computing and/or statistics have been used in either the first or second rotation projects. The appropriate level of any training you will require, and the analyses you can perform on your own data, will depend on your prior knowledge. There will therefore be a brief one-to-one interview with members of the ENWW team at some point during the statistics training to agree on a way in which you can evidence your progress in ENWW on your own data (as well as discussing which SysMIC course would be more appropriate for you).
Rotation Projects

Students will carry out two 10-week rotation projects during the first six months. The rotation projects allow students to gain experience of two different research environments and make an informed choice of their PhD project. The available rotation projects submitted by supervisors and other academic staff have been classified by theme and the first of these will be allocated to students by the start of the Programme in October.

It should be noted that each Supervisor will normally only be permitted to supervise one rotation project each term.

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, 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 at this time. Further information on what should be included in the project report is contained in the Rotation Project Reports section of this handbook (see below).

Choosing your PhD Project

The majority of rotation projects are linked to PhD projects and it is expected that most students will choose one of these to continue for a PhD. However, different projects with the same Supervisor, or different Supervisors, are also possible following consultation with your Theme Leader. In exceptional circumstances students may be permitted to change theme.

During Michaelmas Term you will have the opportunity to learn more about the partner Departments and visit the external Partner Institutes. The aim is to give you a flavour of the research undertaken (in addition to your rotation projects) and help you to make an informed choice for your PhD project, including identifying potential collaborations or techniques that might enhance your research.

Each Supervisor is permitted to have one student on the BBSRC DTP Programme per cohort, so this may limit choices available. PhD project allocations will be confirmed at the end of your second rotation project and you will start in the group in April 2017.
Year 1 Coursework and Evaluation

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

- Taught modules
  - Statistics (Michaelmas Term)
  - Analysis of Biological Data (Lent Term)
  - SysMIC
  - ENWW Learning Log
- Reports on your two rotation projects
- PhD project proposal
- Module 1 of the Moodle course Preparing for PIPS

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 review process is overseen by the Executive Committee, comprised of Theme and Deputy Theme Leaders (bbsrcdtp.lifesci.cam.ac.uk/current/contact), who will review feedback and marks from Supervisors and Assessors.

Students must achieve the following:

- Satisfactory attendance at and completion of Statistics, Analysis of Biological Data and SysMIC training courses
- At least a Satisfactory mark for each of the rotation project reports
- At least a Satisfactory mark for the PhD project proposal

In subsequent years, 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 Institute.

Leaving the BBSRC DTP Programme

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

- MPhil by Research, by extending work on one of the rotation projects
- MRes, by completing a further piece of written work

The exact route will be determined after discussion with your Theme Leader.
Rotation Project Reports

Rotation project reports should be a maximum of 5000 words in length, including figure legends but excluding the bibliography (and words in 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 bound 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.

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.

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

Reports should be .pdf (make sure that it has not changed once saved in this format) and emailed to the Programme Administrator (bbsrcdtp@lifesci.cam.ac.uk) before 12:00 on the deadline (see Appendix 1). Hard copies are not required.

Each rotation project report will be read by two Assessors, nominated by the Rotation Project Supervisor, who will provide feedback and a mark (Excellent, Very Good, Good, Satisfactory, Requires Improvement; see Year 1 Coursework and Evaluation).
PhD Project Proposal

PhD Project Proposals should be a maximum of 6000 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. We suggest that about 1/3 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 additional 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 (be it worms or mice etc.), consumables, equipment (if you need any specific equipment; if not there may not be anything in this category). 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 Rotation Project Supervisor to read and provide feedback before final submission.

Reports should be .pdf (make sure that it has not changed once saved in this format) and emailed to the Programme Administrator (bbsrcdtp@lifesci.cam.ac.uk) before 12:00 on the deadline (see Appendix 1). Hard copies are not required.
Each proposal will be read by two Assessors, nominated by your PhD Supervisor, who will provide feedback and a mark (Excellent, Very Good, Good, Satisfactory, Requires Improvement).

**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/](http://www.gradschl.lifesci.cam.ac.uk/)). On passing this students become fully registered for the PhD, back-dated to October 2016.

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, including details of courses that will help you in this process, such as the Writing Skills Summer School and the Finishing Up, Moving On (FUMO) course for final year students.

**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.admin.cam.ac.uk/univ/plagiarism/students/](http://www.admin.cam.ac.uk/univ/plagiarism/students/)

*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.

A copy of the Faculty Board of Biology Statement on Plagiarism is contained in Appendix 2 of this Handbook. 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](http://www.admin.cam.ac.uk/univ/plagiarism/students/depts.html)
Researcher Development

Researcher Development (RD) encompasses all of the learning and development that you might wish to experience and acquire during your time in Cambridge. It is needed to provide you with the skills and experiences that you need both today and for the future, whatever that might be. Examples would be:

- Personal Skills (e.g. leadership and resilience)
- Professional Skills (e.g. presentation skills and time management)
- Career-related Skills (e.g. writing CVs and interview technique)
- Academic Skills (e.g. paper writing and teaching)
- Entrepreneurial Skills (e.g. commercial awareness and innovation)

The structure for your RD is provided by the Cambridge Researcher Development Framework. This tells you about the competencies you need to gain to meet the goal of becoming a professional researcher.

Within Cambridge there are many providers of RD activities. The central provision is provided by the Researcher Development Team ([www.rdp.cam.ac.uk](http://www.rdp.cam.ac.uk)) and the GSLS provides you with a Core Skills Training Programme (CSTP) and other life science-specific activities ([www.gradschl.lifesci.cam.ac.uk/GSLSRD](http://www.gradschl.lifesci.cam.ac.uk/GSLSRD)). Training is also available from the University Information Services, University Library and the Careers’ Service.

The CSTP is a group of activities that you are strongly recommended to complete in your first year. It has been designed to get you started in planning your RD and providing you training in the areas of personal effectiveness and communication. If you successfully complete the CSTP you will receive a certificate from the GSLS.

To learn more about the CSTP you should review the course requirements and activity descriptions on the CSTP Moodle site onto which you should already be enrolled ([www.student-systems.admin.cam.ac.uk/moodle](http://www.student-systems.admin.cam.ac.uk/moodle)). The first activity that we recommend is a Skills Analysis Survey. This is completed online and will provide you with more information about RD in Cambridge and how to make the most of your time here—we recommend you do this in the first month of your studies.

If you need some advice on where to get started or what to do next with your RD you should contact Dr Ben Murton ([blm23@cam.ac.uk](mailto:blm23@cam.ac.uk)) who is responsible for RD in the Life Sciences. He can also answer any questions you might have about the CSTP.

**Departmental Training Opportunities**

During the first year students will be invited to training opportunities (journal clubs, etc.) in the Department(s) or Partner Institute(s) where they are doing their rotation projects.

**Health and Safety**

Students must adhere to the specific health and safety regulations of the Department in which they are working at each stage of the Programme. Information on General Safety in Research Labs is included in Appendix 4 below. Students must attend the compulsory lectures in the University Safety course in October (see Appendix 1). We also encourage students to attend the optional biological safety, cryogenics, VDUs, pipettes, glass and sharps, and radiation courses. Courses can be booked online: [www.safety.admin.cam.ac.uk/training/graduate-safety-course/current-timetable-venues-and-handouts](http://www.safety.admin.cam.ac.uk/training/graduate-safety-course/current-timetable-venues-and-handouts)
Professional Internship for PhD Students (PIPS)

As part of the Programme each student must complete a 12 week (60 work days) internship in a professional environment. You will go out into the 'real world' and potentially compete with 'real people' for the chance to work in your chosen host organisation. Your PIPS is an amazing opportunity to learn and apply new skills that will develop you as a researcher and help you understand the context of your research in the wider world, as well as providing ideas about future employment options. Students should therefore choose a PIPS that is not related to their field of research or in research in academia.

In order to help you organise your PIPS you will be enrolled on the Preparing for PIPS Moodle course (www.student-systems.admin.cam.ac.uk/moodle). This electronic learning resource will guide you through a series of activities that will help you identify what you want to gain from the PIPS, plan when it will fit in with your research and prepare you for approaching your host organisation and securing your placement.

The PIPS should ideally take place after the Department's/Institute's First Year Assessment and before the last six months of the Programme. Module 1 of the Preparing for PIPS course should be completed by the end of your first year.

All potential placements must be approved by the PIPS Coordinator (Dr Sarah Fahle), who is also happy to meet with you to discuss your areas of interest and to help you develop your ideas. Further details about PIPS will be provided in the PIPS workshop, usually held in November. Details of current PIPS providers can be found in the Preparing for PIPS Moodle course and you will be emailed PIPS opportunities throughout the year.

Consult the Preparing for PIPS Moodle course or BBSRC DTP Programme website (https://bbsrcdtp.lifesci.cam.ac.uk/PIPS) for more information.

Research Contracts

A research contract is required to ensure that a researcher has freedom to operate when working with an external collaborator. The role of the Research Operations Office (www.research-operations.admin.cam.ac.uk/) is to negotiate contracts on behalf of the researcher and the University.

Prior to any external work students must contact the DTP Programme Administrator (bbsrcdtp@lifesci.cam.ac.uk).

BBSRC DTP Programme Cohort Development

The welcome dinner, Department Introduction Event and external Partner Institute visits, along with training opportunities, will foster cohort development. The Programme also organises workshops and events for all students within the BBSRC DTP Programme, to enable networking opportunities and provide individuals who can advise you about the Programme, PhD and PIPS. Some meetings/events may be organised by Theme.

Students are actively encouraged to plan additional social events and skills development opportunities, such as informal presentations or journal clubs.
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 (see Appendix 1). 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](http://www.admin.cam.ac.uk/students/studentregistry/current/graduate/programme/intermission.html)

Students funded by the BBSRC should bear in mind that they will not receive a stipend for a period of intermission (unless the intermission is to cover a period of maternity leave). Students with joint awards from other funders should check with them to see if payment is made during periods of intermission.

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.

Money Matters

Students funded by BBSRC will have their University tuition fees paid directly from the School of the Biological Sciences. 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 Programme Administrator have been completed.

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
- £900 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.

Laptops

Laptops are not provided, but financial support may be available for upgrades or software. Generally, after the first year of the Programme, IT needs should be met through your consumables funding (see above). Contact the Programme Coordinator for information about financial support.
Student Support

There are a number of support mechanisms available to students, in addition to your rotation project and PhD Supervisors:

**Theme Leader**

Theme Leaders will get to know their students as individuals and will advise on choice of rotation projects, PhD project and taught modules as part of the personal training strategy. They may also provide mentoring and guidance as required.

**College Graduate Tutors**

Students will be assigned a Graduate Tutor in their College who can provide advice about academic and non-academic (pastoral, financial or emotional) issues. Further information on the advice and support provided by College Tutors can be found on the Graduate Admissions website: [www.graduate.study.cam.ac.uk/sites/www.2016.graduate.study.cam.ac.uk/files/cambridge_colleges_a_guide_for_graduate_students.pdf](http://www.graduate.study.cam.ac.uk/sites/www.2016.graduate.study.cam.ac.uk/files/cambridge_colleges_a_guide_for_graduate_students.pdf)

**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](http://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/Current%20Students/GRASP](http://www.gradschl.lifesci.cam.ac.uk/Current%20Students/GRASP)

**Other**

General information on being a student at Cambridge can be found in the student handbook at: [www.cam.ac.uk/staffstudents/studenthandbook/](http://www.cam.ac.uk/staffstudents/studenthandbook/)

Students should ensure that they have read the University’s Code of Practice for Graduate Research Degrees: [www.cambridgestudents.cam.ac.uk/files/codeofpractice_16-17.pdf](http://www.cambridgestudents.cam.ac.uk/files/codeofpractice_16-17.pdf)

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/](http://www.gradschl.lifesci.cam.ac.uk/)

Information for graduate students in Colleges can be found at: [www.graduate.study.cam.ac.uk/colleges](http://www.graduate.study.cam.ac.uk/colleges)
### Useful Information and Contacts

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Tel</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair, Management Committee</td>
<td>Professor Alison Smith</td>
<td>(3)33952</td>
<td><a href="mailto:as25@cam.ac.uk">as25@cam.ac.uk</a></td>
</tr>
<tr>
<td>Programme Director/Chair,</td>
<td>Dr Raymond Bujdoso</td>
<td>(3)37655</td>
<td><a href="mailto:rb202@cam.ac.uk">rb202@cam.ac.uk</a></td>
</tr>
<tr>
<td>Executive Committee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme Coordinator/PIPS</td>
<td>Dr Sarah Fahle</td>
<td>(7)47160</td>
<td><a href="mailto:srf42@cam.ac.uk">srf42@cam.ac.uk</a></td>
</tr>
<tr>
<td>Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme Administrator</td>
<td></td>
<td></td>
<td><a href="mailto:bbsrcdtp@lifesci.cam.ac.uk">bbsrcdtp@lifesci.cam.ac.uk</a></td>
</tr>
<tr>
<td>Graduate School of Life Sciences</td>
<td>Meg Staff</td>
<td>(7)61569</td>
<td><a href="mailto:enquiries@lifesci.cam.ac.uk">enquiries@lifesci.cam.ac.uk</a></td>
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### BBSRC DTP Programme Executive Committee

[https://bbsrcdtp.lifesci.cam.ac.uk/current/contact](https://bbsrcdtp.lifesci.cam.ac.uk/current/contact)

### Theme Leaders

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Department</th>
<th>Tel</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Food Security</td>
<td>Dr Alison Bentley</td>
<td>NIAB</td>
<td>01223 342200</td>
<td><a href="mailto:alison.bentley@niab.com">alison.bentley@niab.com</a></td>
</tr>
<tr>
<td>Industrial Biotechnology &amp; Bioenergy</td>
<td>Dr Finian Leeper</td>
<td>Chemistry</td>
<td>(3)36403</td>
<td><a href="mailto:fjl1@cam.ac.uk">fjl1@cam.ac.uk</a></td>
</tr>
<tr>
<td>Bioscience for Health</td>
<td>Professor John Doorbar</td>
<td>Pathology</td>
<td>(3)33734</td>
<td><a href="mailto:jd121@cam.ac.uk">jd121@cam.ac.uk</a></td>
</tr>
<tr>
<td>World-Class Underpinning Bioscience</td>
<td>Dr Cahir O'Kane</td>
<td>Genetics</td>
<td>(3)33177</td>
<td><a href="mailto:cjo1003@cam.ac.uk">cjo1003@cam.ac.uk</a></td>
</tr>
<tr>
<td>Exploiting New Ways of Working</td>
<td>Dr Nik Cunniffe</td>
<td>Plant Sciences</td>
<td>(3)33954</td>
<td><a href="mailto:njc1001@cam.ac.uk">njc1001@cam.ac.uk</a></td>
</tr>
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</table>

### Deputy Theme Leaders

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Department</th>
<th>Tel</th>
<th>Email</th>
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<tbody>
<tr>
<td>Agriculture &amp; Food Security</td>
<td>Professor William Sutherland</td>
<td>Zoology</td>
<td>(3)36686</td>
<td><a href="mailto:wjs32@cam.ac.uk">wjs32@cam.ac.uk</a></td>
</tr>
<tr>
<td>Industrial Biotechnology &amp; Bioenergy</td>
<td>Professor Alison Smith</td>
<td>Plant Sciences</td>
<td>(3)33952</td>
<td><a href="mailto:as25@cam.ac.uk">as25@cam.ac.uk</a></td>
</tr>
<tr>
<td>Bioscience for Health</td>
<td>Dr David Belin</td>
<td>Psychology</td>
<td><a href="mailto:bdb26@cam.ac.uk">bdb26@cam.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>World-Class Underpinning Bioscience</td>
<td>De Martin Hember</td>
<td>Sanger</td>
<td></td>
<td><a href="mailto:martin.hemberg@sanger.ac.uk">martin.hemberg@sanger.ac.uk</a></td>
</tr>
<tr>
<td>World-Class Underpinning Bioscience</td>
<td>Dr Oliver Stegle</td>
<td>EBI</td>
<td>01223 494101</td>
<td><a href="mailto:stegle@ebi.ac.uk">stegle@ebi.ac.uk</a></td>
</tr>
<tr>
<td>Exploiting New Ways of Working</td>
<td>Dr Simon Frost</td>
<td>Veterinary Medicine</td>
<td><a href="mailto:sdf22@cam.ac.uk">sdf22@cam.ac.uk</a></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix 1: 2016/17 Student Timetable
[https://bbsrcdtp.lifesci.cam.ac.uk/current/time](https://bbsrcdtp.lifesci.cam.ac.uk/current/time)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
</table>
| Monday 3 October 2016 | 09:30-12:30   | DTP Student Welcome Meeting  
Large Lecture Theatre, Dept of Plant Sciences |
|                     | 14:00-17:00   | Statistics for Biologists Lecture 1  
Bioinformatics Training Room, Craik-Marshall Building, Downing Site |
| Tuesday 4 October   | 12:30-14:00   | University General Safety Course – **compulsory**  
Babbage Lecture Theatre, New Museum Site  
One session to be booked:  
09:00-10:00  
10:10-11:10  
11:20-12:20 |
|                     | 14:30-17:30   | University Chemical/Lab Safety Course – **compulsory**  
Babbage Lecture Theatre, New Museum Site  
| Wednesday 5 October | Morning 12:30-17:00 | Arrange meeting with first rotation project Supervisor  
University Graduate Safety Courses – **optional and research appropriate**  
Mill Lane Lecture Rooms  
[www.safety.admin.cam.ac.uk/files/day2_prog_oct16.pdf](https://www.safety.admin.cam.ac.uk/files/day2_prog_oct16.pdf) |
| Thursday 6 October  | 09:00-11:30   | Department Showcase  
Cormack Room, University Centre |
|                     | 14:00-17:00   | Statistics for Biologists Lecture 3  
Bioinformatics Training Room, Craik-Marshall Building, Downing Site |
|                     | 19:00-22:00   | DTP Welcome Dinner  
Robinson College |
| Friday 7 October    | 09:30-12:30   | Statistics for Biologists Lecture 4  
Bioinformatics Training Room, Craik-Marshall Building, Downing Site |
<p>| Friday 7 October    | 14:00-17:00   | Statistics for Biologists Lecture 5 |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 10 October</td>
<td></td>
<td>Rotation Project 1 begins</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
</tr>
<tr>
<td>Tuesday 11 October</td>
<td>14:00-17:00</td>
<td>Statistics for Biologists Lecture 6</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
</tr>
<tr>
<td>Wednesday 12 October</td>
<td>14:00-17:00</td>
<td>Statistics for Biologists Lecture 7</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
</tr>
<tr>
<td>Thursday 13 October</td>
<td>09:30-12:30</td>
<td>Statistics for Biologists Lecture 8</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
</tr>
<tr>
<td></td>
<td>14:00-17:00</td>
<td>Statistics for Biologists Lecture 9</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Friday 14 October</td>
<td>08:30-14:30</td>
<td>External Partner Institute Visit: Wellcome Trust Sanger Institute and European Bioinformatics Institute</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td></td>
<td>15:30-18:00</td>
<td>External Partner Institute Visit: National Institute of Agricultural Botany</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Wednesday 19 October</td>
<td>08:30-13:00</td>
<td>External Partner Institute Visit: Animal Health Trust</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td></td>
<td>14:00-17:00</td>
<td>External Partner Institute Visit: Babraham Institute</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Tuesday 1 November</td>
<td></td>
<td>SysMIC course begins</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Thursday 17 November</td>
<td></td>
<td>Preparing for PIPS Workshop</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Friday 16 December</td>
<td></td>
<td>Rotation Project 1 ends</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Monday 19 December to Monday 2 January 2017</td>
<td></td>
<td>Winter break</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Monday 9 January</td>
<td>12:00</td>
<td>Rotation Project 1 report due</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
</tr>
<tr>
<td></td>
<td>14:00-17:00</td>
<td>Training</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Tuesday 10 January</td>
<td>14:00-17:00</td>
<td>Training</td>
<td>Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Date</td>
<td>Time</td>
<td>Event</td>
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<tr>
<td>Wednesday 11 January</td>
<td>14:00-17:00</td>
<td>Training Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Thursday 12 January</td>
<td>14:00-17:00</td>
<td>Training Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Friday 13 January</td>
<td>14:00-17:00</td>
<td>Training Bioinformatics Training Room, Craik-Marshall Building, Downing Site</td>
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<tr>
<td>Monday 16 January</td>
<td></td>
<td>Rotation Project 2 begins</td>
<td></td>
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<tr>
<td>Friday 24 March</td>
<td></td>
<td>Rotation Project 2 ends</td>
<td></td>
</tr>
<tr>
<td>Thursday 13 April</td>
<td>12:00</td>
<td>Rotation Project 2 report due</td>
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<tr>
<td>Friday 14 April to Monday 24 April</td>
<td></td>
<td>Spring break</td>
<td></td>
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<tr>
<td>Monday 24 April</td>
<td></td>
<td>PhD begins and PhD Project Proposal Write-up</td>
<td></td>
</tr>
<tr>
<td>Monday 22 May</td>
<td>12:00</td>
<td>PhD Project Proposal due</td>
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<tr>
<td>June</td>
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<td>Deadline for all SysMIC assignments</td>
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<td>July</td>
<td></td>
<td>Summer event</td>
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<tr>
<td>August</td>
<td></td>
<td>Deadline for students to complete PIPS Module 1</td>
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</table>
Appendix 2: Faculty Board of Biology Statement on Plagiarism
[www.biology.cam.ac.uk/undergrads/exams/plagiarism and
www.admin.cam.ac.uk/univ/plagiarism/]

In general, plagiarism can be defined as:

The unacknowledged use of the work of others as if this were your own original work.

In the context of an examination, this amounts to:

Passing off the work of others as your own to gain unfair advantage.

Such use of unfair means will not be tolerated by the University; if detected, the penalty may be severe and may lead to disciplinary proceedings being taken against you.

1. The scope of plagiarism

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) 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, 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 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's Courts. The Courts have wide powers to discipline those found guilty of using unfair means in an examination, including depriving such persons of membership of the University, and deprivation of a degree.

2. How to avoid plagiarism

The stylistic conventions for different subjects vary and you should consult your Course Organiser or project supervisor about the conventions pertaining in your particular subject area. Most courses will issue written guidance on the relevant scholarly conventions and you are expected to have read and to follow this advice. However, the main points that apply to submitted work (e.g. dissertations, project reports) are:

- when presenting the views and work of others, include in the text an indication of the source of the material, e.g. 'as Sharpe (1993) has shown,' and give the full details of the work quoted in your bibliography;
- if you quote text verbatim, place the sentence in inverted commas and give the appropriate reference, e.g. 'The elk is of necessity less graceful than the gazelle' (Thompson, 1942, p 46) and give the full details in your bibliography as above;
- if you wish to set out the work of another at length so that you can produce a counter-argument, set the quoted text apart from your own text (eg by indenting a paragraph) and identify it by using inverted commas and adding a reference as above. NB long quotations may infringe copyright, which exists for the life of the author plus 70 years.
- if you are copying text, keep a note of the author and the reference as you go along, with the copied text, so that you will not mistakenly think the material to be your own work when you come back to it in a few weeks' time;
- if you reproduce an illustration or include someone else's data in a graph include the reference to the original work in the legend, eg (figure redrawn from Webb, 1976) or (triangles = data from Webb, 1976);
- if you wish to collaborate with another person on your project, you should check with the Course Organiser to see whether this might be allowed and then seek their permission;
- if you have been authorised to work together with another candidate or other researchers, you must acknowledge their contribution fully in your introductory section. If there is likely to be any doubt as to who contributed which parts of the work, you should make this clear in the text wherever necessary, e.g. 'I am grateful to A. Smith for analysing the sodium content of these samples';
- be especially careful if cutting and pasting work from electronic media; do not fail to attribute the work to its source. If authorship of the electronic source is not given, ask yourself whether it is worth copying.

Please note that during written answers for unseen examination papers, you will not be penalised for failures to reference information in this manner.

3. The Golden Rule:

The examiners must be in no doubt as to which parts of your work are your own original work and which are the rightful property of someone else.
Appendix 3: 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.