Undergraduate Degree in Biological Sciences
FINAL HONOUR SCHOOL HANDBOOK 2017-2019
Section 1 of 2
Version 1.0

Issued to second year students and to College Tutors in October 2017
(for cohort 2016-2019)
THIS HANDBOOK SHOULD BE READ IN CONJUNCTION WITH THE FINAL HONOUR SCHOOL EXAMINATION CONVENTIONS AND WITH COMMUNICATIONS FROM THE CHAIRMAN OF EXAMINERS OF THE FINAL HONOUR SCHOOL IN BIOLOGICAL SCIENCES

Please note that the information published in this Section of the FHS Handbook supercedes that in any previous handbooks.

Photograph acknowledgements
This handbook applies to students starting the Final Honour School in Michaelmas term 2017. The information in this handbook may be different for students starting in other years.

The Examination Regulations relating to this course are available at [www.admin.ox.ac.uk/examregs/2017-18/hsofbiolscie/studentview](http://www.admin.ox.ac.uk/examregs/2017-18/hsofbiolscie/studentview), and the course Examination Conventions are available on WebLearn at [https://weblearn.ox.ac.uk/x/bb9xp](https://weblearn.ox.ac.uk/x/bb9xp). If there is a conflict between information in this handbook and the Examination Regulations/Conventions then you should follow the Examination Regulations/Conventions. If you have any concerns please contact the Biology Teaching Administration Team ([undergraduate.teaching@biology.ox.ac.uk](mailto:undergraduate.teaching@biology.ox.ac.uk)).

The information in this handbook is accurate as at 1st October 2017, however it may be necessary for changes to be made in certain circumstances, as explained at [www.ox.ac.uk/coursechanges](http://www.ox.ac.uk/coursechanges). If such changes are made the department will publish a new version of this handbook together with a list of the changes and students will be informed.
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A. INTRODUCTION

A.1 Welcome to the Final Honour School in Biological Sciences

Now that you have successfully completed the first year of the Biological Sciences course you begin the Final Honour School in Biological Sciences or FHS. This will take you through years 2 and 3 of your degree course.

This handbook provides details of the organisation of the second and third years of your degree course in Biological Sciences. Please note that this is Section 1 only and Section 2 (a supplement dealing with details of the third year) will be issued to you during Hilary Term of Year 2. An additional Project and Assignments set of guidelines will also be provided in Hilary Term of your second year but you are also given some preliminary information in this handbook to start you off.

Any links referred to are listed at the end of this handbook – in the electronic version they are hyperlinked in situ. We strongly suggest that you find time as soon as possible to read it all, and keep it somewhere accessible for future reference. Some of the information here repeats what was provided in the First Year Handbook. Where it does, please consider these topics to be just as important as they were then.

Detailed content of the course is given on WebLearn. Here you will find the most up-to-date lists of themes, reading lists, individual lectures, lecturers, lecture synopses/presentations, practicals, and other course related materials. And remember that the timetable is published on a termly basis and is made available on WebLearn. Please consult this frequently. Any changes to the timetable will be sent to your College email account, so it is very important that you check regularly for updates.

The information provided here is the most accurate we can provide at the present time, but please note we may have to change things (timetables, lecturers, dates, etc.) as the terms progress and as new circumstances demand.

If you have any further questions about the teaching, what is expected of you during the course, examinations and methods of assessment, then please talk to your College Tutor as the first port of call.

Prof. Peter Darrah
Director of Undergraduate Teaching
A.2 Why you should keep and use this Handbook

This Handbook provides information about the second and third year course and explains how to handle lectures, practicals and tutorials. It also provides lots of contact points for teaching, assessment, welfare and so on. We strongly suggest that you find time to read it all, and keep it somewhere accessible for future reference. As part of your exam preparation, you should re-read Section D, which explains the FHS Examination in detail.

If you lose your paper copy of this handbook, it can be downloaded from the Course Handbook area of WebLearn. Any links referred to are listed at the end of this handbook – in the electronic version they are hyperlinked in situ.

Some of the details given here, for example about the Projects in Section J, are only designed to start you off. Further, more detailed, information will be provided in the FHS Project & Course Assignments Handbook, which will be issued in Hilary Term of your second year.

A.3 Course-related information

(a) Teaching Administration Team

Director of Undergraduate Teaching:
Prof. Peter Darrah (peter.darrah@plants.ox.ac.uk)

Deputy Director of Undergraduate Teaching:
Prof. Rosalind Harding (rosalind.harding@zoo.ox.ac.uk)

Undergraduate Studies Administrator (Examinations): Dr Céline Clavel
Undergraduate Teaching Coordinator: Mrs Siobhan Organ
For any matters relating to teaching or examinations email the Biology Teaching Administration Team: undergraduate.teaching@biology.ox.ac.uk.

Practicals Coordinator and Teaching Technician (for matters relating to practical groups and write-ups):
Dr Asya Naish (asya.naish@plants.ox.ac.uk)

Disability Contacts for Biological Sciences:
Lead – Prof. Peter Darrah (peter.darrah@plants.ox.ac.uk)
Coordinator – Mrs Siobhan Organ (siobhan.organ@zoo.ox.ac.uk)

(b) Academic staff contacts

The second year of the course comprises 2 compulsory themes (Evolution and Quantitative Methods) and 6 optional themes (Adaptations to the Environment, Animal Behaviour, Cell & Developmental Biology, Disease, Ecology, Plants & People). Each theme has a Theme Organiser who is responsible for the content and organisation of their theme and can be contacted if there are questions related to their individual area of teaching.
Adaptations to the Environment:
Theme Organiser: Prof. Andrew Smith (andrew.smith@plants.ox.ac.uk)

Animal Behaviour:
Co-Theme Organiser: Prof. Marian Dawkins (marian.dawkins@zoo.ox.ac.uk)
Co-Theme Organiser: Prof. Tim Guildford (tim.guildford@zoo.ox.ac.uk)

Cell & Developmental Biology:
Theme Organiser: Prof. Hugh Dickinson (hugh.dicksinson@plants.ox.ac.uk)

Disease:
Theme Organiser: Prof. Sunetra Gupta (sunetra.gupta@zoo.ox.ac.uk)

Ecology:
Theme Organiser: Prof. Owen Lewis (owen.lewis@zoo.ac.uk)

Evolution:
Theme Organiser: Prof. Stuart West (stuart.west@zoo.ac.uk)

Plants & People:
Theme Organiser: Prof. Nicholas Harberd (nicholas.harberd@plants.ox.ac.uk)

Quantitative Methods:
Theme Organiser: Prof. Andrew Hector (andrew.hector@zoo.ox.ac.uk)

Please note that at the top of each individual theme or practical page on WebLearn you will find the name and email address of the Theme Organiser.

The University Website provides a search facility to find the email addresses of individuals throughout the University. The normal format of University emails is:

firstname.lastname@department.ox.ac.uk or firstname.lastname@college.ox.ac.uk

N.B. in email addresses the department names are abbreviated to plants and zoo. Some colleges also use abbreviations (e.g. magd, stcatz, worc).

(c) Student representatives

Two students will represent your year group as members of the Biological Sciences Joint Consultative Committee (JCC). Further information regarding the role of the JCC representatives is found in Section F.1 of this handbook and on WebLearn. At the start of Michaelmas Term of year 2 the Teaching Administration Team will contact you by email to inform you how and when you can nominate your chosen representatives. Once your two representatives have been elected their names and contact details will be confirmed via email and on WebLearn.

(d) Useful numbers

Plant Sciences (Reception): (2) 75000
Zoology (Reception): (2) 71234
Oxford University IT Services, Banbury Road: (2) 73200
Radcliffe Science Library: (2) 72800
(e) WebLearn

Biology resources on WebLearn, the University’s Virtual Learning Environment (VLE) provides you with instant access to information on your course. You may access this site from any computer linked to the Internet but you will need to log in using your Oxford Single Sign On to access the Biological Sciences Home page.¹

When you log into WebLearn if you wish to access a site that you are a member of but you are not sure how to find it please select SITES from the menu at the top right hand side of the screen – this will bring up a list of all sites that you are a member of, and if you select ‘Biological Sciences Teaching’ you will be redirected to the Biology homepage.

The Biology WebLearn pages follow the structure of the degree course. Sub-menus for the Preliminary Examination (first year) and the Final Honours School (FHS – second year and third year) are found via the Biological Sciences Home page. A series of links will then take you to an introduction to each of the main themes/options, and from here you can find lecture and practical titles and synopses, additional reference material, and, in most cases, additional handout materials. Please note that lecturers may choose to include their lecture handouts and/or slides on WebLearn but they are not obliged to do so.

The Biology ‘Electronic Timetable’ for each year group is available in the main menu of their year page on WebLearn. The timetable will automatically be made available here shortly before the start of each term and can be downloaded into your electronic diary (see Section C.2 (a)).

There are many additional types of resource posted on the Biological Sciences WebLearn site. Among these are:

- Examiners’ reports;
- Exam Marking Schemes and exemplar answers;
- Feedback questionnaire summaries;
- Joint Consultative Committee minutes;
- Steering Committee minutes;
- Course handbooks.

Please note that lecturers may choose to include their lecture handouts and/or slides on WebLearn but they are not obliged to do so.

(f) Important dates

Dates of University Full Term 2017-17:

- Michaelmas Term 2017 – from Sunday 8th October to Saturday 2nd December 2017;
- Hilary Term 2018 – from Sunday 14th January to Saturday 10th March 2018;
- Trinity Term 2018 – from Sunday 22nd April to Saturday 16th June 2018.

Future University term dates are available on the University website.

¹ https://weblearn.ox.ac.uk/portal/hierarchy/mpls/xmpls/biology
Michaelmas Term, Year 2 (MT2):
Early MT2: start to narrow down Project subject areas and potential Project Supervisors;
Make contact with preferred Supervisors during Michaelmas Term;
Submit Project Registration Form to the Biology Teaching Administration Team as soon as possible in MT2 (and no later than noon Friday Week 8).

Hilary Term, Year 2 (HT2):
Before starting Project practical work, a Safety Registration Form must be authorised by the relevant Departmental Safety Officer. If applicable the following forms must also be authorised – UK Fieldwork Risk Assessment Form, Overseas Fieldwork Risk Assessment Form, Overseas Travel Risk Assessment Form, Animal Welfare Assessment Form, Human Ethic (CUREC) forms, Memorandum of Understanding (MOU) Form (see Section J.1 (b)).

Trinity Term, Year 2 (TT2):
Part I of the FHS examination: 3 written papers (normally Week 1);
8.30am-4.00pm, Thursday & Friday, Week 1: submission of all second year practical write-ups;
If possible, begin Project practical work – work may be required in the vacation.

From Trinity Term 2 (TT2) – end Michaelmas Term 3 (MT3):
The titles of both Course Assignments must be decided by Friday, Week 7 of MT3. It is possible to complete your assignments at any point to suit your individual academic workload e.g. in TT2 if your Project practical work will take place in the summer vacation.

Michaelmas Term, Year 3 (MT3):
Before MT3: Project experimental work should be completed;
MT3: Complete write-up of Project;
Friday, Week 7: Submit completed Course Assignment Certificate for Approval to the Biology Teaching Administration Team.

Hilary Term, Year 3 (HT3):
Noon, Monday, Week 2: Project submission date;
Friday, Week 7: Confirm with the Biology Teaching Administration Team which Course Assignment title will be your oral assignment and which will be your written assignment.

Trinity Term, Year 3 (TT3):
Noon, Friday, Week 0: Oral Course Assignment (abstract) submission date;
Noon, Friday, Week 0: Written Course Assignment submission date;
Noon, Monday, Week 1: submission of Oral Assignment presentation to the Biology Teaching Administration Team;
Week 1: Oral presentation to be given (normally Thursday or Friday);
Part II of the FHS examination: 4 written papers (usually 5th Week).
(g) Departmental opening hours

Department of Plant Sciences – 8.30am – 5.15pm; Monday to Friday

Department of Zoology – 8am – 5pm; Monday to Friday

Undergraduate students are expected to work within each department’s normal opening times, including computer rooms, and to leave at normal closing time. On occasion students may be allowed to remain on the premises for Project-related reasons but only with the specific approval of their Supervisor and they must be under supervision at all times.

A.4 College-related information

Every student at Oxford has to belong to a College, whatever the degree they may be studying. As a biologist, you are a member of one of the 21 undergraduate colleges which admit students studying this subject and have a Tutor who has been assigned to you by your College. By now you know that it doesn’t really matter which College you are at: all of your lectures, practicals, classes, fieldcourses, projects and so on are organised centrally by the University Departments of Plant Sciences and Zoology. Even your exams are set, marked and graded by these same institutions.

Your College Tutor has an important advisory role. They are a biologist, and a member of either Plant Sciences or Zoology who is appointed by your College to look after many aspects of your education and welfare. In the second and third year they continue to be the first port of call for advice on all manner of things from course structure, exam systems, field work, project choice, specialist tuition, career directions, etc. They can also become a confidant whom to talk about personal problems and difficulties. Never hesitate to ask questions of your College Tutor – if they don’t know the answers, they will probably know someone who does.

In your second and third year you have a greater role in the organisation of your tutorials but your College Tutor will continue to provide advice regarding your choices and may still help to arrange tutorials if you have a particular interest that is not met by the tutorials on offer centrally to all students. They will continue to receive the reports of your termly subject tutorials, as well as the results of your College collections (unofficial exams held in colleges). Using this information, your College Tutor will discuss your progress with you on a regular basis.
B. THE COURSE, CONTENT AND STRUCTURE

B.1 Degree course overview and aims

The Bachelor of Arts in Biological Sciences is taught jointly by the Department of Plant Sciences and the Department of Zoology. This three-year course leads to a single honours degree in Biological Sciences. Biological Sciences is an exciting and rapidly developing subject area. The study of living things has undergone tremendous expansion in recent years, and many topics are advancing very rapidly.

The Quality Assurance Agency for Higher Education (QAA) produces subject benchmark statements which provide information about the nature and standards of awards in a particular subject. To download the relevant Biosciences subject benchmark statement please visit the QAA website.

The aims of the programme are:

- to educate students with high potential on an equal opportunity basis by providing them with a learning environment which encourages them to achieve their academic and personal potential;
- to give a grounding in both the conceptual approaches and practical techniques used in modern biology by teaching a curriculum that reflects modern research within a framework of established scientific principles;
- to draw upon specialisms within the teaching/research staff, in order to provide cutting edge and immediately relevant education based on a core foundation of biological sciences in its widest sense;
- to provide training in relevant transferable skills for a career in the life sciences, medicine, the environment and wildlife, industry, teaching, politics, journalism, or a commercial environment;
- to provide suitable training, and application of acquired skills, to equip graduates for research careers in most areas of biological research.

In the first two terms of the second year, you will take two compulsory themes, which underpin the further six optional themes that are offered in the second year. You must also perform satisfactorily in at least 3 of the 6 practical topics that are offered. Further details of the second year themes and practicals are given below. In the third year, there are no compulsory themes and there are no practicals. Most of the teaching is via lectures.

B.2 Structure of the second and third year course (Final Honour School)

Note that information regarding all components of the three year course (including lecture lists and synopses, lecturer details, lecture handouts, practical details, timetabling information and reading lists) can be found in detail on WebLearn.

(a) The second year course

Second year lectures and practicals are delivered in the first two terms of the second year only – Michaelmas (MT2) and Hilary (HT2) Terms.
You will attend 2 compulsory Themes – Evolution (32 lectures) and Quantitative Methods (8 interactive classes in MT2 and 8 lectures plus practicals in HT2) – and will also be required to attend at least 80% of the 6 other themes that are offered, which each consist of 16 lectures that are delivered across both terms (unless otherwise stated): Adaptations to the Environment (HT2 only); Animal Behaviour; Cell & Developmental Biology; Disease (MT2 only); Ecology; Plants & People.

You must also take, and perform satisfactorily in at least 3 of the 6 practical topics that are offered in MT2 and HT2. The practical courses do not necessarily directly complement the second year Themes: they are stand-alone topics which allow students to practice skills and techniques over a full range of lab and field systems. Each practical takes place in Michaelmas or Hilary Term of year 2 and each normally involves 4 sessions, totalling around 12 hours in length. The second year practicals are: Biodiversity Survey & Analysis (MT2); Experimental Evolution (MT2); Infectious Disease Control (MT2); Molecular & Cellular Biology Techniques (HT2); Observations & Experiments in Behaviour (HT2); Plant Adaptations – Wild & Domesticated (HT2).

You registered for practicals at the end of TT1 – if you registered for a practical course you are expected to attend it. If you find that you are unable to attend a practical you must complete a ‘Practical Withdrawal Request’ form for approval by the Director of Undergraduate Teaching. All forms must include your reason for withdrawing and be countersigned by your College Tutor. This form may be obtained from the Practical Coordinator. If you decide you wish to sign up for an additional practical, contact the Practical Coordinator – you can sign up for a maximum of four.

On WebLearn you will find further details of each theme and practical. Summaries of the Themes are given below in Sections B.2 (a) (i), (ii) and (iii).

(i) Second year Compulsory Themes

**Evolution (MT2 and HT2, 32 lectures)**

Evolutionary biology is about understanding why the natural world is the way that it is, at all levels from genes to morphology to behaviour. This compulsory theme will provide a broad introduction to the underlying theoretical and conceptual issues, as well as their application to a number of specific cases. The main topics covered in the course are: adaptation; natural selection; population genetics; life-history evolution; social evolution; phylogenetics; evolutionary genetics; species concepts; homology, character evolution and molecules & morphology; paleobiology.

**Quantitative Methods (MT2 and HT2, 32 hours – lectures and classes)**

The statistical component of this theme runs in Michaelmas Term. It extends the linear models covered in the first year to include categorical (factors) and continuous variables plus interactions between them. The modelling component and the bioinformatics component of this theme run in Hilary Term – the former demonstrates some key applications of modelling in biology and the latter includes searching bio-databases and the construction of phylogenies.
(ii) Second year non-compulsory Themes

Adaptations to the Environment (HT2 only, 16 lectures)

This theme explores a wide range of examples of adaptation in the biological world, surveying the diversity of Earth’s environments and the remarkable ways in which organisms have come to inhabit almost all of them. We use these examples to illustrate the selective forces imposed by both physical and biotic constraints, and to consider how the fitness benefit of potential adaptations can be demonstrated. The theme surveys numerous examples from animals, plants and microbes, encompassing some of the latest research on environments from the tropics to the poles, and from the highest mountain-tops to the deepest oceans. It builds on the second year Evolution course and illustrates core conceptual issues in the study of adaptation such as: the physical constraints and limits to adaptation; the molecular basis of adaptations; convergence across lineages and biomes; phenotypic plasticity vs. local adaptation; the speed of adaptation; and contemporary responses to climate change.

Animal Behaviour (MT2 and HT2, 16 lectures)

This theme provides an introduction to the study of animal behaviour. It covers the behaviour of a wide range of animals, stressing the importance of taking a general view and looking for principles. With a wide range of questions it stresses the importance of asking about (and requiring different answers for) adaptation, mechanisms, development, genetics and phylogeny. It covers a wide range of applications, such as conservation, animal welfare, human behaviour, and links with neuroscience.

Cell & Developmental Biology (MT2 and HT2, 16 lectures)

This theme is focused on key elements of this rapidly-expanding topic, including an introduction to the ‘RNA world’, the molecular systems directing cell polarity and secretion, signalling both within and between cells, and aspects of human disease. A key aim of the Theme is to emphasise the scale of the topic as it ranges from the control of gene expression, via events at the cellular level to systems affecting development of the whole organism. Also emphasised in the teaching is how cell and developmental genetics serves to integrate many of the other aspects of biology taught in the course, and inform current research into human challenges, such as ageing and cancer. Finally, and very importantly, teaching in this theme provides a flavour of the latest discoveries in the field in areas such as epigenetics, cloning, and the understanding of the behaviour and disease. This effectively provides both background and context to more advanced Cell and Developmental Biology teaching (and project work), in Year 3 of the course.
**Disease (MT2 only, 16 lectures)**

This course builds on foundation material presented in the three first year courses to explore infectious disease as a biological interaction between pathogens and hosts. The 16 lectures adopt an evolutionary and ecological framework to examine the stages of infection and spread within and among hosts, including a detailed account of the interactions of the animal immune systems with pathogens and the countermeasures that pathogens have evolved in response to host immunity. The first seven lectures will focus on how microbes cause pathologies in animals, considering the challenges encountered by both the host and the pathogen and how the host reacts. The following five lectures describe transmission dynamics and conclude with a lecture on disease control. The course concludes with five cases studies that integrate the material taught in the first 11 lectures in the study of specific infections, illustrating and consolidating the concepts covered.

**Ecology (MT2 and HT2, 16 lectures)**

Ecology is the scientific study of the interactions between living organisms and their biotic and abiotic environment. The first year Ecology and Evolution course provided a solid training in the fundamental principles of ecology, concentrating on population, community and ecosystem-level processes. In the second year, we develop these themes further, focusing in particular on the practical application of ecological principles. Applied ecology helps us to find practical solutions in conserving populations and ecosystems, sustainably exploiting natural resources, minimizing the loss of agricultural crops to pests and diseases, and dealing with the anthropogenic threats such as pollution, climate change and invasive species. These topics will be illustrated using case studies from a wide variety of marine and terrestrial ecosystems. The theme will cover: landscape-level approaches to conservation; conserving biodiversity in nature reserves and in the wider landscape; coping with invasive species; grazing, fire and other practical management strategies on land; threats to marine biodiversity and their solutions; the theory and practice of harvesting and biological control strategies; climate change as a major threat to biodiversity and ecosystem function and services; policy and practice relevant to mitigating the consequences of climate change for biodiversity and ecosystems.

**Plants & People (MT2 and HT2, 16 lectures)**

This theme compares and contrasts the seemingly very different worlds of wild and domesticated plants, giving an overall picture of the relationships between plants and people. First, the theme takes an overall look at how humans domesticated their crops from wild plant species, and explores how our understanding of domestication processes influences our understanding of Darwinian evolution. The domestication of specific crops (maize, rice, wheat, etc.) is examined in depth in subsequent lectures, as is the scientific basis of the plant breeding processes that have resulted in modern crop varieties. Next we examine the huge impact of plant disease on global food security, tree breeding for future forests, biofuels and molecular ‘pharming’ as a route towards new medicines. Finally, the theme explores the importance of plant interactions with microbes, and the relevance of these interactions to food security and sustainable agriculture.
(iii) Second year practicals

**Biodiversity Survey & Analysis (MT2, 12 hours of practical work)**

Biodiversity surveys provide data on the identity and diversity of species, allowing us to compile species lists and compare sites or habitats. At the heart of these surveys are three major practical issues: the ability to sample organisms appropriately, identify them reliably and to handle and analyse the resulting data appropriately. A further challenge is that ecologists must often carry out these tasks rapidly since field seasons may be short, time in the field limited or employers keen to get results quickly. This series of practicals is designed to give experience of collecting, processing and handling biodiversity samples through a biodiversity analysis of plants and invertebrates at Wytham Woods.

Additional time will be required for travel to and from Wytham Woods for the first practical.

**Experimental Evolution (MT2, 12 hours of practical work)**

This practical will enable you to gain experience on key microbial experimental evolution methodologies, experimental design and statistical analyses and to test evolutionary theory. Areas covered include antibiotic resistance and experimental evolution of diversity. An interest in basic microbiology and quantitative methods are crucial. You will work in pairs and will typically have one replicate in each experimental treatment, but will pool results for statistical analyses.

**Infectious Disease Control (MT2, 12 hours of practical work)**

Outbreaks of infectious disease can have devastating public health consequences. Recent examples include the 2009 influenza pandemic, the West African Ebola outbreak and the Zika virus epidemics in the Americas. Genomic and theoretical epidemiology offer computational research models that can help us predict, avoid and control infectious disease outbreaks. This practical course consists of four 3-hour practicals, in which you will use phylogenetic methods to analyse genetic data, and dynamic transmission models to analyse real and hypothetical disease outbreaks. From these exercises, you will revisit key evolutionary, immunological and ecological concepts on the population dynamics of pathogens, which are the basis of modern epidemiology and public health intervention.

**Molecular & Cellular Biology Techniques (HT2, 12 hours of practical work)**

This practical will introduce you to biochemical and cytological techniques for the analysis of DNA, RNA and proteins. You will be testing hypotheses rather than just learning how to carry you a particular technique. The first half of the practical will involve western blotting, and confocal microscopy. You will analyse Brassica plant samples representing different differentiated states, using antibodies against 4 proteins. During the second half of the practical you will gain experience of designing primers to use in the polymerase chain reaction (PCR) in an exercise which is a mock-up of how PCR can be used to diagnose infectious disease. You will set up PCR reactions with mock flu samples and analyse the products by agarose gel electrophoresis. Putting together results from PCR analysis, viral pathogenicity, and bioinformatics should allow you to draw conclusions as to the nature of the novel viral strain.
Observations & Experiments in Behaviour (HT2, 12 hours of practical work)

This set of four practicals aims to introduce students to some of the empirical techniques used to study Animal Behaviour using invertebrate model systems. It is recommended, but not required, that if you choose to attend this practical you should also attend the 2nd year lectures on Animal Behaviour. By the end of this practical, you will have acquired experience and understanding of the design, execution and analysis of behavioural experiments, and of the collection and analysis of behavioural data.

Plant Adaptations – Wild & Domesticated (HT2, 12 hours of practical work)

This practical will introduce you to a wide spectrum of the concepts and techniques underpinning modern plant biology: systematic/taxonomic approaches to understanding biodiversity; genetic and molecular analysis of the relationship between plants and symbiotic nitrogen-fixing bacteria; tissue-culture based approaches to understanding the development of plant form; analysis of plant disease defence mechanisms. An underlying theme in the practical is the relationship between wild and domesticated plants, and the relationship between plants and people.

(b) The third year course

In the third year, around 24 Specialist Options are offered. You are free to select any combination from these options, which cover the breadth of active research in the Departments. You are recommended to take a minimum of 6 Specialist Options but can take more if you wish to do so. Teaching begins in Trinity Term of year 2. Normally each Specialist Option is presented as a block of 16 lectures, although some are taught as fieldcourses or include some computer-based sessions.

The Specialist Options may be varied from time to time by the Biological Sciences Steering Committee, and the Options that will be available for your third year will be published on WebLearn by the beginning of TT2.

N.B. Consult the timetable on WebLearn frequently; things may have to change due to unforeseen circumstances.

Trinity Term of your third year is left free of formal teaching to allow you time for revision prior to your Final examinations, which usually start in 5th Week.

N.B. Provisional details of the third year options and exams will be published as part of Section 2 of the FHS Handbook, which will be given to you by the end of HT2.
B.3 FHS Examinations

The Final Honour School in Biological Sciences is a two-year long course of teaching and practical classes assessed by the Second Public Examination, more commonly known as ‘Finals’.

At the beginning of Trinity Term of year 2 (TT2), normally in Week 1, you will complete Part I of the FHS examination, which will comprise 3 written papers (Paper 1: Evolution; Paper 2: Quantitative Methods; Paper 3: Essay Paper). Your practical work is also assessed.

Assessment in Part II of the Honour School will consist of 4 written papers, submission of a research Project and 2 Course Assignments (1 Extended Essay and an Oral Presentation). Trinity Term of the 2nd year has fewer timetabled lectures, which is designed to allow most students to begin working on their Project, and/or Course Assignments. The 4 written examination papers (Paper 4: General Paper; Part 5: Long Essay Paper; Part 6: Short Essay Paper; Paper 7: Data Interpretation Paper) are 3 hours in length and will be sat during Trinity Term of the 3rd year (normally in Week 5). Further details about examining are given in Section D of this handbook.

The University awards degrees and is, therefore, responsible for examining them. A description of the formal requirements for each examination is published annually in the University’s Examination Regulations. Please note that the regulations are the official repository of the information about your degree and takes precedence over any other form of literature about your course. You will be informed in good time about the precise arrangements for your examinations. From year to year there may be slight changes to these arrangements, for instance to the exact format of the papers. If there are aspects of the Regulations about which you are uncertain, you should consult your College Tutor in the first instance.

Another document that explains many valuable details about examination procedures is called the Examination Conventions, which you can download from the Final Honour School Examination area of WebLearn – see Section D.3 for further information.
C. TEACHING AND LEARNING

As you already know, teaching and learning at University differs considerably from that at school. As in the first year, we expect a much higher degree of synoptic learning and synthesis that only comes from a deep understanding of the subject material. In general you are now far more reliant on your own assessment of your progress. Some ongoing feedback on your progress is provided and this is detailed in the sections below.

C.1 Components of teaching and learning

There are four main components of teaching in your degree, all equally important, namely lectures, practicals, computing classes and tutorials. Management of lectures, practicals and classes are the responsibility of the Departments of Plant Sciences and Zoology. Management of tutorials are the responsibility of your College – however, in your second and third year the Departments make available information regarding tutorials that are offered centrally and that you might choose to take.

Lectures for the second year are normally held in the Museum of Natural History Lecture Theatre and in the third year most lectures are given in the Department of Plant Sciences Large Lecture Theatre. Computing practicals are held in the Computing Suite in the Department of Plant Sciences. The remaining practicals are held in a number of different locations: the John Krebs Field Station Teaching Lab at Wytham; the Plant Sciences Teaching Lab; and the Modular Biology Teaching Lab on Mansfield Road. The times and venues of lectures and practicals are confirmed in the published termly Lecture List, which can be found on WebLearn (see Section C.2 (a)). Any alterations to the scheduled times or subjects will be published well in advance whenever possible.

If you have any issues with teaching or supervision please raise these as soon as possible so that they can be addressed promptly. Details of who to contact are provided in Section G.4 Complaints and Appeals.

Please refer to Section C.1 (a)(i) below and Section D.4 Good Academic Practice for advice regarding note-taking, referencing and other useful skills you will need to acquire. Patterns of teaching are given in Appendix 1.

(a) Lectures

As you know, lectures are designed to communicate information and to provide a framework for further discussion of each topic. Although we hope that the lectures will awaken curiosity and spark interest, their primary function is to provide you with factual information and to explain concepts. Most of the discussion, expansion or clarification of the information and concepts is handled in tutorials, practical demonstrations and on fieldcourses. The main difference between Prelim and FHS lectures is the level of difficulty of the material being covered. You need to be aware of this step-change, and as a result you will probably need to spend more time on independent reading of the references given in your lectures. Although a brief outline of the course is published in the University’s Examination Regulations, the detailed syllabus on which the Final Honour School Examination is based is defined by the lectures (see WebLearn).
Lectures are normally timetabled as one hour in length but the actual running time should be around 50 minutes, normally starting 5 minutes after the scheduled start time. However, you should arrive at the scheduled start time to allow everyone to be seated in time for a prompt start. It is rude to arrive late, it can be disruptive and you may miss the vital introduction that sets the scene for the whole lecture.

(i) What you need to do

**Taking notes and making the most of handouts**

Most, but not all, PowerPoint presentations of lectures or lecture handouts will be available from WebLearn. However, this is not mandatory and some lecturers may choose not to include them (or not to include them in full).

You are expected to take hand-written notes during lectures – please note that audio recording of lectures is forbidden without prior written consent (see Section C.2).

Each lecture will cover a number of topics, and the most important information is likely to be summarised in lecture handouts. Some or all of the more complex diagrams may be given in the handouts for you to annotate during the lecture but don’t expect the entire lecture to be duplicated and handed out.

Most people do not absorb material that is simply presented to them so it is extremely useful to go over your notes and diagrams after the lecture to organise them in a form that makes sense to you, and to check on any points of uncertainty by reference to the reading lists.

**Sources of information**

By now you should have developed the skills necessary to read the original research literature and there is therefore a greater emphasis on research papers in your reference material. Reference lists are also given to provide you with a number of access points into the literature in preparation for tutorials.

Most lecturers will provide details of references as part of the lecture handout or with their lecture materials on WebLearn. If this material is presented as a reading list, you might be expected to read sufficient of this material to develop your understanding of the topic as part of the core course – you are unlikely to have enough time to do this full justice until the vacations. You may also need to read some references to clarify specific points made in the lecture. In some cases, the reference list will contain all literature cited in the lecture, which may be a substantial list and you would not be expected to read every article – however, it does provide you with guidance should you wish to develop the lecture topic further. If you are not clear about the intention of the lecturer when they present you with a list of references ask them for clarification at the time.

(ii) Feedback

There is no formal feedback for lecture material. Indirect feedback is provided via College Collections and tutorials. This means that self-generated feedback is very important and you are strongly advised to test yourself on your understanding of lecture material. It is expected that you will spend part of the vacations consolidating each term’s work. As an absolute minimum you should read through your lecture notes on a regular basis to make sure you fully understand them.
(b) Practicals

Practicals have many useful functions, including teaching you key practical skills, training you in experimental design, providing an opportunity to highlight or expand aspects of the lecture course, and training you in basic safety procedures. Many of the techniques you learn through your practical classes will be invaluable when you start your FHS Project – normally in Trinity Term of year 2. Please note that some parts of the second year practical courses have a number of days in the field. Where this is the case this will be confirmed on the practicals pages on the Year 2 area of WebLearn. Please also see Section H.7 of this handbook regarding safety when working in the field.

(i) What you need to do

You will have already registered for a minimum of 3 second year practicals in Trinity Term of your first year. You should carry out your chosen practicals competently, understanding what you are doing or have done (ask the demonstrators if you don’t), and keeping a clear account of any observations or measurements made. In many cases, the practical is accompanied by a practical booklet giving you the key information you require to undertake the practical work and providing you with a series of tasks to complete during the practical. This is in part to encourage you to develop a concise analytical style and to record your data and observations efficiently. In other cases, the practical work should be written up in loose-leaf notebooks as soon as possible after the end of the practical.

Drawing and labelling may not be everyone’s favourite activity, but it remains an essential part of the observation and learning processes in biology. It is not the same as merely taking a photograph and, where appropriate, we do expect you to produce clear, accurate and detailed annotated drawings in practicals.

You must obey the rules that apply to safety in the teaching labs – these are set out in full in Section H.7 of this handbook.

Your performance in your second year practicals will form part of your Finals assessment (see table in Section D.1) and the Examiners may request coursework from any candidate. It is important to make sure you keep your practical records in a safe place until completion of the course. You will find full details of all second year practicals and their timetabling on WebLearn.

Attendance and write-up marks are taken into account for your 3 best second year practicals. Anyone failing to attend all of 3 practical blocks (each normally comprising 4 practical sessions) and produce 100% of 3 practical course write-ups at a satisfactory standard, will be required to submit all their practical write-ups to the Chair of Examiners in the Trinity Term of the 3rd year. Further details can be found in the Examination Regulations (see Section B.3), see also Section D of this Handbook.

You must make sure that you don’t lose your practical portfolio – it may need to be submitted to the FHS Examiners during your third year.
(ii) Feedback on practicals

Both formative and summative feedback is provided on all of your practical work. For summative feedback, practical write-ups are graded by the practical demonstrators as follows: non-satisfactory (NS), satisfactory (S) or excellent (E). A grade of NS indicates that the student failed to complete to a satisfactory level a substantial part of the work that most of the cohort completed successfully and therefore that the work was unsatisfactory. A grade of NS is not intended to be used to penalise students who failed to understand the material but only those who failed to engage in a meaningful way with the practical itself. However, students who are having difficulty understanding practical work are strongly urged to talk to the demonstrators in the practical classes for advice and help. We would expect that all diligent students, who attend all practicals and complete and hand in all of the required practical write-ups, will pass the practical component of the second year course.

Grades of S (often split into S−, S0 and S+) and E are intended to give formative feedback by providing additional quality information – these grades should be read in conjunction with any constructive comments that the markers provide on the write-ups.

(c) Computer classes

In MT2, Quantitative Methods (QM) teaching mainly comes in a ‘learning by doing’ form through weekly computer classes. For a few topics, the classes start with an introductory lecture (e.g. Experimental Design). The practical exercises during the computer class are designed to reinforce the lecture material and the more theoretical reading (on WebLearn) through relevant worked examples. In HT2, you will attend a weekly QM lecture and then a QM computer class, which builds on the teaching received in that week’s Quantitative Methods lecture and provides you with relevant worked examples: again the practical exercises during the class are designed to reinforce the more theoretical lecture material. Demonstrators are available during the computer classes to help you understand the material. The practical exercises during the class are designed to reinforce the more theoretical lecture material in the class. In MT2 each class is up to 2 hours in length and in HT2 each class is up to 1 hour in length.

(i) What you need to do

You should carry out the set class-work competently, understanding what you are doing or have done (ask the demonstrators if you don’t), and keeping a clear record for your future reference (annotated slides; R scripts).

(ii) Feedback

The interactive structure of the computer classes ensures that the lecture material is reinforced. This provides useful feedback as success in completing the practical examples should correlate with an understanding of the new statistical material. Many problem sets are also available on the Internet for self-study.

You can expect your class-work to be assessed by the Demonstrators to provide formative feedback. However, these marks are only for your benefit and do not form part of the formal examination process.
(d) Tutorials

Tutorials are a distinctive feature of undergraduate education at Oxford and make a significant contribution to maintaining Oxford’s standard of excellence in teaching. Tutorials can be as rewarding for the tutor as they can be for you. If you have immersed yourself in the material and come prepared with questions to challenge the tutor, you will be surprised how rapidly your knowledge and understanding of the subject will develop. Your tutor will give you feedback on your prepared essay during the tutorial but will be just as concerned to discuss your ideas, to answer your questions and to talk about the broader implications of the subject. The tutorial should not be a mini-lecture. Most of your tutorials will be with one, two or more students in your year. Though you will have to produce separate, independent written work, interactions with each other during the tutorial can be very beneficial. This continuous refinement of your own analytical and critical skills should serve you well in any discipline after leaving Oxford, even if it is not Biology.

In your first year, your College Tutor was responsible for organising much of your tutorial teaching. However, you can have much more say about your tutors and tutorial topics in your second and third year. While we suggest a certain format for tutorials, you and your College Tutor may decide to organise things differently. Whatever you decide to do, tutorials remain a form of learning paid for by your College so you should discuss your options with your College Tutor and keep them informed regarding your tutorial choices. Your College receives tutorial report forms about you every term (via the OxCORT reporting system), and your performance in tutorials is the concern of your College Tutor as well as the Senior Tutor and Head of House at your College. Tutorials are not the direct responsibility of the Teaching Administration in Biological Sciences and, though we help to guide subjects and structures, we do not organise tutorials or Tutors.

Tutorials are NOT necessarily linked to lecture themes and they are NOT priming for examinations. They can cover a wide range of topics within the broad brief of a Theme. Each second year theme page on WebLearn contains a Tutorials link, which will take you to a list of tutors who are offering tutorials linked to that theme. Here the tutors are able to share full details of the tutorials they are offering, including venues and timings. They are also able to offer electronic sign-up lists. Please note that it is not the Theme Organiser’s job to find you a tutor.

The format of most tutorials will be similar to those in your first year. However some tuition, especially in MT2 and HT2, takes the form of classes. This system is especially suited to subjects in which the written work is in exercises rather than essays. The class format also facilitates a variety of different teaching modes, including problem sheets, short talks using PowerPoint presentations, or group-led discussions. You will also be encouraged to learn through discussion with your fellow students as well as your Tutors. The classes are designed to dovetail closely with the lecture course, both in content and timing, and the topics are selected by the main course lecturers. For example, classes may cover key experimental techniques that underpin major advances in the subject and the original literature. Typically each class is for between six and twelve students and lasts between 60 and 120 minutes. A number of assignments may be associated with the classes, including extended essays, short-answer questions, problem sheets, or writing a Project proposal.
(i) What you need to do

Typically, you will have a planning meeting with your College Tutor in 0th Week of each term to confirm teaching arrangements for that term and in 8th Week to review the term gone by, and to discuss your programme for the following term. The published subject norm for Biology is an average of one tutorial per week (i.e. 8 tutorials per term).

You will be expected to undertake a significant amount of work in preparation for each tutorial. Typically, this will be reading for an essay that is handed in before the tutorial so that the tutor can read and comment on it prior to your discussion. You should also be aware that the material covered will increase in complexity and difficulty from that in the first year and will include much more primary literature. Reading such literature is a learnt skill - ask for help from your tutors if you have difficulties.

The tutorial essay is intended to encourage you to explore a particular aspect of the subject in depth and to give you an opportunity to put forward your own ideas and present a critical analysis of a particular problem or proposition. A good tutorial essay is rarely produced unless you allow yourself sufficient time to think. Work on a tutorial essay involves library searches, reading, thinking and writing. The first two of these will take you about three days. Giving yourself a few extra days to construct your argument will result in a much stronger essay. Read attentively and thoughtfully, skipping bits that obviously do not bear on your topic, and avoid the tedium of summarising paragraph after paragraph of someone else’s ideas. As your reading progresses, develop a structure for your essay and, if your treatment appears unbalanced, be prepared to follow up additional avenues of investigation.

Keep your essays, and the notes you used to prepare them, filed away carefully, as you may be referring back to them for revision. If you are working on a computer, remember to keep back-up copies. It is advisable to hand-write at least some of your essays to encourage better mental discipline and to practice writing for the exams at the end of the year.

Essays should be used to develop an argument, not as places to store information. One simple aim might be to try to develop an original hypothesis within every essay that you write or to suggest an improvement to an often-cited paper. Even key papers and textbooks can be wrong or rely on evidence that can be interpreted in more than one way. We are interested in your opinions and views, not simply a regurgitation of a standard text.

There are arguments for and against using a word-processor for writing essays. On the one hand it will make your essays and notes easier to read and is undoubtedly a useful skill to acquire. On the other hand there is a danger that you will get out of practice of physically dragging a pen across the page, especially under a time-constraint. However, you will be able to practice and refine your exam skills by means of mock exams (‘Collections’) set by your College Tutor at the beginning of term. You are not allowed to use word-processors in your exams, unless there are exceptional medical reasons.

In the second and third year most lecture courses have centrally co-ordinated tutorial support, generally in the form of pre-set tutorial titles, often at pre-set times. Note that this does not preclude you from making your own arrangements or from approaching the Theme or Option Organisers directly to try and arrange tutorials reflecting your particular interests.
Centrally co-ordinated tutorials in the second and third year of the course are advertised on WebLearn. To view tutorial information, navigate to the relevant Theme page and then select the Tutorials link. You will then see the full list of tutorials that are available. Note that tutors do not add all their tutorial information at the beginning of term so we suggest that you regularly revisit the relevant pages on WebLearn to check for new tutorials. It should be clear from the list of tutorials whether electronic sign-ups are being offered for each tutorial. To sign-up electronically just follow the on-screen instructions. Electronic sign-ups are the recommended method for tutors but a number of different methods are still in use – some tutors offer paper sign-ups via lists on a noticeboard, while others ask that you send them an email to arrange a time to meet.

If you sign up for a tutorial it is expected that you will attend that tutorial. If you do not attend your tutorial or you make a last minute cancellation, your College will be charged for the tutorial and will be informed that you did not attend.

During your second and third year you are likely to see a greater variety of tutors than in your first year and it is likely that each will have a different way of running tutorials. Do pay particular attention to instructions regarding when and how to hand-in any required tutorial work. Please also remember that good time-keeping is really important as, just like you, your tutor may have other commitments they need to keep after your tutorial.

Read your essay through and edit it carefully and critically before finally handing it in to your tutor. Use graphics such as graphs, tables and maps, where appropriate but make sure that you cite fully each source. It will help your understanding and interpretation if you redraw such items rather than simply cutting and pasting from other sources. Plagiarism is considered to be a serious offence at Oxford (see Section D.4) – avoid it at all costs.

Make sure that you hand your essay in by the deadline and method determined by your tutor. Turning up for a tutorial with the essay in your hand will provoke various reactions from your tutor, none of which are likely to be very rewarding! Similarly, do not email your essay to your tutor unless invited to do so; it’s not fair to expect them to do your printing for you.

(ii) Feedback

You will normally find that your essay work has not been explicitly graded. Do not be surprised. Tutors will often give effective and helpful comments at the end of the essay but the essence of the discussion in the tutorial is to give you feedback about your work and to develop your understanding further. You are encouraged to move away from a marks-oriented approach to your studies, where counting facts is important, to an environment in which discussion of ideas and concepts prevail. A key feature of this approach is to encourage you to explore and develop your own ideas and risk being wrong without any fear of penalty to your final degree class.

Your tutorial work is not formally assessed as part of your Second Public Examination but a written report on your progress in each tutorial will be sent back to your College (via the OxCORT reporting system). You will have the opportunity to discuss progress with your College Tutor informally at the end of each term, or formally in the presence of (usually) the Head of House or Senior Tutor at intervals during your course. You should be clear at the
outset that, although your tutorial work will be of great assistance to you when you come to prepare for Finals, the purpose of the tutorial is not explicitly to prepare you for exams. Rather, it is an integral part of your whole learning experience and particularly important for your academic development.

C.2 Organisation of teaching

We make no apologies for lectures or practicals starting at 9.00am. If you have had insufficient sleep you will work more slowly, absorb little and understand less. However, it can be possible to fit in plenty of activities such as sport, music, drama or planning an expedition alongside your studies. The eight weeks of Full Term are quite intensive, so it is important that you plan your time and commitments carefully and don’t overdo it. Time management is a learnt skill so talk to your College Tutor if you are having problems in this area.

You MUST NOT record lectures, and indeed it is a disciplinary offence to do so, without prior permission. While the University has introduced a Lecture Replay Service, the Biology Faculty have decided not to adopt it as a course-wide policy. For further information please see the University Policy on the recording of lectures and other formal teaching sessions by students. Students with specific learning difficulties or visual impairments may be given permission to record lectures (see Section G.3) and will not need to seek permission to record lectures from individual academics. Further information is available from the University Disability Advisory Service.

(a) Timetable and teaching loads

All official lectures, practicals and fieldcourses are detailed in the timetable which is published every term. For the most up to date information consult the electronic timetable on the Biological Sciences WebLearn site. Please consult this frequently, as we may have to change things occasionally. Email circulars will be used to notify you of timetable changes.

You can download or subscribe to a detailed ‘Electronic Timetable’ from the Second Year WebLearn menu. Visit the Biological Sciences WebLearn site, select Second Year from the main menu and then Electronic Timetable. From there follow the instructions given.

We cannot give you a precise idea of “norms” in teaching load (i.e. what you can expect per week), since in the second year the number of lectures and practicals vary through the year. However, in Michaelmas and Hilary Term you might expect 2 lectures a day, except on Wednesdays. Practical norms will vary depending on whether you have opted to take 3 or 4 practicals and in which term each runs but you would normally expect to attend four 3-hour sessions per practical (normally 12 hours of teaching per practical). You might expect to meet your College Tutor at the beginning and end of each term and an average of one tutorial per week is normal for biologists.

PLEASE NOTE THAT WE HAVE TO RESERVE THE RIGHT TO CHANGE, ALTER, ADD OR REMOVE EVENTS AS THE TERMS PROGRESS AND AS CIRCUMSTANCES CHANGE.
(b) Organisation of lectures

(i) Time keeping

It is extremely important, not just for educational efficiency but also for courtesy, to make sure that you are never late for lectures (or any other teaching activities). It is extremely disconcerting for a lecturer or tutor to be interrupted by students arriving late for an event and it is simply not acceptable to turn up even a few minutes after the allotted start time. So please aim to be in your seat in the lecture theatre at the allotted start time so that you do not delay the start of the session. However, we do appreciate that on rare occasions arriving a few minutes late may be unavoidable and this can be the case for teaching staff too.

(ii) Lecturing facilities

In the second year the majority of lectures will be held in the Museum of Natural History Lecture Theatre, which is on the first floor of the Museum. Some second year lectures will also be held in the Plant Sciences Large Lecture Theatre. All lecture theatres have up to date facilities and include hearing induction loops. Lecture theatres are equipped with microphones, although not all lecturers use them – if you have trouble hearing a lecturer then consider asking them to use the microphone system. If the theatre is too dark or too bright please ask the lecturer to adjust the lighting. If you find any of the lecture theatres too warm or too cold please contact the Teaching Administration Team (note that lecturers cannot adjust the ambient temperature levels).

(c) Organisation of practicals

Please aim to be in your seat in the teaching lab at the allotted start time, with your lab coat on so that you are ready to begin the practical work. Please make sure that your belongings are stored in the appropriate place.

(i) Unavoidable absence from practicals

Records of attendance and marks are kept and recorded by the Practical Coordinator – please ensure that you always sign the practical attendance sheets provided in the lab and in the computer room. As non-attendance at a practical will also result in a failure to submit a write-up, it is essential that any practicals that are missed though medical or other unavoidable circumstances are formally recorded. Medical certificates, normally from your College Doctor/Nurse, are required for absence for medical reasons and a note from the Senior Tutor of your College should be provided for all other absences – these must be given to the Practical Coordinator (Asya Naish in the Department of Plant Sciences). Medical
information will be treated in the strictest confidence. Please note that permission for absence on non-medical grounds will only be given in exceptional circumstances such as a family bereavement or serious illness of a family member. Further details are given in the Biological Sciences Examination Conventions available on WebLearn (see Section D.3).

(ii) Practical Groups

Some practicals have to be given more than once because of space constraints, therefore all students are assigned to practical groups: these groups are organized centrally by the Teaching Administration. You can view your practical group via the second year biology menu on WebLearn. You must not switch groups without the permission of the Practical Coordinator. If for some reason you need to change practical groups you must find another student who is willing to swap groups with you permanently and see the Practical Coordinator to confirm whether or not the swap can go ahead. For administrative queries about practical groups or submission of write-ups, please contact asya.naish@plants.ox.ac.uk

(iii) Storage of your practical write-ups

All students have their own individual suspension file in a filing cabinet in the Modular Biology Teaching Laboratory from Hilary Term. To locate your own file first find your college drawer in the filing cabinet (each drawer is clearly labelled). Inside each drawer the files are ordered alphabetically by college and then by first name. All assessed work will be returned to your suspension file in the Teaching Lab.

(iv) Ethical considerations in practicals and field courses

Please note that in order to understand how living organisms function, evolve and adapt, it is sometimes necessary to explore their inner structures and physiology. In addition, biology and ecology in the field involves the collection and examination of plant, animal and microbe samples. The undergraduate course of Biological Sciences at Oxford therefore includes some examination of animals via dissection, and the collection and examination of invertebrates on field courses and in practicals. All trapping and handling techniques involving protected animals (that is, vertebrates and cephalopods) in field courses, and all sourcing of protected animals used in dissection practicals, will have been subject to ethical review by the Department of Zoology’s Animal Welfare and Ethics Review Board under the University of Oxford’s Policy on the Use of Animals in Scientific Research, as described in the University’s ‘Code of Practice for Biologists using Animals’ (periodically updated).

(d) Organisation of computer classes

(i) Practical groups

All computer classes are held in the Computing Suite, which holds around 60 terminals connected to a central server. It is located in the Department of Plant Sciences on the first floor of the South Building. Space constraints mean that computer classes are given in groups, which are publicised on WebLearn (see Section C.2 (c)(ii)).

(e) Organisation of tutorials

In the second and third year you have the opportunity to become much more involved in the selection and organisation of your tutorials. Tutorials are NOT necessarily linked to lecture
themes and can cover a wide range of topics. A list of tutorials offered in each theme is available on WebLearn by visiting the theme page and selecting the *Tutorials* link. Please remember to discuss your tutorial choices with your College Tutor and keep them informed of the tutorials you have signed up for.

(f) Organisation of optional fieldcourses (Borneo and Tenerife)

Two of the third year specialist options involve overseas fieldwork. The first is a module on Tropical Forest Ecology, which takes the form of a fieldcourse in Malaysian Borneo. The fieldcourse will take place at the end of the long vacation between the second and third years. The cost is approximately £1600 per student including flights and local travel. If the course is over-subscribed, selection for the 24 places will be based on academic performance in either the Preliminary Examination or submitted written work. The second is a module on Oceanic Island Plant Biodiversity which is a 7 day fieldcourse on the Canary Island of Tenerife. The course will start shortly after your second year exams at the end of Trinity Term Week 1. The cost is approximately £600 per student including flights and local travel, and places are limited to 23 students. In the case of more than 23 people wanting to attend, the names of all students wishing to attend who obtained 50% or more in Prelims will be drawn out of a hat. Further information regarding both options is available on WebLearn and will be circulated during MT2.

If your passport is due to expire within 3-6 months of the return date from the fieldcourse it may need to be renewed ahead of the fieldcourse. Please do check the requirements for your passport and for the country you will be travelling to (note that requirements can be different in different countries and for different nationalities) and make sure that if it is necessary to renew your passport you do this well in advance so that this doesn’t affect whether or not you are able to attend.

Students should be aware that their colleges may not be willing or able to contribute to the costs of attending these courses.

Health and safety rules that apply to fieldwork are set out in Section H.7 of this handbook.

C.3 Expectations of study

Students are responsible for their own academic progress. In addition to your timetabled lectures, practicals and classes you should expect to carry out private study during term time and the vacation. Everyone learns at a different rate, so the number of hours study will vary from person to person but in UK higher education, the expectation is that each year a full-time student will spend 1200 hours learning. This for most Universities, with 10 weeks terms, equates to a 40 hour week – for Oxford the assumption is that the additional time is made up in the vacations but as a result you should expect to undertake around 740 hours of private study across your second year. If you are considering taking on employment during your studies please refer to the following guidance on paid work on the [Oxford Students](#) website.
D. ASSESSMENT AND EXAMINATIONS

You will be formally examined by written papers on the second year course at the start of Trinity Term of your second year. You must also perform satisfactorily in three second year practicals. During Trinity Term of your third year you will be formally examined by written papers on the third year course. In addition to this, in the third year you will be assessed on an independent Research Project and two Course Assignments (one written and one Oral Presentation). Further details are given in the Assessment Structure below (Section D.1) and key dates are given in Section A.3 (f).

Formal details of the examinations are given in the Examination Regulations. Extensive further details of examination regulations and procedures are given in the Biological Sciences Examination Conventions available from WebLearn – see Section D.3. In addition the Director of Undergraduate Teaching will give 3 compulsory examination talks during your second and third year, normally at the following times:

- Week 1, MT2 – Preparing for your Project
- Week 7, HT2 – Preparing for your second year exams
- Week 5, HT3 – Oral Presentation and Examination talk

D.1 Assessment structure

A summary of the components of the Final Honour School examination is set out below:

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>Year</th>
<th>ASSESSMENT</th>
<th>WEIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper 1: Evolution</td>
<td>2</td>
<td>One 3-hour paper at the start of TT2. In section A answer 10 questions out of 12. In section B answer 2 questions, no more than 1 from each subsection, each of which present 3 questions.</td>
<td>10% of marks</td>
</tr>
<tr>
<td>Paper 2: Quantitative Methods</td>
<td>2</td>
<td>One 3-hour paper at the start of TT2. Answer 3 questions out of 6, including at least one from each section.</td>
<td>10% of marks</td>
</tr>
<tr>
<td>Paper 3: Essay Paper</td>
<td>2</td>
<td>One 3-hour paper at the start of TT2. Answer 4 questions, with no more than one from each of the 2nd year themes.</td>
<td>10% of marks</td>
</tr>
<tr>
<td>Practical work</td>
<td>2</td>
<td>Full attendance and satisfactory performance in three blocks of practicals is required. Attendance of classes for quantitative methods is also required (see Section C.1 (b) and Section D.6).</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>3</td>
<td>A Project Report is to be submitted electronically as a pdf file.</td>
<td>15% of marks</td>
</tr>
<tr>
<td>Course Assignment – written</td>
<td>3</td>
<td>A written course assignment is to be submitted electronically as a pdf file.</td>
<td>7.5% of marks</td>
</tr>
<tr>
<td>Course Assignment – oral</td>
<td>3</td>
<td>An oral course assignment requires an abstract of not more than 500 words to be submitted electronically as a pdf file. An oral presentation is given to an audience of two assessors.</td>
<td>7.5% of marks</td>
</tr>
</tbody>
</table>
The assessment of Finals in each year is carried out by a Board of Examiners, supported by a team of Assessors, who are usually people who have lectured on the course. One member of the Board is designated the Chair of Examiners and takes no part in the formal assessment of your work but is responsible for overseeing the conduct of the examination and for communicating information to you. Note that neither you nor your College Tutor is allowed to communicate directly with the Chair of the FHS Examination or any members of the Examination Board – such communications should go via your Senior Tutor or the Director of Undergraduate Teaching.

Three External Examiners, each from a different UK university, are appointed to provide external monitoring of the examination process and to help ensure that there is comparability between the standards used at different institutions. Membership of the Board of FHS Examiners is detailed in the FHS Examination Conventions on WebLearn. Students are strictly prohibited from contacting External Examiners directly. If you are unhappy with an aspect of your assessment you may make a complaint or appeal (see Sections G.4, G.5 and G.6).

### D.2 Feedback on learning and assessment

In preparation for your written examination papers, your College Tutor may set you a number of 3-hour papers that you sit in College, usually at the beginning of each term, called Collections. These papers usually relate to the work you have done in the previous term and are set in the style of mock examination papers. They are usually marked by your Tutor or another specialist drawn from the departments. These papers provide you with the opportunity to consolidate your understanding of the previous term’s work and to practise writing under exam-style conditions. Collections are entirely College-based and are intended to allow you to assess your progress using the type of question papers you will see in the University examinations: they are not taken into consideration in your Finals grades. The writing practice gained is also important because if your handwriting is not considered legible you may have to pay to have your Finals scripts typed. You should certainly try to improve the legibility of your writing if it receives unfavourable comment from your Tutors.
Copies of past examination papers are available through Oxford Examination Papers Online (OXAM). Because the course content changes over time, it is likely that the most recent papers will be the most useful. OXAM is an independently run service and any questions regarding exam papers should be addressed directly to the contact found on their homepage. Exemplar answers to past examination questions produced by students are made available on WebLearn, in the FHS Examinations area, together with outline answers to past papers.

Your tutorial work will be of great assistance to you when you come to prepare for Finals, however, the purpose of the tutorial is not explicitly to prepare you for exams and it is not formally assessed as part of your Finals.

D.3 Examination Conventions

Examination conventions are the formal record of the specific assessment standards for the course or courses to which they apply. They set out how your examined work will be marked and how the resulting marks will be used to arrive at a final result and classification of your award. They include information on: marking scales, marking and classification criteria, scaling of marks, progression, resits, use of viva voce examinations, penalties for late submission, and penalties for over-length work.

The definitive version of the Examination Conventions will be made available by the end of Hilary Term on WebLearn. All students will be notified of their availability by the Teaching Administration Team via email. The full document is available via a link on the Biological Sciences Home page on WebLearn - here we give you a few key details.

D.4 Good academic practice and avoiding plagiarism

The University definition of plagiarism:

Plagiarism is presenting someone else’s work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.

Plagiarism may be intentional or reckless, or unintentional. Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence.²

Please be aware that any case of plagiarism is taken very seriously by both your Examiners and the Proctors, and severe penalties may be imposed on any student who attempts to deliberately plagiarize the work of others whilst undertaking any aspect of the Biology degree course. Please do exercise due care and judgement, and follow good practice as indicated within course documentation material, including the Examination Conventions on WebLearn. If in any doubt regarding this matter, do not hesitate to ask your College Tutor, Project Supervisor or Course Assignment Advisor. As a rule of thumb, ensure that in any written work, passages quoted or closely paraphrased from another person’s work are identified as quotations or paraphrases and the source of this material and other sources used are clearly acknowledged in the text and the bibliography. You should be aware that Turnitin software is available for detecting plagiarism – you might want to discuss this with your College Tutor.

² www.ox.ac.uk/students/academic/guidance/skills/plagiarism
Examples of plagiarism might include:
1. Misusing electronic literature by cutting and pasting sentences, paragraphs, etc. without including quotes and attribution.
2. Copying, in whole or part, previous student essays.
3. Copying another student’s practical work (except where the sharing of data is explicitly allowed).

D.5 Procedures for assessment of written papers
(a) Entering for University examinations
It is important to note that you MUST register for your examination papers in advance. Please refer to the Oxford Students website for further information regarding examination entry and alternative examination arrangements.³

(b) Examination dates
In the second year, examinations normally take place in Week 1 of Trinity Term 2. In the third year, examinations normally start in Week 5 of Trinity Term 3. The actual dates and times are not known at this stage – you will be notified of them by the Chair of Examiners in due course. Further information about examination timetabling is available on the Oxford Students website.⁴

(c) Sitting your examinations
Information on (a) the standards of conduct expected in examinations and (b) what to do if you would like examiners to be aware of any factors that may have affected your performance before or during an examination (such as illness, accident or bereavement) are available on the Oxford Students website.⁵

Final Honour School examinations are usually held at the Examination Schools, however, these arrangements may differ for candidates with special needs. Note that all candidates are required to wear sub-fusc in examinations.

Questions for Finals papers are requested from all of the academics teaching on each Option, and draft papers are moderated by all Examiners, including the Externals. All work is marked independently (blind double-marked), by the Option Examiner and their team of subject Assessors, using the published Marking Schemes. Further information regarding the marking process is detailed in the FHS Examination Conventions on WebLearn (see Section D.3).

(d) Use of calculators in written papers
For some examination papers, calculators will be helpful and we highly recommend that you bring one to each examination. The rules relating to permissible calculators are in the Examination Conventions on WebLearn. Whichever calculator you decide to use you should make sure that you have learnt to use it before entering the examination. You should also carry either a spare battery or a spare calculator (or both).

³ http://www.ox.ac.uk/students/academic/exams
⁴ http://www.ox.ac.uk/students/academic/exams/timetables
⁵ www.ox.ac.uk/students/academic/exams/guidance
(e) Marking scheme for written papers

Our marking schemes provide a written description of the qualities expected for various grades of answer in terms of content, structure, and understanding displayed. The written descriptors are then converted into numerical scores that the answers represent. You should familiarise yourself with these schemes as they form the only basis for the assessment of your written examinations.

Marking schemes for each exam paper are updated every year – the marking schemes for your examinations will be sent to you by the Chair of FHS Examiners by the end of Michaelmas Term. Previous schemes are available for reference on the FHS Examination section of WebLearn.

(f) Standard classification scale

The University requires all Examiners in all First and Second Public Examinations to express agreed final marks for individual papers (including those for formally assessed coursework) in the following form on the basis of the following class boundaries:

- 70 – 100  First Class
- 60 – 69  Upper Second Class
- 50 – 59  Lower Second Class
- 40 – 49  Third Class
- 30 – 39  Pass
- 0 – 29  Fail

**N.B. The precise class boundaries may be varied at the discretion of the Examiners.**

D.6 Procedures for assessment of practical work

You must make sure that you don’t lose your practical portfolio – it may need to be submitted to the Examiners during Trinity Term of your third year.

You are also advised to carefully read the sections from the Examination Conventions for FHS concerning practical coursework, particularly,

- Section 5. Examination of Practical Coursework undertaken in Part I;
- Section 6. Rules for Progression from Part I to Part II;
- Section 9. Penalties that may apply to unsatisfactory coursework and late submission.

(a) Final assessment of practical work by the Examiners

The final assessment of your work is undertaken at the end of Trinity Term of Year 2 by the Board of Examiners. It is the Examiners’ practice to regard those practical portfolios whose components have all been graded satisfactory or better by the Practical Demonstrators to have automatically passed the practical requirement of the FHS examination: you will be notified of the result by the start of Michaelmas Term of Year 3.

If you have an unsatisfactory aggregate of attendance and/or write-ups, then the Examiners will formally re-assess your work to decide your grade (note that only duly appointed
Examiners have the power to fail a candidate on their practical work. Such candidates will be required to submit their entire practical portfolio to the Chair of FHS Examiners for re-assessment and will be notified that submission is required via a list posted by the day of the first written paper in Trinity Term of Year 3. If after this formal re-examination the work is still considered to be unsatisfactory the candidate will be deemed to have failed the practical component and their final classification may be affected.

(b) Assessment of practical work by the Practical Demonstrators

Your work is initially assessed by the Practical Demonstrators, and graded as excellent (E), satisfactory (S) or not satisfactory (NS). Organisers of practicals have differing approaches to the timing of marking work: some may request this is handed in the same day; others at the end of the week; while some will require it sometime after the end of their practical course. Whenever it is required, you should be prepared to submit your completed write-ups for the individual practical course, handing them in to the designated hand-in box. If you fail to hand in work when requested, then a NS mark will be recorded unless you have previously supplied a medical certificate or note from your College Senior Tutor (as detailed in Section C.2 (c)(i)).

(c) Auditing of your practical work by the Teaching Administration

Numerous people are involved in the assessment process and some errors in transferring the many hundreds of marks are probably inevitable. To counter this, and to ensure that all of your practical work has been marked, we undertake an administrative check of your marks. We therefore require you to submit all of the practical work undertaken in the second year at the beginning of Trinity Term 2.

Submission will take place in the Modular Biology Teaching Laboratory on Mansfield Road and your work must be placed in the hand-in box provided. The deadline for submission is 8.30am – 4.00pm on Thursday and Friday, Week 1 Trinity Term. We will write to you to remind you of this nearer the time.

D.7 Exam results

You are able to access your results information electronically via Student Self Service, details of which will be provided by your College at the appropriate time. The Academic and Assessment Results page within Student Self Service details all of your assessment results and the result for the year (if applicable). For more information regarding examinations, including examination entry and where to find examination dates, and to gain access to Student Self Service please visit the Student Gateway.

It will not normally be possible to get marks for second year examinations to you during TT2 because third year finals marking will take priority at this time. You must accept this and not pester your College Tutor or others to try and obtain marks ahead of time. Marks will be released via Student Self Service at the earliest time that they can be.

Your marks and overall ranking are sent to your College and your Tutor will discuss your performance with you, usually at the start of MT3.
D.8 Examiners and Examiners’ Reports

The Examiners and the External Examiners both produce reports on the examination that are discussed both at Steering Committee and at Divisional level. The reports are posted on WebLearn (normally during the following Hilary Term). The reports contain useful information about what the Examiners were looking for in answer to particular questions, summary statistics and indications of any errors made by substantial proportions of the cohort.

The External Examiners for 2017-18 are:
Dr Julia Davies – Dept of Plant Sciences, University of Cambridge
Dr Alison Dunn – Faculty of Biological Sciences, University of Leeds
Professor Jon Slate – Department of Animal & Plant Sciences, University of Sheffield

Students are strictly prohibited from contacting external examiners directly. If you are unhappy with an aspect of your assessment you may make a complaint or appeal (see Sections G.4, G.5 and G.6).

D.9 Prizes

Each year the Biological Sciences FHS Examiners award prizes to students who have excelled in various aspects of the examination. There are three named prizes:

(a) Gibbs Prize in Biological Sciences

The Gibbs prize, established under the will of Mr. Charles Day Dowling Gibbs, is awarded to the candidate offering the best papers in the Final Honour School. The examiners have the power to award up to two further Gibbs prizes for meritorious work in Biological Sciences.

(b) The Harley Prize of the New Phytologist Trust

The prize, established in memory of Prof. J.L. Harley, is awarded for the best research project dissertation in the field of Plant Sciences

(c) The Southern Field Studies Prize

The prize, created from a donation by Dr H.N. Southern, former Senior Research Officer in Zoology, is awarded annually to the candidate who has shown the greatest aptitude for Zoological field studies in the Final Honour School and/or in independent project work.
E. SKILLS AND LEARNING DEVELOPMENT

E.1 Academic progress

The Departments provide feedback on your progress via practical assessments and examinations but are not responsible for monitoring your progress. Your College will monitor your performance in tutorials, via tutorial reports submitted by each person who has tutored you (through the OxCORT reporting system), and may monitor your overall academic progress in College Collections. However, you are largely responsible for monitoring your own academic progress as an independent learner.

If you are unclear about any aspect of your formal teaching it is perfectly acceptable to approach the lecturer/demonstrator with your question after the lecture/during the practical.

E.2 Learning development and skills

(a) Intended learning outcomes of the degree course

By the end of the degree course you should have achieved the following:

(i) Knowledge and understanding

- acquired an understanding of the conceptual and practical aspects of modern biology and its interdisciplinary nature;
- appreciated the diversity of life on earth, the processes by which it has evolved and currently functions, and the risks for its future survival.

(ii) Intellectual skills

- developed a facility for independent learning from a range of sources, including critical analysis of the original literature, and a capacity for independent thought;
- developed ability to recognise, categorise and classify living and fossil material from all types of organisms using modern, scientifically rigorous, techniques;
- developed conceptual and practical skills to define, analyse and solve problems;
- had experience of critically researching and analysing research literature;
- appreciated and be practised in the numerical skills appropriate to modern biology;
- understood the principles of experimental design and safe use of materials and equipment in a laboratory or field context.

(iii) Practical skills

- gained hands-on experience in a range of practical skills and methodologies, from cellular and molecular techniques to behavioural observations and ecological assessment and monitoring systems in aquatic and terrestrial habitats;
- acquired skills in data handling, experimental design and data analysis;
- acquired an appreciation of the diversity of life and how it may be managed, curated or conserved;
- completed an independent project of original research, involving a literature review and experimental design, culminating in a dissertation;
- received training and understood the importance of good laboratory practice.
(iv) Numeracy, communication and Information Technology skills
- developed skills in logical thinking and problem-solving;
- learned to précis large bodies of information, and present reasoned arguments both verbally and in writing, targeted to a specific audience;
- gained experience in designing and undertaking a research project;
- gained an understanding and working knowledge of coding techniques in R;
- acquired computer skills enabling you to present work to a high standard;
- acquired skills in general & technical communication, through verbal & written reports, including PowerPoint presentations.

(v) Interpersonal and teamwork skills
- experienced a range of different learning environments that include team presentations;
- had the opportunity to debate current topical issues;
- had the opportunity to participate in a wide range of extra-curricular activities to stimulate personal development.

(vi) Self-management and professional development skills
- gained extensive experience in independent study;
- developed time management skills in both study and laboratory contexts;
- developed an effective approach to study.
E.3 Opportunities for skills training and development

A wide range of information and training materials are available to help you develop your academic skills – including time management, research and library skills, referencing, revision skills and academic writing – through the Oxford Students website. In addition to this, on their website the Oxford University Student Union (OUSU) provide a selection of pages dedicated to developing your study skills including study skills tips and exams revision tips. And if English is not your first language and you wish to improve your academic English skills you might find it helpful to take a look at resources available through the University Language Centre.

(a) Seminar series

Most departments in the University, including Plant Sciences and Zoology, have a regular series of seminars that are advertised on the University Lecture Lists website. It is also possible to link directly to the Plant Sciences and Zoology seminar notices via WebLearn. You are entitled (and, indeed, strongly recommended) to attend any of these lectures and by your 3rd year you will be surprised at how much you can follow and how stimulating they can be. Some of the leading researchers in the world will be presenting their most recent results and the cumulative experience of their career. These can be some of the most stimulating and challenging lectures you will experience in Oxford and you are strongly urged to make the most of the opportunity. In addition, you will regularly see posters for lunchtime seminars on various notice boards, often associated with particular research groups. You are allowed to attend any of these meetings and some may, for example, be particularly relevant for your project work.

(b) Oxford University Careers Service

The Careers Service provide a range of career-focused services, programmes and activities. They offer a free and impartial service, relevant careers information and services, and they work with alumni for life.

The Careers Service regularly advertise events and opportunities that might be of particular interest to biologists. From time to time they also offer individual career appointments in the departments for second and third year students, however any student might make an appointment directly with the Careers Service via their website. These are advertised to students via the Biological Sciences Weekly Circular. This coming academic year we also hope to offer workshops delivered by the Careers Service for second and third year students, which will be advertised via the Weekly Circular.

Visit the Careers Service website and log into CareerConnect to book individual careers appointments, to find information regarding current employment and internship opportunities, to find out about upcoming events and other opportunities that might be of interest.

The Careers Service is located at 56 Banbury Road and is open between 9am-5pm Monday-Friday. General enquiries can be made via reception@careers.ox.ac.uk or 01865 274646.

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http://www.ox.ac.uk/students/academic/guidance/skills
F. STUDENT REPRESENTATION, EVALUATION AND FEEDBACK

F.1 Department representation and degree course governance

The course is organised through a series of Committees, although day to day running of the course is overseen by the Teaching Administration Team. The primary inter-departmental Committee is the Biological Sciences Steering Committee: the Joint Consultative Committee, the Exam Sub-Committee and the Teachers’ Forum all feed into this Committee. Minutes of these meetings are available on WebLearn. At a higher level, Biological Sciences Steering Committee is responsible to the Academic Committee of MPLS Division and ultimately to the Education Policy Committee of the University.

Students have an opportunity to make their views known at a number of different levels, either directly or through their student representatives. Your views are welcome and can be raised via your student representatives, your feedback returns, your tutor, Theme/Option Organisers or via the Teaching Administration.

(a) Biological Sciences Steering Committee

The Biological Sciences Steering Committee is responsible for all matters concerning teaching and examining; formal approval of the Biological Sciences curriculum including all options/themes/practicals; formal approval of changes to syllabus, course design and delivery; monitoring of the results of in-house termly and annual student feedback and pursuing necessary responses; consideration of teaching matters referred for departmental consideration by the supervisory board or other University committees. The list of Committee responsibilities is provided in the Steering Committee Standing Orders on WebLearn. Membership includes key staff members responsible for the organisation and development of the degree course. The Committee meets twice per term and it reports to the MPLS Divisional Board via the Chair.

The Committee reports to the MPLS Divisional Board via the Chair. It consults the faculty and college tutors on all substantial matters of policy, either at formal meetings or by electronic means. Minutes of its meetings are published to all members of the University via WebLearn.

The two second year Joint Consultative Committee representatives are invited to attend Biological Sciences Steering Committee meetings to provide a student perspective.

(b) Biological Sciences Joint Consultative Committee

The Biological Sciences Joint Consultative Committee (JCC) considers changes to the syllabus, general aspects of examinations (including Examiners’ reports), teaching arrangements, library facilities and similar matters. Much of the business of the Committee relates to issues raised by students. Student representatives provide a regular channel of communication between the Biological Sciences Steering Committee and the Biological Sciences undergraduates. Membership includes two undergraduate representatives from each cohort of students and five staff members who are involved in the organisation and development of the degree. The JCC meets once per term, usually in 4th Week.

Elections to the Committee are held annually in Michaelmas Term. We hope that students will participate fully in both the process of election to the JCC and in channelling through to their
elected representatives any course-related matters that ought to be discussed. A list of JCC representatives and contact email addresses, and minutes of JCC meetings are available on WebLearn.

Student representatives are encouraged to take part in the work of a number of other important committees, including the Biosciences & Environmental Sciences Library Advisory Committee, which advises the Director of the University Library Services on library and electronic resources provision, and the **MPLS Division Undergraduate Joint Consultative Forum** (UJCF). The Divisional UJCF aims to complement the departmental JCCs by providing a forum for informal student input and feedback on issues of concern to undergraduate students from all departments in the Division. A junior member of the JCC will sit on the Divisional UJCF, which meets once per term.

**(c) Biological Sciences Exam Sub-Committee**

The Exam Sub-Committee is responsible for oversight of all matters concerning and arising from the Preliminary Examination in Biological Sciences and the Honour School Examination of Biological Sciences, which includes the nomination of examiners, the consideration of internal and external examiners’ reports, and to provide oversight, guidance and advice to Boards of Examiners.

As a sub-committee of the Biological Sciences Steering Committee, all matters discussed and all recommendations made are reviewed by the Steering Committee. Membership includes members of the Preliminary Examination and Final Honour School Board of Examiners, members of the Teaching Administration and other academic members of the Departments of Plant Sciences and Zoology. The Committee meets once per term, shortly before the beginning of Full Term.

**(d) Biological Sciences Teachers’ Forum**

The Teachers Forum provides an opportunity for any member of Biology teaching staff to raise for discussion any aspect of undergraduate teaching and also provides a means of sharing information with teaching staff. It acts as an advisory body to the Biological Sciences Steering Committee. Membership is limited to all lecturers, all college tutors and academic administration, including the head of teaching lab. The Forum meets once per term.

**N.B. Steering Committee retains its role as the executive body for the course – the teaching forum provides opinion on issues but does not to take binding decisions.**

**F.2 Division and University representation**

The **Mathematical, Physical and Life Sciences Division** (MPLS Division) is one of four Divisions in the University (the others are Humanities, Medical Sciences and Social Sciences). The MPLS Division consists of 13 departments, including Plant Sciences and Zoology. All undergraduate matters are overseen by Divisional Committees, on which we are fully represented.

The MPLS Division:

- Provides leadership for the natural and physical sciences at Oxford, and acts as an advocate within and outside of the University;
• Supports and advises the 13 departments, and interdisciplinary units that cross the boundaries between departments;
• Manages a range of operational functions that support departmental activity, including finance, personnel, and skills training for graduate students.

Student representatives sitting on the Divisional Board are selected through a process organised by the Oxford University Student Union (OUSU). Details can be found on the OUSU website along with information about student representation at the University level.

Education Policy Committee is the University Committee that oversees all aspects of teaching within the Collegiate University. Major changes to the degree course structure have to be approved by this body.

F.3 Opportunities to provide evaluation and feedback

It is mandatory that as part of your degree course you complete anonymous course questionnaires at various stages during your degree. This is normally done via WebLearn. These questionnaire results are shared with Theme/Option Organisers and are discussed with the lecturers involved in running each course. Each Theme/Option Organiser has to provide a summary to Steering Committee, both of the perceived strengths and weaknesses of their course and of the actions proposed in response to the comments received. Steering Committee will decide which of the proposals to implement or modify, and will disseminate these in the Steering Committee minutes and on WebLearn.

Your comments are taken very seriously and in the past substantial changes to the structure and staffing of the course have resulted from feedback received from undergraduates. The course is kept under continuous review as part of the University’s system of internal quality assurance. We take great pride in trying to provide the best possible degree course for our undergraduates. This process of on-going feedback and review by students and staff is a vitally important part of our work. To give an idea of how each course is being received by the student cohort, we publish summaries of the quantitative data from each end of course surveys. These can be found on the Biology Teaching WebLearn site under the Student Feedback Summaries link.

(a) University wide feedback

Students on full-time and part-time matriculated courses are surveyed once per year on all aspects of their course (learning, living, pastoral support, college) through the Student Barometer. Previous results can be viewed by students, staff and the general public at www.ox.ac.uk/students/life/student-engagement.

Final year undergraduate students are surveyed instead through the National Student Survey. Results from previous NSS can be found at www.unistats.com.

Results of both the Student Barometer and the NSS are monitored by the Biological Sciences Steering Committee and the Joint Consultative Committee. If necessary, action is taken in response to the feedback received.

7 https://weblearn.ox.ac.uk/x/8vZmJ
G. STUDENT LIFE AND SUPPORT

G.1 Who to contact for help

The primary responsibility for pastoral support lies with your College and its support structures. Every college has their own systems of support for students, please refer to your College handbook or website for more information on who to contact and what support is available through your college.

If you don’t feel able to talk to your College Tutor about a particular issue take it to someone else in your College – your Junior Common Room Officers, College Administrator, the Senior Tutor or Dean, the Welfare Officer, or even the Head of College if your difficulty is serious. Many colleges have feedback questionnaires at the end of each term through which you can report problems. Your College will give you personal support – just make sure you talk to someone.

Support is also available more widely in the University from the Oxford Students website, including in relation to mental and physical health and disability. The University also appoints two Proctors as Senior Officers of the University whose duties include:

- being available if students wish to consult them in confidence for help, information, or advice about University matters or any matters outside the sphere of their College Advisors.
- ensuring that regulations designed to maintain the orderly working of the University are implemented (this means that they play a major part in seeing that the University examinations are conducted properly and fairly, and enforcing student discipline);
- investigating any complaints by any members of the University (the Proctors have the power to summon any member of the University to help in their enquiries).

The Proctors can be contacted on Oxford (2)70090 or by email: proctors.office@proctors.ox.ac.uk. The Proctors produce a useful booklet, The University Student Handbook, which gives general information notably on health and welfare, personal safety and security and the University’s academic support services.

At a departmental level, you can talk to a Theme/Option Organiser about problems relating to specific areas of the course; for course-related administrative issues or for issues involving the organisation of examinations contact the Teaching Administration Team. For more serious and/or confidential issues you should contact the Director of Undergraduate Teaching. Contact details are provided in Section A.3 (a).

It is not at all unusual for students to experience a difficulty of one kind or another during their time in Oxford – some aspects of the course may be difficult to understand; a personal relationship might break down; a health problem might arise; domestic or financial difficulties might crop up. Such pressures and difficulties may give rise to feelings of inadequacy, compounded by the impression that everyone else is coping better. There are a number of ways to handle such situations: establish good work habits; from the start of the first term of the first year, work systematically and regularly on your studies, and don’t rely on last-minute panics to get you out of difficulties; take time and effort to cultivate good friendships, and get used to the idea of discussing both academic work and your other interests with your fellow
students; regular meals, physical exercise and sleep will all help; talk to somebody. Try to remind yourself that you are not the only person in this position. Learning to cope and learning how and when to seek advice when you need it is part of the natural preparation for your future.

G.2 What to do if you are ill

If illness seriously affects your academic work, please try not to worry but make sure that your tutors know the facts. If you don’t feel able to confide directly in your College Tutor, try to talk to your Senior Tutor or Dean, or explore one of the other avenues available within your College. Help may involve excusing you from tutorials and practicals, suspending your studies for a period, asking the University to give you dispensation from that term’s residence (you are normally required to be resident in Oxford for nine terms to qualify for a BA) or permitting you to go out of residence for a number of terms.

It is essential that any practicals that are missed though medical reasons are formally recorded. Medical certificates are required for absence for medical reasons – these must be given to the Practical Coordinator. Medical information will be treated in the strictest confidence.

Information about any special circumstances (e.g. ill-health) that may have affected your performance before or in an examination may be provided to the examiners. You should, as soon as possible and before the papers are marked, complete the form entitled Factors Affecting Performance in Examinations. It is available from the Examination Guidance section of the University Website. You should speak with your college office about completing an application for Factors affecting performance in examinations. Your College will submit the application to Student Administration at Exam Schools for forwarding to the Chair of Prelims Examiners. Applications submitted to Exam Schools later than 10 am Friday Week 7 of Trinity Term are unlikely to be received in time for consideration by the Board of Prelims Examiners.

Please refer to the Proctors’ and Assessor’s Memorandum Essential Information for Students.

G.3 Disability support

Throughout the course, including planning for examinations, every care is taken to ensure that all students are helped to achieve their full academic potential. If you think that you need additional help with any aspect of your work, due to any level of disability or long-term condition, please do talk to your College in the first instance, or the University Disability Advisory Service directly, as there is plenty of help available to you. This is especially important if examinations need to be sat in college. If, for instance, you have been diagnosed with dyslexia, you may be allowed additional time during examinations provided that your College has made a request to the Proctors, and in good time.

The Disability Advisory Service can be contacted by email at disability@admin.ox.ac.uk or on 01865 (2)80459. They produce guidance for disabled students and applicants as does the Oxford University Students Union (OUSU). Your OUSU Vice-President Welfare & Equal Opportunities can be contacted on 01865 288452, or by email, at vpweo@ousu.ox.ac.uk.
Within the course you can contact the Disability Coordinator for Biological Sciences, Siobhan Organ, or the Disability Lead for Biological Sciences, Prof. Peter Darrah.

Students may also be given permission to record lectures, as a reasonable adjustment on disability-related grounds, provided they agree to comply with the procedures outlined in the ‘Pro-forma for Recording of Lectures’. Further information regarding how to obtain permission to record lectures can be accessed via the University Disability Advisory Service website.

G.4 Complaints and academic appeals within the faculty of Biological Sciences

The University, the Mathematical, Physical and Life Sciences Division and the Biological Sciences faculty all hope that provision made for students at all stages of their course of study will result in no need for complaints (about that provision) or appeals (against the outcomes of any form of assessment).

Where such a need arises, an informal discussion with the person immediately responsible for the issue that you wish to complain about (and who may not be one of the individuals identified below) is often the simplest way to achieve a satisfactory resolution.

Many sources of advice are available from colleges, faculties/departments and bodies like the Counselling Service or the OUSU Student Advice Service, which have extensive experience in advising students. You may wish to take advice from one of those sources before pursuing your complaint.

General areas of concern about provision affecting students as a whole should be raised through Joint Consultative Committees or via student representation on the faculty/department’s committees.

G.5 Complaints

If your concern or complaint relates to teaching or other provision made by the faculty, then you should raise it with Director of Undergraduate Teaching (Peter Darrah). Complaints about departmental facilities should be made to the Departmental administrator (Roni McGowan, Department of Plant Sciences or Niamh McEntee, Department of Zoology). If you feel unable to approach one of those individuals, you may contact the Head of Department (George Ratcliffe, Department of Plant Sciences or Ben Sheldon, Department of Zoology). The officer concerned will attempt to resolve your concern/complaint informally.

If you are dissatisfied with the outcome, you may take your concern further by making a formal complaint to the Proctors under the University Student Complaints Procedure (https://www.ox.ac.uk/students/academic/complaints).

If your concern or complaint relates to teaching or other provision made by your college, you should raise it either with your tutor or with one of the college officers, Senior Tutor, Tutor for Graduates (as appropriate). Your college will also be able to explain how to take your complaint further if you are dissatisfied with the outcome of its consideration.
G.6 Academic appeals

An academic appeal is an appeal against the decision of an academic body (e.g. boards of examiners, transfer and confirmation decisions etc.), on grounds such as procedural error or evidence of bias. There is no right of appeal against academic judgement.

If you have any concerns about your assessment process or outcome it is advisable to discuss these first informally with your subject or college tutor, Senior Tutor, course director, director of studies, supervisor or college or departmental administrator as appropriate. They will be able to explain the assessment process that was undertaken and may be able to address your concerns. Queries must not be raised directly with the examiners.

If you still have concerns you can make a formal appeal to the Proctors who will consider appeals under the University Academic Appeals Procedure.

G.7 Scientific societies

Many of our students are members of or attend events organised by the following societies:

- Oxford Nature Conservation Society: [https://ouncs.org](https://ouncs.org)

There are more than 150 officially recognised clubs and societies at the University. For more information visit the [Oxford Students Website](https://www.oxfordstudents.org).

G.8 Organisations offering additional support

There are several organisations within and outside of the University which exist to help you. These organisations include:

- **OUSU Student Advice Service**, Thomas Hull House – normally open between 10am and 5.30pm on weekdays. Appointments can be made by emailing advice@ousu.org or phoning 01865 (2)88466.
- **Nightline**, 16 Wellington Square – a listening, information and support service run by students, for students. Open 8pm–8am every night in term-time (0th Week to 9th Week), telephone 01865 (2)70270.
- The **University Counselling Service**, 11 Wellington Square – appointments can be made by email: reception@counserv.ox.ac.uk or by phone on 01865 (2)70300.
- **The Samaritans** – phone 01865 722122 or 08457 909090 (24 hour national helpline)

G.9 Policies and regulations

The University has a wide range of policies and regulations that apply to students. These are easily accessible through the A-Z of University regulations, codes of conduct and policies available on the [Oxford Students website](https://www.oxfordstudents.org).
**H. FACILITIES**

**H.1 Social spaces and facilities**

Plant Sciences Common Room, which is located on the ground floor of North Building, provides vending machines for snacks and drinks during Departmental opening hours. In addition to this, fresh tea and coffee are normally available for purchase every week day from 10.30-11.15am and 3.30-4.15pm in the Plant Sciences Common Room.

The Museum of Natural History café opens at 10am and is close by to the Museum Lecture Theatre. A range of drinks and snacks are available for purchase.

*Please note that the consumption of food and drink in lecture theatres and laboratories (including the computing lab) is strictly forbidden.*

**H.2 Libraries, museums and other facilities**

The Radcliffe Science Library provides services to support the teaching and learning needs of the science community at Oxford University. You will receive an introduction to the Library and its facilities at the beginning of Michaelmas Term of your first year.

Biological Sciences at Oxford has some fantastic connections with other parts of the University in and around Oxford that you might choose to visit:

- **The Museum of Natural History** was founded in 1860 as the centre for scientific study at the University of Oxford. The Museum holds internationally significant zoological specimens and is open to visitors throughout the year (entry is free). Most of your second year lectures will take place in the Museum Lecture Theatre.

- The John Krebs Field Station is located to the north of Oxford just outside the village of Wytham. It was initially established in the 1950s and, along with Wytham Woods, forms part of the Wytham Estate, which was bequeathed to the University in 1943. Over the years new facilities have been built to accommodate the various needs of teaching and research, particularly those associated with ecology, ornithology and environmental change. Some second year students will visit the Field Station for laboratory practicals in Michaelmas Term.

- **Wytham Woods** are an area of ancient semi-natural woodland to the west of Oxford. The Woods are owned by the University of Oxford and used for environmental research. Walking permits are available to anyone who wishes to apply. Unless essential work necessitates their closure, the Woods are open every day - gate opening times vary throughout the year.

- **University Botanic Garden** in central Oxford is the oldest botanic garden in the UK and offers a diverse collection of plants that you can visit throughout the year. If you wish to visit just show your University card when you arrive.

- **Harcourt Arboretum** is also open to visitors throughout the year and comprises 130 acres containing the best collection of trees in Oxfordshire. If you wish to visit the Arboretum just show your University card when you arrive.

- **Oxford University Herbaria** are located in the Department of Plant Sciences. The Herbaria comprise two separate collections: the Fielding-Druce Herbarium and the
Daubeny Herbarium. An optional introductory visit to the Herbaria will take place in Hilary Term of your first year.

H.3. Workspace
In the Department of Plant Sciences workspace is available at the back of the Common Room, which is found on the ground floor of North Building. You will also find workspace on the first floor of the South Building (follow signage from Plant Sciences Reception).

Third year students may request access to the quiet reading room in Plant Sciences for quiet study. This is arranged through Roni McGowan (Administrator) – you will be reminded of this and be offered access in TT2. **No food or drink may be consumed in this workspace.**

H.4 Lecture theatres
In the second year the majority of lectures will be conducted in the Museum of Natural History Lecture Theatre, which is on the first floor of the Museum. In the third year the majority of lectures will take place in the Department of Plant Sciences in the Large Lecture Theatre, on the ground floor. All lecture theatres have up-to-date facilities and include hearing induction loops.

H.5 Teaching laboratories
In Michaelmas Term second year lab practicals will take place in our newly refurbished teaching laboratory at the Zoology Field Station in Wytham and in the Plant Sciences Teaching Lab (S207). From Hilary Term lab practicals will mainly take place in a high-specification modular teaching laboratory on Mansfield Road, in the Oxford University Science Area.

H.6 Computing
Computers have become indispensable tools in modern biology and you will encounter them in a wide range of activities. You will be introduced to the use of WebLearn in your first term. Many people bookmark or set up the [Oxford University home page](#) as the default home page for their personal web browser – from here everything else to do with your life at Oxford is available.
(a) Computing in the Departments and Colleges

Please note that access to the computing facilities in the Department of Plant Sciences, as well as some University online resources, requires you to sign on using your Oxford Single-Sign-On (SSO) account. You will have received details about this account from your College on arrival.

Wireless internet, via the Eduroam network,\(^8\) is available in the public areas of the two Departments (in Plant Sciences in the Common Room and outside the lecture theatre).

You will have access to the undergraduate Computing Suite in Plant Sciences during departmental opening hours, when it is not in use for teaching. The Computing Suite is on the first floor of the South Building. The computers in the Suite connect to the Biological Sciences teaching server which runs software for the course, including statistical software and programming tools (R), as well as standard software such as Office and Endnote (see Section H.6 (a) (i)). Printing facilities are also available.

If you encounter any problems with the Computing Suite then please contact IT support via email itsupport@biology.ox.ac.uk. Please note that they can only help you with the facilities provided in the Computing Suite. OU ITS helpdesk and your college IT staff may be able to help you with issues with your personal IT equipment.

The undergraduate teaching server can also be accessed remotely from your college room or elsewhere in the world. Please see Section H.6 (a) (i) and the Zoology Sharepoint Site for further instructions.

Access to some of the University online resources from outside Oxford (in fact anywhere else in the world) requires Virtual Private Network (VPN). For further details please see the OU IT Services VPN guidance.

(i) The Biological Sciences teaching server

To access the teaching server from the Computing Suite in the Department of Plant Sciences you must log onto one of the computers in the Suite using your Oxford Single Sign On and password. Instructions are available on a wall chart in the Computing Suite. You can save your work on the O Drive and you will then be able to access it from other locations by logging onto the teaching server remotely – instructions for gaining remote access to the server are available on the Zoology Sharepoint Site.

When you have finished using the teaching server always remember to log off. N.B. We strongly recommend that you back up your work (e.g. on a memory stick) and not rely solely on the teaching server as a means of storing it.

(b) Oxford University IT Services

Oxford University IT Services provides you with a University email account and offers other optional services.\(^9\) The OU ITS reception, helpdesk and classrooms are at 13 Banbury Road, Oxford, OX2 6NN. The building is open to non-keyholders Mondays to Fridays from 8.30am to 8.30pm in term. Users must register in person or online – you will need your University card with you when registering.

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\(^8\) \url{http://help.it.ox.ac.uk/network/wireless/services/eduroam/index}

\(^9\) \url{www.it.ox.ac.uk/do}
(c) Biological Sciences printing system

Each Biological Sciences student has their own individual printing allowance for occasional printing jobs in the Computing Suite in Plant Sciences. You are currently given a quota of 100 pages per month (set by the Biological Sciences Steering Committee), which is applied at the start of each calendar month. Note that any quota that is not used will not be carried forward to the next month. In exceptional circumstances, additional quota may be granted for specific academic reasons. Please contact IT support (itsupport@biology.ox.ac.uk) to request a temporary increase of your quota, stating the reasons for the need.

Pages stuck in a print jam are not charged by the system. The printers give ample and clear warnings when the toner is low so refunds will not be given if printing quality is lower than expected due to toner not having been replaced. Additional toner and paper supplies for the printer are held by IT support (itsupport@biology.ox.ac.uk).

(d) Rules

Please note that in using University computing facilities you will be bound by the University’s rules for Computer Use and Information Technology. Details of these rules can be found on the Oxford University IT website and in the University Student Handbook, a copy of which you should have received from your College at the beginning of the year.

H.7 Safety

We have a very positive attitude towards safety – your safety as well as the safety of those around you – and it is your duty to follow all requirements and advice. Here are a few rules and guidelines:

1. No food or drink is allowed in any of the laboratories. The same applies to the lecture theatres with the exception that bottled water is permitted. Smoking is not allowed in any University building;
2. You will not be allowed to work in a laboratory unless you are wearing a lab coat. You will also be required to wear safety glasses and closed toe shoes. Each student is provided with a storage tray in which you can keep your items in between practicals and a bag to use when transporting your lab coat outside of the laboratory;
3. Before leaving the laboratory you should always remove your lab coat and gloves, and wash and dry your hands. Lab coats are not permitted to leave the laboratory outside of the carrying bag you are provided with (or similar);
4. Inform a member of teaching staff or a laboratory technician immediately if you have an accident, breakage or spillage. This is absolutely nothing to be ashamed of – accidents happen – but it is important that you take appropriate action and inform a member of staff, so that they can assess whether the accident needs to be recorded in a minor incident book, and so that replacement equipment can be obtained. Similarly, if you feel unwell at any time during a practical, inform a member of staff so that they can make appropriate arrangements for you;
5. If you have any allergies or intolerances (e.g. an allergy to feathers, fungi, etc.) that you think might affect your participation in a particular practical or in fieldwork please inform the Zoology Departmental Safety Officer (neil.carveth@zoo.ox.ac.uk) in confidence ahead of time so suitable arrangements or alternatives can be agreed;
6. You are not permitted to take any items away from the teaching lab unless advised or permitted by a member of teaching staff or a laboratory technician;
7. Tetanus is common in the Oxford area, so please ensure that you are adequately protected and take all appropriate precautions. Those who participate in outdoor practicals or any other fieldwork, including the first year fieldcourse in Orielton, should ensure that their tetanus vaccinations are up to date. If you are in any doubt, please contact your College Doctor;
8. No undergraduate is allowed in a laboratory unsupervised. The only exception is for low-risk activities such as computing (during Departmental opening hours). Outside of Departmental opening hours undergraduates must not be in a computer laboratory unsupervised;
9. Access to either Department outside normal departmental working hours is restricted and requires card access. If this is necessary you will require special permission and you will be informed of additional safety regulations that apply. Normal departmental working hours are given in Section A.3 (g);
10. AT ALL TIMES, SAFETY MUST BE PARAMOUNT.

Please follow all instructions at all times.
I. LIFE BEYOND THE FHS

Many students visit countries overseas during their long vacations and fieldwork carried out on such a trip may form part of the FHS Project. If you are seeking opportunities to carry out research or internships during the long vacation you might find it helpful to refer to the document ‘Funding opportunities for undergraduate student research’, which is available on WebLearn. We also circulate opportunities via the weekly term-time Biology Weekly Circular from the Teaching Administration team.

Further information on job vacancies, work experience and internship opportunities can be accessed via the University Careers Service, who advertise upcoming opportunities and careers events that are taking place across the University, as well as providing advisory sessions to students that can be booked via their website. Students may also learn about the careers alumni have gone into on the Careers Service website.

I.1 Supplementary Subjects

It is possible to attend and be examined in Supplementary subjects in the academic year preceding that in which you take the Part II written examinations of the Final Honour School. At present supplementary subjects are as follows but these are subject to change.

(a) Chemical Pharmacology

The Chemical Pharmacology course will provide students with a flavour of how the interplay between chemistry and pharmacology has contributed to the development of drugs. Such drugs have played a major role in advancing our basic understanding of basic biology and certain ones have proven revolutionary in the treatments of some diseases.10

(b) History & Philosophy of Science

This course gives you the opportunity of standing back from the work of the laboratory and considering, in general terms, the history of science and the nature and methods of the scientific enterprise. It offers an introduction to styles of thought and analysis not encountered in normal scientific studies, and a training in writing essays with a different structure and purpose.11

(c) Quantum Chemistry

Quantum mechanics forms the conceptual foundation of much of chemistry, and it underpins a wide range of other topics including atomic structure, valence, optical spectroscopy, magnetic resonance, reaction dynamics, and statistical mechanics. It is also an exciting and fun subject in its own right. This course is designed to introduce the techniques of molecular quantum mechanics at a level at which you can actually set up and solve problems relating to the structure and properties of molecules.12

Please consult your College Tutor before enrolling on any of these courses.

10 http://course.chem.ox.ac.uk/chemical-pharmacology-mt.aspx
11 http://course.chem.ox.ac.uk/history-and-philosophy-of-science-mt.aspx
12 http://course.chem.ox.ac.uk/quantum-chemistry-mt.aspx
J. PROJECT AND COURSE ASSIGNMENTS

As part of your Honours course you must undertake a Research Project and two Course Assignments (one written essay and one oral presentation). These are a formal part of the FHS Examination (see Section D.1) and are fully described in a separate booklet (FHS Projects and Course Assignments Handbook), which is published and given to you in Hilary Term of your second year. Only a brief overview of these assignments is provided below.

You have considerable freedom to choose appropriate topics for your Project and Course Assignments. Any subject within the areas covered or touched upon in the second year themes or third year options may be suitable provided you can find a Supervisor/Academic Advisor who is willing to help you. Note that the Project and the two Course Assignment topics are expected to be significantly different from one another. It is strongly recommended that you have a different Supervisor/Advisor for your Project and for each of your Course Assignments. Do also check that your topics have non-overlapping bibliographies – if a significant number of the appropriate citations are found in more than one submission, then the areas are almost certainly not sufficiently distinct.
**J.1 Project**

The Project submission date is by noon, Monday, Week 2, HT3.

The FHS Honours Project is probably the most important, exciting and original part of FHS Biological Sciences at Oxford. It also takes the most time, but this is reflected in the weighting of the Project, which represents 15% of the total Finals mark. You should normally begin the practical work in Trinity Term 2, however this is not always the case and some lab and field work, especially if outside Oxford, may require work in the vacation instead. Note that some work is possible outside of Oxford during Trinity Term (see Section J.1 (e)).

Your College Tutor should be consulted early in MT2 to narrow down subject areas, and to identify potential Supervisors. Don’t leave it too late – most students will have sorted out a Supervisor by Christmas in the second year; any later and you run the risk of your chosen field being unavailable, since many Supervisors become fully booked rapidly – note that each academic can only be expected to supervise two or three undergraduates.

The aim of the Project is to test your ability to plan, undertake and report a piece of original research. Almost all Projects involve the collection of experimental data, however, on rare occasions, a Project may be entirely library-based. In such cases, the work should involve an original analysis of published information, or a novel interpretation or re-analysis of experimental data collated from published records, or possibly a modelling approach. This type of Project should not be a straightforward literature review, as this would be deemed too similar to the Course Assignments (see Section J.2 of this Handbook). You are permitted to work with other people on your Project but you cannot use exactly the same data, nor write up a joint Project. Please note that undergraduate Projects are not expected to yield publishable results although some do: however, provided your Project is well-designed and well-conducted then it can achieve first class marks – positive results are not necessary.

It’s up to you to choose a Project topic and an Academic Supervisor to go with it (or vice versa). Your Project may be entirely your own idea but most projects emerge from discussions with a potential Supervisor (who must have been approved by the Director of Undergraduate Teaching). All lecturers, readers and professors can be approached about Projects, as well as some of our post-docs. Postgraduate research students may be very willing and able to help you, but they can’t officially supervise. The research interests of both Plant Sciences and Zoology staff can be found on the Departmental websites, and a database of approved Supervisors together with their research interests is available on the WebLearn FHS Examinations site. If a potential Supervisor is not on this list, contact the Biology Teaching Administration Team.

Note that for Projects submitted in 2018-19, your Supervisor will also be asked to act as an Assessor. We recommend that you and your Supervisor discuss the following points at an early stage:

- Any conflicts of interest? Should the Supervisor recommend that someone else be an Assessor (for example, if the Supervisor is the candidate’s College Tutor);
- That the Supervisor’s role continues up to and including submission of a first full draft sent to the Supervisor for comments, but not beyond.
Projects from 2011 are available electronically via the Projects area of the WebLearn FHS Examinations site. Those projects which received particular acclaim by the Examiners are marked with ‘1st class’ to give you an idea of what ideally you should be aiming for.

(a) Project registration

You must submit a Project Registration Form with the title of your Project, along with the name and email address of the Supervisor to the Biology Teaching Administration Team as soon as you can, and no later than noon on Friday week 8, HT. Any change to topic or Supervisor should be reported to the Biology Teaching Administration Team as soon as possible. Experimental work should normally be completed by the start of MT3, with the remainder of MT3 being used to write up the Project. Occasionally, students use some of their summer vacation at the end of the 2nd year to carry out the practical component of their Project. Before planning to do this, consult your Project Supervisor and your College Tutor.

It is vitally important that the appropriate safety procedures for each Project is discussed by student and Supervisor BEFORE any work on the Project is undertaken (see below).

(b) Project safety and essential documentation

There are a lot of regulations to do with health and safety, which all members of the Departments must comply with. This section details the important safety information that you need to be familiar with and describes the various forms that must be completed and approved before you can start work on your Project. This means, if you intend to start your practical work straight after exams at the beginning of TT2, you will need to have received all appropriate approvals before Easter.

Safety is extremely important throughout the undergraduate course. For each lab practical or field class you have done so far, someone else will have carried out a risk assessment and you will have been told about any precautions identified as necessary to work safely. This is relatively straightforward since one assessment covers all students in the class.

Project safety is clearly more complicated as each Project is different, so a separate risk assessment needs to be completed for each Project – and you need to be involved in the process. Your assessment must be carried out jointly by you and your Project Supervisor, and recorded on your Safety Registration Form. Please remember that you cannot complete this form by yourself since you need information about potential hazards from your Project Supervisor, as well as guidance about how serious the risks involved are likely to be, and what precautions you need to take. Your Supervisor is responsible for your safety during the Project whether it is done in the lab, or in the field, or both – and this responsibility includes carrying out the risk assessment exercise with you.
Note that you must complete and receive approval of all relevant pre-Project paperwork before you start your Project practical work.

(i) Checklist of essential pre-Project paperwork

Before you begin your Project work it is essential that you have handed in:

- *Project Registration Form* – ALL students must complete;
- *Safety Registration Form* – ALL students must complete;
- *UK Fieldwork Risk Assessment Form* – if you are carrying out fieldwork in the UK;
- *Overseas Fieldwork Risk Assessment Form* – if you are carrying out fieldwork overseas (i.e. not in the UK);
- *Overseas Travel Risk Assessment Form* (not involving fieldwork) – if you are carrying out non field-based Project work overseas (i.e. not in the UK);
- *Animal Welfare Assessment Form* – if your Project involves, or potentially has an impact on, vertebrates or cephalopods;
- *Human Ethic (CUREC) forms* – if your Project involves human participants;
- *Memorandum of Understanding (MOU) Form* – if you are being partially supervised by an institution outside of the University of Oxford, in the UK or overseas.

Details of all of the forms listed above are provided in Section J.1 (b) (iii).

**If the relevant forms have not been completed and authorised you cannot start your Project.** Please note that poorly completed forms take longer to process and may cause delays to your Project start date. We recommend completing all forms as early as possible.

All forms are available on the WebLearn FHS Examinations site.

(ii) Project safety

Your safety during your Project is of paramount importance. Your Supervisor is responsible for your safety during the Project whether it is done in the lab, or in the field, or both. If you have questions about safety at any time during your Project you should ask your Supervisor in the first instance. If they are not available or they are unable to help, please contact the Safety Officer.

**General Safety rules for laboratory based, fieldwork based and overseas fieldwork**

Regardless of the location of your Project the following rules will apply:

1. No project work can start until a risk assessment has been written and approved;
2. You must receive and understand all relevant local rules and safety policies from the host organisation;
3. You must receive information, training, instruction and supervision from their supervisor and host organisation;
4. You must be provided with and instructed on the correct use of any required personal protective equipment, including the use of respiratory protective equipment;
5. Any accidents during your project should be reported as soon as possible to both your Supervisor and the University of Oxford via the Departmental Safety Officers (neil.carveth@zoo.ox.ac.uk or david.anderson@plants.ox.ac.uk).
**Immunisations**

Any students planning to travel overseas should book an appointment with their college GP in order to discuss any required immunisations and to check their general fitness to travel. Approval to travel will not be granted unless this has taken place. Any recommended immunisations must be administered in time before leaving the country. Some laboratory based placements in the UK may also require immunisations, for example if working with human blood a Hepatitis B vaccination may be appropriate. Your supervisor and the relevant risk assessments will inform you should this be the case. The costs for immunisations can be met by the relevant department as part of your project expenses.

**Additional considerations for overseas work**

**Foreign and Commonwealth Office (FCO) travel advice for overseas travel**

Before deciding on a project based overseas you should first check for any travel advice on the FCO website. Any travel to countries or regions where the FCO advice is against all but essential travel is put through a more rigorous approval process involving the University Safety Office. As undergraduates, it is likely that any such travel would not be approved so do not book any flights before having gained approval. If you are considering a project based in or near one of these countries or regions please contact the Safety Officer in your Supervisor’s department at the very start of the process for assistance (see Section J.1 (b) (ii)).

**Insurance**

All students travelling overseas are required to have suitable travel insurance arrangements in place. Anyone using their own personal travel insurance should make sure that it includes cover for the type of work being carried out. The University has a very comprehensive travel insurance policy which students are able to apply to use. Details of the registration process and a summary of cover are available on the [Travel Insurance](#) page of the University website. The cost of taking out the policy can be met by the relevant department as part of your project expenses.

The University holds legal liability insurance policies relevant to fieldwork activities. As students you are covered by the Public Liability insurance. For projects based outside of the University of Oxford, we expect any host organisation to hold their own Public Liability insurance. As part of your Safety Registration Form we ask you to check and provide this information. Any projects based outside the University where no Public Liability Insurance cover is provided by the host organisation may not be approved.
(iii) Pre-Project paperwork

Some or all of these forms must be completed and authorised before you start work on your Project.

**Safety Registration form**

A risk assessment needs to be completed for your Project – and you and your Supervisor need to be involved in the process. Please remember that you cannot complete this form by yourself since you need information about potential hazards from your Project Supervisor, as well as guidance about how serious the risks involved are likely to be, and what precautions you need to take. Your Supervisor is responsible for making sure that this risk assessment exercise is carried out.

The form must be completed and submitted by you or your Supervisor to the relevant Safety Officer for approval BEFORE any lab or field work is started. The Project safety form is available on the WebLearn FHS Examinations site.

The form is in 4 parts:

Part 1: the basic information about the Project and Supervisor;

Part 2: requires information about the types of hazard you might be exposed to, and allocation of a risk category (or level) by your Supervisor in each instance. Higher risk activities will require more training and greater supervision;

Part 3: asks for details about the precautions you will take to make sure that your work is carried out safely – not only for you, but also for those working around you. This part of the form is sometimes completely ignored and often poorly completed, in which case the form will be returned for revision and resubmission before practical work can begin – perhaps delaying the start of your practical work. N.B. Projects entirely office/library based do not complete this section;

Part 4: is your undertaking to obey safety instructions given by your Supervisor, and your Supervisor’s undertaking to provide you with appropriate training and supervision. You and your Supervisor must sign the form before it is submitted – the Safety Officers will not approve forms that have not been signed.

Once completed the form should be signed by you and your Supervisor and submitted to the relevant Safety Officer (see below). They will check to see if it has been completed appropriately and if so, will sign and date it. A signed, scanned copy of this final form will be sent to your college email address and must be kept safely for submission with your Project.

Projects in Plant Sciences: [david.anderson@plants.ox.ac.uk](mailto:david.anderson@plants.ox.ac.uk)

Projects in Zoology: [neil.carveth@zoo.ox.ac.uk](mailto:neil.carveth@zoo.ox.ac.uk)

Projects in other Departments: contact [neil.carveth@zoo.ox.ac.uk](mailto:neil.carveth@zoo.ox.ac.uk) for further instructions.

You are not allowed to start on your practical work until you have received the signed copy of your Project Safety Registration Form.
Fieldwork and overseas travel forms

Before planning projects involving fieldwork and/or overseas travel, students and their Supervisors should read the University policies S5/07 ‘Safety in Fieldwork’ and S3/07 ‘Overseas Travel’ plus such local rules as are currently in place. For any fieldwork and/or overseas travel, you are required to complete an additional, more thorough risk assessment. There are separate risk assessment forms for UK fieldwork, overseas fieldwork or overseas travel.

Fieldwork and/or overseas travel often requires a very detailed risk assessment as a consequence of something going wrong potentially being more significant. If you are planning any high-risk activities as part of your fieldwork and/or overseas travel, such as diving or abseiling, you should submit the relevant fieldwork and/or overseas risk assessment form to the relevant Safety Officer (see Section J.1 (b)) along with your Safety Registration Form, and then wait to be advised on whether your plans have been approved (all forms will be returned within three weeks of submission). It is important to complete this process in good time.

The additional forms to complete with the help of your Supervisor are:

- UK Fieldwork Risk Assessment Form – required if carrying out fieldwork in the UK;
- Overseas Fieldwork Risk Assessment Form – required if carrying out fieldwork overseas;
- Overseas Travel Risk Assessment Form – required if your Project involves time overseas but not in the field.

Note that forms must be completed and signed by you and your Supervisor before being submitted for approval to the relevant Safety Officer. All necessary approvals must be in place before you begin your fieldwork. Signed, scanned copies of these forms will be sent to your college email address. These forms are not part of your Project assessment so they need not be bound into your Project report.

Animal welfare form

Any Projects involving, or potentially having an impact on, vertebrates or cephalopods will require an Animal Welfare Assessment Form to be included within your Project. Supervisors should hold a thorough discussion with their Project students concerning the ethical issues, welfare, and handling, of the creatures before the Project work begins. The Animal Welfare Assessment form aims to help structure that discussion. You should complete the form with the help of your Supervisor. The original form should be passed on to Neil Carveth in the Department of Zoology. The form will be assessed and you will be contacted to confirm whether the assessment is complete or to notify you that it requires further consideration (in which case he will outline the subsequent procedures). The assessment process must be completed BEFORE you begin your Project work and you must keep a copy of the form for your records.

Please read the animal welfare guidelines on the Department of Zoology intranet, then, if you have any questions, contact phil.smith@zoo.ox.ac.uk for further advice.
**Ethics forms**

The University has taken the view that it should be a formal requirement that all research involving human participants should be subject to ethical review. If your Project involves people, such as via questionnaires or observations, you must gain approval from the Central University Research Ethics Committee (CUREC). Further information regarding forms for completion, approval times and who to contact with questions are found on the CUREC website.

**Memorandum of Understanding (MOU) form**

If you are being partially supervised by an institution outside the University of Oxford (either in the UK or overseas), your Supervisor must ensure that a Memorandum of Understanding (MOU) is completed before the work starts. Ask your Supervisor to talk to the Director of Undergraduate Teaching if this needs clarification.

**(c) Carrying out the Project**

It is normally convenient to split the Project into several stages, namely:

a) Reading  

b) Planning & Design (including statistics)  

c) Practical work  

d) Data Analysis  

e) Write-up.

These stages are covered in the Project & Course Assignment Handbook, to be distributed towards the end of HT2. At this stage you should only be focusing on reading and planning your Project. The information below is only intended to give you the information you need for the early planning stages of your Project.

Stages a) and b) should be combined to produce detailed proposals for the practical work to come, based on what you have found in the literature and subsequent discussions with your Supervisor. Proposals should include the hypotheses to be tested, equipment and/or sites required, the replication needed and the statistical techniques to be used in the analysis. You may need to take statistical advice on the design of your experiments. Please remember that unforeseen problems may arise in both lab and field, so it is sensible to make your plans flexible from the start, and you should be prepared to be adaptable.

A typical Project workload is around 240 hours of practical work, however this will vary from Project to Project.

**(d) Project expenditure**

Up to £200 is available per student to claim for expenses incurred associated with their Project. It is not expected that everyone will need the full amount.

Costs of items such as travel tickets and field kits, which have been directly bought by the student, can be reimbursed if all original receipts are submitted with the expense claim. The completed claim form (countersigned by the Supervisor), and all original receipts, must be handed in to Plant Sciences or Zoology finance team (depending on your Supervisor’s
Department). Claims must be submitted by the end of Michaelmas Term of your third year. Claims should be submitted to the finance team in your Supervisor’s department and should clearly state ‘Undergraduate Project’.

If your Supervisor is outside Plant Sciences and Zoology they can instead make a direct claim up to £200 for consumables for the Project from the Department of Zoology. Your Supervisor should contact their departmental finance team who will in turn liaise with the Zoology finance team.

Expenses claims forms are available on the University website.

(e) Residency requirements

You are normally expected to fulfill a residency requirement while studying at Oxford. In the case of Biological Sciences, a dispensation has been agreed to allow students to carry out Project-related work away from Oxford during Trinity Term of year 2. This dispensation is set out in the Special Regulations for the Honour School of Biological Sciences, Part II, 2 (iii) Residence:

“Candidates undertaking project work outside of Oxford will be permitted by the Chairman of the Teaching Steering Committee (aka Director of Undergraduate Teaching), subject to the written approval also of the Senior Tutor of the candidate’s college, to spend a maximum of two weeks outside of Oxford during Trinity Term of their second year working at a supervised field site or another university / institution in the UK or overseas, in accordance with clause 2.8 of the First and Second Public Examination regulations pertaining to residence. Candidates will still be liable for their College battels, if applicable, during this time.”

(f) Key Project-related dates

- Michaelmas Term, Year 2 (MT2):
  Start to narrow down Project subject areas and potential Project Supervisors. Submit Project Registration Form to the Biology Teaching Administration Team as soon as possible (and no later than noon Friday week 8).
- Hilary Term, Year 2 (HT2):
  Before starting Project practical work, all applicable forms must be completed, authorised (see checklist in Section J.1 (b)) and submitted to the Safety Officer.
- Trinity Term, Year 2 (TT2):
  If possible, begin Project practical work – work may be required in the vacation.
- Michaelmas Term, Year 3 (MT3):
  Before MT3: Project experimental work should be completed. MT3: Complete write-up of Project.
- Hilary Term, Year 3 (HT3):
  Noon, Monday, Week 2: Project submission date.
J.2 Course Assignments

The third year Course Assignments take the form of one extended essay and one oral (PowerPoint) presentation plus a written abstract. The titles of both your Course Assignments must be decided by Fri Wk7, MT3, although it is possible to complete your assignments at any point to suit your individual academic workload e.g. in TT2 if your Project practical work will take place in the summer vacation.

You have considerable freedom to choose your Course Assignment topics – any subject within the areas of Biology that are covered in the second year themes or third year options may be suitable provided you can find an Academic Advisor who is willing to help you. You should seek advice (from your College Tutor in the first instance) if the subject features only marginally in the course or relates mainly to another discipline (e.g. Sociology).

Note that the two Course Assignment topics are expected to be significantly different from one another, and also from your Project. It is strongly recommended that you have a different Supervisor/Advisor for your Project and for each of your Course Assignments. Do also check that your topics have non-overlapping bibliographies – if a significant number of the appropriate citations are found in more than one submission, then the areas are almost certainly not sufficiently distinct.

Your Assignments should be informative, scientifically rigorous, controversial if possible and should contain not only published findings, but your own opinions, carefully argued and presented, on a topic within your chosen field. Each assignment should deal critically with a topic of current biological interest and should be based at least in part on primary research literature. As with all good scientific writing, you should address a particular question(s) or hypothesis(es) rather than simply summarising progress in a particular field and you should include your own ideas and opinions on the subject as far as possible. The precise format of each assignment is a matter of personal choice but further guidance on the different formats and styles available will be provided in the Final Honour School Project & Course Assignments Handbook, which will be distributed at the end of HT2.

(a) Key Course Assignment Stages (dates are given in Section A.3 (f))

- **Michaelmas Term, Year 3 (MT3):**
  Decide the titles of both Course Assignments;
  Submit Course Assignment Certificate for Approval to the Biology Teaching Administration Team.

- **Hilary Term, Year 3 (HT3):**
  Confirm with the Biology Teaching Administration Team which Course Assignment title will be the oral assignment and which will be the written assignment.

- **Trinity Term, Year 3 (TT3):**
  Electronic submission of oral assignment (abstract) and written assignment;
  Electronic submission of the oral assignment presentation to the Biology Teaching Administration Team;
  Oral presentation to be given.
K. USEFUL LINKS (some sites require you to log in using your Oxford Single Sign On)

Bodleian Library
www.bodleian.ox.ac.uk

Botanic Garden
www.botanic-garden.ox.ac.uk

Careers Service
www.careers.ox.ac.uk

Central University Research Ethics Committee (CUREC)
www.admin.ox.ac.uk/curec

Course changes
www.ox.ac.uk/admissions/undergraduate/courses/important-legal-information-about-potential-course-changes

Course Handbooks (Biological Sciences)
https://weblearn.ox.ac.uk/x/V5qCDY

Data Protection
www.admin.ox.ac.uk/councilsec/compliance/dataprotection

Examination Conventions
https://weblearn.ox.ac.uk/x/V5qCDY

Examination Regulations (University): www.admin.ox.ac.uk/examregs
Examination Regulations (Biological Sciences)
www.admin.ox.ac.uk/examregs/2016-17/peinbiolscie/studentview

Expenses Claim Form
https://www.admin.ox.ac.uk/finance/epp/forms/expensesandrelocation/#d.en.139342

Foreign and Commonwealth Office (FCO)
https://www.gov.uk/government/organisations/foreign-commonwealth-office

Harcourt Aboretum
www.botanic-garden.ox.ac.uk/harcourt-arboretum

IT Services: www.it.ox.ac.uk
Computing usage and rules: www.it.ox.ac.uk/rules
Eduroam Network / Wireless Internet: http://help.it.ox.ac.uk/network/wireless/services/eduroam/index
Other Service: www.it.ox.ac.uk/do
VPN Guidance: http://help.it.ox.ac.uk/network/remote/index

Language Centre
www.lang.ox.ac.uk

Mathematical, Physical and Life Sciences Division (MPLS): www.mpls.ox.ac.uk
MPLS Undergraduate Joint Consultative Forum
www.mpls.ox.ac.uk/intranet/divisional-committees/undergraduate-joint-consultative-forum

Museum of Natural History
www.oum.ox.ac.uk
National Student Survey
www.unistats.com

Nightline
oxfordnightline.org

Oxford Biological Society
http://groupsites.com/OxfordBiologicalSociety

Oxford Colleges On-line Reports for Tutorials system (OxCORT)
www.oxcort.ox.ac.uk

Oxford Examination Papers Online (OXAM)
http://oxam.ox.ac.uk

Oxford Nature Conservation Society
https://ouncs.org

Oxford Students Website / Student Gateway: www.ox.ac.uk/students
A-Z of University regulations, codes of conduct and policies: www.ox.ac.uk/students/academic/regulations
Complaints and Academic Appeals: www.ox.ac.uk/students/academic/complaints
Counselling Service: www.ox.ac.uk/students/welfare/counselling
Disability (including Disability Advisory Service contacts): www.ox.ac.uk/students/welfare/disability
Examination Dates: http://www.ox.ac.uk/students/academic/exams/timetables
Examinations & Assessments: www.ox.ac.uk/students/academic/exams
Feedback and Surveys: www.ox.ac.uk/students/life/student-engagement
Fees & Funding: www.ox.ac.uk/students/fees-funding
Guidance on Paid Work: www.ox.ac.uk/students/life/experience
Health and Welfare: www.ox.ac.uk/students/welfare
Language Centre: www.ox.ac.uk/students/academic/guidance/language
Lecture Lists: www.ox.ac.uk/students/academic/guidance/lectures
Plagiarism guidelines: www.ox.ac.uk/students/academic/guidance/language/plagiarism
Student Engagement: www.ox.ac.uk/students/life/student-engagement
Student Gateway: www.ox.ac.uk/students
Student Self Service: www.ox.ac.uk/students/selfservice
Study Skills and Training: www.ox.ac.uk/students/academic/guidance/skills

Oxford University
www.ox.ac.uk

Oxford University Herbaria
http://herbaria.plants.ox.ac.uk/bol/oxford

Oxford University Student Union (OUSU): https://ousu.org
Exam Revision Tips: https://ousu.org/advice/academic/finals-revision-tips
Student Advice Service: https://ousu.org/advice
Study Skills: https://ousu.org/advice/academic/studyskills

Plant Sciences Department
www.plants.ox.ac.uk
Policy on the recording of lectures and other formal teaching sessions by students
http://www.admin.ox.ac.uk/media/global/wwwadminoxacuk/localsites/educationcommittee/documents/policyguidance/Policy_on_the_recording_of_lectures_and_other_formal_teaching_sessions_by_students.pdf

Proctors Office: www.admin.ox.ac.uk/proctors
Procedure for handling complaints and appeals:
www.admin.ox.ac.uk/proctors/complaintsandacademicappeals
University Student Handbook
http://www.proctors.ox.ac.uk/handbook/handbook/
Regulations for the Investigation of Complaints
www.admin.ox.ac.uk/statutes/regulations/247-062.shtml

Quality Assurance Agency for Higher Education: www.qaa.ac.uk
Subject Benchmarks

Radcliffe Science Library
www.bodleian.ox.ac.uk/science

Samaritans
www.samaritans.org

Supplementary Subjects
Chemical Pharmacology: http://course.chem.ox.ac.uk/chemical-pharmacology-mt.aspx
History & Philosophy of Science: http://course.chem.ox.ac.uk/history-and-philosophy-of-science-mt.aspx
Quantum Chemistry: http://course.chem.ox.ac.uk/quantum-chemistry-mt.aspx

University Policy S3/07 Overseas Travel
www.admin.ox.ac.uk/safety/policy-statements/s3-07

University Policy S5/07 Safety in Fieldwork
www.admin.ox.ac.uk/safety/policy-statements/s5-07

University Regulations – Statutes and Regulations for Complaints and Academic Appeals
www.admin.ox.ac.uk/statutes/regulations

University Term Dates
www.ox.ac.uk/about/facts-and-figures/dates-of-term

WebLearn: https://weblearn.ox.ac.uk
Biological Sciences Home Page
https://weblearn.ox.ac.uk/portal/hierarchy/mpls/xmpls/biology
Mathematical, Physical and Life Sciences Division
https://weblearn.ox.ac.uk/portal/hierarchy/mpls

Wytham Woods
www.wytham.ox.ac.uk

Zoology Department: www.zoo.ox.ac.uk
Zoology Intranet: https://sharepoint.nexus.ox.ac.uk/sites/zoo/SitePages/Home.aspx
Remote Access to Teaching Servers:
https://sharepoint.nexus.ox.ac.uk/sites/zoo/IT-Teaching-Servers.aspx
## ANNEX 1 RECOMMENDED PATTERNS OF TEACHING

<table>
<thead>
<tr>
<th>Paper</th>
<th>Term</th>
<th>Lectures</th>
<th>Practicals</th>
<th>Tutorials</th>
<th>Classes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evolution</td>
<td>MT2</td>
<td>16</td>
<td>0</td>
<td>2</td>
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<td></td>
<td>HT2</td>
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<tr>
<td>2. Quantitative Methods</td>
<td>MT2</td>
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<td>8</td>
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<td>In addition to this, you should expect to attend interactive computing sessions in Hilary Term and Trinity Term of Year 1: eight and four sessions respectively.</td>
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<td>3. Essay Paper</td>
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<tr>
<td>5, 6 &amp; 7. Long Essay Paper, Short Essay Paper and Data Interpretation Paper</td>
<td>TT2</td>
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<td>These session are applicable to three examination Papers: Paper 5 (Long Essay); Paper 6 (Short Essay); Paper 7 (Data Interpretation).</td>
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Figures in this table are in sessions. Lectures are normally 1 hour in length.