



## Guide to Supervision in Natural Sciences 2012-2013 ‡

### 1.0 Introduction

This document is intended for all research students, post-doctoral workers and academics new to Cambridge who are intending to supervise undergraduates in the Natural Sciences at Homerton.

Whether familiar with the supervisions system or entirely new to it, Homerton College recommends that supervisors attend the following University-run courses, intended for the various stages of experience in supervising:

- For ‘**Supervising Undergraduates: An Introduction**’, see:  
<http://www.training.cam.ac.uk/event/391009>
- For ‘**Supervising Undergraduates More Effectively**’, see:  
<http://www.training.cam.ac.uk/event/390430>

These courses will also be recommended to you by Directors of Studies at the start of the year. They are free to University staff and **graduate students, and supervisors can book their own place on any of them using the booking system on the websites shown.**

---

## 2.0 Background Information

### 2.1 What is a supervision and why do we have them?

Typically, a supervision is a one hour tutorial for two or three undergraduates given by a supervisor. Usually, the supervisor will have set questions or an essay at the end of the previous week’s supervision. The students will then do the work set and hand it in for the supervisor to mark, which he or she will do and return to the students at the start of the next supervision. The supervision itself then fulfils a number of purposes, in particular:

- A discussion of the problems or essay set, especially those parts which have not been done very well, thus producing greater understanding in a certain area.
- A discussion around the work set and an opportunity for students to ask for further explanation of the subjects covered in the problems and other topics covered in the lecture course.

The supervision system’s major strength is its ability to cater for the individual needs of students: whilst one group of students may be covering just the basic principles already outlined in the lecture course, another may have no apparent difficulties and they can thus explore the subject in more detail or go further on in the supervision problems.

---

‡These notes were compiled by Deborah Longbottom (dal28@cam.ac.uk) with the aid of previous documents on this subject by Stephen Tomkins (Homerton College/DoS for Biological Sciences), Laurie Friday (Newnham College) and James Keeler (Selwyn College/Department of Chemistry).

## 2.2 Who organises the supervisions?

In Natural Sciences Part IA and Part IB, supervisions are generally arranged through the College.\* In Part II and Part III, they are more usually arranged through the Departmental lecturer in a particular course, though there can still be an element of College organisation, depending on who the Director of Studies is in a particular subject.

At Homerton **Part IA students** will have as their **Director of Studies**:

Dr Penny Barton ([pb29@cam.ac.uk](mailto:pb29@cam.ac.uk)) OR Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

**However, Dr Barton does not fix the supervisions for Part IA in all subjects.** Rather, it will be a Fellow of the College who is an expert in the particular area for which the supervisions are organised. The **supervision organisers** are shown below **for Part IA**:

**Biology of Cells** – Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

**Chemistry** – Dr Deborah Longbottom ([dal28@cam.ac.uk](mailto:dal28@cam.ac.uk))

**Computer Science** – Dr Bogdan Roman ([abr28@cam.ac.uk](mailto:abr28@cam.ac.uk))

**Earth Sciences** – Dr Penny Barton ([pb29@cam.ac.uk](mailto:pb29@cam.ac.uk))

**Evolution and Behaviour** - Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

**Materials Science** – Dr Penny Barton ([pb29@cam.ac.uk](mailto:pb29@cam.ac.uk))

**Physics** - Dr Penny Barton ([pb29@cam.ac.uk](mailto:pb29@cam.ac.uk))

**Physiology of Organisms** - Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

**Mathematics** – Robert Dillon ([rgd20@cam.ac.uk](mailto:rgd20@cam.ac.uk))

**Mathematical Biology** – Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

**Elementary Mathematics for Biologists** – Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

**In Part IB**, students will move to a **Director of Studies** with expertise in the area that they have chosen to specialise in. These are given at the back of this guide in the **‘Subject Specific Useful Information’** section. The **Director of Studies** in each subject is generally responsible for **organisation of supervisions** in Part IB.

**In a practical sense, you will be given a list of the student names and e-mail addresses by the supervision fixer in advance of the course that you have agreed to teach.** Supervisions are then usually organised by yourself and the groups of students at mutually convenient times and days (usually the same day and time every week).

## 2.3 Where shall I do my supervisions?

Supervisions should be held in a suitable, reasonably central location that is not liable to be seen as too personal or intimate: a bed-sitting room, for example, is **NOT** an appropriate venue.

Teaching space is available in the Homerton College itself, if you prefer to do College-based supervisions. Please e-mail [supervisions@homerton.cam.ac.uk](mailto:supervisions@homerton.cam.ac.uk) with the following information if you would like to book a room, **giving at least 48 hours notice: name of the supervisor, number of attendees, any special requirements (whiteboard etc) and specific dates/times.** Hayley Duignan or Amy Willox will respond to you directly when you e-mail this account.

Teaching space is also usually available in Faculties and Departments.

If you have any problem finding an appropriate place in which to supervise, contact the Director of Studies of the student(s) you are supervising.

---

\*Some Departments also organise supervision for selected Part IB courses: this is not to usurp the Director of Studies concerned but in recognition of the fact that it is often easier for Departments to find appropriate supervisors for that particular course.

## 2.4 Who pays for supervisions?

The College pays for the supervisions given at rates that are set each year by all the Colleges together.

Although the undoubted value of the supervisions system is unanimously agreed, it is a costly system for the Colleges to support. Therefore group size, student groupings and number of supervisions for any given course will typically be pre-defined by the Director of Studies concerned. As a guide, around one hour per week per lecture course being attended (i.e. 8 per term) is usually in the right area. In the Easter term we normally expect about 4 weekly 'normal' supervisions on any new material, followed by 2-4 revision supervisions, as requested by the students.

If you are in any doubt at all, **you should ask the person who engaged you to supervise how many supervisions you are expected to give for a particular course. You should not vary this number without prior consultation.**

Please note that if you have to miss a supervision yourself, e.g. due to illness or being away from Cambridge, you should let your students know and try to rearrange in advance. If you have to miss more than one week, please let the Director of Studies know so that alternative cover can be arranged. Try to avoid a build up of 'catch up' supervisions in the last week(s) of term as this will put the students at a disadvantage.

## 2.5 How do I claim payment for supervisions? \*\*

In order to claim payment for supervisions that you have carried out, you must write a report on each student **a week or so before the end of term**, using the online **CamCORS** system (<https://camcors.cam.ac.uk/camcors/>). N.B. You can fill in the report before the final supervision of term but still claim payment for it.

To use the system, you need to be **registered for CamCORS** and you need a **Raven password**:

**If you have already been registered on CamCORS** by another College, that will be your only CamCORS account and you are intended to use it to do supervision reports on students from ALL Colleges. All supervisors will have **one account on CamCORS** through which to file all their supervision reports.

**If you are not already registered on CamCORS, you feel you need guidance on how to use CamCORS properly or there are any problems or issues with your account**, please contact the Homerton College Tutorial Office on the following e-mail address: [supervisions@homerton.cam.ac.uk](mailto:supervisions@homerton.cam.ac.uk). Hayley Duignan or Amy Willox will respond to you directly when you e-mail this account.

**If you do not already have a Raven password**, please consult the following information page 'How do I get a Raven Password?' (<http://www.cam.ac.uk/cs/docs/faq/n5.html>) and then obtain the Raven password *via* the pathway recommended for somebody of your status within the University.

## 2.6 How is my effectiveness as a supervisor monitored?

Homerton College has been very fortunate in these last years to have for the most part excellent supervisors in place who have done a first class job of educating the students they teach.

We know this because we have in place a feedback system, whereby students are asked to rate their supervisors in terms of their effectiveness as teachers, communicators and so on at the close of each academic year.

In the very few cases where students are dissatisfied for any reason with the quality of supervision they are receiving (reasons for this can vary from the supervisor failing to mark work, being difficult to

---

\*\* In accordance with the provisions of the Data Protection Act of 1998, supervisors should be aware that the personal data supplied on their claim forms will be held on a database within each College and that the processing of this data will take place only for the proper purposes of the Colleges as educational institutions. Personal data supplied to CamCORS will also be held in a central database, hosted on behalf of the Colleges by the University's Management Information Services Division.

contact, constantly cancelling/rearranging supervisions to them seeming to have a lack of understanding of the course material), students will usually complain individually or as a group to their Director of Studies if they have a problem at any point during the year.

The College takes all such complaints very seriously and the Director of Studies concerned will do their utmost to resolve any issues as soon as they are raised.

---

### **3.0 A More In-depth Look at the Supervision Itself**

#### **3.1 How will I know if I have the right academic background to supervise a particular course?**

Most Departments produce booklets or have web pages containing synopses of the courses and typically, the lecturer will give a fairly detailed outline as to the content of the course there. In some Departments, it is common for lecturers to provide students with printed handouts that define the course and Departments usually also supply copies of past Tripos papers. For the information available to you for each subject, please consult the ‘Subject Specific Information’ section of this document (Page 8). You should equip yourself with as much information as you can about the course content: **if you offer to supervise for a course, you need to be confident that you are capable of doing a good job!**

#### **3.2 How can I best prepare to supervise a course for which I have the right academic background?**

Unless you are already very familiar with a course, there is no substitute for attending the lectures themselves, whichever level you are teaching. Do not worry that if your students see you there, your authority as a supervisor will be somehow undermined: experience tells us that most students see the presence of their supervisor as a sign of commitment rather than weakness!

Even if you do not attend all (or any!) of the lectures, you must make sure you are well informed about the progress of the lecture course so that you are able to set appropriate written work and be well prepared for the kinds of questions you will be asked.

As detailed in the ‘Subject Specific Information’ section (Page 8), many Faculties and Departments now issue subject-specific guidance for supervisors and you should check what is available in your subject: it could save you a lot of time!

#### **3.3 Setting and marking work**

In Physics, Maths and Materials Science, work to be done every week for supervisions is actually set in lectures so there is no need for you to make the decision as to how much to set. In other subjects, the expectation is that you will set the students a suitable amount of written work to do in preparation for the supervision. If in doubt about how much to set, consult with your colleagues who are teaching the same course or ask the course lecturer directly.

You should **insist that the students hand in their written work before the supervision so that you can mark it**; be precise about when and where you expect the work to be handed in, e.g. ‘by 5pm the day before to the envelope labelled with my name outside my lab’. You should then discipline yourself to **always mark their work before the supervision**; this will stop you having to waste time in a supervision looking through work or concentrating on the wrong topics.

In **marking** written work, you need to identify clearly where any errors have been made and indicate the correct solution. In order to do this effectively you will probably need to work through the problem sheets yourself in advance. Make clear written comments on the students’ work – don’t simply put a cross by their answer. Also, be open-minded to the approach of each student: they may not do things in the way you favour but they may be equally right in their answer.

### 3.4 Setting and marking essays for supervisions in the Biological Sciences

The essay will be of no help to the student in learning how to present arguments if it is merely copied from textbook, lecture notes or other sources. Further, it will be of no help to you in assessing the student's understanding. Hence it is important to advise students on how to write essays; such advice may usefully contain these suggestions:

1. Do what reading you like before tackling the essay, making notes if necessary to understand sources.
2. Put away all such sources and any such notes before writing the plan for the essay, only referring back during the writing of the plan if you realise you understand less than you had thought.
3. Write the essay from the plan as if in an exam.
4. Read what you have written and look for ways of improving it

This advice has several purposes:

1. The student should learn the facts and arguments in preparing the essay. (Hence essay writing, like the supervision itself, will not be extra work to understanding lectures and practicals; it will be part of doing so.)
2. The essay will be shorn of detail that is not worth learning (e.g. precise values of determinations). Hence the students should learn to concentrate on the arguments, their strengths and weaknesses, rather than the details of observations.
3. The essay will give you the student's understanding of the topic, and not just the source, so you can assess this understanding and see where the gaps are that you need to fill.
4. Students will learn to be critical and how to improve their own work.

Emphasise the importance of presenting logical argument in essays, and of addressing the question posed, rather than their notion of the general subject area. Students tend to think they should learn 'facts', rather than learning how to think straight. Candidates typically feel inadequately prepared for exams; they therefore find it psychologically hard not to include every conceivably relevant fact that they know. This makes it hard to persuade them that examiners look for the quality of argument, so that adding one more fact may detract from an answer by excluding the argument that will make the other facts relevant. Conveying this is educationally important; the factual state of the subject now may have little importance by the middle of the student's working life, compared with developing the ability to handle evidence. Do not worry that emphasis on arguments will prevent students from learning basic facts; handling the evidence for theories effectively teaches these theories. Include practical advice, such as not wasting time on a prose description of something already conveyed by an annotated diagram.

### 3.5 Setting and marking essays for Earth Sciences

Typically Geology essays will be short (3-4 pages in the first year), and structured with sub-headings taken from the wording of the question – they should be more like organised notes or a scientific paper than the school model of an essay. Illustrations and diagrams are greatly to be encouraged, as is the use of field examples. It is important for students to learn to address the question posed, rather than write a general essay 'about' the topic, although this is useful for revision purposes. Supervisions should also encompass plenty of practice of geological map work and regular examination and discussion of specimens – either in hand specimen or thin section.

### **3.6 The supervision itself**

Each supervisor has their own personality and style of teaching. Below are some general points that you may find useful as a guide:

- From marking the students' work, you should have a good idea as to which areas of a topic are causing the students difficulty. The expectation is that you will focus on these and help their understanding by explaining how to reach the right solution and which principles are at work.
- Try not to see the supervisions as a Tripos-cramming exercise! You should use this discussion of the problems as a starting point for wider discussion and bring in extra ideas, examples and concepts, depending on how well a particular group is grasping the work.
- Let the students interrupt you with questions regarding your explanation of any particular point: it is sometimes easy to slip into a supervisor monologue but we all need to remember that the best supervisions have a fluid two-way interaction between students and supervisor.
- Give the students plenty of opportunity to ask other, unrelated questions or seek explanation of any topic they don't understand in the course – try to always ask during the supervision if there is anything else they would like to ask about. Don't deflect their questions, even if you don't know the answer! Nobody knows everything and it is much better to come back the following week with the correct solution than to bluster and put them off asking questions altogether.
- Ask the students to explain concepts or turn their question back to them or another member of the supervision group to see what their understanding is, guide them through the answer they are thus giving and then fill in the gaps with your own explanation.
- Be prepared for a student not to understand your explanation!! However clever you are, you may need to repeat your explanation or offer an alternative and you need to be very tolerant if any student is unable to follow you!
- You may wish to ask the course lecturer directly regarding a question that arises from a statement made in a lecture or their course handout that you can't answer. Such feedback from supervisors can be of great help to lecturers, who may not have seen some ambiguity in their wording or some of the confusion that students may have.
- Be very careful in the wording of criticism, showing that you appreciate the good parts of their work, whilst giving constructive criticism on the parts that are lacking in some way. Remember that praise when faults are remedied in later supervisions is highly constructive.
- Remember that a supervision is not a lecture! Try to establish an atmosphere in which two-way interaction is encouraged and students feel secure enough to expose their weaknesses. These are not easy goals (!) but one way to go towards achieving them is to let students know either that you yourself found a particular problem or concept difficult the first time you met it or that students generally find this or that thing difficult. This can often help a great deal with them then being honest about their weaknesses.

---

## **4.0 Feedback**

### **4.1 Feedback to students during Term**

It is important that overall, you are providing students with feedback on a week-by-week basis so that they understand how they are doing relative to the norm for the course. The supervision report you submit at the end of each term through CamCORS should not be a shock to them (!) but rather just confirm the comments and feedback that they have already received either written on their supervision work or verbally during the supervision itself.

You'll need to be sensitive to the fact that most students, particularly the incoming first years, will find it difficult to cope with the fact that they cannot do all of the work perfectly: they will often have been used to being top of their set at school and not necessarily having to do a lot of work to maintain that position. It is important then to let students know that even though their work is covered in comments and corrections this is perfectly usual and not a sign that they are any less good than the next student.

## 4.2 Feedback to Directors of Studies during Term

Most often, you will have no need to contact the Director of Studies for any particular student as the majority will be handing in work on time and turning up to supervisions!

**However, there are two situations in which you MUST contact the Director of Studies at once during term:**

- 1) **If a student misses more than one supervision** without giving a good reason (even at the start of the year of course for which the supervision has been arranged). It can be an early indicator of a more serious problem: **you are not betraying the student confidence** by doing this but more probably doing them a favour!
- 2) **If a student repeatedly fails to hand in work set** without giving good reason. Again, this can be an early indicator of a more serious problem: **you are not betraying the student confidence** by doing this but more probably doing them a favour!

Other situations may also arise where contacting the Director of Studies will be an appropriate course of action:

- 1) **If you feel that a regrouping of students is appropriate.** Usually, Directors of Studies will be guided by the feeling of the supervisor concerned on this but **always check before rearranging:** the DoS may have good reason for deciding on the groups in the first place and may not want them to be reorganised.
- 2) **If you feel by the middle of term that a student is really struggling to attain even third class standard (or if you think they might even fail).** Most students will be absolutely fine and the majority of supervisors will not need to follow this route but there are plenty of reasons why a student might be in this position. There are lots of ways in which Homerton can support such students with study skills etc and the earlier we are aware of such cases, the earlier such support can be offered and put into place. Again, please remember that **you are not betraying the student confidence** by contacting the DoS but more probably doing them a favour.
- 3) **If you develop concerns about the physical or mental wellbeing of any of your students.\*\*\***

## 4.3 Reporting Back at the End of Term: Writing CamCORS Supervision Reports

**To create supervision reports**, you just need to have a list of CRSids (the first part of the e-mail address) and the Tripos part. If you create the form early in the term, you can use it to make notes on each student during the term: no text is visible to anybody else until you submit the report.

**The report itself MUST contain supervision hours and a suitable written comment or it will not be processed for payment.** Ideally, we would also like you to use the performance indicators and to please ONLY tick the 'College Action Recommended' box when there is a serious problem (ideally, you will have already communicated problems which are this serious to the Director of Studies!).

**The report also needs to be honest!** You need to give praise where it is due for effort, participation and achievement as well as pointing out perceived areas of weakness or where more effort is needed. There is no point in being 'nice' just for the sake of it! Only a frank appraisal is of use to the Director of Studies and more particularly to the student. Be aware that the student can read these reports and if you want to communicate anything in confidence to the Director of Studies, do so by e-mail or telephone, taking care to state that each such communication is confidential.\*\*\*

---

\*\*\* Because of data protection provisions, any communication in writing of information that you wish to be treated as confidential should include a clear statement that you do not consent to the release of that communication to the student concerned. In general, if you wish to transmit information or concerns to a Director of Studies (or Tutor) on a confidential basis, you are asked to communicate with them directly by telephone rather than e-mail.

---

## 5.0 Vacation Work

Setting vacation work is relatively straightforward in the Natural Sciences and the following points form a general summary of what to set:

1. **Recommend making summary notes for major topics**, if you think this a useful exercise: it is generally easier to concentrate on a topic and retain information if students are making notes and not just reading.
2. **Set questions from their current courses** to ensure they are completely up-to-date with everything when the next term starts.
3. **Set some relevant past paper Tripos questions** to enable them to see clearly how the course content is reflected in the examination questions. It is advisable to **be specific about which year and question numbers to do** to avoid being given a diverse range of these to mark at the start of the following term! Also, although the Easter vacation is the most obvious time to do this, setting past Tripos questions is advisable at Christmas too – this will help them to pull together the previous term's work and the IA students in particular to prepare for the **College based Lent Term examination**.\*\*\*\*

---

## 6.0 Potential Problems and Suggested Solutions

We hope that, as most of our supervisors find, you don't have any problems supervising and that, in fact, you enjoy the experience and feel the reward of watching the increased understanding of your group(s) of students as the weeks go by.

However, below are some situations to watch out for and some advice as to how to deal with them, in the event that you should find yourself in one of them:

- **What should I do if the students have done an excellent job of all the work set and claim to have no further points they want to discuss or need clarification on?** In these cases, a supervisor needs to be prepared with more material and more demanding questions to really probe the students' understanding and raise/broaden the level of discussion. Unseen past paper Tripos questions can be very useful in this situation.
- **What should I do if the students are apparently unable to tackle the work at all and seem completely lost?** Once you have discounted the possibility of them being idle, the key thing is to try to build up the students' confidence that they can do the work. Explore their basic understanding, check that their lecture notes are reasonable and they are consulting the right books; start with the simpler problems and build in difficulty from there. **If you feel the students would benefit from being supervised longer than is usual in any given week, always ask the Director of Studies before you do so.**
- **What should I do if the group of students I have is very mismatched in apparent ability of preparation?** Whatever the reason for this, if you feel that it would be beneficial to the students concerned to be rearranged into different groups, **contact the Director of Studies to see if the College's groups can be rearranged. Do not do any rearranging yourself without prior consent of the DoS concerned.**
- **What should I do when one student is dominating a group by always answering my questions, volunteering ideas and it is difficult for the other students to contribute?** One approach is to make it quite clear that you are directing a question or enquiry at a particular person, rather than to the group as a whole. Tactfully, or eventually bluntly, you will need to ensure that one person does not dominate as it can be very harmful to the confidence of others in the group if one person is apparently (and it is often only apparently, not actually) so much more confident with the work.

---

\*\*\*\* All Homerton First Year students sit a 90-minute exam in each subject (i.e. 6 hours of exams total) at the start of the Lent term to assess their progress and give them a taste of doing exams in Cambridge before they sit their summer examinations. The other year groups do not generally have a Lent Term Examination.



---

## 7.0 Subject Specific Useful Information

### Animal Biology

#### Director of Studies:

Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

---

### Biochemistry and Molecular Biology

#### Director of Studies:

Dr Andre Neves ([atrmdn2@cam.ac.uk](mailto:atrmdn2@cam.ac.uk))

#### Course guides:

Details of all the courses are available on the following web site:

<http://www.bioc.cam.ac.uk/teaching>

#### Past tripos papers:

Past papers can be printed directly from CamTOOLS:

<https://camtools.cam.ac.uk/>

You need to have a **Raven password** and **the appropriate permission** (e-mail [examtchg@mole.bio.cam.ac.uk](mailto:examtchg@mole.bio.cam.ac.uk) - if you need to request this).

Hard copies can also be purchased from the Reception Desk of the Sanger Building, Department of Biochemistry.

---

### Cell and Developmental Biology

#### Director of Studies:

Dr Julia Kenyon ([jck33@mole.bio.cam.ac.uk](mailto:jck33@mole.bio.cam.ac.uk))

---

### Chemistry

#### Director of Studies:

Dr Deborah A. Longbottom ([dal28@cam.ac.uk](mailto:dal28@cam.ac.uk))

#### Course guides:

Details of all the Chemistry courses are available on the teaching web site:

<http://www-teach.ch.cam.ac.uk/introcourses/guides.html>

#### CamTOOLS:

Some lecturers produce 'supervisors' versions' of their handouts and some also produce suggested answers to the questions. If available, these will be posted on the Chem\_Supervisors section of CamTools (<https://camtools.cam.ac.uk/>)

To obtain access to CamTOOLS, you need to have a **Raven password** (<http://www.cam.ac.uk/cs/docs/faq/n5.html>) and **the appropriate permission** (e-mail **Arwen Tapping** – [at503@cam.ac.uk](mailto:at503@cam.ac.uk) - if you need to request this).

N.B. If these materials are only available in printed form, they can be obtained from the office located in the centre to the Part II and Part IB O&I practical laboratories. Be aware that **not all lecturers in chemistry produce such materials for supervisors**.

#### Past tripos papers:

Past papers can be printed directly from the following website:

<http://www-teach.ch.cam.ac.uk/tripos/>

Hard copies can also be purchased from the Part IA prep room or the Part IB O&I practical laboratory.

---

## **Computer Science**

### **Director of Studies:**

Dr Bogdan Roman ([abr28@cam.ac.uk](mailto:abr28@cam.ac.uk))

### **Course guides:**

Details of all the courses are available on the following web site:

<http://www.cl.cam.ac.uk/teaching/>

### **Past tripos papers:**

Past papers can be printed directly from the following website:

<http://www.cl.cam.ac.uk/teaching/exams/pastpapers/>

---

## **Ecology**

### **Director of Studies:**

Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

---

## **Experimental Psychology**

### **Director of Studies:**

Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

---

## **Geological Sciences**

### **Director of Studies:**

Dr Penny Barton ([pb29@cam.ac.uk](mailto:pb29@cam.ac.uk))

### **Course guides:**

Details of all the courses are available on the following web site:

<http://www.esc.cam.ac.uk>

### **Past tripos papers:**

Past papers can be printed directly from CamTOOLS:

<http://www.esc.cam.ac.uk/teaching/camtools>

You may need to email [alison@esc.cam.ac.uk](mailto:alison@esc.cam.ac.uk) to get access to the site

Hard copies can also be purchased from Glynis Caruana at the Department ([glynis@esc.cam.ac.uk](mailto:glynis@esc.cam.ac.uk))

---

## **History and Philosophy of Science**

### **Director of Studies:**

Dr Melanie Keene ([mjk32@cam.ac.uk](mailto:mjk32@cam.ac.uk))

### **Course guides:**

Details of the IB HPS course, including the timetable, are available on the departmental web site:

<http://www.hps.cam.ac.uk/students/partib/>

### **For supervisors:**

The department's guide to supervising undergraduate students is online here:

<http://www.hps.cam.ac.uk/supervisors/guide.html>

## **CamTOOLS:**

Lecturers are being encouraged to put handouts and other supporting materials online on the HPS IB CamTOOLS site: it is therefore worth joining the relevant group for the academic year you are supervising (search the 'joinable courses' for HPS):

<https://camtools.cam.ac.uk/>

You can also set up your own group for your students to join.

N.B. To obtain access to CamTOOLS, you need to have a **Raven password** (<http://www.cam.ac.uk/cs/docs/faq/n5.html>) and, for certain courses, **the appropriate permission** (e-mail **David Thompson** – [dt243@cam.ac.uk](mailto:dt243@cam.ac.uk) - if you need to request this).

## **Past tripos papers:**

Past papers can be printed directly from the following website:

<http://www.hps.cam.ac.uk/students/pastpapers.html>

*Please note – all part II and III supervising is organised by the HPS department, not Homerton.*

---

## **Mathematics (as part of Natural Sciences)**

### **Director of Studies:**

Robert Dillon ([rgd20@cam.ac.uk](mailto:rgd20@cam.ac.uk))

### **Course guides:**

Details of all the courses are available on the following web site:

<http://www.maths.cam.ac.uk/undergrad/nst/>

### **Past tripos papers:**

Past papers can be printed directly from the following website:

<http://www.maths.cam.ac.uk/undergrad/nst/>

Hard copies can also be purchased from the Reception Desk, in the main hall of the Centre for Mathematical Sciences

---

## **Materials Science**

### **Director of Studies:**

Dr Sohini Kar-Narayan ([sk568@cam.ac.uk](mailto:sk568@cam.ac.uk))

### **Course guides:**

Details of all the courses are available on the following web site:

<http://www.msm.cam.ac.uk/Teaching/index.html>

### **Past tripos papers:**

Past papers can be printed directly from the following website:

<http://www.msm.cam.ac.uk/Teaching/index.html>

Hard copies can also be purchased from Materials Science Stores.

---

## **Neurobiology**

### **Director of Studies:**

Dr Andre Neves ([atrmdn2@cam.ac.uk](mailto:atrmdn2@cam.ac.uk))

---

**Pathology****Director of Studies:**

Dr Julia Kenyon ([jck33@mole.bio.cam.ac.uk](mailto:jck33@mole.bio.cam.ac.uk))

---

**Pharmacology****Director of Studies:**

Dr Andre Neves ([atrmdn2@cam.ac.uk](mailto:atrmdn2@cam.ac.uk))

---

**Physics****Directors of Studies:**

Robert Dillon ([rgd20@cam.ac.uk](mailto:rgd20@cam.ac.uk)) and Dr Sohini Kar-Narayan ([sk568@cam.ac.uk](mailto:sk568@cam.ac.uk))

**Course guides:**

Details of all the courses are available on the following web site:

<http://www.phy.cam.ac.uk/teaching/>

**Past tripos papers:**

Past papers can be printed directly from the following website:

<http://www.phy.cam.ac.uk/teaching/>

Hard copies can also be purchased from the Cavendish Stores

---

**Physiology****Director of Studies:**

Dr Andre Neves ([atrmdn2@cam.ac.uk](mailto:atrmdn2@cam.ac.uk))

---

**Plant and Microbial Sciences****Director of Studies:**

Dr Paul Elliott ([pe206@cam.ac.uk](mailto:pe206@cam.ac.uk))

---