

St Anne's College University of Oxford



Studying Experimental Psychology at St Anne's

Psychology in Oxford concerns issues that can be tackled through empirical investigation. The department, widely regarded as one of the foremost psychology departments in the UK, is one of the world's leading centres for psychological research on human cognitive processes, neuroscience, vision, developmental and social psychology. We see Psychology as an outward-looking subject, and so we draw on the outstanding strengths of Oxford in the neurosciences, psychiatry, genetics, linguistics, education, computation, social sciences and philosophy to help us in the enterprise of understanding human behaviour and mental life.

Aims and Objectives

It is important for you to know what the aims of the course are and how they are to be achieved (objectives). The following gives the declared aims and objectives of the Experimental Psychology (EP) course.

Aims

The aims of the EP course are:

- to teach a curriculum which covers core areas of psychological inquiry and which reflects contemporary developments in theory and research;
- to encourage all students to develop independent and critical habits of thought and learning;
- to develop transferable skills related to communication, information technology, and problem solving.

Objectives

The objectives of the EP course are:

- Students will have the opportunity to develop a deep understanding and broad knowledge of the general theoretical and scientific principles of psychology;
- Students will have the opportunity to acquire in-depth knowledge in specialised areas of their subject;
- All students will have the opportunity to acquire and demonstrate bibliographic skills to search out information appropriate to a particular topic;
- Students will have experience in compiling written reviews of key topics in psychology in which they will be expected to have demonstrated breadth of knowledge, depth of

understanding, and a critical appreciation of the strengths and weaknesses of theoretical claims and research evidence or conceptual argument;

- Students will have the opportunity to discuss in detail aspects of research or enquiry with those who are active in the area;
- Students will experience comprehensive and challenging lecture courses, in which lecturers are allowed flexibility in their approach, and which may frequently lead to the inclusion of material reflecting developments in the field, not contained in standard textbooks;
- Students will experience college-based tutorial teaching, which comprises:
 - guidance as to what to study, and in what order;
 - week-by-week assignments, adjusted if necessary to the needs of individual students;
 - personal assistance in achieving students' full academic potential;
 - a mode of instruction in which students' understanding is rigorously and individually probed and expanded;
 - regular reports (oral or written) on students' progress;
 - a caring environment, capable of responding rapidly and effectively to students' problems.

Structure of the Experimental Psychology Course

Outline of course

The course at Oxford allows students to study intensively within the discipline of Psychology. After the Preliminary Examination ('Prelims', see note below), taken after two terms (MT and HT) in the first year, our students are allowed to specialize in Psychology alone. This degree of specialization is greater than is available in most other University Courses. The course for the first two terms, leading to **Prelims**, is intended to provide a general introduction to three subjects. In Psychology, for example, the lectures give a broad overview of the subject, and in Statistics students are introduced to the statistical ideas and methods that are used in Psychology. Students attend lectures and typically have tutorials in each subject. They take the Prelims examination at the end of the second term. They take three papers, choosing from Psychology, Philosophy, Statistics, Neurophysiology and Physiology. For EP, the most usual combination is Psychology, Neurophysiology and Statistics. The Neurophysiology paper is designed for students taking Experimental Psychology, and this paper can be taken even by those without a background in Biology or Chemistry.

For the remaining terms students work for the Final Honours School (FHS) of EP which is divided into a **Part 1 course** lasting three terms and a specialised **Part 2 course** from TT of the second year until Finals. The Part 1 course consists of lectures and tutorials in nine different areas of Psychology (three per term). Students will have twelve tutorials (four per course) each term during the three terms of the Part 1. In TT of the second year, students start on the Part 2 course during which they choose up to three Advanced Options (usually one per term). There are both lectures and tutorials for each of the Advanced Option courses, which are designed to explore particular areas of the subject in considerable depth. Students will have up to six tutorials per Advanced Option.

Prelims

It is not expected that Visiting Students will take the prelims courses in Psychology or Statistics, as they will have had similar preparation in their home institution. Our previous Visiting Students have enjoyed the prelim course in Neurophysiology, however, and found it good preparation for some of the neuroscience courses available at Part 1 and Part 2 levels.

Introduction to Psychology (starts MT and runs through HT)

The aim of this two-term course is to introduce you to some of the basic problems, theories and discoveries of Psychology. The course is divided into four consecutive sections. A different lecturer covers each of these sections in a series of seven lectures. All the lecturers take care to point out the connections between their own lectures and those of the other three sections of the Psychology Prelim. The course begins in the first term with **Developmental Psychology**, and the seven lectures on this topic will cover various ways in which children's behaviour changes as they grow older. This part of the course deals with the origins of our perception, with the beginnings of language and with other aspects of children's intellectual and social lives. The next part of the course is on **Sensory Processes and Perception**, and mainly concerns vision. The lectures cover the physiological basis of vision, the perception of colour and how we use perceptual information as we move around our environment. The Hilary term lectures begin with lectures on **Psychobiology**. These are on the organisation of the brain, and how this affects emotion, motivation, language and thought. The lectures conclude with a discussion of chemical communication in the brain and how this relates to the action of various drugs on our behaviour. The last set of lectures is on **Cognitive Psychology**. It deals with the way we process information, solve problems, remember past events and think about the world around us.

Neurophysiology (starts MT and runs through HT)

This two-term course is a popular choice for students who wish ultimately to specialise in psychology and the neurosciences. This 'prelim' is commonly taken by students who intend to read Experimental Psychology. The Neurophysiology Prelim is a lecture course with no practical requirement and is intended to be accessible to those of you who have a lesser scientific background at school. As with all courses, you will get additional help through tutorial teaching. The course introduces you to the cellular basis of electrical activity in nerve cells and the transmission of activity between nerve cells and nerve and muscle. You will learn about sensory receptors, and you will be introduced to the pathways and basic mechanisms by which sensory information is processed by the brain. You will also learn about how muscle generates movement, and how those movements are controlled by the brain and spinal cord. Finally, you will learn basic information about how the nervous system develops. The course thus gives you a broad grounding in neurophysiological processes without requiring a detailed knowledge of neuroanatomy. Those of you who decide subsequently to specialise in psychology and neurophysiology may take an optional (non-examined) course in neuroanatomy at the start of your second year, and you are advised to go to a series of four introductory lectures in neuropharmacology in the Trinity Term of your first year.

Introduction to Philosophy

The purpose of the course is to introduce you to some central philosophical issues and to help you to acquire some concepts and ways of thinking which will be useful if you continue with the study of Philosophy, or even if you do not. The course has three parts, **I General Philosophy**, studied in connection with Descartes: *Meditations on First Philosophy*, **II Moral Philosophy**, studied in connection with J.S. Mill: *Utilitarianism*, and **III Logic**, studied in connection with W. Hodges, *Logic* (Penguin Books) and parts of Mark Sainsbury, *Logical Forms: an Introduction to Philosophical Logic* (Blackwell). In the preliminary examination you are required 'to show adequate knowledge' in at least two of these. Your college tuition may cover all three or only two parts; the decision may be your tutor's or left partly to your choice. In any case you are free to attend lectures on all three parts.

Logic (usually taught in college classes) is the study of patterns of valid inference, and involves some study of a formal system (that found in W. Hodges, *Logic*). Students are required to do exercises and proofs in a formal system, and also to understand the relation between the elements of the formal system and the kinds of inference and argument used in ordinary language. Even if you do not plan to answer questions from the Logic section of the examination paper, you are likely find it useful in further philosophical study to have some familiarity with a formal logical language and the ability to use it to investigate logical relationships and to understand its use by others. In I and II (usually taught in tutorials or small groups) students are introduced to central issues in philosophy, studied through reading a classic text in conjunction with other writings, including critical responses and modern treatments of the same issues. Part I, General Philosophy, with Descartes' *Meditations*, introduces students to issues such as the foundations of knowledge, scepticism, the nature of the mind and its relation to the body, and arguments for the existence of God. Part II, Moral Philosophy, with J.S. Mill *Utilitarianism*, involves the study of an influential but controversial moral theory, with discussions of subjects such as happiness and pleasure, the criterion of right action, the role and foundation of moral principles, and justice. Students learn how to read and to evaluate philosophical writings, how to identify the author's arguments and conclusions, and are encouraged to think critically and write lucidly about the issues discussed.

Introduction to Probability Theory and Statistics

This course provides an introduction to statistics in the behavioural sciences and consists of lectures supported by tutorial work. The course focuses on the principles of statistics as applied to the analysis of surveys and experiments and the interpretation of the results of such investigations. You will consider a range of common techniques, including graphical techniques, for describing data and how to begin to interpret the results of scientific investigations. You will also learn about the types of data that are dealt with in psychology, the common methods for summarizing data, and the advantages and disadvantages of these methods. The course will also cover the principles of probability theory, the common probability distributions that are encountered in statistics and psychology and the relationship between these distributions. You will also learn about the principles of extrapolating from a sample of data to a population. A major part of the course deals with hypothesis testing, including how to construct hypotheses and the issues that need to be considered when testing hypotheses. You will cover in detail a range of statistical tests that are commonly used in psychology to test hypotheses, including how to apply these methods and how to interpret the results. As part of your tutorial work you will need to explore and analyse 'real-life' data, for which you will need a calculator – a Casio scientific or statistical calculator, or equivalent, is recommended. The

level of mathematics ability required is about the same as GCSE (High School) mathematics. A booklet is given out at the lectures detailing all the major formulae required for the course. At the examination you are allowed to use your calculator and you are provided with a copy of the booklet of formulae.

Physiology

The Physiology Prelim is an introductory course to all the major aspects of physiology. It is taught in lectures and in a number of compulsory practical classes over all three terms of the first year. The course is supported by the colleges through tutorial teaching. Perhaps because it is a broader and longer course than the other Prelim courses in PPP, the Physiology course is less often chosen than the others. However, it is a useful course if you are clear that you wish ultimately to take PPP and to specialise in Physiology without confining your interests to neurophysiology. The Physiology Prelim introduces you to the body's fluid compartments and their regulation through the kidney; the blood and its functions, and the main aspects of the circulatory system; respiration, the gastrointestinal system, endocrinology and reproduction; and the fundamentals of pharmacology. In addition, you will study the basic processes involved in nervous transmission within and between nerve cells, but this course does not include sensory processes, motor control and the physiology of the brain and spinal cord. You should discuss with your tutor whether to choose the Physiology Prelim or the Neurophysiology Prelim. If you choose Neurophysiology, but then feel subsequently that you need to extend your knowledge to appropriate areas, this can always be done later through tutorial teaching. There is clearly a small area of overlap in the courses for Physiology and Neurophysiology, and this part of the syllabus is taught in Michaelmas Term. To avoid confusion, the printed University Lecture List in Michaelmas Term shows only the teaching that is intended for the Neurophysiology course. Detailed timetables showing both courses are, however, available on request through your tutors and through the Physiology Faculty Office or the Academic Secretary in Psychology. If you choose to take both the Physiology and the Neurophysiology Prelims, you may answer questions on the physiology of nerve cells only in your examination paper in Neurophysiology.

Psychology Courses

Visiting students would be expected to take two or three Part 1 courses per term from those below or one Part 1 course and one Advanced Option per term. Please note only one Part 1 course from each group is available each term. The terms in which Advanced Options are offered change frequently as do the different options available.

Part 1 courses

The eight core areas of the degree are indicated below:

Group A – Biological Bases of Behaviour

- A1. Cognitive Neuroscience (TT11; HT from 2013)
- A2. Behavioural Neuroscience (MT)

Group B – Human Experimental Psychology 1

- B1. Perception (TT)

B2. Memory, Attention and Information Processing (MT)

Group C – Human Experimental Psychology 2

C1. Language and Cognition (HT12; TT from 2010)

C2. Developmental Psychology (MT)

Group D – Social Psychology and Individual Differences and Psychological Disorders

D1. Social Psychology (TT)

D2. Individual Differences and Psychological Disorders (HT)

Part 2 courses

The availability of part 2 courses changes every year. We would consider allowing students to study a part 2 course in their second or third term at Oxford, provided there is a place available on the course. This can be discussed with your personal tutor at the end of the first term.

Teaching Modes

Lectures

Lectures form the backbone of the EP course. They are designed to tell you about the important issues, theories and empirical research in Psychology, and to stimulate further thought and discussion about each topic. Much of this further discussion takes place in tutorials and classes. The main function of the lectures is to give you a clear, thorough and up-to-date introduction to the main branches of Psychology, while also giving you the opportunity to learn about more specialized topics in the third year Advanced Options. Be prepared to take systematic notes during the lectures, but be careful not to write too much down. You will need to develop the skill of taking notes efficiently. You will find it helpful to go over your notes and to re-organise them after each lecture. Useful books giving advice on study methods are: *The Good Study Guide* and *The Sciences Good Study Guide* by A. Northedge (Open University paperbacks).

Do not be afraid to ask questions during or at the end of the lectures if you have a point to make or if there is some aspect of the lecture that you have not understood. Lecturers welcome questions, which can spark off a discussion in the lecture itself. All the lecturers provide a list of references (journal articles, chapters and books) as part of the lecture handout. Each list will probably contain a number of key articles that were explicitly mentioned in the lecture, but the lists will be valuable to you, not just as part of the lecture but also when you do tutorials on the same topics and when you come to revise. For the Prelims course you are advised to go to all the lectures that are relevant to the papers that you are taking. You are also advised to go to all the Part 1 lectures and the relevant Advanced Options lectures.

Tutors and tutorials

Oxford colleges play an active and important role in undergraduate courses. College tutors in the subjects that you are studying are responsible for arranging the tutorial teaching. Tutorials are a valuable and essential part of undergraduate education here. The tutorials that you go to will be given either by one of your College tutors or by another tutor, as arranged by your College tutor. The tutorial system requires you to organize your time efficiently. For most of the week you will be working on your own, and this requires self-discipline. It is better to distribute your work over the day and early evening than to have 'essay crises', writing your essays late at night or in the early morning. For advice on working patterns and study methods see *The Good Study Guide* by A. Northedge (Open University paperback).

At the beginning and at the end of each term your College tutor will talk to you about the arrangements that they have made for your tutorials for each term. Your tutor will also give you advice about which lectures to go to. Your College tutor will keep a close eye on your progress and is also there to help with any problems that you have outside work. Nowadays most undergraduates are given tutorials in pairs. You and another undergraduate spend an hour with the tutor each week and you will usually be expected to write an essay for every tutorial. The way in which tutors deal with this essay varies. Some tutors read the essay before the tutorial and give you written or oral comments during the tutorial; others ask you to read the essay at the tutorial and make their comments on it on the spot; others read your essay after the tutorial and make comments on it. At your initial meeting the tutor will discuss the topic for the first tutorial and will tell you what to read on this topic. After this, the tutor will devote the last part of each tutorial to giving you reading for the next topic.

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 the issues. A good tutorial essay is rarely produced unless you allow yourself sufficient time to think. The purpose of the tutorial is to encourage you to think, not to give you a mini-lecture. Work on a tutorial essay involves library searches, reading, thinking and writing. The first two of these will take you up to three days. You must then give yourself time to construct your argument since this will result in a much stronger essay. Read attentively and thoughtfully, skipping bits that obviously do not bear on your topic. Remember that good notes are in your own words. Copying down passages of the original is rarely helpful. Your notes should be selective. As a rough guide an essay might be based on 15 to 20 pages of notes. Highlighting passages on a photocopy of the article is not helpful; you need to take notes because you then think about what you are reading instead of just recording it. You should use your essay, not just to summarize what you have read, but also to present your individual viewpoint. Tutors are interested in encouraging you to develop your own opinions and views. If you would like to receive tuition from a particular person in Oxford, ask your College Tutor in the first instance. If you have any difficulties with your tutorials or any personal problems with your tutor, tell your College tutor about it immediately. If the problem concerns your College tutor, and you prefer to talk to someone else about it, approach someone else in your College – for example your College Advisor, the Women's advisor or the Senior Tutor; you can also approach the Director of Undergraduate Studies in the Psychology Department.

Towards the end of each term the tutor who has been teaching you will write a report for your College on your progress. You will have the opportunity to discuss the report and your progress generally at the end of each term either informally with your College Tutor.

Useful books giving advice on study methods and writing are: *The Good Study Guide* and *The Sciences Good Study Guide* by A. Northedge (Open University paperbacks) and *How to Write about Biology* by J. Pechenik and B. Lamb (Longman).

Work in vacations

Vacations allow you to consolidate and make connections for yourself between the different segments. Vacations give depth and time for serious thought, and they are particularly important for reading, and for work on your research project or dissertation.