

Study Day at Somerville College, Oxford University

I am delighted to let you know that this year we will again be running our Year 12 Study Day on **Saturday 23rd of February, 2019.**

The day offers a taste of university study, and will have as its centrepiece small-group seminars (with a maximum of 15 students) run by Oxford university academics in their own specialisms, which will offer a challenging and entertaining introduction to university-level study of the subject. Please see below for the full list of this year's sessions on offer.

The seminars are open to all Year 12 students taking a related subject, who are thinking about going on to study it at university. The students will also have the opportunity to spend the day with current undergraduates in their subject of interest, and to discuss the courses with the college tutors. The day is entirely free of charge, and includes lunch with current undergraduates in the College Hall, refreshments and a university tour. Although we regret we are not able to pay students' travel expenses in general, we do have a small budget to support travel for students who would otherwise be unable to come due to financial circumstances.

The schedule for the day and details of each of the seminars on offer are attached. To accommodate as many students as possible, we will be dividing them into two groups – you will notice that this is reflected on the schedule. In order to keep numbers low in the seminars, places are limited. We try to accommodate students from as many schools as possible, but will do our best to offer places to as many of your students as we can. **When listing candidates it is therefore important that they are placed in priority order and that the seminar subject they are interested in is clearly listed.** It is often the case that we are only able to accommodate the first couple of entries, although numbers vary from year to year. Selection criteria could include academic performance and potential, interest in and suitability for a particular subject on offer, or anything else that the school deems suitable.

We believe that our Study Day offers a valuable educational experience, as well as a taste of undergraduate life, at a time when students are making important decisions about higher education. Somerville College would be delighted to give your students a very warm welcome, and we do hope that the day will be of interest to your school.

With all best wishes,

Professor Simon Kemp, *Associate Professor of French and Fellow of Somerville College*
Nuala Marshall, *Access and Outreach Support Officer*

Somerville College, Oxford



Somerville College Study Day 2019

Schedule

10.15 – 10.45	Arrival and refreshments
10.45 – 10.55	Welcome from the organisers
11.00 – 12.00	<p>Group 1: Taster session. Students are taken to meet the tutors for the academic seminar they have chosen, which includes discussion about studying the subject at Oxford.</p> <p>Group 2: Our undergraduate helpers will take students on a walking tour of the College and of the University's main sites.</p>
12.00 – 13.00	Lunch in Hall, with undergraduate helpers
13.00 – 14.00	<p>Group 1: Our undergraduate helpers will take students on a walking tour of the College and of the University's main sites.</p> <p>Group 2: Taster session. Students are taken to meet the tutors for the academic seminar they have chosen, which includes discussion about studying the subject at Oxford.</p>
14.00 – 14.20	Refreshments
14.20 – 15.30	Oxford admissions – the organisers and undergraduates will discuss applying to Oxford, with time for questions.
15.30	Close

Booking

To reserve places for your students at this year's Study Day, please complete the below form and return it by email to the Access Team at the following address: access@some.ox.ac.uk

Alternatively, please post the required information to:

Access Office
Somerville College
Woodstock Road
Oxford, OX2 6HD

Please book quickly as places are very limited. We try to accommodate students from as many schools as possible, but will do our best to offer places to as many of your students as we can.

Reservations must be received by Friday 25th January. We will confirm places and send out further information by Friday 1st February.

Somerville College Study Day 2019 - Booking Form

School name: _____

Coordinating teacher's name: _____

Email address: _____

IMPORTANT NOTE: please place students' names in priority order, as it is possible that only limited numbers will be accommodated

Student name	Seminar number (1-9)	Dietary requirements (if applicable)	Disability/access requirements

Academic Taster Sessions offered this year:

1. Neuroscience is all about understanding the brain and nervous system. But how does the brain work? How does it influence our behaviour and emotions?

Have you heard about serotonin? Serotonin is a chemical in the brain that is important in influencing emotions and behaviour. Mood disorders like depression are connected to low serotonin levels in the brain. I am interested in how electrical signals of individual neurons and neural networks within the brain work to further our understanding of the serotonin system. Helping to understand how the basic system works, we hope to help developing better, targeted drugs for mood disorders. This is just one little aspect of a very exciting field of trying to understand how the brain works. For my day-to-day work, I use a combination of neurobiology, pharmacology, a little bit of physics and a lot of computer analysis, this diversity is challenging, but also exciting.

No advance preparation will be needed. This session should be interesting to any student considering studying biomedical sciences, (experimental) psychology and medicine.

Dr Judith Schweimer, Lecturer in Medicine

2. Getting to the Heart of Cardiac Disease: A Multi-Disciplinary Effort to Understand the Metabolism of the Heart

A picture can tell a thousand words, but only the right picture can help a cardiologist in deciding what the best course of treatment is for a patient with heart disease. In this session, we will discuss the ongoing multi-disciplinary effort between physicists, cardiologists, pharmacists, biologists, chemists, and others in using magnetic resonance imaging (MRI) to acquire images that reflect the metabolism of the heart. This session will include short talks, interactive demonstrations and discussions on various aspects that encompass our research including: metabolic biochemical pathways of the heart, MRI coil engineering, signal processing and image reconstruction, and how wonderful the heart is as a natural mechanical pump.

We hope that this session will encourage students from a wide range of backgrounds and interests (including, but not limited to, physics, biophysics, engineering, computer sciences, biology, chemistry, biochemistry, medicine) to consider a career as a medical researcher and to appreciate that their choice of undergraduate degree does not limit them in their future career options.

Drs Kerstin Timm and Justin Lau, Postdoctoral Research Fellows in Medicine

3. Are we trying to save the planet or are we trying to save ourselves?

In order to answer this question we need to answer some more. What is happening to our planet? Why are we losing species? Why do we need biodiversity? What can we do to help to prevent the loss of species and the reduction in biodiversity? This discussion-based session will try to draw up a list of actions that will save species for future generations.

This session is suitable for biologists, geographers and anyone interested in the future health of our planet.

Timothy Walker, College Lecturer in Plant Conservation

4. The Future of Petrol and Diesel Engines

This session will look at the thermodynamics of internal combustion engines and review how to make them clean and efficient. It will introduce some of the material taught to 1st year engineers, but also explore the more general topic of energy and why internal combustion engines will continue to be used in road transport.

This session will be of particular interest to students who wish to study Engineering, but also has relevance to anyone studying A level Physics or Chemistry

Professor Richard Stone – Tutorial Fellow in Engineering Science

5. Exploring the fuel used to power the Olympics

Our bodies use a variety of fuels to power athletic performance. We will explore the differences between these different fuels and how our bodies chooses the best fuel for the different endeavours of the Olympics.

This session would be suitable for those interested in medicine, biology, biomedical sciences or biochemistry.

Professor Damian Tyler, Fellow and Tutor in Medicine

6. Pain: History-taking and Diagnosis

How can we use how someone describes a pain to tell us more about what might be wrong? Medical problems often manifest with a pain, and we can tell a lot about what might be wrong by asking detailed questions about the pain. In this session, we will explore how doctors ask questions about pain, and I will ask for two volunteers to have a go at role playing this (good acting skills definitely not required!). We will then talk through what might be wrong, drawing on background knowledge of anatomy and physiology. We call this process ‘history-taking to reach a diagnosis’, and the same principle can be applied to all aspects of medicine, which medical students learn during the clinical part of the course.

No advance preparation needed. This session will be of particular interest to students considering studying medicine, but all are welcome.

Dr Helen Ashdown, Janet Vaughan Tutor in Clinical Medicine and academic GP

7. Harry Potter and the Translator’s Headache

Translating the Harry Potter books presents all kinds of linguistic challenges, not only due to the different stylistic preferences of the two languages, but also the cultural references, the jokes, made-up words and comedy names. This session, run by the convenor of Oxford’s Advanced French Translation course, uses the series to explore some of the knottier problems involved in translation, and to offer some help to explore the cultural and linguistic differences between French and English, and to make your own French sound more like that of an actual French person.

The session is open to all Year 12 students currently studying French, and should be of interest to anyone considering a degree involving modern languages of any kind.

Professor Simon Kemp, Associate Professor of French and Fellow of Somerville College

8. The Beginnings of English Literature

In this seminar, we will look at some of the earliest literature written down in English. Some of the material that we will examine dates back to the 7th century, or even earlier. We will think about the process of producing texts in Anglo-Saxon England and about what the surviving literature might tell us about the people who wrote it – and the people who read it. We will also reflect on the ways in which this literature both differs from - and is similar to – literature written today and in the more recent past.

This session will be of particular interest to students who are studying English literature and language, but everyone is welcome.

Dr Annie Sutherland, Rosemary Woolf Fellow & Tutor in Old and Middle English

9. Meeting the Mongols: Interaction and Exchange in the Medieval World

At the beginning of the thirteenth century, a frightening rumour began to circulate around the Christian courts of Europe: a new and unstoppable army led by the Antichrist had arisen in the East, conquering lands in Russia, Poland and Ukraine. This was the moment the Mongols (and their leader Genghis Khan), a vast and powerful nomadic Eurasian empire, came into contact with medieval Christian society. This session will look at how the leaders and peoples of medieval Christendom and the Mongol Empire interacted. The relationship was complex: it could be both violent and peaceable; a patchwork of battle, conversion and trade. We will examine a range of primary sources: accounts of missionaries attempting to make sense of a society which looked very different from their own, medieval maps of the world, and letters—including one sent by the Great Khan of the Mongols to the King of France. We will reflect on what accounts of the Mongols tell us about knowledge and exchange in the medieval world, about travel and travel writing, and about the connections between religion, hierarchy and authority.

No advance preparation needed. This session should be useful to any student considering a humanities degree, but particularly to those interested in history and its joint schools.

Dr Pippa Byrne, British Academy Postdoctoral Fellow in History