



Oxford Summer Institute

Academic Outline 2017

Overview

Oriel College (University of Oxford, UK) and CBL International, a WorldStrides organization, are inviting students and working professionals to participate in a 4-week session of *Oxford Summer Institute at Oriel College*. Delegates can also extend their stay for up to 10 weeks in Oxford or combine this with our sister programme in Cambridge, *Cambridge Summer Institute* offered jointly with Magdalene College (University of Cambridge, UK).

Four sessions will be held in Oxford:

- **Summer Session I: 02 July - 29 July 2017**
- **Summer Session II: 16 July - 12 August 2017**
- **Summer Session III: 30 July - 26 August 2017**
- **Summer Session IV: 13 August - 09 September 2017**

This programme will give all participants the opportunity to attend cutting-edge lectures on several subjects. Delegates will appreciate the strong focus on global economics and policy trends, international law, philosophy, British literature and academic writing, and natural science. This programme is the only extensive summer programme in Oxford that focuses on law, economics, philosophy, politics, computer science, physics, and mathematics, British literature and academic writing, and business and legal English.

Oriel College and CBL International will jointly issue a certificate to the participants. *Oxford Summer Institute* is a certificate programme that may be accountable for optional credits depending on the requirements of the home institution/school/university.

Combining lecture time, preparation, study time, and tests, each week is designed to be the equivalent to 3 ECTS credits or 1.5 US credits. Each week delegates are invited to participate in one examination. All programmes offered by CBL International Education in the UK are run by CBL International Oxbridge Programmes Ltd. We are proud to announce that CBL International Oxbridge Programmes Ltd is accredited by the British Accreditation Council.



The following courses will be offered during the programme:

Note: *All the below-mentioned courses are subject to possible changes. Applicants who select the Natural Science track, are required to attend Natural Science courses for the weeks that they are in Oxford and when these courses are available and offered.*

PPE & Philosophy Courses

- 1. Contemporary Political and Economic Philosophy:** This programme gives an insight into the modern philosophical thinking beginning with Machiavelli and the enlightenment. Various philosophical schools and their viewpoints will be discussed and the ideas of John Locke, Adam Smith, and Descartes will be analysed. Concepts of justice, equality, need, and human rights will be addressed including aspects of theories which argue that there is a duty of justice to distribute resources; justice towards future generations; national self-determination, multiculturalism, and the various concepts of a 'just war'.
- 2. Contemporary PPE - Ethics and Logic:** Since its beginnings in ancient Greece, the Western philosophical reflection on how we should conduct our lives has been closely intertwined with the inquiry into logos, 'reason' or 'reason-ing', practical and theoretical, human or divine. While ethics and logic have developed into two distinct disciplines, different philosophical approaches to normative ethics and meta-ethics are often best understood as springing forth from different conceptions of the role that reason and argument (ought to) play in human morality, and from different assessments of the validity of certain key arguments (or alleged 'fallacies') in ethics, and of the force and implications of certain 'dilemmas' or 'paradoxes'. Competing ethical theories are typically construed dialectically: they argue for the deficiency of the rival theories, and defend themselves by denouncing the shortcomings in the logic of their attackers.

International Economics Courses

- 1. Global Macroeconomics – Financial Crises and Crashes/Financial Crises and Policy Responses:** This course will expose the banking systems and their involvement in the financial crises, utilizing a various set of examples to illustrate key concepts such as the credit crunch and its effects in the real economy in order to later translate into the sovereign debt crises in Europe. This course will also cover subjects such as the unconventional monetary policy and the banking system reform implemented as the result of the financial crises.



2. **Global Macroeconomics – The Economics of Big Health Challenges:** This course will discuss and analyse the state of health in the world and the challenges of the next 20-50 years. In addition, delegates will learn how health financing will need to adapt to the challenges of an aging population. Case studies analyzing pandemics, such as SARS, flu, and Ebola, will be looked at in detail to understand how these cross over into the financial market, looking at early warning, and response ideas.
3. **International Taxation:** This course offers an in-depth understanding of international taxation, various aspects of taxation in cross border transactions, historical background of the OECD Model Tax Convention and how it has developed, basic scheme of the convention, role of commentaries, observations, and reservations.
4. **Development Economics:** This course will give an overview of policy-related issues faced by developing countries from both theoretical and applied perspectives. Topics covered include economic development and economic growth; poverty and inequality; gender discrimination; governance and institutions; media and corruption; natural resources and development; and the effectiveness of foreign aid in assisting developing countries.
5. **Behavioural Economics:** The objectives of this course are to introduce students to the approach and methods of behavioural economics. Psychological and social factors play an important role in human behaviours and decision-making processes. Behavioural economics increase the explanatory power of economics by incorporating these factors in order to provide more realistic psychological foundations for economic analysis.

International & UK Law Courses

1. **European Business Law:** This course will introduce the main concepts in European law and European Business Law giving students a better understanding of the European Legal System.
 - a. **European Business and Economic Law:** This lecture series discusses how the European Union (EU) works: the federal structure of the EU, regulatory competition and federal law making including an overview of the European institutions.
 - b. **European Corporate Law:** This course discusses the European corporate law and the coordination of domestic laws in order to minimise conflicting burdens for cross-border establishment of corporation. It also gives insights of the various options for European corporate structures



Taking into account the need to regulate such a wide range of sea-related transactions, this course will provide delegates with an understanding of shipping law, maritime law, international trade, and law of the sea.

5. **United Kingdom Tort Law:** The course introduces delegates to the basic principles of tort law within a social and economic context. Delegates are given the opportunity to make critical assessment of the law of tort and the way in which it works in practice. It examines the UK dimension through an examination of relevant directives, regulations, and case law of the UK justice system.
6. **International and UK Banking Law and EU Financial Regulations Reform:** The banking industry has recently gone through massive changes, which have changed its structure, the way it operates and the very nature of what was thought to be a stable yet dynamic environment. The systematic nature of the banking sector gives rise to challenges that need expertise in both law and finance in order to be effectively and successfully addressed. The course is designed to be theoretical and practical using case studies, which will enable students to understand the issues that the banking sector faces and provide solutions whilst ensuring the successful and profitable operation and development of the sector.
7. **International Criminal Law:** Issues of international law and international justice are at the forefront of public debates to a greater degree than ever before. International law provides the intellectual and the technical underpinnings to large areas of international cooperation, including:
 - the prosecution of war crimes (both internationally and nationally);
 - the legality of the use of force against States (e.g. Libya and Iraq);
 - the scope of human rights protection (e.g. the 'war on terrorism');
 - the international crimes and international criminal tribunal.

Computer Science, Physics, and Mathematics Courses

1. **Cosmology and Large-Scale Structures:** The aim of this course is to present the most relevant theoretical and observational results on which modern cosmology are based. The course covers the basic mathematical framework of the standard cosmological model, its observational motivations and its most important shortcomings. At the end of the course students should be able to understand the main open questions in cosmology, as well as the current and future observational and computational tools used to tackle them.
2. **Theoretical Physics: Symmetries and Field Theories:** This short course will focus on one of the primary guides to our understanding of modern day physics:



symmetries. In particular, how symmetries can be used to construct gauge theories, the Higgs mechanism and gravity as a gauge theory. Topics covered include Symmetries and field theories, The Higgs mechanism and gravity as a gauge theory, Shift and Galilean symmetries in the early and late universe.

- 3. Numerical Analysis:** Differential equations are one of the most fundamental tools in almost all areas of science. The aim of this course is to give an introduction to the numerical solution of differential equations. Starting with the representation and approximation of functions (continuous objects) by vectors (discrete data), delegates discuss how the basic calculus tasks (differentiation, integration) are done on a computer and move on to solving differential equations. The course will be a combination of lectures and practical computing work.

4. Image Processing & Surface Computing

Image Processing: Image processing uses mathematics to manipulate digital images like from a camera or a medical scanning device. The aim of this course is to give an introduction to diffusion PDEs as a means for image processing. Diffusion processes are used to remove noise while preserving or enhancing features such as edges which play an important role in the human perception of an image. In particular we will discuss edge-stopping, edge-enhancing, and coherence-enhancing diffusion models. Beyond that we will give an overview over other image processing tasks such as image inpainting and image deblurring which can be modelled with PDEs. The course will be a combination of lectures and practical computing work.

Surface Computing: This course introduces numerical solutions of Partial Differential Equations (PDEs) on surfaces using the Closest Point Method. Surface PDEs arise from many applications in physics, biology, and engineering. Among various numerical techniques for solving surface PDEs, the Closest Point Method is easy to implement and it works for a wide range of PDEs on surfaces with complex geometries. This course will cover basic theories, numerics and MATLAB implementations related to the method. On completion of the course, students can potentially solve interesting PDEs on intricate surfaces.

- 5. Artificial Intelligence: Knowledge Representation and Ontologies:** Knowledge Representation is at the heart of the great challenge of Artificial Intelligence: to understand the nature of intelligence and cognition so that computers can exhibit human-like abilities. The course is self-contained and assumes no prior knowledge of Logic or Computer Science. It begins with general background on Classical Logic, Theorem Proving, and Computational Complexity. Then, it turns to specialised logic-based languages that are commonly exploited in applications.



We will put special emphasis on the so-called Ontology Languages, their underpinning formalisations, and their implementation in modern applications.

- 6. Quantum Computing:** In this course participants will survey quantum groups and their relations to the above-mentioned areas of mathematics and mathematical physics. We will look at the Yang-Baxter equation and its relation to knot theory, the definition of quantum groups and the universal R-matrix, the perspective of non-commutative geometry on quantum groups and basic concepts from TQFT and its application to quantum computing. The aim of this course is to give an overview of active areas of research. The required prerequisites are linear algebra. Some knowledge of basic representation theory and ring theory will be useful.

Academic Writing Courses (English Literature & History Oriented)

- 1. English Literature:** This course will offer delegates a strong foundation for understanding the various facets of English Literature across eras and genres, tempering historical and ideological depth with attention to textual details. Prose, poetry, and drama will be considered in dynamic ways, inflected by engagement with various political, socio-economic, religious, philosophical, and cultural ideas.
- 2. Academic Writing & Critical Thinking:** Students will learn how to identify and critique implicit claims in academic and journalistic writing, what characterises weak arguments and how to formulate strong ones, as well as how to interrogate visual arguments in video or photographic media. Students will also acquire more practical skills, including how to interpret essay questions, how to structure and reference an academic essay, as well as how to write with clarity, brevity and maximum impact.
- 3. Culture and Communities in 20th Century British:** In this course we will discover how this cultural revolution in postwar Britain was achieved. We will examine the birth of the teenager and the advent of mass marketing and culture industries, such as popular music, during the late 1950s and early 1960s. We will analyse the phenomenon of 'Beatlemania'-in other words, how four working-class lads from a Northern industrial city, Liverpool, became the most significant and creative force in the history of popular music-either at the time or since. In addition, the course will explore the influences shaping British cultural life since the Second World War. The course will introduce students to innovative new historical work being undertaken on Postwar British Culture by historians such as Dominic Sandbrook, David Fowler, and Doug Rossinow (from the US).



- 4. Intercultural Communication:** This course will look at key academic and practical topics involved in intercultural communication. Drawing on the fields of literary studies, linguistics, anthropology, ethnography, and cultural studies, delegates will analyse topics including, 'Communicating between cultures', 'Translation', 'Verbal and Non-verbal Communication', and 'Cultures and Concepts'.

Business and Legal English Courses

- 1. Business and Legal Communication:** This course is designed to develop an individual's confidence and ability to use English within a professional environment. Covering topics such as negotiation, business presentations, client communication, and self-communication, this course is an excellent preparation for future experience in the business or legal sectors of an English-speaking environment. Both with clients and about focus on the reading, writing, and listening skills of the English language in a business context. By being able to understand and use the business language, participants will be able to further their career in both their work quality and building relationships among colleagues and clients. This course will provide delegates the ability to communicate on an international level using precise and correct legal language. Upon completion of the course, participants will improve their confidence in explaining points of law, enhance their drafting and editing skills, and ultimately represent their organisation in a more effective manner.

Additional Programme Features

These features are offered complimentary in each session to all delegates

- 1. Corporate Day in London:** It is essential not only to learn the theory of international law and economics but also to understand some of the important practical aspects. Therefore included in the programme is a trip to the City of London where students will have the chance to visit some of the following: British and international institutions, city law firms, Inns of Court, banks, corporations, or courts. Previously visited institutions are, among others:

- Thomson Reuters
- Fountain Court Chambers
- UBS
- Westlaw
- The Royal Courts of Justice
- Lincoln's Inn
- Middle Temple Inn
- Bank of England
- Whitehouse Consultancy
- International Maritime Organization
- International Sugar Association
- Incorporated Council of Law Reporting
- London Court of International Arbitration



Oxford Summer Institute



- Harvey Nichols
- Rouse
- Houses of Parliament
- Amnesty International
- Supreme Court

2. Visits and workshops: Delegates of the Computer Science, Physics, and Mathematics courses will also have the chance to go to London, and various institutions or labs in Oxford or Cambridge. As the classroom lectures are good venues for more theoretical content, visits to practical environments are a good opportunity for students to understand how science and technology is applied, and what cutting edge technology is being developed to advance our frontiers in technology, energy and infrastructure.

Possible visits may include:

Institution	Area of Interest	Location
Sharp Laboratories of Europe	Optoelectronics/ IT / Health technology	Oxford
Poyry	Energy engineering and market	Oxford
Culham Centre for Fusion Energy	Nuclear energy/ physics/ engineering	Oxford
Cavendish Laboratory Museum	Physics	Cambridge
Thames Barrier	Engineering/ Infrastructure	London
Royal Observatory Museum	General Science/Astronomy	London
Science Museum London	General Science	London

3. Cultural Activities in Oxford: Throughout the programme, delegates will have the opportunity to get to know the city of Oxford through a variety of activities. This is a selection of cultural activities and visits organised in previous years:

- Oxford Walking Tour
- Ashmolean Museum
- Pitt Rivers Museum
- College Tours
- BMW Mini Plant Tour
- Film Nights
- Pub Crawl
- Quiz night
- Academic and Cultural Evening Talks
- Sports activities
- Punting
- River Cruise
- Oxford Castle
- Botanic Gardens
- Blackfriars Dominican Convent

Faculty

CBL International, Oriel College, and all involved colleges are composing a strong team of faculty members including professors, university lecturers, university researchers, college tutors, and DPhil candidates from the University of Oxford (UK) and the University of



Cambridge (UK) to teach your courses. In the meantime, some teachers and lecturers will also be invited from other prestigious universities such as the London School of Economics and University of California, Berkeley, and other selected institutions.

The following faculty members worked *with Oxford Summer Institute* in previous years (selection):

- **Professor Keith Hawkins**, Emeritus of Law and Society at University of Oxford (UK), Fellow Emeritus of Oriel College, University of Oxford (UK)
- **Professor Stefan Enchelmaier**, Professor of European and Comparative Law, Lincoln College, University of Oxford (UK)
- **Professor Luca Castagnoli**, Associate Professor of Ancient Greek Philosophy, Oriel College, University of Oxford (UK)
- **Professor Bernardo Cuenca Grau**, Supernumerary Fellow of Oriel College, Professor at Department of Computer Science, University of Oxford (UK)
- **Professor Kobi Kremnitzer**, Fellow and Tutor of Mathematics at Oriel College, Professor at Department of Mathematical Institute, University of Oxford (UK)
- **Dr. Christopher Malone**, Lecturer in International Relations at Queen's College, University of Oxford (UK), DPhil in Philosophy, University of Oxford (UK)
- **Dr. Anzhela Yevgenyeva**, Research Fellow at SAID Business School, University of Oxford (UK)
- **Dr. Robert Pitkethly**, Official Fellow and Tutor in Management, St. Peter's College, University of Oxford (UK)
- **Dr Rudina Jasini**, Faculty of Law, University of Oxford (UK)
- **Dr. Nikolaos Theodorakis**, University Lecturer at the Oxford University Foreign Service Programme, Junior Research Fellow at Pembroke College, and Postdoctoral Research Fellow at Kellogg College, University of Oxford (UK)
- **Dr Donna Harris**, Department Lecturer in Development Economics, University of Oxford (UK)
- **Dr. Martin Robinson**, Post Graduate Research Assistant at the Oxford Centre for Collaborative Applied Mathematics, University of Oxford (UK)
- **Dr David Michael Fowler**, Faculty of Politics, University of Cambridge (UK)



Certificate, Academic Transcript, and Accreditation

Oriel College and CBL International will jointly issue a certificate to delegates on completion of the programme. *Oxford Summer Institute* is a certificate programme that may be accountable for optional credits depending on the requirements of the home institution/school/university.

The Academic Transcript will show the courses chosen and attended by each delegate. It will indicate the workload of each course as well the results of exams and assignments. Each week, one course will be taught. Combining lecture time, preparation, study time, and tests, each week is designed to be equivalent to 2 - 3 ECTS credits or 1 - 1.5 US credits. Each week delegates are invited to participate in one examination. All programmes offered by CBL International Education in the UK are run by CBL International Oxbridge Programmes Ltd. We are proud to announce that CBL International Oxbridge Programmes Ltd is accredited by the British Accreditation Council.

Combination of *Oxford Summer Institute* and *Cambridge Summer Institute*

Since 2013, *Oxford Summer Institute* has a very exclusive sister programme, *Cambridge Summer Institute*, offered jointly with Magdalene College (University of Cambridge, UK). This academic programme is the only extensive summer programme in Cambridge that focuses on international business management, international relations and politics, history, and business and legal English. It is possible for delegates to combine these two outstanding academic programmes and spend up to 10 weeks in Oxford and 8 weeks in Cambridge. Please contact our academic programme representatives for further information.

Tuition & Accommodation

Tuition Fee (4 weeks):	RMB 32,500
For USTB	RMB 22,800

Tuition fee includes all lectures, course materials, handouts, a corporate day in London, academic evening talks, scheduled cultural activities, and excursions.

Accommodation Fee (4 weeks)	RMB 16,400
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Accommodation fee includes a single room with a shared bathroom in a college of the University of Oxford (in total 27 nights), and breakfast served daily in college dining halls.

Extra charge for full board (lunch and dinner served daily)	RMB 6,250
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Application and Contact Details



CBL International
A WorldStrides Organization



Oriel College
UNIVERSITY OF OXFORD

Student groups can apply through a university/school representative. Qualified representatives will be individual professors, programme directors, or head of international offices.

For further information regarding *Oxford Summer Institute* and the application process, please contact:

Valen Li

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