



Worcester College
UNIVERSITY OF OXFORD

Oxford Certificate Programmes at Worcester College

***- Intensive Residential Study Abroad Programme for
University Students -***

Academic Programme Outline

Open-enrollment programmes for university students

Course Overview for Asian Universities

Summer 2024



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1. Introduction

The *Oxford Certificate Programme at Worcester College (University of Oxford)* for university students is an academic study abroad programme that offers cutting-edge subjects designed to complement a student's existing studies, providing them with methodologies and case studies that will set them above their peers.

Students participate in academic courses on various subjects and experience teaching in an authentic Oxford college setting. This will be done according to the Oxford teaching model: small group interactive classes with individualised feedback and class participation. All academic teaching the courses will be tutors at the University of Oxford or the University of Cambridge.

Participants will live in Oxford college dormitories and dine in Oxford dining halls. All teaching will happen in small groups within Worcester college or Oxford university premises. All of this will offer participants an experience that will be as close as possible to attending Worcester College as a student of the University of Oxford.

In support of the academic content, the programme offers a wide range of activities. These include visits to the main university sites such as the Oxford Union and the Bodleian Library, in addition to other colleges and Oxford's world-renowned museums and galleries. Trips further afield, such as to Cambridge and Blenheim Palace, compliment an extensive array of evening speakers and further activities.

2. Worcester College (University of Oxford)

Worcester College is one of the historic colleges of the University of Oxford. It was founded in 1714, but is on the same site and in direct succession to Gloucester College, which was founded in the late 13th century.

Today, the college teaches almost every subject offered by Oxford, from Economics and Management to English Literature and Fine Art, from Medicine to Law, Artificial Intelligence to International Relations, and it enjoys multiple links with Oxford's Said Business School in particular.

This academic offering takes place in one of the most stunning of Oxford's colleges: medieval and 18th century buildings are set in Oxford's finest gardens and a lake, and all this is alongside state-of-the-art modern facilities, such as the recently built Nazrin Shah center. We are also the only college to have our sports fields and tennis courts within the college walls, together with a boat house on the river.



3. Programme Dates

- **Session I** 28 July – 10 August 2024 (Economics and International Law)
- **Session II** 11 August – 24 August 2024 (Business Management and AI)
- **Session III** 25 August – 7 September 2024 (AI, Global Health and Planetary Health)

4. Academic Course Offerings

Session I: Economics and International Law

Economics I: Financial Economics and Game Theory

Instructor: Dr Charles Roddie

Description TBC.

Economics II: Financial Crisis and Beyond

Instructor: Andrew Farlow

The objective of this course is to provide an overview of the causes and the events of the recent financial crisis, as well as of the policy response by governments and central banks. The first two lectures will discuss the critical aspects of the evolution of financial markets and institutions that have led to the crisis. The next two lectures will go over the events of the crisis and the actions undertaken by government and central banks around the world. The fifth lecture will recap before the multiple-choice test. The last two lectures will put the recent crisis in a historical perspective and compare alternative views on the causes of the crisis.

International Law I – IP Rights Management and Legal Theory

Instructors: Prof Keith Hawkins and Dr Robert Pitkethly

This course consists of two parts, combining two facets of the law.

The legal theory course will provide an in-depth knowledge of the functions of the rule of law in common law jurisdictions, as well as to consider law in a practical manner. These lectures analyse the nature and importance of rules in legal systems and examine some of the main difficulties associated with the implementation of laws, rules, and regulations.

The course in intellectual property law aims to give students a general overview of the three main regimes of IP, copyright, patents and trademarks. This will include discussions on the justifications of intellectual property; the requirements necessary to garner protection for literary or artistic works, inventions and brand logos; the infringement of these various rights; and the remedies available.

International Law II - International Dispute Resolution

Instructor: Dr Rudina Jasini



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This course provides a comprehensive introduction to international dispute settlement. The course begins with an introduction to the obligation to settle peacefully international disputes and the basic concepts in the field, in particular the various methods of peaceful dispute settlement.

In this course we will study a number of institutions and processes that have been developing to deal with a variety of “international” issues, including some that will seem more “national” or domestic or “municipal” (such as in the aftermath of civil wars, genocides, or “internal” conflicts that may become international for a variety of reasons, including treaties, international customary law or just plain politics). We will look at issues that affect states (generally called “public international law”) and those that affect private parties (commercial dealings, generally called “private international law”). International disputes are both civil (involving contracts, commercial relations, and various torts and injuries, as well as involving employment and family law) and criminal (human rights violations, international kidnapping, economic crime, terrorism), as well as “diplomatic,” involving state to state relations.

The first part of the course addresses the role of international and regional organisations in dispute settlement. The course then explores the diplomatic or non-judicial means of dispute settlement: negotiation, mediation, inquiry, and conciliation.

The second part of the course concerns the advancement of international criminal justice and settlement of disputes through a range of international courts and tribunals, in particular the International Court of Justice, International Criminal Court, and various international criminal tribunals that have been established up to date.

Session II: Business Management & Artificial Intelligence

Note: Courses in International Relations and Diplomacy are currently under development, and expected to be offered in 2024

Business Management I: Strategic Management

Instructor: Dr Eva Schlindwein

Various methods of strategic market analysis are presented in this course so as to allow students to evaluate risks and opportunities in global markets, highlighting intercultural aspects, by looking at organizations operating in different countries. Students learn to analyse and understand strengths and weaknesses of organizations from various disciplines (products, services, NGOs etc.) that face specific market situations. Supported by new developments in the field of market research, the process for identifying and analysing core competencies and competitive advantages in national and international environments is discussed at length. Students are supported to plan strategic alternatives and to implement and control these by taking on fictitious roles within various different organizations. Exercises and international case studies help students to identify with the role of management and participate in the strategic planning process as well as in operational management. This helps students understand the



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problems companies regularly face and comprehend how methods of modern management can be used in order to solve these.

Business Management II: Leadership

Instructor: Dr Eva Schlindwein

In today's knowledge-based society, employees are a firm's most valuable resource. A key responsibility of leadership is to develop the knowledge, expertise, and skills of employees. Good leadership is crucial for the continued success of a firm in the face of increasingly competitive markets. This course presents the necessary competencies of the leader in a modern, knowledge-based organization. Central questions raised by modern leadership theory are presented and discussed. In doing so, the course focuses on requirements and instruments of professional leadership, aspects of situational leadership, and leadership communication and interactions, both in the context of strategic management and change processes. The methodological and conceptual foundations of leadership are presented to students, along with empirical examples and best-practice principles, with the intent for students to master the challenges of enhancing the firm's most valuable asset—its employees—via professional and contemporary leadership practices.

Artificial Intelligence I: Machine Learning

Instructor: Dr Vincent Harinam

Machine learning is a field of scientific study concerned with algorithmic techniques that enable machines to learn performance on a given task via the discovery of patterns or regularities in exemplary data. Consequently, its methods commonly draw upon a statistical basis in conjunction with the computational capabilities of modern computing hardware. This course aims to acquaint the student with the main branches of machine learning and provide a thorough introduction to the most widely used approaches and methods in this field.

Artificial Intelligence II: Deep Learning

Instructor: Dr Vincent Harinam

Module Description

Neural networks and deep learning approaches have revolutionized the fields of data science and artificial intelligence in recent years, and applications built on these techniques have reached or surpassed human performance in many specialized applications. After a short review of the origins of neural networks and deep learning, this course will cover the most common neural network architectures and discuss in detail how neural networks are trained using dedicated data samples, avoiding common pitfalls such as overtraining. The course includes a detailed overview of alternative methods to train neural networks and further network architectures which are relevant in a wide range of specialized application scenarios.



Session III: Artificial Intelligence, Global Health & Planetary Health

Artificial Intelligence III:

Instructor: Prof Bernardo Grau & Colleague

This course has a particular focus on search as the fundamental technique for solving AI problems. It will introduce AI search techniques, such as depth-first, breadth-first, and iterative deepening search, and it will discuss heuristic techniques such as A* search that improves efficiency by pruning the search space. This course also deals with optimization problems, and will introduce a standardized language called STRIPS for modeling planning problems, before discussing how to solve planning problems using search techniques such as forward chaining, backward chaining, and partial order planning. Constraint satisfaction problems (CSPs) constitute another important class of AI problems, and so this course will also introduce search techniques such as backtracking and constraint propagation that can efficiently solve many CSP problems in practice.

Artificial Intelligence IV:

Instructor: Prof Bernardo Grau & Colleague

This course will initially introduce basic game-playing techniques such as minimax search and alpha-beta pruning, building on the previous week. Dealing with unknown or incompletely specified environments is a form of intelligent behaviour that is critical in many intelligent systems. For example, consider a robot in maze that has no prior knowledge about the maze layout. To solve the problem, the robot needs to represent and update its knowledge about the maze as it moves through the maze. This course will show how to solve such problems via search in the belief space – the space of all possible beliefs the robot may have about the maze layout. The course will then cover knowledge representation and reasoning as well as modern topics involving knowledge graphs, before the students move on to assessment.

Global Health & AI

Instructor: Andrew Farlowe

This class will offer its participants a look into the likely trends and developments that the world will experience over the next decade, together with forecasting deeper into the 21st century. Each day, leading academics from the University of Oxford will present, discuss and analyse what these trends mean for humanity and its planet with its participants, with each day focused on a particular field.



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Planetary Health & Food

Instructor: Andrew Farlowe

Description TBC

Evening Talks Series

Instructors: Prof Nir Vulkan, Dr Simon Cowan, Edward Hadas

Alongside these courses are a range of evening talks, providing more focused explorations of specific subjects complimentary to the main academic content. These talks are conversations with plenty of question time, allowing students to interact with top people in these fields in an informal setting, whilst also learning aspects of a subject at the cutting edge of these fields. Specific talks in recent courses have included *AI and Finance*, *Ethics*, *Finance and the Next Crash* and *Pricing and Market Power*.

5. Teaching Academics

All instructors are leading academics, including professors, academic tutors and lecturers, senior post-doctoral researchers and PhD students from the University of Oxford and/or the University of Cambridge.

- **Dr Simon Cowan**

Associate Professor of Economics

Wigmore Clarendon Fellow and Tutor in Economics

Prof Cowan's research is on theoretical models of pricing in imperfect competition, with a recent focus on price discrimination and its welfare effects. He has also worked on the regulation of privately-owned utilities. Regulatory Reform: Economic Analysis and British Experience (MIT Press), written with co-authors Mark Armstrong and John Vickers, was published in 1994. He has papers in the American Economic Review, The Economic Journal and the Rand Journal of Economics, and he is a former editor of Oxford Economic Papers. He teaches undergraduate courses in Introductory Economics, Microeconomics, Macroeconomics, the Economics of Industry and International Economics. He also teaches environmental economics, and Industrial Organization to graduate students. He was Head of Department between October 2019 and September 2020.

- **Andrew Farlow**

Senior Research Fellow

Oxford Martin School

University of Oxford

Andrew Farlow is head of global public health initiatives, Oxford in Berlin, where he convenes the COVID-19 Science and Policy Forum. With nearly 20 years' experience researching and



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advising on the development, deployment, and financing of vaccines and medicines, he has advised a wide range of public- and private-sector organizations. He is Teaching Fellow of the Nuffield Department of Medicine, University of Oxford, for its MSc in International Health & Tropical Medicine, and a Senior Fellow, Oxford Martin School, where he was Co-PI on its Vaccine Design Institute.

- **Prof Bernardo Grau**
Professor of Computer Science
Admissions Coordinator
Tutorial Fellow, Keble College
University of Oxford

Until October 2017, Prof Grau held a prestigious University Research Fellowship awarded by the British [Royal Society](#). He is co-founder of [Oxford Semantic Technologies](#), a start-up company from the University of Oxford focusing on high-performance reasoning and query evaluation over large-scale knowledge graphs.

His research is in the broad field of artificial intelligence. In particular, his work revolves around the areas of knowledge representation and reasoning, knowledge graphs, computational logic, semantic technologies, and graph representation learning. His activities within these areas cover a wide spectrum, including theory and foundations, algorithm design, software and systems, technology standards, and engagement with industry.

- **Dr Alessandro Guasti**
Postdoc Research Fellow
SAID Business School
University of Oxford

Alessandro Guasti is a Postdoctoral Research Fellow at the Oxford University Centre for Corporate Reputation, whose research interests lie at the intersection between international political economy and governance studies.

His work explores the relationship between trade, governance, and the protection of fundamental labour rights. His research asks questions such as: 'What is the effect of competition on labour standards?', 'What mechanism drives social upgrading in global value chains?', and 'What is the potential and what are the limitations of private regulation in improving social compliance?'. He uses a variety of approaches, including spatial econometrics, experimental and quasi-experimental methods, and qualitative interviews, to address these questions.

He is working with Matthew Amengual, Associate Professor in International Business at Saïd Business School, on a number of projects. These include a bottom-up assessment of what workers want in global value chains and a randomised control trial in garment factories in India aimed at improving working conditions for female workers.

Alessandro holds an LLM in International Law from the University of Milan and a Master of Science (MSc) in Global Politics from the London School of Economics and Political Science (LSE),



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where he also completed his PhD in International Relations. Throughout his academic career, Alessandro has continued to engage with practitioner-oriented projects, translating his research skills into evidence-based policy recommendations.

- **Edward Hadas**

Research Fellow
Blackfriars Hall
University of Oxford

Edward Hadas has worked for 45 years in Finance and Finance journalism, and has now put that experience to work in multiple research fields, from social sciences research to the philosophy of economics, and he is currently writing a new book on narratives of modernity.

- **Dr Vincent Harinam**

Fellow of the Cambridge Centre for Evidence Based Policing
Law Enforcement Consultant
Supervisor, Applied Criminology and Police Management
University of Cambridge

Dr Harinam is a researcher and law enforcement consultant with a wide expertise in data science and an expert on the Dark Web. He is a Supervisor at the Applied Criminology and Police Management Programme of the University of Cambridge and a fellow in Crime Data Science at the Cambridge Centre for Evidence-Based Policing.

- **Prof Keith Hawkins**

Emeritus Professor of Law and Society
Oriental College
University of Oxford

Keith Hawkins (LL.B Birm., Dipl Criminol., MA, PhD Cantab.) retired from active teaching in October 2006. His research interests are in the sociology of legal processes, and are concerned with legal decision making and the workings of governmental regulation in such areas as environmental control, and occupational health and safety regulations.

- **Dr Rudina Jasini**

Attorney and Researcher in Law
Green Templeton College
University of Oxford

Rudina Jasini is an attorney and researcher specialising in international criminal law and human rights law. As an Economic Social Research Council (ESRC) researcher at the Faculty of Law, she is currently leading with Prof Carolyn Hoyle the ESRC Impact Acceleration Award (IAA) project "Advancing the Impact of Victim Participation at the International Criminal Court: Developing Avenues for Collaboration" in cooperation with the International Criminal Court Bar



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Association. This project builds upon her research at the University of Oxford. It focuses on co-designing resources for the education and training of legal representatives for victims at the ICC.

- **Dr Robert Pitkethly**

Official Fellow and Tutor of Management
St Peter's College
University of Oxford

Dr Robert Pitkethly, MBA INSEAD, MA DPhil Oxf, MSc Stirling, has taught in Oxford on Introduction to Management courses as well as Strategic Management and Management of Intellectual Property. He has been a visiting fellow at the Institute of Intellectual Property and the National Institute of Science and Technology Policy in Tokyo, a research fellow of Cambridge University's Judge Institute of Management Studies, a member of the University of Oxford's Intellectual Property Advisory Group as well as tutor in management at St Peter's College, Oxford. He has also worked both as a Patent Attorney and as a Management Consultant with a wide range of industries. He is a Fellow of the Chartered Institute of Patent Attorneys, His current research interests bridge the fields of strategic management and intellectual property and include managerial and historical aspects of intellectual property policy.

- **Dr Charles Roddie**

Director of Studies
Governing Body Fellow
Sidney Sussex College
University of Cambridge

Charles Roddie received a BA in mathematics from Cambridge and a PhD in economics from Princeton. He has lectured on microeconomics, industry and mathematics at the faculty of economics in Cambridge and the Saïd Business School in Oxford. He has worked on game theoretic models of reputation and evolutionary analysis of social preferences.

- **Dr Eva Schlindwein**

Postdoc Research Fellow
SAID Business School
University of Oxford

Dr Eva Schlindwein's research interests include the application of organisation and management theories to diverse challenges for corporations, public and non-profit organisations. Eva works closely and co-teaches on many programmes with Tom Lawrence, Professor of Strategic Management at Saïd Business School.

- **Prof Nir Vulkan**

Associate Professor of Business Economics



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Saïd Business School
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Nir is a leading authority on fin tech, e-commerce and market design, and on applied research and teaching on hedge funds. Alongside his role at Saïd Business School, Nir is also a Fellow of Worcester College and a member of the Oxford Man Institute for Quantitative Finance. In 2003 Nir wrote one of the leading texts on the microeconomics of e-commerce [The Economics of E-Commerce: A Strategic Guide to Understanding and Designing the Online Marketplace](#). In 2013, Nir edited, with Al Roth and Zvika Neeman, [The Handbook of Market Design](#). The handbook contains a selection of the latest research in the growing field of market design, and draws on Vulkan's interest and expertise in markets, both virtual and those confined to particular geographical locations. He is particularly interested in how lessons from successful and unsuccessful markets can be learned and transferred to different environments. Part of the book examines issues raised by the fact that the internet is now the preferred platform for most markets, and the wide choice this gives consumers. He also examines markets linked to geography where participants have little choice. More recently in 2020 Nir Chaired the Banking and Finance Committee on Ethical AI, which made recommendations to the European President and Parliament. Nir was also a member of the Insurance Committee on Ethical AI. Nir has a BSc in Mathematics and Computer Science from Tel Aviv University and gained a doctorate in Economics at University College, London, where he was awarded the Dean Scholarship for excellence in PhD studies. He became a Lecturer at Bristol University in 1997, and in 2001 moved to Saïd Business School. He was the Executive Director of the Oxford Centre for Entrepreneurship between 2009 and 2011 and the co-founder and Director of OxLab, a laboratory for social science experiments, both at Saïd Business School.

6. Academic Workload

Academic workload per week (in total 40 academic hours):

- 16 academic hours: 4 hours of teaching on Monday, Tuesday, Wednesday and Thursday of each week
- 2 academic hours: 2 hours (45 minutes each) of teaching and review on Friday of each week
- 10 academic hours: independent study, including assessment preparation
- 2 academic hours: assessment on Friday of each week
- 6 academic hours: 3 evening seminars and workshops per week
- 14 academic hours: cultural immersion activities
- Total: 3 ECTS credits per week including assessments

7. Extracurricular Activities and Farewell Dinner

Extracurricular activities

The tuition fee for each two-week programme includes the following Oxford and English



cultural activities:

- Oxford City walking tour
- Visit to college library
- Visit to the Oxford University Bodleian Library
- Visit to one or more of the three historic towers (St Mary's Church Tower, Saxon Tower, Carfax Tower)
- Visit to Oxford Museums (Ashmolean Museum, Museum of Natural History or Museum of History of Science)
- A one day-excursion to Cambridge
- Visit to the Oxford Botanic Garden
- Visit to the Oxford Castle
- Evensong in Christ Church College
- More activities tbc

Farewell dinner

The tuition fee includes a farewell dinner or lunch.

8. [Assessment](#)

As part of each course, an assessment will be offered by the teaching academic.

9. [Certification](#)

Certificate of Attendance and Achievement

Students will receive a Certificate of Attendance and Achievement issued by Worcester College (University of Oxford).

Academic transcript

Students who successfully finish the programme will receive an academic transcript with a summary of the programme content and academic performance issued by Worcester College (University of Oxford).

10. [Participants](#)

Worcester College invites undergraduate and postgraduate students interested in the offered courses to apply for participation in the *Oxford Certificate Programme at Worcester College (University of Oxford)*.

Target Participants:

university students aged 18+

Maximum number of students per course:

30-40



11. Financials

The Tuition Fees are calculated per student, per session (each student would be charged for each subscribed course).

- Tuition, Room & Breakfast: Twin room occupancy (13 nights): 4,190 GBP

Worcester College is offering students from partner universities a scholarship in the amount of 500 GBP.

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