Regent's Park College OXFORD

Oxford Prospects and Global Development Institute

Oxford Prospects Programmes

牛津展望计划

Oxford Prospects Online Programme

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英国国家院士主持并**亲授**

助力申请**世界顶尖**大学

触及**最高学术成就**，探索专业领域**最前沿**

跨学科式教学，强化辩证思维及独立研究能力

牛津大学访问生及硕博**申请要点**

与**顶级学者**互动，明晰学界、业界的职业发展

项目背景简介

牛津大学是英语世界国家中最古老的大学，创建历史可追溯至十一世纪末。2017-2022 年连续六年蝉联全球排名第一。牛津大学拥有雄厚的师资力量，其教职队伍中有 83 位皇家学会会员和 125 位英国科学院院士。近 900 年的校史中，牛津于各个领域培养了许多杰出领袖，包括 6 位英国国王、28 位英国首相、多位外国政府首脑、50 余位诺贝尔奖获得者和一大批世界著名的文学家和科学家，在诸多领域引领着世界最前沿的科学研究。

牛津大学摄政学院全球发展与展望研究院（OPGDI）与学术界同仁团结一致，在这充满不确定的时期，全球共识和相互知识交流比以往任何时候都更为重要，OPGDI 的首要任务是给我们的海外合作伙伴和学生持续不断地提供高质量的学习资源和学术服务，巩固和稳定其与海外合作伙伴和学生之间建立的，长期稳定且卓有成绩的合作关系。为此，OPGDI 特别筹备在线课程，有幸组织数位英国四大学术院的国家院士为模块领衔教授，为来自精心挑选的一流中国合作高校的优秀学生而设计，以鼓励学生申请牛津大学注册访问学生课程（VSP），硕士课程及博士研究。

基本信息

申请条件：IELTS 6.0 或 TOEFL 80 以上

如尚未拥有以上成绩证明，项目学术处将依据申请人资历进行审核，或将安排面试，学术处将对录取结果拥有最终决定权。

授课形式：所有课程均为**直播授课，同步录制，便于回放复习**。

通过课程交互系统及课程交流群组，提供 Reading Materials，分享 Lecture Notes。

项目咨询：此项目仅向合作高校开放，课程内容咨询联系

Wechat: **oppadmin**
Email: **admin@oxford-prospects.com**

课程结业：顺利完成课程将获得 Programme Certificate 以及 Transcript。

此次课程总计约 40 小时 Contact Hours，以及 40 小时的自主研习时间，对应 8 个 CATS 学分，4 个 ECTS 学分，以及 3 个美国学制学分。

学术课程
Academic Lectures
15 课时

+

小班研讨会
Interactive Seminars
10 课时

+

拓展工作坊
Outreach Workshops
5 课时

+

特邀嘉宾讲座
Guest Lectures
3 场次

学术课程 (六项选一)
Academic Lectures

学术课程共计 **15 课时**，分为六大类跨学科 Module，各 Module 由对应的英国四大学术院的国家院士领衔并亲自主持授课，其余授课老师为牛津大学教授、学者以及部分特邀行业嘉宾，无在读博士或博士后代课。

课程精选跨学科前沿热门议题，通过对特定热门学术议题的 **纵深学习**，激发对具体学科和未来学术规划的兴趣。通过跨学科式的 **广度学习**，构建对相关专业领域更全面的理解和认知，对于未来学术和职业规划有更清晰的认识，更将利于突破单一学科思维模式限定，对于国际化、多元文化交流，团队合作，系统性复杂问题的解决奠定良好基础。

小班研讨会
Interactive Seminars

共计 **10 课时**。每日学术课程之后将安排线上互动研讨课，学以致用，增强知识的理解和输出。学生们将作为课程核心，课前各小组（2-4 人）将在指导下进行充足的准备工作，课上作业展示，接受其他小组的提问，并在指导下就议题进行深度讨论，思考 - 质疑 - 辩论 - 捍卫，进而锻炼学术研究技能，提升团队合作能力。此部分师资为牛津大学教授、学者或研究员。

“与 Lecture 授课模式不同，Seminar 小班过程中的收获完全超乎我的预期，非常 Hardcore，教授给我们分组并引领我们进行开放式的课程讨论，激励我们探索，知识输出，科研方法论实践，让我第一次觉得问题解决、做学术是可以如此有趣。”

-- 李同学，浙江大学本科三年级

拓展工作坊
Outreach Workshops

共计 **5 课时**。拓展工作坊旨在激发学生的内驱力，锻炼批判性思维和研究技能，明晰学术和职业规划，同时还将提供与牛津大学成功申请者互动，建立新人际关系的机会，内容包括：

- 科学研究方法论
- 学术科研论文撰写
- 演讲陈述技能
- 牛津在读生及校友分享会
- 个人陈述撰写
- 申请过程解读
- 心理健康及朋辈支持
- 职业规划

特邀嘉宾讲座
Guest Lectures

三场次特邀嘉宾讲座将邀请来自于不同行业的重量级嘉宾，为同学们带来行业内的洞见和思考，这也将是此次学术课程以外最值得期待的环节之一。

Film and TV Industry
影视戏剧行业

3 次金球奖，15 次艾美奖，69 次提名成为艾美奖，1 次英国电影电视艺术学院奖，荣誉加身的《唐顿庄园》风靡全球无需多介绍。第一场讲座将邀请《唐顿庄园》总制片人 Ms Liz Trubridge 及神秘参演嘉宾。

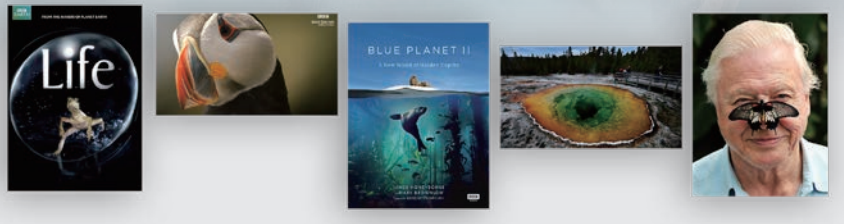
World Leading Enterprises
世界顶级企业组织

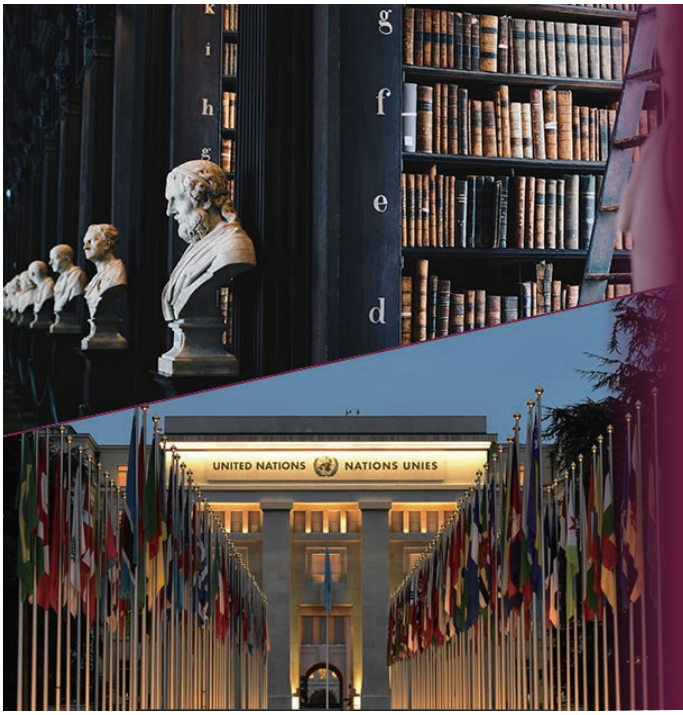
英国的世界顶级企业组织不胜枚举，阿斯利康，汇丰银行，联合利华，捷豹路虎，英格兰央行，葛兰素史克等等。第二场讲座将邀请资深企业高管。

BANK OF ENGLAND　HSBC
AstraZeneca　Unilever　bp
BURBERRY LONDON　LAND ROVER　JAGUAR

British Nature Documentaries
英国自然纪录片

英国自然纪录片以其广泛题材和精良制作闻名于世，尤其是英国国宝级主持人爱登堡爵士（David Attenborough）所参与的：《地球脉动》、《蓝色星球》、《冰冻星球》等。第三场将邀请英国知名摄影师，其与爱登堡爵士本人紧密合作，参与制作诸多知名自然纪录片。





政治 - 经济 - 哲学 - 法律

Module A

政经哲专业最初由牛津大学设立，后受诸多名校效仿，被誉为人文社科类最顶尖的专业，核心主旨在于通过几个不同角度和互补的学术方向，完整认识社会现象。此次课程内容将探索研究决策的含义，竞争性市场经济的后果，社会秩序的变化，以及当代世界的一系列相互依存的主题。

课程大纲及师资请参照 Page 9 ~10

文学 - 语言 - 数字文化与传播学

Module B

英剧唐顿庄园（Downton Abbey）的幕后有怎样的故事，在不同文化背景下的传播和接受度有什么样的区别？ 阅读可以成为理解和澄清自己思想的一种方式吗？ 新媒体数字文化是否正在改变我们的看法？ 在这一具有前瞻性的课程中，学生将专注于跨文化的各种交流媒体的基本信息。

课程大纲及师资请参照 Page 11~12

人类与环境：可持续发展

Module C

脱碳的原因和方式是什么？零碳系统可以实现吗？通往低碳未来的最佳途径是什么：太阳能、风能还是核能？全球变暖、水和空气污染、能源供应和自然栖息地减少是威胁我们星球的最严重挑战。该模块将帮助学生更深理解这些挑战和威胁，研究人口与自然环境的相互作用、自然资源消耗的增加、全球气候变化、生物多样性丧失以及可持续发展的概念。学生们将着眼于跨学科团队开发的实用工具以及该领域的最新进展。

课程大纲及师资请参照 Page 13~14

Module D

金融 - 商科 - 管理

全球化背景下商业管理有什么样的影响？ 未来的世界需要怎样的全球领导力和企业家精神？可持续性，数字化转型，量化经济学，博弈论，加密货币，创新创业，劳动力市场，国际商业的政治经济学以及多层系统带来的挑战将激发学生对周围世界，市场机制，政策选择，进行批判性思考。

** 课程大纲及师资请参照 Page 15~16*

Module E

STEM 前沿科学：数学 - 物理 - 计算机 - 工程

大数据的使用将如何驱动“智慧城市”创新？低碳未来更好的能量源是什么？人工智能将如何助力“智能制造”实现个性化产品生产？量子计算机可实现自我复制吗？创新发生在各学科的交汇处，课程聚焦数学、物理、计算机及工程技术的前沿交叉应用，探讨科技成果转化的价值。

** 课程大纲及师资请参照 Page 17~18*

Module F

医学 （仅供医学类专业学生申请）

人为什么会得癌症？衰老时大脑会发生什么？干细胞可以用来治疗任何疾病吗？超声波对输药有用吗？抗生素会有危险？跨学科团队如何成为推进生物医学科学前进的唯一途径？该模块将探究错综复杂的医学和临床研究，基因编辑和肿瘤成像方面的最新技术发展，神经退行性疾病和肿瘤学的过程，并将分析临床试验和药物开发所需的步骤，提升更加全面的认知。

** 课程大纲及师资请参照 Page 19~20*

领衔教授
Lead Professors

课程各 Module 领衔教授来自于英国四大学术院：国家学术院，皇家学会，皇家工程院，医学科学院。以下为部分领衔教授列表：

Professor Sir Richard Sorabji

英国国家学术院院士，
美国人文与科学院院士，
大英帝国勋章获得者，
爵士头衔。

Professor Graham Richards

英国皇家学会院士，
牛津大学化学系主席，
大英帝国勋章获得者。

Professor Duncan Gallie

英国国家学术院院士，
英国国家学术院副主席，
大英帝国勋章获得者。

Professor Sir Mike Brady

英国医学科学院院士，
英国皇家学会院士，
英国皇家工程院院士，
爵士头衔。

Professor Avner Offer

英国国家学术院院士，
万灵学院荣誉教授。

Professor Brian Cantor

英国皇家工程院院士，
大英帝国勋章获得者。

Professor Sir Walter Bodmer

英国皇家学会院士，
爵士头衔。

Professor Dame Frances Ashcroft

英国皇家学会院士，
英国医学科学院院士，
大英帝国勋章获得者，
女爵头衔。

学生反馈
Student Testimonials

“No silly questions”

为期三周的线上课程，我最大的收获不仅是密度极高的学术知识，更是对于走出舒适圈的觉悟及高效的学术研究技巧。在课程初期，由于害怕犯错，我一直羞于提问，但教授的那句 'No silly questions' 无意中给了我走出“沉默”这个舒适区的勇气。

-- 赵同学，吉林大学本科二年级

“教会了我以批判性的思维方式看待所有问题”

在参加课程之前，我从未设想哲学这一门脱离现实生活的学科，竟可以与经济发展有着如此紧密的联系。在这三周内我们许多的固有认知都被牛津大学教授逐个推倒，同时也教会了我以批判性的思维方式看待所有问题。

-- 王同学，上海交通大学研究生二年级

“课程中最大的收获，是对于知识获取及思考方式的转变”

课程中最大的收获，是对于知识获取及思考方式的转变。以前我的学习是被动进行的，很少会提前预习或阅读相关资料。而现在我开始会在课下阅读文献，因为自我学习比单纯的靠老师归纳整理，更利于知识的吸收，也能获取更全面的信息。

-- 郑同学，山东大学本科二年级

“为我打开了学术的新世界”

课程的新鲜感是我从未体验过的，我很荣幸能有机会和牛津大学教授一起学习。整个课程的全英文教学环境，使我的英语口语更加流畅，再也不惧怕查阅任何英文文献。课程中涉及的许多前沿科学研究，为我打开了学术的新世界，教授们经常耐心的鼓励我们提问任何问题。

-- 曾同学，浙江大学本科一年级

“科学的世界仍笼罩着迷雾，需要我们潜心钻研的问题还有很多”

从牛津的网上课程中，我学到了很多知识。不仅对牛顿力学和热力学的一些概念有了更深入的理解，而且了解了一些让人叹为观止的知识。例如令人费解的量子效应，蝴蝶翅膀特殊结构的应用潜力，研讨课上讲到的鲨鱼不患癌症，长寿的未解之谜。这些仍待探究的科学告诉我：科学的天空仍然乌云密布，需要我们潜心钻研的问题还有很多。

-- 陈同学，重庆大学本科一年级

“各学科的前瞻性开拓了我的眼界”

很珍惜这次被选中参加牛津展望计划线上课程的机会，聆听许多优秀教授的讲课。在不同形式的学习过程中，我逐渐意识到沟通及自主学习的重要性。各学科的前瞻性开拓了我的眼界，教授的每次提问都发人深省。

-- 张同学，北京师范大学本科二年级

“我真实的感受到了什么是跨学科学习”

与国内单一思维授课不同的是，我真实的感受到了什么是跨学科学习！学科研究不再是单一方向的思考，而是多元化交叉学科的融合。研究的主题也可以从“云端”的高大上，发展到日常生活的所见。这些不一样的认知加深了我对学习的兴趣，从未想过学习可以如此的接地气，如此的有趣！

-- 李同学，北京理工大学本科二年级

“结业典礼的云烟火感动而又惊喜”

课程内容的丰富有趣让我感受到牛津教授的博学多才。专业负责的授课态度及项目老师的耐心支持是我学习的不二动力。每个 session 的互动交流让我收获颇多，不同校友之间的新友谊，结业典礼的云烟火感动而又惊喜。

-- 张同学，中国社会科学院大学本科三年级

Syllabus

Module A

Politics-Economics-Philosophy-Law
政治 - 经济 - 哲学 - 法律

Module Description

Do we all have the right to health? How much power does the Queen have? What characteristics should a leader in times of crisis have?

During this programme, students will appreciate our strong focus on philosophy, politics and international economics enriched by some insight into legal systems.

Examining the implications of decision-making, the consequences of competitive market economy and changes in social order, students will have the opportunity to explore a wide range of interdependent topics that shape the contemporary world.

Learning from and engaging with leading Oxford academics, this course will equip students with theoretical and methodological tools and expertise to engage systematically with political and economic questions in a broader international context.

Learning Outcomes:

- Understand the intricacies of UK and global politics for international relations, employment, poverty and inequality.
- Gain insight into the philosophy of leadership and how it relates to practical ethics.
- Have an understanding of international economy in the perspective of employment and social development.
- Be introduced to different types of research in social sciences and comprehend how international organisations shape our reality.
- Comprehend the link between theory and practice in legal systems and global geopolitics.

Proposed Topics

- Modern British Politics and Government
- Europe's Decade of Crises
- Re-engineering Social Security for the New Economy
- The Social Consequences of Unemployment
- Global Geopolitics
- Precedent in Legal Reasoning
- Human Right to Health
- Moral Philosophy, and Practical Ethics
- Words are Weapons: Lecture on Language in Politics
- British Constitutional Law
- Decline in Media Trust
- Philosophy of Leadership

This course is for students of:

Social Sciences and, in particular, fields related to: Politics and Administration, International Relations, Philosophy, Sociology, Economics and Trade, Law, Journalism, etc.

Proposed List of Lecturers (Partial)

Prof. Sir Richard Sorabji

Fellow of British Academy, Fellow of the American Academy of Arts and Sciences, Commander of the British Empire. He has published 15 books, edited or co-edited 11 and provided two book-length series of interviews. Prof. Sorabji's writing on Philosophy and its History covers three main areas: the physics of the universe, the mind and social and ethical problems.

Prof. Duncan Gallie

Fellow of British Academy, Commander of the British Empire, Fellow of Nuffield College, Professor of Sociology in the University of Oxford. He has advised the French government as a member of an expert group on psychosocial risks at work. He served as Vice-President Social Sciences and then as Foreign Secretary and Vice President of the British Academy .

Prof. Paul Craig

Emeritus Professor of English Law, Fellow of the British Academy. He was appointed an honorary Queen's Counsel. Professor Craig does most of his teaching and research in Constitutional and Administrative Law, and European Community Law and is currently engaged in a project which brings all of these subjects together.

Prof. Avner Offer

Fellow of the British Academy, Emeritus Fellow of All Souls College. He has published on international political economy, law, the First World War, and land tenure. Professor Avner studies the origins, attributes, and drivers of market liberalism, its successes, failures, and prospects. Currently he is studying the transition from Social Democracy to Market Liberalism.

Prof. David Rueda

Professor of Comparative Politics at Nuffield College. Received numerous research awards, including a British Academy Research Development Award (2008-2010). Author of Social Democracy Inside Out (Oxford University Press, 2007) and Who Wants What? Redistribution Preferences in Comparative Perspective (Cambridge University Press, 2019).

Prof. Jonathan Wolff

Blavatnik Chair in Public Policy and Governing Body Fellow at Wolfson College. Formerly Professor of Philosophy and Dean of Arts and Humanities at UCL. He has been an external member of the Board of Science of the British Medical Association. His recent work has largely concerned equality, disadvantage, social justice and poverty.

Prof. Micheal Freeden

Emeritus Professor of Politics. Sir Isaiah Berlin Prize for Lifetime Contribution to Political Studies by the UK Political Studies Association. Fellow of the Academy of Social Sciences. His main interest is in the study of actual political thinking at various levels of articulation.

Syllabus

Module B

Literature, Language, Digital Culture and Communication

文学 - 语言 - 数字文化与传播学

Module Description

Ever wondered what happens behind the scenes of the most successful British show worldwide of all time - Downton Abbey? Could reading classics be a way of understanding and clarifying our own thinking? Is digital culture changing and shaping our perception?

When we read, we are making sense not just of the words on the page but of the ideas being communicated to us. In this forward-thinking course, students are going to focus on the underlying messages of various media of communication across cultures and will look at femininity and the representation of women, in particular.

From Shakespearean tragedies and Jane Austen's novels analysed and critically examined from academic as well as performing arts angles, through film experts to digital media and society, students will have the opportunity to engage with the latest research in literature, language and intercultural communication.

Learning Outcomes:

- Understand the different approach to literary analysis in the West.
- Have experience in critical analysis of literary texts and visual arts using different theoretical approaches.
- Look in detail at canonical texts by Shakespeare and Jane Austen in their original context.
- Gain insight into cultural appropriation and representations of China in English literature.
- Become familiar with the major trends in digital cultures, modern scholarship and interdisciplinary studies
- Become acquainted with and aware of varying aspects of intercultural communication and try creative writing first-hand.

Proposed Topics

- Representations of China in Eighteenth-Century English Literature
- Intricate Workings behind the Scenes of Downton Abbey
- Feminist History and the History of the Body
- Self-presentation in the Digital Age: Collapsed contexts, fragmented identities, and risks of the lowest common denominator
- Languages, Dialects and Varieties
- An Introduction to World and Postcolonial Literatures
- Film and Gender
- The Language of 'Romeo and Juliet'
- Language and the Practice of Persuasion
- Creative Writing
- Jane Austen, Pride and Prejudice, and the Courtship Novel
- Languages Don't Change, People Change Languages

This course is for students of:

English Language and Literature, Foreign Languages, Linguistics, Journalism, Translation, Chinese Language and Literature, Sociology, Anthropology, History, Drama, Film and Television, Media Studies, Arts, Cross-cultural Communication, Library Studies, Humanities and Education, etc.

Proposed List of Lecturers (Partial)

Prof. Ros Ballaster

Professor of 18th Century Studies and Lecturer in the Faculty of English and Tutorial Fellow at Mansfield College. Professor Ballaster was a Visiting Fellow to the Department of English and American Literature at Harvard University. Her main research areas encompass seventeenth-and eighteenth-century culture; oriental fiction; ideas of cognition and character in literary and theatrical representation.

Prof. Katherine Paugh

Fellow and Tutor at Corpus Christi College, Associate Professor of Atlantic World Women's History at the Department of History, University of Oxford. Her work as an historian has focused primarily on understanding how the political and economic imperatives of empire have shaped cultural visions of race, class, gender, and the body during the seventeenth through nineteenth centuries.

Ms Liz Trubridge

Film director and television producer mostly known for her role as Executive Producer of Downton Abbey. She has won many awards for her work, including a Primetime Emmy, a BAFTA and a Golden Globe. Downton Abbey aired on UK television between 2010 and the end of 2016. It is the most successful British show worldwide of all time and has won many awards around the world.

Prof. Lynda Mugglestone

Professor of the History of English, Tutorial Fellow at Pembroke College, Lecturer in English Language at Trinity College, University of Oxford, Governor of Samuel Johnson's House museum in London. Her current research, for which she was awarded a Leverhulme Research Fellowship explores linguistic evolution during war-time.

Dr Clare Morgan

Director, Master of Studies in Creative Writing, Department for Continuing Education, Fellow of Kellogg College, the Chair of the Literature Bursaries Panel for the Arts Council of Wales. Dr Morgan is a novelist and short story writer, whose interdisciplinary research interests currently focus on creative writing, and on the relation between literature and business.

Dr James Painter

Director of Journalism Programme at Reuters Institute for the Study of Journalism. He has carried out several consultancies for the IPCC, IPBES, Oxfam, UNDP, Conservation International and other organisations. James joined the BBC World Service in 1992, and worked as head of the Spanish American Service, head of the BBC Miami office, and Executive Editor Americas.

Dr Peak Krafft

Senior Research Fellow at the OII in the University of Oxford's Social Science Division. Dr. Krafft's research, teaching, and organizing aim to bridge computing, the social sciences, and public interest sector work towards the goals of social responsibility and social justice. Dr. Krafft's research interests include Sociotechnical systems, digital institutions, online laboratory experiments, sociotechnical systems, etc.

Syllabus

Module C

Humans and the Environment Around
人类与环境：可持续发展

Module Description

What are the why and how of decarbonisation? Are Zero-Carbon Systems achievable? How can we be more environmentally friendly towards our planet and mankind? What is the best path to a low carbon future: solar, wind or nuclear? Do we abuse our deserts? Can we effectively mitigate risk of flooding?

Global warming, water and air pollution, shrinking energy supplies and natural habitats are the most serious challenges that threaten our planet. This unique programme will help the students grasp these challenges and threats and will show what choices we have if we want to save our future.

Students will investigate the interaction of human population and natural environment, increasing consumption of natural resources, global climate change, biodiversity loss, and the concept of sustainable development. They will look at practical tools developed by interdisciplinary teams and at the latest advances in the field.

Learning Outcomes:

- Identify the threats related to climate change and loss of biodiversity.
- Understand the options for sustainable future development.
- Develop an interdisciplinary approach to tackle the most pressing environmental challenges.
- Comprehend the steps needed to achieve zero-carbon emissions.
- Investigate the most efficient alternative sources of energy.
- Develop a framework for animal conservation.

Proposed Topics

- Biodiversity Loss and Its Consequences for the Stability and Functioning of Ecosystems
- Climate Effects of Meat and Dairy Production
- Climate Change and Biodiversity
- Ice-sheets and Sub-glacial Hydrology
- Sand and Dust Storms: An Increasing Climate Change Hazard
- The Shape of Things to Come: Future Energy Storage and Non-renewable Power
- Air Pollution from Vehicles
- The Ageing of our Populations
- Going to Extremes
- Wild Animal Welfare
- Deserts: Their Use and Abuse
- Chemistry for the Future: Clean Energy
- Farming and Wildlife – Truce or Battle

This course is for students of:

Geography, Geology, Environmental Studies, Earth Sciences, Ecology, Anthropology, Zoology, Wildlife Conservation, Marine and Ocean Sciences, Biology, Biochemistry, Chemistry, etc.

Proposed List of Lecturers (Partial)

Prof. Sam Fankhauser

Professor of Climate Change Economics and Policy in the School of Geography and the Environment, University of Oxford, Research Director at Oxford Net Zero, Inaugural member of the UK Climate Change Committee, Non-executive Director of CDC Group, the UK's development finance institution. He works at the intersection of research and public policy and is interested in the policy interventions.

Prof. Ros Rickaby

Chair of Geology, Department of Earth Sciences, University of Oxford, Professor of Biogeochemistry. Professor Rickaby has pioneered an interdisciplinary blend of biology and chemistry to resolve questions of past climates, evolution, and the future of the phytoplankton. She currently holds a Wolfson Research Merit Award from the Royal Society.

Dr Pete Walton

Knowledge Exchange Research Fellow and Training Officer for UKCIP. Dr Pete's academic and professional career combines both Climate Change and Education, providing him with the expertise in adaptation and climate change impacts and the skills to communicate the practical implications of such impacts to a wide range of audiences.

Prof. Richard Katz

Professor of Geodynamics, University of Oxford. Professor Katz leads a group that does research into geophysical problems involving flow and phase change. The research interests of this research group FoaLab are centred around the dynamics of fluid–solid systems with chemical, mechanical and thermodynamic interactions between phases.

Prof. Gillian Rose

Fellow of the British Academy, Fellow of the Academy of Social Sciences, Head of School of Geography and the Environment, Professor of Human Geography, University of Oxford. Professor Rose has a longstanding interest in how images of many kinds mediate relations with places, spaces and landscapes. her current research focuses on digital visualisations.

Dr James Painter

Director of Journalism Programme at Reuters Institute for the Study of Journalism. He has carried out several consultancies for the IPCC, IPBES, Oxfam, UNDP, Conservation International and other organisations. James joined the BBC World Service in 1992, and worked as head of the Spanish American Service, head of the BBC Miami office, and Executive Editor Americas.

Prof. George Leeson

Professorial Fellow at the Institute for Population Aging, University of Oxford; Fellow of the Galton Institute; Senior Research Fellow at Kellogg College, University of Oxford; and Visiting Professor of Demography at the University of Guanajuato-Leon in Mexico; co-editor of the Journal of Population Ageing and Population Horizons.

Prof. Andrew Hector

Professor of Ecology, Plants for the 21st Century (Co-director: Conservation), Linacre College. Professor Hector is a community ecologist interested in biodiversity loss and its consequences for the stability and functioning of ecosystems and the provision of ecological services. He currently works mainly in grassland and forest ecosystems.

Syllabus

Module D

Business, Finance and Management

金融 - 商科 - 管理

Module Description

Have you ever wondered how financial systems work or how much a company is worth? Are interactions more important than processes? Can we live without money?

This module is for students interested in understanding the impact of business on our globalised world, curious about financial processes, sustainable accounting, and digital transformation. This course will give you a deeper insight into workplace psychology and developing leadership skills. Led by distinguished professors, students will gain a deeper insight into quantitative economics, investment banking, game theory, innovation, labour markets, political economy of international business and the challenges posed by multi-level systems. The interdisciplinary approach of the course will stimulate students to critically reflect on the surrounding world, market mechanisms, policy options, innovation as well as global leadership and entrepreneurship in the 21st century.

Learning Outcomes:

- Improve understanding of macroeconomic process.
- Become aware of design thinking steps.
- Be able to identify latest fintech tools.
- Gain insight into foundations of financial stability policies.
- Master the most common game theory strategies.
- Be able to discuss the complexities of executive compensation.

Proposed Topics

- The British Economy - Yesterday, Today, Tomorrow
- Business in Post-Covid World
- Applications of Game Theory to Real World
- Investment Banking
- Financial Crisis: Causes and Policy Issues
- Corporate Finance
- Strategic Foresight
- Sustainable Accounting
- Workplace Psychology and Leadership
- Digital Finances and FinTech

This course is for students of:

Business, Economy, Finance, Accounting, Business and Public Administration, International Trade, Management, Marketing, other related fields and for students with strong interest in business matters.

Proposed List of Lecturers (Partial)

Prof. Duncan Gallie

Fellow of British Academy, Commander of the British Empire, Fellow of Nuffield College, Professor of Sociology in the University of Oxford. He has advised the French government as a member of an expert group on psychosocial risks at work. He served as Vice-President Social Sciences and then as Foreign Secretary and Vice President of the British Academy .

Prof. Avner Offer

Fellow of the British Academy, Emeritus Fellow of All Souls College. He has published on international political economy, law, the First World War, and land tenure. Professor Avner studies the origins, attributes, and drivers of market liberalism, its successes, failures, and prospects. Currently he is studying the transition from Social Democracy to Market Liberalism.

Prof. Nir Vulkan

Fellow of Worcester College, Director of the Oxford Programmes on Fintech; Blockchain Strategy; and Algorithmic Trading, Chair of the Committee set up to advise the European Commission on AI in Banking and Finance. Professor Vulkan is a leading authority on e-commerce and market design, and on applied research and teaching on hedge funds.

Prof. Petr Sedlacek

Professor and Tutor in Economics at Christ Church College, and a Research Fellow at the Centre for Economic Policy Research. Professor Sedlacek is also Principal Investigator for the Entrepreneurs, Firms and the Macroeconomy research project, for which he has been awarded a Starting Grant of the European Research Council.

Prof. Richard Barker

Professor of Accounting at the Saïd Business School. He has education from both the University of Oxford and University of Cambridge, and he qualified as a chartered management accountant while working for AstraZeneca.
He is the academic member of the Corporate Reporting Council, which sets UK accounting standards.

Alan Giles OBE

Associate Fellow at the Saïd Business School, University of Oxford, Chairman of the Advisory Board of the Oxford Institute for Retail Management, Non-executive director of the Competition and Markets Authority, Chairman of Fat Face, Chief Executive of HMV Group.Alan has taught on the Oxford MBA programme at Saïd Business School.

Prof. Andrea Ferrero

Professor in the Department of Economics at the University of Oxford and the Levine Fellow in Economics at Trinity College, where he teaches undergraduate and graduate macroeconomics. He is currently an academic consultant for the Bank of England and was a consultant the Norges Bank between 2014 and 2016.

Syllabus

Module E

New Frontiers of Science: Maths, Physics, Computer Science and Engineering

STEM：数学 - 物理 - 计算机 - 工程

Module Description

How will big data drive future smart city innovation? How will Artificial Intelligence enable rapid and stable intelligent manufacturing of personalised products? How do we design bridges? Is maths useful for sports? Will robots fully mimic humans?

Students will explore ways to apply creative reasoning and science to solve real problems while crossing traditional boundaries of disciplines. As disciplines converge into new hybrid fields students engage with the highest-level academicians and leading experts who invent and research the cutting-edge solutions of the modern world. This programme focuses on practical aspects of mathematical modelling, physics and engineering, asks questions about the worth of technology transfer and encourages students to find missing links between everyday phenomena.

Learning Outcomes:

- Have the requisite knowledge and understanding to make their own critical scientific assessments of current issues.
- Develop critical thinking skills necessary for mathematical modelling.
- Develop an understanding of the scale of the Universe.
- Describe and apply the principles of intelligent manufacturing.
- Gain insight into the future of quantum computing and optimisation of robotics.
- Comprehend the historical evolution of Newtonian mechanics and its place in contemporary world as well as in the future.
- Investigate the multitude of high entropy materials.

Proposed Topics

- Multicomponent High-entropy Materials – Cantor Alloys
- Mathematical Modelling: Art of Problem Solving
- Renewable Energy for a Low-carbon Future
- Conservation laws. Noether's Theorem
- Particle Accelerators: From Making Higgs Bosons to Curing Cancer
- Human-AI Interaction: Digitalisation and Collective Action
- Transportation: Future Powertrains
- Intelligent Manufacturing of Personalised Products
- Modelling Sports Dynamics
- The Role of Big Data in a Smart City
- The Dark Side of the Force: Dark Energy and Dark Matter

This course is for students of:

Engineering related degrees, Material Science and Technology, Physics, Mathematics, Transportation, Space Science and Technology, Computer Science, Artificial Intelligence, etc.

Proposed List of Lecturers (Partial)

Prof. Sir Mike Brady

Fellow of the Royal Society, Fellow of the Royal Academy of Engineering, Fellow of the Academy of Medical Sciences, Professor in the Department of Oncology. Professor Brady was Deputy Chairman of Oxford Instruments plc from 1994 to 2014. He was awarded the Faraday Medal for the year 2000, and a Third Millennium medal of the IEEE.

Prof. Artur Ekert

Fellow of the Royal Society, Professor of Quantum Physics at the Mathematical Institute, University of Oxford. He was awarded the 1995 Maxwell Medal and Prize by the Institute of Physics, the 2007 Hughes Medal by the Royal Society and the 2019 Micius Quantum Prize. His research extends over most aspects of information processing in quantum-mechanical systems.

Prof. Brian Cantor

Fellow of the Royal Academy of Engineering, Commander of the British Empire. Professor of Materials in the Department of Materials, Former Vice-President of the Royal Academy of Engineering. He was awarded the Rosenhain and Platinum Medals of the Institute of Materials, Minerals and Mining. He has published over 300 papers and books, given over 100 invited talks in more than 15 countries.

Prof. Harish Bhaskaran

Professor of Applied Nanomaterials in the Department of Materials, EPSRC Fellow in Manufacturing. He is an inventor of phase change photonic computing and continues work in establishing the field. His work has been featured widely over the last several years in Science, Nature, The Economist, MIT Technology Review, Fortune, Wired, BBC etc.

Dr Tom Crawford

Fellow and Tutor at St John's College, Early Career Teaching and Outreach Fellow at St Edmund Hall, University of Oxford. Dr Crawford runs the award-winning website www.tomrocksmaths.com and has had partnerships with the European Mathematical Society. He can also be found on Numberphile – the largest maths education channel on YouTube with over 3 million subscribers.

Prof. Dino Sejdinovic

Professor at the Department of Statistics, Turing Fellow of the Alan Turing Institute. He is broadly interested in statistical foundations underpinning large-scale machine learning algorithms. Professor Sejdinovic conducts research at the interface between machine learning and statistical methodology with a focus on kernel and nonparametric methods.

Prof. Martin Bureau

Lindemann Fellow and Tutor in Physics at Wadham College, University of Oxford, and Professor in Astrophysics within the Department of Physics, University of Oxford. He is particularly interested in using observations and theoretical studies of the gas, stars, and dark matter that make up galaxies to constrain their formation and evolution.

Prof. Felix Leach

Fellow and Tutor in Engineering Science at Keble College, University of Oxford, Associate Professor of Engineering Science, Fellow of the Higher Education Academy, Member of the Society of Automotive Engineers. His research interests are in Combustion, and specifically emissions and efficiency in internal combustion engines.

Syllabus

Module F

Medical Sciences
医学

Module Description

Why do people get cancer? What happens to the brain when we get older? What is checkpoint therapy? Can stem cells be used to cure any disease? Is ultrasound useful for administering drugs? Antibiotics – can they be dangerous?

This module provides an insight into the hottest topics in medicine and health related subjects. The greatest brains in the field will guide the students through the intricacies of medical and clinical research, paying particular attention to the latest technology developments in gene-editing and oncological imaging. Students will investigate the processes involved in neurodegenerative diseases and oncology as well as will analyse the steps necessary in clinical trials and drug development. The course offers a preview of how interdisciplinary teams are the only way to advance biomedical sciences and offers a comprehensive framework in translational medicine. Students will also examine various models of healthcare systems and clinical practice to become more aware and better informed physicians.

Learning Outcomes:

- Develop understanding of the state-of-the-art tools and techniques in biomedical research.
- Appreciate the importance of interdisciplinary teams in cutting-edge developments.
- Explore the ethical and regulatory issues in research.
- Understand the complexities of cancer research and neurodegenerative diseases.
- Have insight into the role of nanotechnology in biomedical applications such as vaccinations, drug delivery or cell cultures.
- Gain understanding of biomaterial manufacturing processes and its role in regenerative medicine.
- Discuss various aspects of inflammatory processes in body.

Proposed Topics

- Medical Artificial Intelligence Vision
- Haematopoiesis: from Normal to the Disease State
- Macrophage & Anti-microbial Activity
- Computer-aided Drug Design
- Flash Radiology
- Drug Development and Clinical Trials
- Cell biology: Evolutionary Perspectives on Cancer and Ageing
- Neurodegenerative Diseases: the Coming Epidemic
- Biomedical Engineering: Tissue Reconstruction and Angiogenesis
- Deep Brain Simulation and Testing
- Autoimmune Diseases and Checkpoint Therapy
- Quantifying Parkinson' s Disease and Digital Phenotyping
- Is Vision Driven by the Eye or the Brain?
- Extracellular Vesicles in Health and Disease
- Vascular Pharmacology

This course is for students of:

Medicine, Genetics, Psychology, Public Health, Pharmacology and other related fields.

Proposed List of Lecturers (Partial)

Prof. Graham Richards

Fellow of the Royal Society, First Chairman of Chemistry at the University of Oxford. He also founded Oxford Molecular, a scientific software company that at its peak was worth £450m and helped set up Oxford University Innovation, Oxford's technology transfer company that has brought approximately 60 spin-out companies into existence.

Prof. Sir Mike Brady

Fellow of the Royal Society, Fellow of the Royal Academy of Engineering, Fellow of the Academy of Medical Sciences, Professor in the Department of Oncology. Professor Brady was Deputy Chairman of Oxford Instruments plc from 1994 to 2014. He was awarded the Faraday Medal for the year 2000, and a Third Millennium medal of the IEEE.

Prof. Sir Walter Bodmer

Fellow of the Royal Society, Honorary Fellows of the Royal Society of Chemistry, Fellow of the Academy of Medical Sciences, Professor of Genetics in the Department of Oncology (Medical Sciences Division) at the University of Oxford, and Head of the Cancer and Immunogenetics Laboratory at the MRC Weatherall Institute of Molecular Medicine, Oxford.

Prof. Sonia Antoranz Contera

Professorial Fellow of Green Templeton College, and a Professor of Biological Physics at the University of Oxford Physics Department. Her work lies at the interface of physics, biology, and nanotechnology. She was the founder, director and co-director of the Oxford Martin Institute of Nanoscience for Medicine at the Oxford Martin School.

Prof. Robert Carlisle

Fellow of St Cross College, Associate Professor in Biomedical Engineering, Director of MSc in Nanotechnology for Medicine and Healthcare, Associate Director of Synthetic Biology CDT. The majority of Bob’ s work has been concerned with achieving systemic delivery of anti-cancer agents for the treatment of metastatic cancer.

Prof. Chrystalina Antoniades

Official Fellow of Reuben College, Associate Professor of Neuroscience in the Nuffield Department of Clinical Neurosciences at the University of Oxford, the Chair of the Clinical Neurosciences Society. Professor Chrystalina Antoniades' interest lies in examining the neurobiological relationship between visual perception and art.

Prof. Dame Frances Ashcroft

Dame Commander of the Order of the British Empire, Fellow of the Royal Society, Fellow of the Academy of Medical Sciences, Research Professor in the Department of Physiology, Anatomy and Genetics at the University of Oxford, Professorial Fellow of Trinity College, University of Oxford. Her research focuses on ATP-sensitive potassium (KATP) channels.