世界名校暑期课程

International Summer School Programs

牛津、剑桥、斯坦福

Oxford, Cambridge, Stanford

牛津夏校

Oxford Summer School

牛津大学 University of Oxford

牛津大学，英语世界中最古老的大学，是世界著名研究型大学之一，也是英国最顶尖大学之一。牛津大学培养了众多社会名人，包括了26 位英国首相、60 位诺贝尔奖得主以及数十位世界各国的皇室成员和政治领袖。

The University of Oxford is a collegiate research university located in Oxford, United Kingdom. It is currently ranked as the world's number one university, according to the Times Higher Education World University Rankings. Oxford University has educated many notable alumni, including 27 Nobel laureates, 27 Prime Ministers of the United Kingdom,and many foreign heads of state.

项目介绍 Programme Introduction

牛津夏校由牛津皇家学院主办，凭借其雄厚的师资力量和合理实用的课程设置，在过去10 年中，为来自世界各地一百多个国家的学生提供为期两周的牛津大学课程体验项目。大部分课程由牛津大学老师授课，提供超过20 种课程可供选择，全程教学、住宿、餐饮均在牛津大学这所世界上最古老、最受人尊敬的学术圣殿之中进行，以学为主、学娱结合，供国际青年领略学术精髓与英伦文化，最终授予牛津皇家学院官方证书与结业报告。

The Oxford Summer School programme offers students aged 16-18 the opportunity to live and study in colleges of the University of Oxford for two weeks. Most courses are taught by Oxford University teachers, offering more than 20 courses to choose from. The full course of instruction, accommodation and dining takes place in Oxford. The main idea of learning and entertainment for the international youth is to appreciate the essence of academics and British culture, and ultimately be awarded the Oxford Royal of certificate and graduation report.

选课列表：

A 组：企业财务 / 化学 / 古典文明 / 当代历史 / 英文创作 / 经济学 / 英语文学 / 实验心理学 / 人类科学 / 新闻/
管理学 / 市场营销与数字营销 / 数学 / 生物医学 / 神经学 / 哲学 / 物理 / 政治学与国际关系 / 企业家与创
业1 / 工程学1 / 计算机科学1/ 医学预科1
B 组：考古学与人类学 / 天文学 / 企业财务 / 化学 / 当代历史 / 英文创作 / 经济学 / 英语文学 / 实验心理学 / 遗
传学 / 人类科学 / 市场营销与数字营销 / 数学 / 生物医学 / 神经学 / 物理 / 政治学与国际关系 / 企业家与
创业 2 / 工程学 2 / 计算机科学 2 / 医学预科 2

Academic Content:

List A:
Business Finance / Chemistry / Classical Civilizations / Contemporary History / Creative Writing /Economics / English Literature / Experimental Psychology / Human Science / Journalism / Management Studies / Marketing & Digital Marketing / Mathematics / Medical Biology / Neuroscience / Philosophy/ Physics / Political Science and International Relations / Business and Enterprise Programme 1 /Engineering 1 / Computer Science 1 / Medical School Preparation 1

List B:
Archaeology & Anthropology / Astronomy / Business Finance / Chemistry / Contemporary History /Creative Writing / Economics / English Literature / Experimental Psychology / Genetics / Human Sciences/ Marketing & Digital Marketing / Mathematics / Medical Biology / Neuroscience / Physics / Political Science and International Relations / Business and Enterprise Programme 2 / Engineering 2 /Computer Science 2 / Medical School Preparation 2

专业学术

课程介绍

天文学Astronomy
星际与外层空间研究是一门古老的科学。此课程将学生利用前人留给我们的知识遗产，让学生更好地了解宇宙的奥秘。主要通过观测天体发射到地球的辐射，发现并测量它们的位置、探索它们的运动规律、研究它们的物理性质、化学组成、内部结构、能量来源及其演化规律。
遗传学 Genetics

遗传学是研究自然领域中遗传与变异的科学。遗传物质的本质、遗传物质的传递和遗传信息的实现等。该课程将让学生以实验的形式深刻洞察这个复杂的科学领域。

数学Mathematics

本课程旨在建立学生对数学的好奇心与自信。不同于普通高中课堂教授的数学基本概念，该课程展现了现代数学前沿发展的最激动人心的方面。课程中包含各种活动，包括解谜，批判性思维拼图，数学战略游戏，甚至设计一个原始计算机。

生物医学 Medical Biology

该课程为对医学感兴趣的同学们而设计。内容涉及不同领域的科学研究课题，从人类健康和疾病背后的生物医学伦理，到影响公共医疗体制的政治和环境因素。课程形式以讨论辩论为主，互动性较强。

神经学 Neuroscience

在生物科学领域研究的一般方法和原则，同时在一个更具体的研究领域窥见世界最先进的研究。课程主题可能包括微生物学、神经生物学、生物力学、医疗器械设计、癌症生物学、环境生物学等。

化学 Chemistry

本课程使用各种不同的教学风格，让学生了解和接触先进的化学水平，感受化学的奇妙。课题会包括原子结构，溶液浓度，酸碱平衡，氧化、还原反应以及有机分子结构。甚至包含自由焓和熵的概念和碰撞理论的反应。课堂讨论、辩论、演讲、角色扮演等方式，鼓励学生创新性思维，培养学生的好奇心。

物理 Physics

本课程旨在让学生感受大学物理的前沿教学内容，主要包含相对论和量子物理。因为这些不仅仅可以从科学和数学的角度去分析，也可以从哲学和技术角度去学习。课程使用多种教学和学习方法，其中的解决问题的能力是物理研究的重要方法。

实验心理学 Experimental Psychology

该课程涵盖了实验心理学的基础概念和一些最为重要的理论知识。同时，教会学生使用最新的实验心理学方法来亲自设计、制作一些心理学实验课题。

经济 Economics

本课程旨在让学生熟悉经济学的关键规则，包括市场，政府干预，政策目标和指导，贸易往来以及汇率变化。涉及的内容包括微观经济学，宏观经济学以及国际经济。同时会针对当前经济问题进行讨论，让学生将理论与实际结合，看到在现实世界中可以有具体应用的抽象理论。本课程的目标群体为没有或者仅初级经济学背景的学生。

市场营销与数字营销Marketing & Digital Marketing

随着互联网的逐步发达，以数字营销为代表的营销模式逐渐崛起，其中包含了许多互联网营销中的技术与实践，如手机、数字户外广告等。该课程给学生提供了一个学习的机会，让学生模拟真实商业环境，用所学知识与技术实现产品的营销。

管理学Management Studies

管理学是一门综合性的交叉学科，是系统研究管理活动的基本规律和一般方法的科学。现代企业管理者所需的技能是多样化的，需要灵活的头脑与执行。该学科会交给学生如何通过合理的组织和配置人、财、物等因素，提高生产力的水平。

企业财务Business finance

企业财务是企业生产经营活动的一个重要方面，是企业生产、营销、技术、人事等集中体现。该课程旨在通过让学生熟悉会计基础，投资策略和有效的债务管理，使得学生理解作为一个企业的财务人员必须对财务规则有充分的理解，以确保公司盈利。

人类科学 Human Science

该课程研究人类科学的各个方面，从人类生物学到社会科学领域的基础，并从学术视角的解释人类的终极秘密。本课程从人类生物学和社会科学的双重角度着手，涉及遗传学、人类进化等话题以及人类、文化在人类发展中的作用。该课程还会伴随人类学案例分析研究使学生在充分互动中学习有趣的人类学现象。

新闻 Journalism

新闻学科通常不是高中课程涉及的内容。本课程通过调研分析现有的新闻媒体以及培养学生的写作技能，全面讲解要成为一名专业高效的新闻工作者所需具备技能与素养。

英文创作 Creative Writing

该课程互动性较强，旨在使用多种技巧来帮助提高学生的文学素养和创造力。课程会给学生介绍风格迥异的文学作品，以帮助学生向伟大的作家学习。此外，学生还将做大量写作，小组之间阅读并评论，这有助于培养学生的编辑能力与接受建设性批评的技能。

政治学与国际关系

Political Science & International Relations

该课程强调同学关注自由民主的政治学传统以及对当今国际关系领域热点问题的分析。使得同学初步掌握政治学的分析框架，深入研习国际关系的议题。

当代历史 Contemporary History

本课程探讨从第二次世界大战结束至今的世界历史，涉及从非洲和亚洲非殖民化到中东冲突等主题。鼓励学生参与辩论以及专业历史学家一样思考。学习材料大量使用英国档案中的一手资料，以最直观的方式接触大量史实，并以史为鉴，面向未来。

英语文学 English Literature

本课程针对任何对英语文学感兴趣且英文水平较高的学生，从威廉• 莎士比亚的《暴风雨》到后现代写作文学，会从分析较晦涩的作品中树立论据，从而教授学生如何写牛津风格的文章。该课程采用牛津剑桥特有的互动讨论式教学方法，让学生充分参与课程互动，发表观点。

工程学 Engineering

工程学是一个非常广泛的领域，该课程是为对工程学感兴趣的同学及未来想申请工程学的同学所设计的大学预科课程，涉及到机械工程、民用工程、电气工程和化学工程等。老师还将帮助同学们准备英国顶级大学申请材料，提升个人陈述和面试技巧以及相关的入学考试或能力测试技巧。通过一系列作业和任务汇报，提升学生口头沟通能力、写作能力以及分析问题和解决问题的能力。

计算机科学 Computer Science

牛津计算机科学课程是为来自世界各地对计算机有强烈兴趣的学生设计。本课程会对计算机科学前沿领域的进程进行完整介绍。特别强调利用计算机系统来计算，分析和呈现数据。学生将学习HTML基础，CSS 格式化和多媒体以及Python 网站交互性，为学生打造一个更科学的编程语言基础。课程还将探讨计算机科学背后的数学原理和编程中的算法。适合具有良好数学基础和IT 技能的学生，但不需要编程经验。

医学预科 Medical School Preparation

牛津医学预科课程是为来自世界各地想要选择医学作为大学专业的学生设计。该课程向学生提供他们在开始申请医学院的过程之前所需要了解的一切，如个人陈述、生物医学入学测试及英国医学院概述等。学生还将参加一系列实用技能研讨会，使他们能够体验和练习使用医疗设备和执行医疗程序。每年，该课程选拔50 多个国家160 多名16-18 岁的志同道合的学生汇聚牛津，共同参与。该课程包含以下几个课程主题：医

学作为一个职业 / 英国医学院概述 / 牛津剑桥大学的医学院 / 个人陈述（医学类）/ 生物医学入学测试(BMAT) 及其他测试专题 / 面试技巧 / 医学实践。

企业家与创业 Business and Enterprise Programme

不同国家的学生会分小组学习商业管理、经济和金融的基础原理，也会涉及会计、市场营销、人力资源和商业道德等知识。除了学术课程之外，以技能为基础的研讨会将培养学生的表现力和领导能力，以使他们在将来的商业目标中收益。该课程的最后将办一个模拟企业博览会，在此学生将向学校内的其他人描绘自己的商业思路。

Course Description

Astronomy

On this course, students will have the chance to address the same questions with the benefit of modern scientific understanding, charting the history of astronomy and gaining an appreciation of the powerful equipment available to astronomers today.

Genetics

Through a combination of theoretical learning and practical scientific exercises, students will explore this challenging scientific field and gain a deeper insight into the building blocks of human life. More broadly, students will gain an understanding of how genetics fit into the bigger picture of human evolution.

Mathematics

The range of topics covered on this course is broad, spanning game theory, logic, geometry and computer science, designed to demonstrate the wide variety of interesting uses to which mathematics is put in the modern world. Students' existing interest in mathematics is nurtured and encouraged by this course.

Medical Biology

Ideal for any student interested in studying subjects allied to medicine in future, or who is considering a variety of different areas of science. This course gives a thorough overview of the scientific background of medicine while exploring its interdisciplinary interactions.

Chemistry

A wide variety of different teaching styles are used in this course to help students understand and engage with chemistry at an advanced level and give them a taste of the study of chemistry at university.

Neuroscience

This fascinating course introduces students to the phenomenally complex workings of the human brain. As well as exploring the anatomy of the brain and how it is structured, students will gain an understanding of how the brain handles emotions, memory and other functions.

Physics

The major areas of physics covered by this course include relativistic and quantum physics, which are looked at not only from the perspective of science and maths but also analyzed from a philosophical and technological point of view.

Experimental Psychology

This course addresses famous psychological experiments, looking at their conclusions as well as their ethical implications and shortcomings. It then goes on to teach students how to design and carry out their own psychological experiment and produce a report on their findings.

Economics

Designed for students with little or no pre-existing knowledge of economics, this course provides a thorough grounding in the topics studied at pre-university and university level in economics and related disciplines.

Marketing & Digital Marketing

This course will unlock some of the secrets of modern marketing and the many forms it takes. This fascinating course will give students a deeper understanding of a wide range of media, as well as the psychology behind it.

Management Studies

This course provides students with theoretical and practical insights into the world of business, enabling them to take their first steps into practicing skills that will benefit them throughout their working lives.

Human Science

The course takes a scientific approach to the experience of being human. From the perspective of human biology, it looks at topics such as genetics and evolution, while from the perspective of social sciences; it offers an introduction to areas such as anthropology and the role of culture in human development.

Journalism

This class will look at several different aspects of the subject of journalism. The challenges modern journalists face and the different kinds of media in which they work are just two of the many vantage points from which students will explore this field.

Creative Writing

The course will engage with a variety of literature of different styles and genres to help students learn from great writers. Students will be encouraged to do a great deal of writing over the two weeks' length of this course, to overcome the fear of a blank page.

Political Science & International Relations

Students first learn about the basics of democratic politics and then explore their effects from an international perspective – for instance, by looking at the evolution of warfare in an age of global terrorism.

Contemporary History

The events that this course looks at are those which directly shaped the worlds that we live in today, and which are frequently subject to intense discussion. Special emphasis is given to the most recent historical events, such as the rise of global terrorism and the Iraq War.

Business finance

Students will be introduced to key concepts in business finance, from company-level finances to how businesses fit within the wider economy. Through theoretical study and practical exercises, students will get to grips with a challenging subject and pave the way for future study and careers in this competitive field.

English Literature

Ideal for any student with a curiosity about literature, this course teaches students how to write an Oxbridge - style essay, how to engage with complex and difficult writers like TS Eliot and Virginia Woolf and how to build arguments from close analysis of texts.

Business and Enterprise Programme

Students are taught the principles of business management, economics and finance in small groups, and will be given the opportunity to learn the principles of accounting, finance, marketing, human resources and business ethics. In addition to the academic classes, skills-based workshops will develop the students' presentation and leadership skills for the benefit of their future business goals. The programme will culminate with an Enterprise Fair during which students will have the opportunity to present their ideas to others within the school.

Engineering

The course aims to introduce students to the wide range of options they have when studying engineering at

university, as well as the challenges facing the modern engineer. Students will consider university engineering courses and how they differ, looking into a variety of engineering fields, such as mechanical, electrical, civil and chemical, and the associated opportunities and potential careers. They will also have the opportunity to work on their university application, developing their personal statement and interview technique, as well as practicing potential admission tests. Students will examine a typical set of tests used to select engineering students, and discuss what it is that universities are looking for in engineering candidates.

Computer Science

This course provides a complete introduction to the thriving field of Computer Science, using the web to illustrate key concepts. Students will learn website design using HTML for structure and CSS for formatting, and Python to provide them with a foundation in a more scientific programming language.

Medical School Preparation

This course is designed for students who are considering applying to British medical schools. This course will advise students on medical school application best practices, demystifying the process and addressing any concerns they may have. Below is a list of topics covered during the course, Medicine as a Career, UK Medical Schools, Medicine at Oxford and Cambridge, Personal Statement, Advice on BMAT and other tests, Interview Technique, Practical Skills Workshops.

剑桥夏校

Cambridge Summer School

剑桥大学 University of Cambridge

剑桥大学始创于1209 年，也是英语世界里第二古老的大学，被评为世界上最顶尖杰出的大学之一。学校800 多年的历史中，涌现出牛顿、达尔文等一批引领时代的科学巨匠；造就了培根、凯恩斯等贡献突出的文史学者；培养了弥尔顿、拜伦等开创纪元的文学艺术大师，从这里走出了8 位英国首相以及95 位诺贝尔奖获得者，这些都为剑桥大学奠定了世界近现代学术文化中心的伟大地位。

The University of Cambridge is a collegiate public research university in England. Founded in 1209, Cambridge is the second-oldest university in the English-speaking world. It is a member of numerous associations and forms part of the 'golden triangle' of leading English universities. Ninety-five Nobel laureates have been affiliated with Cambridge as students, faculty, staff or alumni.

项目介绍 Programme Introduction

剑桥夏校项目致力于为全世界16 至18 岁高中生提供一个在剑桥大学体验专业且丰富学科课程的平台。授课教师全部来自剑桥大学或牛津大学的各领域杰出教师，力求为学生打造最佳学术环境。为保证学生最独一无二的优质学习体验，精心策划的课程安排不仅能够满足学术需求，更提供了丰富多样的课外活动。项目期间，各国学生生活在剑桥中心区最大、最美丽的皇后学院、基督学院以及圣凯瑟琳学院中，在古朴典雅的砖墙内以及无与伦比的学术环境里学习，探索未知的知识领域，拓展思维。

The Cambridge Summer School is a unique two week residential educational experience with a diverse and enriching curriculum, designed for 16-18 year old students. Tutorials and seminars are taught by highly regarded tutors in an optimal learning environment that stimulates academic enquiry. The programme not only meets the academic needs of the participants, but also provides a unique experience of the university city through an abundance of extracurricular activities. Students reside in one of central Cambridge's largest and most beautiful university colleges. With its diverse and enriching curriculum, the programme allows students to explore and further their knowledge of a chosen subject in an unrivalled academic environment.

为对医学感兴趣的同学们设计的大学水平课程，帮助同学们深入了解基本医学原理以及熟悉医学学科的进步。学生可以学习主题广泛的医学生物学和解剖学伦理，比如基因，染色体及其操作；细胞遗传物质的结构、遗传和表达；表观遗传学和癌症研究。

物理

本课程重点为学生提供大学物理学的课题，旨在让学生感受大学物理前沿教学内容，通过研究实际问题探索物理学的根本实用性质。从行星运动到追踪火箭的轨迹，导师将帮助学生获得更多的理解类似物理现象的原理。研究课题包括电子学、地球物理学、力学、相对论和热力学等知识。还通过研究从X 射线、超声波、卫星信号等实际问题探索物理学根本。此外，学生还将分组合作完成导师布置的项目，最终的成果展示将为导师评估提供依据。该课程要求现阶段在校学习物理和数学的学生。

工程学

在该课程中，导师会从理论和实践两方面对桥梁、高层建筑、水库、发电站、港口和运输系统等的实用设计和构造理论进行讲解。此外，学生将探究下一代可再生能源，水资源可用性和废物管理等领域的主要挑战，从而了解化学和环境工程。除了学习与工程相关的学术主题，学生还将分小组运行一个项目，使学生通过微型土木工程结构将他们的知识付诸实践。该课程需要学生具有良好的数学基础，会在课程开始前6周为学生提供预备学习材料。

建筑学

该学科不仅关注建筑的外部和室内设计的美学，而且关注整个环境的营造。在本课程中，将向学生介绍建筑的关键理论原则及世界各地不同地区的建筑历史。学生通过了解建筑学各个领域，可以锻炼其观察、设计、批判性思维与表达能力，尤其是空间立体思维的表达。此外，学生还将尝试动手制作建筑绘图和构建数字建筑模型及建筑师的日常工作内容，包括建筑与工程和施工的内部联系，可以深入了解未来的职业发展路径。最后会分组合作完成导师布置的设计项目，最终的成果展示将为导师评估提供依据。

生物

生物科学包含众多令人兴奋的主题，从细胞结构到遗传学，直至整个生态系统。该课程将向学生介绍更高级的大学级课程和辩论，激发学生的批判性思考的能力。主要涉及达尔文的进化论、RNA 世界假说问题、细胞分级技术等，课程还让学生自己选择感兴趣的领域完成小组项目，最终作为项目成果展示。该课程为有志于探索生物科学并感受最前沿科学的学生提供了独特的机会。

化学

本课程使用各种不同的教学风格，不仅激发学生好奇心，更是让学生了解和接触先进的化学课题，鼓励学生创造性思维，提前感受大学化学学科的奇妙。学科领域涉及无机化学、有机化学和生物化学等，课题包括：原子和分子结构、化学键、热力学、化学动力学、酸碱度等。学习方式包括课堂讨论、辩论、演讲、分小组制作项目并展示等。

数学

数学课程旨在向学生提供大学级别的数学课程，除了扩展学生现有的数学知识外，还重点说明这些数学知识如何应用于其他领域。核心主题包括：微积分、分析、整合、统计、数学金融、数学哲学等。该课程需要学生对代数与微积分有一定基础，会在课程开始前6 周为学生提供预备学习材料。

计算机科学

课程将会介绍现代计算机科学的核心概念，为学生提供理论和实践知识。课题包括：编程语言的理论、软件工程的最新发展、人工智能的变化领域、计算理论。还可选择探索不同学科的概念，如数学，工程和语言学。此外，学生还将在课程期间完成一个项目，主题包括社交网络应用程序，金融行业软件应用程序和在医疗领域软件应用等。

经济学

该课程目标群体为有志于在大学学习商业和经济管理类的学生。该课程使用当今经济事件为经济学研究对象。除了学习核心理论模型和框架，该课程还特别关注当前的全球金融危机和欧元区危机等，让学生独立分析特定经济政策的利弊。该课程还涉及企业管理内容，包括财务管理和一般管理学的核心知识，依据案

例分析企业成败的因素，与哈佛商学院的“案例研究方法”颇为类似。最后，学生将会完成一个经济与管理特定领域的小组任务来展示所学技能，并作为导师的评估依据。

法律

该课程重点向学生介绍不同背景下的法律条款，也会分析宪法、侵权法、国际公法和人权法等领域所引起的法律问题。此外，还提供了对包括刑法、国际法和公司法在内的法律领域的理论框架深入了解，并对各个领域内的经典案例进行分析。通过对法律学科的核心理论和实用分析，让学生能够逻辑清楚、条理清晰、有效辩论。该课程不需要有法学知识和经验。

哲学

哲学是一般问题和根本问题的研究，与我们所理解的一切与现实、存在、知识、价值观、理性、心灵和语言相关。本课程通过研究从柏拉图和亚里士多德到尼采等哲学大家的作品，让学生更好地理解什么是逻辑和理性原理，课程细分为四部分：即逻辑，形而上学，认识论和伦理。希望学生解决最基本的哲学问题，鼓励学生互相交流与辩论。此课程不需要学生具有相应的哲学知识。

英语文学

本课程通过对文学理论和文学作品语言形式的实证分析（从西德尼到巴特），使学生掌握文学概况的基础上初步了解一系列文学经典作品的历史文化语境、主题思想、艺术特点和创作手法。除了上述内容，学生还将参观来自剑桥（包括米尔顿和马洛）等著名作家的大学，以及为他们提供灵感的各种场所和场景，将为未来大学文学的学习提供坚实的基础。该课程与英文创作的学生一起学习。

历史

该课程聚焦于历史时期的政治、文化、社会和经济结构，着眼于学术界当前面临的一些核心问题。时间跨度从伊丽莎白时代到第二次世界大战再到近代“阿拉伯之春”起义等事件，鼓励学生使用批判性思维分析历史事件的趋势，而不仅仅是背诵历史史实。此外，学生还会对选定的历史问题进行研究，最后在充满进行一场“牛剑”式辩论，激发学生的求知欲，鼓励他们以史为鉴，可知兴替。

国际关系学

该课程提供了当代国际关系和政治科学的重要理论基础，通过分析新现实主义，新自由主义，建构主义和后结构主义方法，使得同学们初步掌握政治学的分析框架，发现各国之间的关系的多样性。课题涉及欧盟移民政策、联合国的作用、中国崛起的意义等主题。课程还通过研究学生选择感兴趣的国际关系领域完成小组项目，最终作为项目成果展示。

英文创作

剑桥以文学剑桥享誉全球，产生了很多文学巨匠（约翰• 米尔顿，克里斯托弗• 马洛等）。课程的每个步骤都将向学生介绍核心技巧，以改善写作的风格与结构，鼓励在散文和诗歌找寻新的想法。导师将对学生的写作作业提供建设性的意见和指导。此外，该课程还与英语文学课程相结合，使学生把文学作家的写作手法应用到自己的创作中去。学生将会创作出一篇中篇小说作为本课程的最终成果。

Architecture

In this course, we'll introduce you to the key theoretical principles of architecture and provide you with grounding in the history of architecture in different regions across the world. Try your hand at architectural drawing and constructing manuals in our architecture workshops. You'll also gain an understanding of what being an architect involves, including how architecture interacts with construction and engineering, giving you an insight into a possible future career path.

Physics

Physics is responsible for some of the things we think indispensable to modern life such as medical instrumentation such as x-rays and ultrasound to satellite signals to watch television, use mobile phones and the Internet itself. In addition, students will have the ability to work on group projects and will be assigned to teams to work together on problems to be presented at the end of the week.

Chemistry

The aim of the course is on the basic principles of atomic and molecular structures, chemical bonds, thermodynamics, chemical kinetics, acid-base and redox equilibrium, and catalysis. The curriculum will also enable students to delve into specific fields of interest through a group project that culminates in a presentation to the rest of the class.

Biology

At the fundamental level, Biology is concerned with understanding the laws that govern interactions from the molecular level to the level of the cells, individuals and populations, and the Cambridge Immerse course provides an unparalleled experience of these key tenets. The programme is a unique opportunity to explore fascinating topics within Biological Sciences, and to consider recent scientific advances.

Mathematics

Core topics explored within the programme include: Calculus, Analysis, Integration Statistics, Mathematical Finance, and the Philosophy of Mathematics. Students are expected to be studying Mathematics. All students are sent preparatory material 6 weeks before the programme commences.

Medicine

Students can expect to study topics as wide-ranging as medical biology and anatomy to ethics and philosophy. Furthermore, the course is distinctive in that it encompasses skills workshops including Interview Workshops, Personal Statement workshops and BMAT test skills workshops.

Engineering

In Civil Engineering, you'll be provided both a practical and theoretical insight into the design and construction of structures such as bridges, tall buildings and other structures, dams and reservoirs, power stations, ports, and transport systems. In addition to studying academic topics related to Engineering, a competitive group project will round off the course. Preparatory work provided to participants 6 weeks before the course commences.

Computer Science

The course introduces the key concepts and tools underpinning modern computer science, equipping participants with both theoretical and practical knowledge. In addition, participants will complete a project over the duration of the course, allowing them to explore a range of topics that might include social networking applications, financial industry software application, and the use of software in the medical sector.

Economics

The programme is focusing particularly on recent and current crises; students will develop, independently, arguments for and against particular economic policies. The 'Management' side of the course focuses on the growth of businesses, allows students to pinpoint why and how any business can succeed or fail which is similar in style to the 'Case Study Method' used at Harvard Business School.

Law

The Law programme provides insights into the theoretical frameworks of key fields of law, including criminal law, international law and corporate law, as well as exploring fascinating cases and notable developments within each field. No prior knowledge or experience of Law /Jurisprudence is required or presupposed.

Philosophy

By studying the works of the world’s finest philosophers - from Plato and Aristotle to Wittgenstein, Nietzsche - participants will develop a finer understanding of the workings of logic and reason, how arguments are built in order to establish conclusions, and how such conclusions can be questioned.

English Literature

This course combines practical analysis of language and form with a thorough grounding in the historical and

cultural context of a variety of key texts. The course is studied alongside participants from the Creative Writing programme.

History

The course looks at some of the key issues facing academics today. From as wide-ranging as the Elizabethan period, to the events of World War II, and the more recent uprisings of the 'Arab Spring'. Participants conduct research on a selected historical question, culminating in an essay discussed during an Oxbridge style tutorial.

International Relationship

This course provides a vital theoretical grounding in contemporary International Relations and Political Science and tackles key questions and debates related to the politics that continually shape our modern world.

Creative Writing

This programme is combined with the English Literature programme, allowing students to analyse the literary devices used to create compelling pieces of writing. By the end of the course, participants will have been guided through the writing of their own novella.

斯坦福国际精英大学先修项目

Stanford Pre-Collegiate International Institutes

斯坦福大学介绍 Stanford University

斯坦福大学被公认为世界上最杰出的研究型私立大学之一，2015-2016 年 ARWU排名位列世界第二。斯坦福大学培养众多社会精英，包括60 位诺贝尔奖得主，20位图灵奖（计算机最高奖）得主，另有6位斯坦福教授获得菲尔兹奖（数学最高奖）。美国最高法院的9 位大法官，其中6 位从斯坦福大学的法学院毕业。斯坦福大学培养了众多高科技产品的领导者及创业精神的人才，这其中就包括惠普、Google、雅虎、耐克、硅谷图形及eBay 等公司的创办人，亦为培养最多美国国会成员的院校之一 。

Stanford University, located between San Francisco and San Jose in the heart of California's Silicon Valley, is one of the world's leading teaching and research universities. Since its opening in 1891, Stanford has been dedicated to finding solutions to big challenges and to preparing students for leadership in a complex world. Stanford is a world leader among academic institutions, known for educating the brightest students, for shaping the world through ground-breaking research, and for building a spirit of innovation and entrepreneurship. Stanford is a leader in engineering, science, technology, medicine, law, business, humanities, and the arts.

项目简介 Program Introduction

斯坦福大学校方每年都会精心挑选斯坦福最具特色的课程设计成为期两周的斯坦福大学课程体验项目，由斯坦福老师授课，全程教学、学习、住宿和餐饮都在斯坦福大学校内，供国际青年精英深入体验斯坦福大学文化，最终授予斯坦福大学官方颁发的结业证书。该项目与各国权威的教育部门和机构合作，选拔来自不同国家和地区、不同文化背景的优秀学子在斯坦福大学学习与生活。该项目学术课程部分以小班授课和研讨为主，涉及商学、医学、工程、人文学科等一系列大学先修水平课程，同时非常强调斯坦福特色的创新思维能力培养。除了上课外，该项目还组织丰富多彩的课余活动，包括访问加州大学伯克利分校，硅谷创业公司，蒙特利海滩休闲等。此外，该项目还专门有大学申请环节，系统介绍和培训美国顶尖大学申请流程和录取标准，了解并获得国际学生在申请美国学府过程中需要的系列资源。

The Stanford Pre-Collegiate International Institutes invites schools and organizations from around the world to bring academically talented high school students to Stanford University for a two - week introduction to American college life. Motivated pre-college students who attend the Stanford Pre-Collegiate International Institutes will be intellectually challenged, and they will develop skills in problem solving, critical thinking, collaboration, creativity, and innovation. Students participate in intensive academics that expose them to university-level content through courses and workshops that draw on a range of subjects taught in the Stanford schools of Humanities, Sciences, Engineering, Medicine, and Business. The program helps to foster a passion for intellectual pursuit. The International Institutes provide an American college-life experience and helps students understand the admissions process for U.S. colleges and universities. One of the highlights of the program is the opportunity for students to interact with

other students from around the world and learn about their cultures.

专业学术

课程以启发思考、自我发现、突破创新为核心。提供医学、商学、工程学、自然科学、人文科学、应用科学与技术等多个领域的广博知识，课上教授们将和学生进行丰富的互动，拓展学生的思维，开创更宽广视野。

课程介绍

生物科学

生物科学是一个多元且引人入胜的领域。无论学生想为从事具体的职业做准备，还是将其作为一门普通的专业来学习，生物科学与生物技术对许多学生来说是一个绝好的体验，通过该专业的学习，学生可以学习到人类研究、生物研究、人类生物研究等不同领域的知识。也为同学们以后进入医药、牙科以及兽医学院或者进入生物学与应用科学领域做好铺垫。

商业与创业

本课程提供学生一系列商业核心规则，包括商业策略、营销、创新、投资、财务以及创业。紧随而来的是学生将用所学知识完成老师布置的一系列研究任务以及类似大学研究生水平的创意项目。

设计思维

由斯坦福的机械工程系教授David Kelley 创立,Design Thinking 是一种思维方式，设计性思维支持在当今充满挑战和不断变化的世界中的创新需求，了解创新内在的规律，激发创新潜能。斯坦福大学从传统的设计方法论演变出来设计过程，强调设身处地地去体验客户需求：移情- 定义- 设想- 原型- 测试。学习期间以学生兴趣小组的形式组织着各种各样的工作坊和设计比赛。

决策领导与谈判

科学决策探讨的是在谈判过程中，为了实现特定的目标采取的各种方式、措施、技巧、战术以及组合运用，从而做出最佳决策。针对领导力和决策技能有兴趣以及对政治经济领域具有洞察力的同学。

神经学

本课程主要介绍在生物科学领域研究的一般方法和原则，同时在一个更具体的研究领域窥见世界最先进的研究。教学方式以教师讲授和实地考察（数字解剖实验室等）结合为主。课程主题可能包括微生物学、神经生物学、生物医学技术、生物力学、医疗器械设计、癌症生物学、环境生物学等。

数学逻辑

问题解决是数学家喜欢的活动，而逻辑推理是活动的框架。本课程面向那些喜欢解决具有挑战性的数学问题，以及想要提升解决问题和逻辑推理能力的人。其中逻辑课程，重点使用数学中的逻辑，还有命题的基本知识和一阶逻辑基础，使学生获得之前被同学们所熟知的逻辑方法的正式概念。

英文创作

在这个需要亲身实践、身临其境的课程当中，学生必须扩大他们对观察周围世界的意义的

理解。学生在课堂上会发起一个简短的阅读讨论，进行一些关于世界的写作观察，然后把他们的观察演变成一个简短的，创造性的作品。

学术写作

如果你想写一篇学术论文并不意味着你不能使用创造性写作的工具。实际上，使用诗歌和小说写作的技巧可以大大提升你的学术论文水平。在这注重实践的、寓教于乐的课堂中，学生们将学习三种方法来提升他们的学术论文技巧，从而使他们更好地掌握如何将比喻语言、音乐语言和实验融入到他们的学术写作中。

Academic Content

The academic program exposes students to university-level content and teaching style in a lassroom that fosters communication, innovation, and creativity.

Sample Course Descriptions:

Bioscience or Biotechnology

The Bioscience and Biotechnology focuses on applying advanced technologies in combination with experimental and computational methods to solve important national problems in public health, bio-security and energy security. It works at the intersection of these areas using advances in the bioscience, physical sciences, nanotechnology, and imaging and measurement science.

Business & Entrepreneurship

This business focused workshop will cover three topics: product positioning, effective advertising, and career options. Using a variety of activities for hands-on learning, we'll explore fundamental marketing concepts and imagine future career possibilities.

Design Thinking

You will explore the main design thinking concepts through short videos, each paired with brief activities to practice relevant methods and approaches. By the end of the course, students will have learned through experience the mindsets and basic tools for each stage of the design thinking process: Empathize, Define, Ideate, Prototype, Test.

Neuroscience

This course introduces students to the phenomenally complex workings of the human brain. As well as exploring the anatomy of the brain and how it is structured, students will gain an understanding of how the brain handles emotions, memory and other functions.

Mathematical Logic

This course is for those who delight in solving challenging math problems and who would like to further develop both their problem-solving and their logical-reasoning skills. Problem solving is the activity of the mathematician, and logical reasoning is the framework for this activity. Here we give an introductory course in logic, drawing from examples outside of mathematics but focusing on the use of logic within mathematics. Students are introduced to the basics of propositional and first-order logic, and this gives them access to formal notions of familiar logical methods.

Creative Writing

In this hands-on, immersive session, students will be asked to expand their understanding of what it means to observe the world around them. Students will discuss a brief reading, engage in writerly observations of the world, and they will emerge from the class having turned their

observations into a short, creative piece.

Expository Writing

Just because you're writing an academic essay doesn't mean you can't use tools from creative writing. In fact, using techniques from poetry and fiction writing can drastically improve your academic essays. In this hands-on, interactive, game-based workshop, students will learn three techniques to improve their academic essays. Students will walk away at the end of the day with a better grasp of how to integrate figurative language, linguistic music, and experimentation into their academic writing.