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ASDAN
Oxford Summer School

(2020 Summer)
Course Descriptions
(Ages 13-15)



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Oxford Summer School 2020

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16 subject options | 9 afternoon workshops

Course Descriptions

Artificial Intelligence

Artificial Intelligence (AI) seeks to create systems that can learn just like humans. The field is inspired by multiple disciplines; statistics, biology, psychology and computer science, and is continuing to grow in today's society. The advancement of AI has been fuelled by exponentially growing amounts of data being collected by various systems.

Climate and Sustainability

The field of Climate and Sustainability is rapidly evolving. This course will help you understand the new information available, to help you progress into future studies and help you to become a more sustainable citizen, striving for a more sustainable society.

Creative Writing

In this Creative Writing course, students will be introduced to a wide range of literary techniques, being coached in the development of a readable piece of prose, guided around the pitfalls of cliché, and learning how to compose, draft, and edit their own work.

All you need for this course is creativity, enthusiasm, and imagination – although a blank notebook and lots of spare pens will come in handy too! Our Creative Writing course has been designed for students with an interest in taking their writing to the next level. The class aims to extend and challenge writing techniques learned in schools and encourages students to find their own 'voice' through which to express themselves. The first week will be spent acquiring a 'writing tool kit', providing students with key basic skills and introducing them to a variety of literary techniques. During the second week students plan, draft and edit their own short story, allowing them to experiment with some of these newly learnt techniques in their own work.

The course is necessarily interactive: students regularly share their writing with the group and are expected to give constructive feedback on the work of others. A varied classroom environment combines teacher-led experimental activities with interactive group work and work-shopping, as well as giving time for individuals to work on their own writing. It can be difficult to critique the work of others, and harder still to take criticism in return, but both are valuable skills for budding writers, and indeed for life in general!

The most successful authors love what they do, and we hope to provoke the same level of passion for all students enrolled on this course

Economics and Management

The Economics and Management course has been designed as an introductory course for students who are relatively or entirely new to either subject, to outline the sorts of theories and issues with which business management theorists and economists are concerned, that students might study at university, and that generally allow students to engage with the world around them to a greater degree.

In economics, students learn about the basic economic problem concerning scarcity and choice, study the supply and demand model, different models of market structure, the occurrence of market failure (e.g. due to

the absence of markets for public goods, problems of information, and externalities), and the incidence and effectiveness of government intervention. The differing theories of Adam Smith, John Maynard Keynes, and Friedrich August von Hayek are addressed and debated.

In management, they look at the different objectives that firms may have (e.g. profit-maximisation, revenue-maximisation, sales maximisation, market share) and the different organisational or market conditions under which these emerge, the impact of price elasticity on demand upon price and revenue decisions, the (managerial and other) sources of falling/rising average costs (i.e. internal/external economies of scale and dis-economies of scale), and the different techniques managers could use to motivate their workers.

Students further consider the purposes of advertising and branding, and to what extent firms should be constrained by ethical considerations; in this way, the course touches on the philosophy as well as the practice of economics and management. Classes involve discussion, analysis of articles, presentations (both by the teacher and by the students), and visual resources. Interactive elements such as 'The Equilibrium Game' express fundamental economic theory in a dynamic way: students are randomly allocated 'buyer' or 'seller' cards by the 'broker' and instructed to negotiate the best sale price per round. This varied atmosphere ensures that all students get the maximum possible learning experience out of the course, accommodating all learning styles as thoroughly as possible.

Students are also given the opportunity to consider and express their own point of view, both through an essay task set in the first week and through a group task where they decide and justify what motivational strategies are most appropriate in different scenarios. Students benefit from the diversity of backgrounds, cultures and nationalities on the Oxford Royale Summer Schools New Perspectives programme, as they can share and exchange their experiences of different economic systems around the world, alongside considering how cultural differences affect management strategies; a vital area of knowledge in the modern globalised economy.

English Literature

Students on this English Literature course will spend their time grappling with some of the most famous works in the English language. They will learn the basics of literary criticism and develop an understanding of how to examine and dissect literature, helping them to identify and understand sub-text, imagery and metaphor. Looking at structure, themes, motifs and symbols within texts, students will gain an appreciation of the variation between different forms of literature. The course will span some 400 years of history, review giants of literature such as Shakespeare, Austen and Orwell, and explore genres such as poetry, Gothic literature and contemporary works.

As part of this course, students will have the chance to contribute their own ideas and interpretations as part of group discussions, thus building valuable communication skills that will stand them in good stead at school, university and beyond. In addition to debate, students will learn in a variety of other ways, including lectures, readings, interactive drama activities, textual analysis and written tasks. They will also be introduced to the art of writing an English literature essay, which will help them develop skills that will be invaluable for any humanities subjects they pursue in the future.

Environmental Science

This Environmental Science course is designed to introduce students to a broad-ranging and hugely topical subject area – never more relevant than in today's rapidly changing world. The central theme of the class is the relationship between people and the natural world, and it is aimed at any student with an interest in the future of our global environment.

Week 1 is used to explore some of the most significant issues for contemporary environmental scientists: climate change, biodiversity loss, and environmental disasters. Week 2 introduces a more theoretical context to the topical issues covered previously. Students will learn about the different approaches to managing the

environment, and also how Environmental Science is very much bound up with politics, ethics, and culture – what might the repercussions be if a country’s government decided to implement nuclear power plants, for instance?

By the end of the course, students will understand the key issues facing environmental scientists today. They will have gained a working knowledge of both the scientific processes at play and the sociopolitical aspects of many environmental issues, as well as familiarity with the main theoretical approaches to managing environmental issues. The way environmental problems are viewed and framed can be as important in determining solutions and responses as the empirical science involved, so students will leave this course having developed valuable transferable skills. Both in Environmental Science and beyond, the ability to present, analyse, and work as part of a team are essential to success.

Experimental Psychology

The Experimental Psychology class has been designed to offer students from varying backgrounds an introduction and insight into studying Experimental Psychology. Experimental Psychologists have addressed some of the most intriguing questions of life: What makes you you? What makes you different from other people? Is there always a clear difference between good and evil? This class provides students with the opportunity to study, discuss and debate these alongside a wide range of other fascinating and controversial issues.

The class provides students with the opportunity to study topics beyond those they will have met in formal education, and to discuss and approach established arguments from alternative and challenging perspectives. Topics include the study and measurement of personality, infant development, social development, and attachment in childhood. The class also looks at key principles of experimental design, animal testing and the issue of ethics in experimental research – how should we engage with ethically controversial studies which have nevertheless helped further psychologists’ research?

Forensic Science

Forensic Science applies science to criminal and civil laws during a criminal investigation. By the end of this course, you will be able to interpret forensic evidence and you will have covered a wide range of related topics to the field. This course is for those who want to be empowered to think more widely about the value that forensic science can add to our society and potentially go on to further study and/or a career in forensic science.

Genetics

Genetics is a branch of biology concerned with the study of genes. This two-week course will cover basic concepts underpinning modern genetics; DNA and how it is replicated; the scientists who discovered DNA; the topic of inheritance; and the relationship between genetics and the environment.

Human Biology

This Human Biology course is designed for students who wish to extend their knowledge and understanding of the science behind human physiology. It uses class discussion, debates, role plays, worksheets, quizzes and games to help students understand the basic scientific principles behind human biology and to get them thinking about some ideas and topics that they might not have encountered in the science teaching they have received at school.

The class aims to be an interactive and fun introduction to human sciences, and so students are expected to get involved in discussions and to participate fully in class activities. These will be varied in order to engage all types of learner and will include plentiful use of examples and props.

During the two-week course, students learn the basic principles of human biology, including cell biology,

homeostasis and genetics; gain an insight into how a medical research study is designed and carried out; and develop a greater understanding of specific areas of human biology, including hormones and diabetes, infectious diseases, the cardiovascular system, cell growth and death, the immune system, DNA and genetic diseases. In this way, students get a solid overview of the subject of Human Biology that may help inform their decision if they are considering studying Biology, Medicine or Human Biology specifically at university.

Furthermore, students get the chance to learn about what is being done at the cutting edge of human biology, such as genetic engineering and cloning; controversial topics that students are encouraged to discuss and debate with their peers. Similarly, in the class on vaccination, students vote on a motion and then debate it with the class, both as a means of testing their knowledge of the subject in ensuring that they debate with the correct facts in hand, and as means of honing discussion skills and rhetorical and persuasive ability. Biology as it pertains to humans can often lead to divisive or controversial topics and it is important that students learn how to discuss these in a mature, respectful and constructive manner, both for the purposes of this course and for their future studies.

The course is assessed by means of a piece of written work and a role-play, thus allowing students to display their strengths regardless of whether those strengths lie more in written or spoken work. The written work will take the form of a practical report on an experiment performed in class and the role-play will be performed in pairs, where one student is a doctor and one student is a newly-diagnosed patient, in order to assess the students' understanding of their work on diseases and their ability to convey their knowledge in spoken form.

Human Geography

This Human Geography course encourages students to explore the relationship between humans and their natural environment. Studying economic and cultural geography, students will gain an understanding of the social patterns that shape human life. Through interactive challenges, project work, and classes on a broad range of topics, students will learn how communities around the world are coping with major changes in society through economics, government, and how corporate and individual decisions can shape cultural identity.

The course is designed to introduce students to the study of human geography by exposing them to the principles of global politics and culture, whilst discussing contemporary issues surrounding economics, religion, identity, and health. The course is suitable both for those seeking general exposure to the subject and those who aim to pursue further education in the field of human geography. During the first week, students examine the basics of culture, society and economics, looking at Oxfam as a case study. In the second week they prepare a class project on a chosen country, and engage in more specific debate over contemporary issues in global affairs, such as development and aid. Classes are structured so as to offer the greatest opportunity for discussions; thus the course offers a combination of lectures, issue debates, written assignments and group presentations.

Students are encouraged to think widely about issues affecting cultural and environmental geography. A range of case studies and debates are used to increase students' cultural awareness. Oxford Royale Summer Schools is proud of the huge diversity of nationalities among our student body (students from 75 different nationalities attended the New Perspectives course in 2017) and this is a huge advantage for studying Human Geography, as students can share and learn from each other's experiences. This is particularly advantageous in providing a broad variety of perspectives for the debates and discussions that are central to this course. Topics of debate include contemporary issues in Human Geography such as population, settlement and culture. Students leave the course with a greater understanding of their own culture as well as that of others, having experienced a truly international learning environment.

Mathematics

The Maths course is designed for students with knowledge equivalent to GCSE level. The focus is on

strengthening fundamental skills and techniques as well as introducing new and advanced topics. The aim is to strengthen existing knowledge and to give the students more confidence in dealing with more sophisticated topics in the future. Moreover, new techniques for solving well-known problems will be introduced. In addition, the students will be faced with completely new concepts such as those arising from the history of maths. Mathematics is relevant and important for a huge variety of subjects, so will be useful to students regardless of the path that they are interested in taking in future – and if they are budding mathematicians, then so much the better.

Students will have the opportunity to present work in small groups, to practise graph drawing, and to learn about general logic using mathematical puzzles and riddles. The class will also give short ‘previews’ of the mathematics taught in higher classes and an explanation of the practical importance of the subject. In this way, it helps prepare students for further studies in Mathematics, and may even assist them in deciding whether it is something that they would like to study at degree level.

Along the way, students also practise teamwork and collaboration to produce presentations in groups, summarising and explaining the history of a mathematical topic to the rest of the class. The course concludes with a quiz, testing the students’ knowledge in a more informal way. In this fast-paced and engaging environment, students who have studied any of the course topics before are given differentiated activities in order to deepen their understanding further.

Modern History

There’s more to history than the dim and distant past; historical events within our own lifetimes are paramount in shaping the culture, politics and economics of our present day. This course looks at recent history, how it is studied, and its continuing repercussions on the international community. While the course will look at the changes and trajectories around the world from the end of the Second World War onwards, its focus will be on the late 20th century, approximately from the fall of the Berlin Wall, up to the present day. Much of the course content will cover history that is within or nearly within the lifetimes of its students (for instance 9/11), some of which they themselves may even be able to remember clearly.

From their school history courses, students may be used to thinking of history as something that has happened before living memory, that must be investigated through archaeology, or that contains mysteries that we can never really unravel. At best, they are likely to think of history as something that extends to the end of the Second World War. Our Modern History course reconfigures students’ view of history and encourages them to see it as something that is happening right now, shaping interpretations right up to the present day or even the present hour. It helps students assess how narratives of history are constructed even when we have all the facts to hand, and how we can work out the importance of events or the establishment of themes even as these processes are still ongoing.

As this course covers world history, it benefits particularly from the broad range of cultural backgrounds and experiences represented on any New Perspectives course. Students will get to see how their peers in other countries interpret the same set of events, and how history is filtered through different cultural and national lenses. Students will get to discuss not only how our narratives of history are shaped, but also how they think those narratives should be shaped and how historians can ensure that a balanced picture of the past is preserved.

Physics and Chemistry

Our Physics and Chemistry course develops students' curiosity as well as their scientific imagination and reasoning, experimentation, and perseverance, boosting their understanding of core physical and chemical concepts beyond school curricular to introduce new, more advanced concepts.

Scientists love to ask questions: How does this work? Why is it here? What happens if I...? Our Physics and Chemistry course aims to harness students’ curiosity, as well as develop their scientific imagination and

reasoning, experimentation, and perseverance. As their confidence grows, so too will their understanding of core physical and chemical concepts, building on and often going beyond what they will have studied at school. New, more advanced concepts will be introduced that students might not otherwise have encountered, spurring them on to pursue Physics and Chemistry at a higher level – fostering enthusiasm for the subjects is a key aim of this course.

In Physics, students look at the principles governing forces and how they interact with matter. This will encompass mechanics and the laws of motion, types of energy, and the key differences between waves and matter – using light and sound as examples. Practical elements include learning how to plot a graph correctly, using gradient and area.

In Chemistry, students look at atomic structure and the concept of moles. The course also covers solutions and molar calculations and explores the properties of acids and bases. Students will learn about the various types of chemical bond and look closely at chemical reactions and equations, as well as some simple kinetics and the collision theory of reactions.

In Week 2, there will be ample opportunity for students to pursue their own topic of interest, and to request specific topics for their final class. Throughout, the two subjects will be closely aligned, with emphasis on how physics and chemistry interact and how topics studied in one subject can readily be applied to the other. The course establishes important exam and presentation techniques of the kind that will be expected in universities such as Oxford and Cambridge, thereby giving budding scientists a head start in their future studies. Successful scientists need curiosity, observation skills, imagination, reasoning, experimentation, enthusiasm and perseverance: this course aims to foster and encourage all of these vital traits and leave students feeling passionate about the sciences and eager to learn more.

Politics and International Relations

This Politics and International Relations course introduces students to the methods of social scientific enquiry and contemporary issues which dominate the two disciplines. In each class, students are progressively exposed to the principles of liberal democratic politics and the contemporary issues dominating world politics. The course is suitable for both those seeking general exposure to the subject and those who aim to pursue further education in the field of politics and international relations. Classes are structured so as to offer the greatest opportunity for discussion, which is provided by a combination of lectures, issue debates, written assignments and class activities.

Week One

The first week of the course is dedicated to politics, providing a broad introduction to democracy in general to begin with, and then later focusing on the British political system in particular. The assessment for this week is a piece of written work about the political system in students' native countries. This course takes advantage of the wide variety of countries of origin that students come from (students of 75 different nationalities attended the New Perspectives course in 2017) to discover and share a plethora of valuable perspectives.

Week Two

The second week of the course introduces students to the most accessible parts of international relations, namely international law, security and human rights, focusing on outcomes rather than theory. Students deliver a presentation on a detailed case-study as their assessment for international relations.

Sociology

A new course for 2020, Sociology is a ubiquitous discipline, which informs the decisions made by politicians, businesses, charities, and more. This course will offer students a taster of this huge field of study. Students will be introduced to the scientific methods of studying society, what we can learn from them, and the patterns they reveal to us about society.

Afternoon Workshops

Acting & Performance Skills

Through a combination of drama theory and practical activities, our Acting and Performance Skills course aims to provide students with an initial grounding in fundamental performance techniques, as well as increased on-stage confidence and the ability to work creatively in a group. Students will get a chance to experiment with skill-based improvisation, focusing not only on 'performance' but also on voice, body, characterisation, and the use of stage crafts.

From day one students get the chance to act, working in groups of two to five on a short scene from a classic English dramatist (starting with Shakespeare's *Richard III* and *A Midsummer Night's Dream*). In the second week, once the students have gained sufficient confidence, they are asked to concentrate on key scenes from modern works such as Samuel Beckett's *Waiting for Godot*, Willy Russell's *Blood Brothers*, or John Godber's *Teechers*. On Fridays these are performed to the rest of the class who offer their feedback. This progression from Early Modern drama to more contemporary theatre also allows students to explore how English drama has developed over the years.

Working towards this personalised scene at the end of each week provides students with a goal-orientated framework around which to develop their performance creativity.

Business Challenge

Through a series of presentations and practical exercises, this course for ambitious teens focuses primarily on developing a new business or product and encourages them to think about the effect businesses have had on their daily lives. Students are introduced to different aspects of business through various scenarios, including setting up a new business, getting funding, developing a unique product and pitching it to the rest of the class.

Students who take part in our Young Enterprise Workshop: Design-an-App Challenge gain a hands-on insight into the fast-moving world of mobile app development – whether for iPhone, iPad, or Android – and its market. The workshop is designed to encourage students to apply their own ideas through interactive tasks and group activities: they learn how to make an effective and persuasive presentation, think about the opportunities and challenges involved in the development of innovative new products or technologies, and consider the most effective strategies to market and advertise such new and non-tangible 'products'.

As a result, students learn through their own experience what it is that makes certain apps so profitable and successful, whilst others fail to get off the ground.

There will be the opportunity to work in groups on the development of either a games or a lifestyle app, and each group will be expected to present a brief explaining their app, its market demand and justification of their pricing strategy, a series of app screenshots demonstrating how it will look and what it does, an iTunes app store page showing what their app will look like at point of sale, and an advertising video. This workshop will, therefore, develop their skills as well as give an insight into the world of business and e-commerce. The workshops will use a variety of visual, auditory and kinaesthetic activities, tasks and skills to help all learners participate effectively.

Digital Skills

In our current digital era, the digital economy is continuing to experience exponential growth. This two-week series of workshops will enable you to take advantage of digital technologies to further your academic, personal and professional pursuits.

Essay Writing Skills

Essay styles and best practices vary around the world, but the skill of writing is generic: in this workshop, students will be equipped with the ability to write clearly and the construct thoughtful, readable prose, a skill of immense benefit in every walk of life.

The Essay Writing Skills workshop is ideal for the younger learner who needs to learn how to communicate in writing using an academic style. Learning these skills now will stand them in good stead as they work their way up through their school exams and on to university. By learning these skills at this early stage students' clarity of thinking will improve as their minds develop.

The workshop complements any of the morning subjects on the ages 13-15 course, helping improve students' writing skills for a broad spectrum of subjects.

Although essay styles and best practices vary around the world, the skills that the students will learn in these workshops will be generic: they will be the skills that lead to thoughtful, clear writing that is a pleasure for the reader to follow. Therefore the differing academic environment of individual countries will not matter for our learners on this workshop: the necessity to be clear, accurate and controlled in English will be our and their goal.

Nevertheless, the young learner will be given a taste of different styles of writing so that they are aware of how language can change depending on the type of writing that is being attempted. So there will be contrastive analysis on differing types of writing: a blog, an article, a creative story, a report and an essay. Students will be given the chance to write using these different styles.

For the younger learner, the workshop is based on 'having a go' – that is, trying out the skills learnt. The learners will be encouraged to enjoy each other's attempts at writing, to listen to each other attentively and to respect the good work achieved as well as the errors made: errors which are of great value in learning.

Only helpful feedback from learner to learner will be of interest. Students will provide positive feedback to one another at all times – in other words, feedback that can help make a positive improvement to their peers' learning.

The tutor will lead this workshop. The tutor will direct the learning at the beginning of each session, encourage ideas from learners and then the tutor will further direct the practice involved to achieve each outcome. The learners will be invited to become fully involved in any discussion and activities and to use their own individual school learning environments, as well as their morning classes, to fully inform each workshop. In this way individuals will build on their own current learning rather than learn something 'foreign'. The aim is therefore that the students return to their own schools armed with skills that they can put into immediate use.

Film Challenge

Film Challenge is a fully practical series of workshops over the course of two weeks. You will gain hands-on experience of the filmmaking process, including directing, producing, cinematography and post-production. This is an incredible opportunity for all budding filmmakers to start their career, producing their very own short film.

Journalism Challenge

New for 2020, this engaging workshop will expose students to the practical demands of the world of journalism. Throughout the workshop, students will develop a keen awareness of how to successfully create various forms of media - from traditional forms like print and broadcast, to the modern and increasingly dominant digital form.

Leadership and Teambuilding

This Leadership and Teambuilding course for teens is designed to increase confidence and self-belief in the students, by engaging them in a number of dynamic team activities and scenarios. Students are encouraged to develop their leadership skills through speeches and presentations. The highly-practical workshop sessions also aim to foster their creativity through activities such as designing a brand or invention, as well as emphasising the importance of team discussion.

In this course, students think about what it means to really be a part of a team, considering what attitudes and insights may be called upon if they were placed in a position of leadership. They are called upon to participate in a range of group activities and initiatives, which thrust them into different and varied scenarios and ask them to think about the range of strategies that they might employ to navigate the task at hand successfully, as well as any obstacles that may arise.

In addition to these practical offerings, they are also required to reflect upon and discuss the more theoretical elements of leadership. These two elements are used in conjunction with each other to allow students to explore the kinds of responsibility that they find themselves adopting in their everyday lives. Working collaboratively, they are encouraged to discuss and evaluate their performance in activities, enabling them to prepare for similar eventualities outside the classroom.

Photography and Sketching

In this Photography and Sketching course students practise their artistic skills in a number of practical sessions. They learn about different aspects of scenic art, sketching, composition and photography in the beautiful setting of Oxford University and its exquisite architecture. Students are introduced to the theoretical concepts surrounding different artistic schools, which can then be applied in their own work.


This course is all about encouraging the students to find and turn on their creativity. Students work both individually and in small groups developing skills in sketching, drawing and composition. Students are encouraged to see their surroundings with a photographer's eye, and to take photos which they can later use as a backdrop to their sketches. On-site sketching visits range from the Oxford's Ashmolean Museum, housing art and artefacts from all over the world, to its picturesque Botanical Gardens. The course is primarily about the students' individual ways of seeing and capturing creative images.

There are few places in the world better suited to a sketching and photography workshop than the city of Oxford. Admired by artists, writers and poets throughout history, Oxford's stunning architecture with its famous 'dreaming spires' is sure to inspire students to produce their best possible work. Oxford contains examples of every significant architectural period in British history from the Saxons onwards, so whether you are interested in medieval towers, Gothic spires or the sharp lines of Functionalism, Oxford's architecture will offer something to catch your eye. Alternatively, it may be the abundant parkland, such as Christ Church meadow, or the rivers that flow through Oxford that draw your attention as an artist or photographer.

Public Speaking and Debate

In this Public Speaking and Debate course for teens, students learn how to compose a speech on a particular topic, compose a strong argument, and respond composedly to different speakers. Under expert guidance, students discover more about the intricacies of debate, from selecting a topic to generating and allocating arguments, the roles of different speakers, and using stylistic techniques to achieve maximum effect. They test their new skills by preparing speeches on their favourite topics and participating in debates with fellow members of the class.

Throughout this two-week course, students are provided with ample opportunity to familiarise themselves with diverse public speaking scenarios – from individual speeches to team debates – as well as the most effective and appropriate presentation techniques. By analysing famous speeches from the past, students



learn to appreciate excellent oratory, and recognise the skills and techniques that they can use when constructing their own speeches. The course aims to increase students' enthusiasm for public speaking and debate, and encourages them to share this with their peers. By the end of the course, students will be on easy terms with the 'three Ms' of public speaking: manner, method, and matter.

The diversity of the Oxford Summer School student body is a real advantage in Public Speaking and Debate, as it provides a variety of viewpoints and experiences that students might otherwise not have encountered, thereby making debates livelier and more interesting. However, as students work alongside peers from across the globe, from varied cultures and backgrounds, it is important for them to keep the tone of the debate considerate. This is a valuable skill for life in our globalised and multicultural world, which is honed on this course. Students are often called upon to debate difficult and controversial social and political topics, and therefore must be prepared to treat their peers with the utmost respect.