

Programmes

The Birmingham International Summer School has been designed to offer you an opportunity to immerse yourself in the culture of another country and to study in one of the most diverse cities in the UK. The 2015 Summer School is ideal for students based overseas who would like to experience studying abroad for a short period. We are offering 3 different programmes in 2015. Cultural Heritage, Mathematical Finance and Financial Time Series and Sport and Health allowing students to study while gaining a valuable insight into the fascinating culture and heritage of Britain. International Students who are currently studying in UK universities are also welcome to apply.

Cultural Heritage Programme

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The Cultural Heritage programme covers the best of British heritage. You will be able to explore the art, architecture, literature, music, design and popular culture that form the basis of Britain's culture and heritage and continue to shape its identity. You will also have the opportunity to earn credits for your study.

What will you study?

From Shakespeare's Birthplace in Stratford-upon-Avon to the cradle of the industrial revolution at the World Heritage Site of Ironbridge, and from the factories of historic international brands such as Cadbury's Chocolate and Wedgwood china, to experiencing the music of the Beatles and Edward Elgar, the programme gives you an insight into how great British heritage was created and a 'behind the scenes' look at how heritage sites are managed.

Visits to nearby Stratford-on-Avon, Warwick and Ironbridge, as well as local Birmingham attractions are an important component of the programme.

Social events such as a traditional games evening, afternoon tea in the beautiful setting of the Winterbourne Botanical Garden and a canal boat trip along Birmingham's extensive, winding canal system are just some examples of the social activities you will have the chance to experience.

This is a **three week** programme and is equivalent to an accredited undergraduate course (20 UK credits, 4 US Credits, or 10 ECTS). All students will receive a certificate of attendance.

The Cultural Heritage programme is delivered by University faculty who are experts in their field. There are 'hands-on' demonstrations, tours and field visits, together with lectures. In addition, you will be required to undertake self-directed study to allow for reading, and assessment where applicable.

Course dates

Start date: 20 July 2015

End date: 7 August 2015

Mathematical Finance and Financial Time Series Analysis

The University of Birmingham based in the heart in England and is one of the UK's top universities. At the University's well established and highly regarded School of Mathematics we deliver this exciting summer study program specialised in Mathematical Finance and Financial Time series analysis. The Programme is ideal for students based overseas who would like to experience studying abroad and also gain a valuable insight into the fascinating yet challenging field of quantitative finance.

What will you study?

The Programme covers the fundamental knowledge in financial engineering, which is a highly specialised and rapidly growing area. You will be able to explore the computational skills as well as the underlying mathematical and statistical theory to prepare for a career on the computational end of quantitative finance. The program is both technical and pragmatic. In Mathematical Finance, you will first learn to examine the financial derivatives using a continuous-time approach, then analyse a range of discrete time financial models and investment models. In the 3rd week of the program, you will start the econometric modelling of financial time series. You will learn various methods of fitting linear and non-linear models to time series data, statistical validation and their use such as forecasting and simulation using the statistical package SAS®.

This is a **three week** programme and is equivalent to an accredited undergraduate course (30 UK credits) and is delivered by University faculty who are experts in their field. In addition there will be 'hands-on' computer lab demonstrations and work on mini-projects, which together with lectures, comprises 66 contact hours. In addition you will be required to undertake independent study to allow for assessment. The Programme is formally assessed. Please check with your home institution regarding the transfer of credits.

There is also a social programme which will allow for a more informal experience of British culture and to interact with other students from different cultures.

The Programme operates at 'beginners' level' but Students are required to have prerequisites of calculus, probability and statistics, or have the equivalent level of knowledge.

On completion of the Programme in addition to obtaining 30 credits you will have been given a unique opportunity to

1. acquire knowledge and problem-solving abilities in new or unfamiliar environments within broader contexts;
2. communicate conclusions and the knowledge and rationale underpinning these, to specialist and non-specialist audiences, clearly and unambiguously;
3. demonstrate the ability to work professionally with a considerable degree of independence.

Course dates

Start date: 20 July 2015

End date: 7 August 2015

Sport: From Molecules and Muscles to Money

The University of Birmingham is based in the heart in England and is one of the UK's top universities. This programme will look at global issues within sport taking a unique interdisciplinary approach working from the molecular level through to the global policy level. The Programme is ideal for students based overseas who would like to experience studying abroad and also gain a valuable insight into the fascinating interrelationships between an individual's molecular make-up, the creation of movement

by muscles and the money and policy behind largest sporting events on the planet.

Uniquely delivered in collaboration between the University's internationally renowned School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham Sport and the College of Medical and Dental Sciences you will explore the role of molecules, muscles and money through examination of a series of globally linked case studies. Content will cover the latest knowledge in areas such as immunology, physiology, sport policy, sports economics, adaptation to training, motivation and motor learning and control whilst focusing on specific topics such examples of which may be:

- Global Doping: Is performance real?
- Football: Money makes the ball go round
- Sports Mega events: Driving health?
- Exercise: HIITing it hard

Through a mixture of lecture, workshops, laboratory and sports practicals you will develop your knowledge and skills from some of the World's leading experts in their academic fields as well as applied professional practitioners. The programme will take you from the theoretical world of understanding the molecular workings of the human to the practical significance of the application of this knowledge.

The Programme is equivalent to an accredited undergraduate course (20 UK credits) which comprises 44 contact hours. In addition staff led activities you will be required to undertake independent individual and group study working towards your assessment. The Programme is formally assessed at the end of the three weeks. Please check with your home institution regarding the transfer of credits.

Alongside the academic programme there is also a social programme which will allow for a more informal experience of British culture and sport along with the opportunity to interact with other students from different cultures.

The Programme operates at 'beginners' level' however students should have studied biology at A level or equivalent (level 12 is also acceptable), or currently studying on a science degree.

On completion of the Programme in addition to obtaining 20 credits you will have been given a unique opportunity to

1. acquire knowledge and problem-solving abilities in new or unfamiliar environments within broader contexts;
2. communicate conclusions and the knowledge and rationale underpinning these, to specialist and non-specialist audiences, clearly and unambiguously;
3. demonstrate the ability to work professionally with a considerable degree of independence.

Course dates

Start date: 13 July 2015

End date: 31 July 2015

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