University of Edinburgh
Academic Programme
Subjects

You will study two subjects throughout the week. The combinations available in the timetable are:

- Chemistry & Biological Sciences
- Chemistry & Computer Science (Informatics)
- Chemistry & Physics
- Ecological and Earth Sciences & Biological Sciences
- Ecological and Earth Sciences & Computer Science (Informatics)
- Ecological and Earth Sciences & Economics
- Ecological and Earth Sciences & Physics
- Engineering & Biological Sciences
- Engineering & Computer Science (Informatics)
- Engineering & Physics
- English Literature & Economics
- English Literature & History
- English Literature & Philosophy
- Mathematics & Biological Sciences
- Mathematics & Computer Science (Informatics)
- Mathematics & Economics
- Mathematics & Philosophy
- Mathematics & Physics
- Religious Studies & Economics
- Religious Studies & History
- Religious Studies & Philosophy
- Sociology & Economics
- Sociology & History
- Sociology & Philosophy

Academic Entrance Requirements

For all subjects, you must have:

- Achieved a minimum of 5 A / B passes at Nat 5 or a minimum of 5 A / A* passes at GCSE or equivalent

And either:

- National 5 English at Grade C and Mathematics or an approved science at Grade C
- Or GCSE English at Grade C and Mathematics or an approved science at Grade C
- Or equivalent

*Some subjects have other requirements – please check in the subject descriptions below.*

What to expect from the Academic Subject Sessions?

**Biological Sciences**

Biology is the study of life and spans from understanding how the machinery inside cells works, through to how cells function together to form complex living organisms which interact with, and impact on, the world. The programme for Biological Sciences will give a flavour of this diversity by exploring three topics: the genetics revolution and its central importance in biology; how evolution has been a major contributor to species development; and how biology underpins cutting edge biomedical advances. Each session will focus on one of these topics, giving you the chance to explore them in more detail with support from expert staff members. You will also be involved in small group laboratory projects where you can work with recently trained young scientists and learn how to communicate the results of your project as a scientific poster or video.

Extra entrance requirements:

- For Highers students: you must be studying Biology and Chemistry and one from Maths or Physics. You must also have N5 Maths and English at B
- For A-level students: You must be studying Biology and Chemistry at A-level. You must also have GCSE Maths and English at B
- For IB students: You must be studying Biology and Chemistry and one of Maths or Physics. You must have Maths at SL if not studied to HL
Chemistry
Will there be any metals left by the time you are 50? Imagine a world without metals: No cars, no phones, no tins of baked beans... Quite a different place. As the global population soars and the planet’s natural resources dwindle, it is vitally important from an economic and environmental perspective that we make better use of our metal reserves. Through lectures and workshops led by academic staff, and hands-on laboratory experiments run by our students, you will learn why metals are so important, where they come from and when they will all be used up. We will examine the environmental impact of industrial-scale metal extraction and purification techniques, and why it is important that we develop a more sustainable approach for the use of metals right now. Is it possible to secure the future of the baked bean tin? Come and find out.

Extra entrance requirements:
- You must be studying Mathematics and Chemistry at Higher, A Level or equivalent

Computer Science (Informatics)
Informatics is Computer Science - and a whole lot more: not just computers and how they work, but social media, human computer interaction, robots and even how we can use the idea of computation to understand ants, flies, sea slugs and even human beings better. The programme will introduce you to Informatics with lectures and hands-on experience. During each morning session, we will present a lecture/demonstration of a particular topic, and in the afternoon sessions, we will work together on projects over the course of the week, such as improving a mobile phone application, or creating a miniature robot football player.

Extra entrance requirements:
- You must be studying Mathematics at Higher, A Level or equivalent

Economics
From the decision to go to university to the financial crisis, from global warming to budget deficits, the study of Economics is central to an understanding the world we live in. In these sessions, you will learn about some of the models and theories which are central to modern economics, and about some of the empirical techniques we use. We will cover issues such as economic growth, unemployment and the economics of independence, and introduce some less conventionally economic topics, such as crime and punishment.

Extra entrance requirements:
- You must be studying Mathematics at Higher, A Level or equivalent

Ecological and Earth Sciences
The Ecological & Earth Sciences programme aims to give you a sense of what it is like to study Ecology and Earth Sciences at university level, with each session dedicated to a new topic. For Ecology, the topic areas to be covered include water quality and invertebrate identification. For Earth Sciences, we will cover plate tectonics and time in the geological record. You will also get to take part in outdoor activities to collect and process your own water samples and reach a conclusion about the water quality. Visiting Edinburgh’s famous Arthur’s Seat, you will make observations about different rock types and build up an understanding of the importance of time in development of the geological landscape.

Extra entrance requirements:
- You must have passed Mathematics at National 5 Grade B or GCSE Grade B or equivalent
- You must be studying at least two of the following at Higher, A-level or equivalent: Biology, Chemistry, Mathematics, Physics, Environmental Studies, Geography, Geology
- From the list above, you must be studying at least one of the following at Higher, A-level or equivalent: Biology, Chemistry, Mathematics, Physics
Engineering
The Engineering programme will consist of lectures and group workshops integrating the four disciplines of Engineering taught at the University of Edinburgh (Chemical Engineering, Civil Engineering, Electrical Engineering and Electronics, and Mechanical Engineering). The aim is to give you a sense of what it is like to study Engineering at university level and how all disciplines integrate and contribute to the challenges of ensuring sustainability. Each discipline will have one dedicated session, and there will be opportunity to discuss each discipline in groups and with academic staff. You will also have the opportunity to take part in a group project in the area of sustainability, where you will work with young researchers from the School of Engineering to produce a poster or video presentation.

Extra entrance requirements:
• For Highers students: you must be studying Maths and either Physics or Engineering Science.
• For A-level students: you must be studying Maths and one of Physics, Engineering or Design and Technology.
• For IB students: you must be studying Maths and one from Physics or Design and Technology.

English Literature
These sessions will help you think critically about what defines and distinguishes each of the three main genres of literature: poetry, drama and prose, from one another. Through lectures and tutorial-style discussions, led by academic staff and tutors, you will get a sense of what studying English Literature might be like at university level, being introduced to new strategies of thinking about literature, and new issues and questions which invite you to think more critically. Over the course of the week, you will also produce a group presentation on a topic which has most interested you.

Extra entrance requirements:
• You must be studying English at Higher or English Literature / Combined English at A-level, or equivalent

History
This programme examines the historical development of regional and national identities. We will consider how historical events have been shaped by the ways we have thought about ourselves as members of communities, including political, ethnic, religious, gendered, and class communities. Not only will we explore British and European contexts, but we will do this by studying documentary films, portrait paintings, war memorials, and historical publications. The workshops will be held in Edinburgh’s world-class galleries and museums, allowing us to study rare historical materials in innovative ways.

Mathematics
During the week, you will be introduced to a range of university-level topics, including subjects like infinity, geometry and symmetry, and you will also find out about some unexpected applications of Mathematics in the modern world. The sessions will be run in the same way as our first year degree classes: you work together, guided by a lecturer, to learn more about the subjects, and improve your problem solving skills in a friendly environment. You will also have the opportunity to be part of a group project, working in a small group to produce a poster presentation about a topic that you will research in more depth. Throughout the sessions you will meet lecturers, students and young researchers who can tell you more about Mathematics beyond school.

Extra entrance requirements:
• You must be studying Mathematics at Higher, A Level or equivalent
Philosophy
Philosophy studies a huge variety of questions, some abstract and general: ‘What is knowledge?’ ‘Do properties exist?’; some quite specific: ‘What is the meaning of the word ‘the’?’; and some practical: ‘How should we lead our lives?’ ‘Is it OK to eat meat?’ In the philosophy programme, you’ll be hearing and thinking about questions like these, giving you a sense of what it is like to study philosophy. Each day you will hear from one of the philosophy department’s lecturers, followed by a discussion between you, your course-mates, and a tutor in small groups. In addition to the lectures and discussion sessions, in the afternoons you will produce a poster or video project based on one of the topics you have been introduced to.

Physics
The Physics programme aims to give you a sense of studying Physics at a university level, and also introduce a flavour of the scope of modern Physics in unexpected areas. The topic areas to be covered include astronomy (the strange unexplored worlds round other stars), particle physics (what goes on at CERN?), statistical physics (from flocking birds to the spread of language), and computational physics (exploring physics on big computers). There will be one session dedicated to each topic and you will have time to discuss the topics in groups and with staff. You will also take part in a group project in an area of modern physics, where you will work with young researchers from the School of Physics & Astronomy to produce a poster or video presentation.

Extra entrance requirements:
• You must be studying Maths and Physics at Higher, A-level or equivalent.

Religious Studies
These sessions will introduce you to a variety of topics and approaches in Religious Studies. From ancient India to modern Britain, you will explore some important examples of religious thought and practice, and discuss some of the key issues occupying scholars today. You will have the chance to think about and discuss the big questions, such as: What defines a religion? How do we study religion? How has religion shaped human history, and what role does it play in our lives today?

Sociology
Sociology is a wide ranging and complex discipline that covers everything to do with social behaviour, from the most micro forms of behaviour (such as body language) to large scale processes such as industrialisation or war. It is the study of people, social relationships and how society works. In these sessions we will introduce you to a range of debates (such as how to understand inequality, or why do we live in nations). Every time you open a newspaper or watch the news you encounter graphs, tables and statistics. We will help you to make sense of the numbers and place them in a wider context.