

# Foundation Certificate in Science and Engineering

## COURSE OPTIONS

**Entry requirements:** completion of high school with good grades<sup>†</sup>, and at least UKVI IELTS 5.5 (with minimum 4.5 in all skills)

### 2 TERMS

**Course start:**  
September 2018, January 2019

**Course length:** 6 to 9 months

**Degree entry:** September 2019

**Tuition fees:** £16,500

### 3 TERMS: ENHANCEMENT

**Study extra modules to further enhance your academic skills**

**Course start:** September 2018, October 2018\*

**Course length:** 10 to 11 months

**Degree entry:** September 2019

**Tuition fees:** £18,660

### 3 TERMS: MATHS AND SCIENCE

**Study extra modules to develop basic skills in Maths and Science**

**Course start:** September 2018

**Course length:** 11 months

**Degree entry:** September 2019

**Tuition fees:** £18,660

<sup>†</sup> Including equivalent of GCSE Maths and Science at grade C/4 or above

\* 2.5-term course — students join the 3-term Foundation Certificate, but begin half a term later.

### Lower IELTS score?

If your English language level is lower than that listed above, but you have at least UKVI IELTS 4.0 in all skills, you can take a course that includes Extended English and Skills (EES). Contact us for more details.

## CORE MODULES

ALL STUDENTS ON THIS FOUNDATION CERTIFICATE WILL TAKE:

### Language for Study 2

- English skills in listening, reading, writing and speaking

### Language for Study 3

- Complex arguments in English
- Giving evidence of research

### Skills for Study 1

- Presentation, note-taking and essay-writing skills

### Skills for Study 2

- Analytical skills in written and spoken information

### Skills for Study 3

- Researching and analysing information to a high standard
- Structuring written and oral arguments

## PATHWAY MODULES

YOU'LL ALSO STUDY MODULES IN ONE OF THE FOLLOWING PATHWAYS. YOUR PATHWAY IS DETERMINED BY YOUR DEGREE SUBJECT AT THE UNIVERSITY OF BIRMINGHAM.

### Chemical Engineering pathway

#### Foundation Mathematics

- Algebra, geometry and trigonometry
- Vectors
- Differentiation and integration

#### Applied Mathematics

- Mathematical modelling and reasoning skills

#### Fundamentals of Science

- States of matter
- Trends and patterns in the periodic table
- Chemical bonding, chemical energy changes and solutions

#### Physical Sciences

- Optics, waves and lasers
- Electronics and magnetism
- Thermal physics and thermal and mechanical properties of matter

— or —

### Life Sciences pathway

#### Fundamentals of Science

- States of matter
- Trends and patterns in the periodic table
- Chemical bonding, chemical energy changes and solutions

#### Biological Sciences

- Reproduction, development and metabolism in animals
- Genetic and cellular principles

— or —

#### Introduction to Social Sciences

- Principles of anthropology, sociology, economics and political science

#### Statistics

- Applying statistical knowledge and techniques to real-world problems

### Science and Engineering pathway

#### Basic Engineering

- Fluid mechanics
- Thermodynamics
- Engineering materials and electronics

#### Foundation Mathematics

- Algebra, geometry and trigonometry
- Vectors
- Differentiation and integration

#### Applied Mathematics

- Mathematical modelling and reasoning skills

#### Physical Sciences

- Optics, waves and lasers
- Electronics and magnetism
- Thermal physics and thermal and mechanical properties of matter

## 3-TERM MODULES

IF YOU'RE STUDYING A 3-TERM FOUNDATION CERTIFICATE, YOU'LL ALSO TAKE EITHER ENHANCEMENT MODULES OR MATHS AND SCIENCE MODULES.

### 3-term Enhancement modules

#### Introduction to Academic Skills

- Key academic skills
- Digital literacy and personal development skills

#### Introduction to British Society and Culture

- UK life and culture
- British society and history

PLUS ONE OF THE FOLLOWING:

#### Basic Numeracy and IT Skills (students on the Life Sciences pathway)

- General IT skills
- Key software such as Microsoft Office

#### Preparatory Mathematics

#### (students on the Chemical Engineering or Science and Engineering pathway)

- Algebra, geometry, trigonometry, graphs and transformations
- Applications of these topics

— or —

### 3-term Maths and Science modules

#### Preparatory Mathematics

- Algebra, geometry, trigonometry, graphs and transformations
- Applications of these topics

#### Preparatory Science

- Essential subject knowledge related to biology, chemistry and physics

## DEGREE POSSIBILITIES

This Foundation Certificate can lead to a range of degree subjects at Birmingham. For example, you could progress to:

- Biology
- Chemistry
- Chemical Engineering
- Civil Engineering
- Electronic Engineering
- Environmental Science
- Geography
- Geology
- Mathematics
- Mechanical Engineering
- Physics
- Psychology
- Sports Science

For a full list of degree options, see page 36.

## CAREER POSSIBILITIES

This educational route can open up many career options for you. You could become a:

- Biologist
- Biomedical Scientist
- Chemical Engineer
- Civil Engineer
- Electronic Engineer
- Environmental Scientist
- Mathematician
- Mechanical Engineer
- Physicist
- Psychologist
- Sports Coach

## HAVE ANY QUESTIONS?

Contact our team for help:

[kaplanpathways.study/contact-kicl-birmingham](http://kaplanpathways.study/contact-kicl-birmingham)