

Engineering and Physical Sciences Foundation Certificate at the University of Nottingham: module information

For degree entry from September 2020

ALL STUDENTS WILL STUDY THE FOLLOWING MODULES TO GAIN A SOLID BASE OF SKILLS:

- **Computer Methods**
- **Foundation Mathematics 1 and 2**
- **Foundation Mechanics**
- **Properties of Matter / Vibrations and Waves**
- **Study Skills**
- **English for Engineering and Science (if you need English language support)**



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 NOTTINGHAM.

COMPUTER SCIENCE PATHWAY

- **Computer Modelling**
- **Electrical Circuit Principles**
- **Electricity and Magnetism**

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ENGINEERING PATHWAY

- **Electrical Circuit Principles**
- **Electricity and Magnetism**
- **Further Foundation Mechanics**

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PHYSICS AND MATHS PATHWAY

- **Further Foundation Mechanics**
- **Molecules on the Move**
- **The Universe**

MODULE SUMMARIES – DETAILS OF WHAT YOU’LL STUDY

Computer Methods

Learn basic programming techniques, and study data structures in MATLAB.

English for Engineering and Science

Develop your English skills, including for giving presentations and lab reports.

Foundation Mathematics 1 and 2

Explore some of the key ideas in mathematics, geometry and algebra.

Foundation Mechanics

Learn about scalars and vectors in mechanics, and the response of rigid structures to imposed forces.

Properties of Matter / Vibrations and Waves

Explore atomic structures and the behaviours of atoms, as well as the physical explanations of vibrations and waves.

Study Skills

Develop important academic skills for degree study, including for research and presentation.

PATHWAY MODULES

Computer Modelling

Use MATLAB to solve engineering and mathematical problems.

Electrical Circuit Principles

Learn about circuits and circuit analysis, as well as electrical resonance.

Electricity and Magnetism

Study principles of electricity and magnetism, as well as inductors, capacitors and semiconductors.

Further Foundation Mathematics

Develop your understanding of the behaviour of structures under simple and circular motion, and how to evaluate experimental data.

Molecules on the Move

Discover the thermal and mechanical properties of matter.

The Universe

Learn about astronomy and cosmology, gravitational fields, stellar evolution, and the nature of the universe.

Note: this information refers to courses that will run in the 2019-20 academic year, and is correct at the time of publication. Published October 2018.