

International Year One in Engineering at UWE Bristol's International College: module information

For degree entry from September 2020

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

- **English for Academic Purposes**
- **Mathematics for Engineers 1**



PATHWAY MODULES

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

AEROSPACE, AUTOMOTIVE AND MECHANICAL ENGINEERING PATHWAY

- **Design, Manufacture and Materials**
- **Fluid Mechanics**
- **Mathematics for Engineers 2**
- **Mechanical Stress and Dynamics**
- **Thermodynamics**

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CIVIL ENGINEERING PATHWAY

- **Civil Engineering Field Study**
- **Civil Engineering Technology and Drawing**
- **Design, Manufacture and Materials**
- **Mechanical Stress and Dynamics**
- **Surveying and GIS**

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ELECTRONIC ENGINEERING PATHWAY

- **Digital Electronic Systems**
- **Electrical and Electronic Engineering Principles 1**
- **Electrical and Electronic Engineering Principles 2**
- **Mathematics for Engineers 2**
- **Programming**



YOU'LL TAKE PART IN PERSONAL DEVELOPMENT ACTIVITIES DURING YOUR COURSE, DESIGNED TO BOOST YOUR EMPLOYABILITY, CONFIDENCE AND INDEPENDENCE, AND HELP YOU MAKE NEW FRIENDS.

EXTRA MODULES TO HELP YOU REACH UNIVERSITY: 2.5 AND 3-TERM COURSES

IF YOU'RE TAKING A 2.5 OR 3-TERM COURSE, YOU'LL STUDY THE RELEVANT MODULES ABOVE, AND 1 SET OF MODULES LISTED IN THE TABLE BELOW, DEPENDING ON YOUR ENGLISH LANGUAGE LEVEL.

IF YOU HAVE AN ENGLISH LANGUAGE LEVEL THAT'S BELOW UKVI IELTS 5.5:	IF YOU HAVE AT LEAST UKVI IELTS 5.5 OR EQUIVALENT, OR DON'T NEED TO TAKE AN IELTS TEST:
<ul style="list-style-type: none"> • English for Academic Study 3 • Independent and Collaborative Study • Reading and Writing 3 • Speaking and Listening 3 	<ul style="list-style-type: none"> • Critical Reading, Writing and Reasoning for Higher Education • Independent and Collaborative Study • Preparatory Mathematics • Preparatory Science

YOU'LL ALSO HAVE ADDITIONAL PERSONAL DEVELOPMENT ACTIVITIES.

EXTRA MODULES TO HELP YOU REACH UNIVERSITY: 3.5 AND 4-TERM COURSES

IF YOU'RE TAKING A 3.5 OR 4-TERM COURSE, YOU'LL STUDY ALL THE RELEVANT MODULES ABOVE, PLUS:

- **English for Academic Study 2**
- **Reading and Writing 2**
- **Speaking and Listening 2**
- **Study Skills Preparation**

YOU'LL ALSO HAVE ADDITIONAL PERSONAL DEVELOPMENT ACTIVITIES.

MODULE SUMMARIES – DETAILS OF WHAT YOU'LL STUDY

English for Academic Purposes

Develop your English to the level you need for university study, and to really get involved in academic discussions.

Mathematics for Engineers 1

Gain a better understanding of algebra, modelling techniques and other mathematical methods needed in engineering.

PATHWAY MODULES

Civil Engineering Field Study

Learn about civil engineering methodologies, and gain field skills and the ability to analyse place-specific information.

Civil Engineering Technology and Drawing

Explore key elements of Civil Engineering technology and systems, and develop skills in sketching and drawing.

Design, Manufacture and Materials

Explore various methods, tools, manufacturing techniques and materials, and develop practical workshop skills.

Digital Electronic Systems

Learn about digital design methods and systems, and how the function alongside engineering principles.

Electrical and Electronics Engineering Principles 1

Explore electronic component and circuit design, as well as the fundamental principles of electrical and electromagnetic signals.

Electrical and Electronics Engineering Principles 2

Better understand magnetic and electromagnetic systems, and key skills needed for electrical and electronic engineering.

Fluid Mechanics

Explore the principles of fluid dynamics, including pressure, density, mass flow rates and Bernoulli's equation.

Mathematics for Engineers 2

Expand your knowledge of calculus, differentiation, integration and differentiation, plus mathematical methods of engineering.

Mechanical Stress and Dynamics

Explore dynamics including stress and strain, shear force and bending, and Newton's laws of motion.

Programming

Learn basic software programming and engineering principles, and how to use software to solve engineering problems.

Surveying and GIS

Gain an understanding of data visualisation and effective cartography, plus GIS data structures, level surveying and more.

Thermodynamics

Analyse combustion-powered gas and steam power plants, and explore thermodynamic principles.

EXTRA MODULES FOR 2.5 AND 3-TERM COURSES

Critical Reading, Writing and Reasoning for Higher Education

Enhance your ability to read and understand complex ideas in English, and to compose convincing written arguments.

English for Academic Study 3

Expand your knowledge of English grammar and vocabulary to the level required for degree study.

Independent and Collaborative Study

Work individually and in teams on an academic task, and practise applying your subject knowledge and study skills.

Preparatory Mathematics

Develop your numeracy skills, including algebra, geometry and graphs.

Preparatory Science

Gain an introduction to core scientific knowledge, and subject-specific language required to study the sciences.

Reading and Writing 3

Develop your English reading and writing skills to a sufficient level to communicate complex ideas.

Speaking and Listening 3

Improve your ability to listen and speak in English, allowing you to fully engage with academic topics.

EXTRA MODULES FOR 3.5 AND 4-TERM COURSES

English for Academic Study 2

Improve your English grammar and vocabulary in order to communicate in an academic environment.

Reading and Writing 2

Develop your English reading and writing so that you can understand and articulate ideas and reasoning.

Speaking and Listening 2

Practise listening and speaking so that you are better prepared for academic debate and discussion.

Study Skills Preparation

Gain an introduction to the wide range of skills and strategies you'll need to succeed at university, such as research methods and using and citing sources.

PERSONAL DEVELOPMENT ACTIVITIES (ALL COURSE LENGTHS)

Digital and employability skills

Outside of your academic learning, you'll also be taught skills that will be useful at university and later in life. You will receive help in making the most of your creativity, improving your communication and developing your digital skills. We will also help you build a CV, portfolio and online profile to empower you after you graduate.

Social network

Forming a strong social network can be hugely beneficial, even if it's just to discuss and debate ideas. Not only will you get to know your classmates, you'll also have opportunities to join professional organisations, and network with students and industry professionals: something that can be really beneficial when you go on to start your career.

Culture and activities

We'll help you have a hugely beneficial cultural and social experience, and encourage you to explore different activities, sports, crafts and more. You might learn about local history and culture, or develop your wider subject knowledge and understanding of related industries.

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.