

## International Year One in Engineering at Kaplan International College London: module information

For degree entry from September 2020

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

- **Electrical and Electronic Engineering Principles 1**
- **Language for Study 3**
- **Mathematics for Engineering**
- **Research, Design and Development**
- **Skills for Study 2**



### PATHWAY MODULES

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

#### ELECTRONIC PATHWAY

- **Electrical and Electronic Engineering Principles 2**
- **Introduction to Digital Electronic Systems**

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#### MECHANICAL PATHWAY

- **Mechanical Stress and Dynamics**
- **Thermofluids**

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### 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, PLUS:

- **English for Academic Study 3**
- **Independent and Collaborative Study**
- **Reading and Writing 3**
- **Speaking and Listening 3**

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### 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 THE RELEVANT MODULES ABOVE, PLUS:

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

## MODULE SUMMARIES – DETAILS OF WHAT YOU’LL STUDY

### **Electrical and Electronic Engineering Principles 1**

Fundamentals principles of electrical and electromagnetic signals, and electronic components and circuit design.

### **Language for Study 3**

Develop your reading, writing, listening and speaking skills, and learn how to make complex academic arguments in English.

### **Mathematics for Engineering**

Learn mathematical methods, symbolism and notation of engineering, as well as calculus differentiations, integration and differential equations.

### **Research, Design and Development**

Learn about the methods, tools, manufacturing techniques and materials used in engineering design, planning and implementation of a practical group project.

### **Skills for Study 2**

Improve your analytical skills in written and spoken information, and practise a university assignment.

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## PATHWAY MODULES

### **Electrical and Electronic Engineering Principles 2**

Analyse magnetic, electromagnetic and communications systems, and use mathematical and simulation tools to solve practical problems.

### **Introduction to Digital Electronic Systems**

Gain an understanding of microprocessor based digital systems, and engineering principles and concepts of microprocessor design and performance.

### **Mechanical Stress and Dynamics**

Develop an understanding of dynamics including stress and strain, shear force and bending, and Newton’s laws of motion, momentum and force impulse.

### **Thermofluids**

Understand fluid dynamics and thermodynamic principles, and analyse engineering problems in context.

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## EXTRA MODULES FOR 2.5 AND 3-TERM COURSES

### **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.

### **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.

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## 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.

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