INTERNATIONAL FOUNDATION GROUP

Students' Handbook - University Foundation Programme in Engineering

2025/26

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Course Outline

Module	% of overall grade
Term One	
Maths & Statistics (Core Maths)	**10%**
Physics	**15%**
Core Computer Science/Chemistry	**10%**
Study Skills	**15%** (including Term 2)
Communication Skills	**10%** (including Term 2)
Academic English	-
Term Two	
Further Physics	**15%**
Further Computer Science/Chemistry	**10%**
Study Skills	**15%** (including Term 1)
Communication Skills	**10%** (including Term 1)
Further Mathematics & Mechanics	**15%**
Academic English	-

Grading Guide

A 70 – 100%
B 60 – 69%
C 50 – 59%
Fail 0 – 49%

Applying to University - Filling in UCAS Applications

During the first two weeks of your course, we will introduce UCAS and help you with the registration.

In your application you will have to fill in information on the following:

- Your personal details - full name, postal address, email, telephone number, where you live
- Your nationality details
- How you will fund your studies
- Education - your Foundation Year at IFG and your high school details
- Employment
- Your personal statement
- Your university choices - you will receive extensive one to one help in choosing the right course and university for the next stage of your studies.

In the education section where you should fill in the Foundation Year information, use the following details:

Awarding organization	**International Foundation Group**
Qualification name	**Foundation Year**
Programme title	**Engineering**
Start date (for September intake)	**September 2025**
Start date (for January intake)	**January 2026**
End date (for September intake)	**June 2026**
Start date (for January intake)	**July 2026**
Type of study	**Full-time**
Referee and/or Agent and/or Nominated access	**Michael Addison** **Academic Director** **+44 (0)20 3633 0510** **m.addison@intfoundationgroup.co.uk**
Modules	**Core Mathematics and Statistics** **Further Maths & Mechanics** **Physics** **Computer Science** **Study Skills** **Communication Skills**
Qualification date	**July 2026**

Course Modules

Maths & Statistics (Core Maths)

Term One
10% of overall grade

Introduction and Aims

This module is designed to ensure that all students have an appropriate level of mathematical knowledge and competence in order to progress onto undergraduate studies in a range of subjects. For business students it provides the foundation for further studies in terms two and three. It is based on A Level Core Mathematics modules, C1 and C2.

Objectives

- Develop an understanding of basic mathematical concepts and theories, and the skills required to solve a variety of problems.
- Apply mathematical concepts and theories in a range of contexts.
- Demonstrate knowledge and understanding of the specified subject content.
- Apply knowledge and critical understanding to mathematical problems.

Recommended Reading

Author	Title	Publisher
Pledger, K et al (2008)	*Advanced Maths for Edexcel: C1 + C2*	Heinemann
Pledger, K et al (2008)	*Advanced Maths for Edexcel: S1*	Heinemann
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

Assessment title	% of module grade
End of Term Examination (2 hours)	100%

Study Skills

Term One and Term Two - 15% of overall grade

Introduction and Aims

This module is taught over two terms. It helps students to prepare for undergraduate studies in the UK. It addresses the challenges of taking a course in a second language and adapting to a very different style of teaching and assessment. It also aims to provide participants with the opportunity to develop skills and confidence in the communication process, in different academic and professional contexts. It also gives guidance to students on writing personal statements for university applications.

Objectives

- Take effective and useable notes from a lecture.
- Appreciate how to identify sources and use them effectively.
- Understand how to avoid plagiarism.
- Develop an ability to select and apply information in a logical and appropriate fashion.
- Structure written answers in a coherent way, developing arguments and reaching balanced conclusions.
- Be able to carry out a research project using a range of sources, and showing an understanding of the Harvard referencing system, and compiling a bibliography in the correct format.
- Complete a well-structured personal statement.

Recommended Reading

Author	Title	Publisher
Burns, T & Sinfield, S (2022)	*Essential Study Skills 5th edition*	Sage Perlego: https://ereader.perlego.com/1/book/4336896/23?page_number=179
Cottrell, S. (2019)	The Study Skills Handbook 5th Ed	Macmillan
www.learnhigher.ac.uk		
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

The final assignment is an essay of approximately 1,500 words on a negotiated topic in which students show their ability to conform to academic rules, perform a basic literature review and write a critical essay and well structured essay.

In Term 1 students submit an essay proposal of approximately 300 words on a negotiated topic in which students show their ability to develop a well structured essay proposal and plan.

Assessment title	% of module grade
Essay Proposal	30%
Final Essay	70%

Communication Skills

Term One and Term Two - 10% of overall grade

Introduction and Aims

This module is taken in terms one and two of the foundation programme. The course is divided into four units: non-verbal communication, verbal communication, IT related communication and presentations. Various transferable skills will be developed through active participation in different academic and professional assessed tasks (formative and summative) leading to the independent production of a fully individual presentation on a chosen subject in an academic and professional manner.

Objectives

- Employ an appropriate and effective use of non-verbal and verbal communication skills in various professional and academic contexts.
- Interact confidently with individuals, groups and large audiences.
- Make effective use of word processing, spreadsheet and presentation software.
- Present and summarise ideas in a coherent way in various professional and academic contexts.
- Prepare and deliver a presentation with clarity and confidence using visual aids.
- Engage in reflective practice.

Recommended Reading

Author	Title	Publisher
Hargie, O (2018)	*The Handbook of Communication Skills. 4th ed*	East Sussex: Routledge Perlego: https://ereader.perlego.com/1/book/1570402/0
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

Assessment title	% of module grade
In Class Participation	10%
Interview and Reflective Essay	10%
Negotiation Meeting and Reflective Essay	15%
IT Related Communication Test	15%
Presentation and Reflective Essay	50%

Physics

Term One
15% of overall grade

Introduction and Aims

The Physics component of this programme is divided into Core Physics, Further Physics 1 and Further Physics 2. The aim of these modules is to develop knowledge and understanding as well as an appreciation of the applications of physics and their importance to different fields of human activity. In the Further Physics modules, there is also an emphasis on the development of skills in designing and executing experiments.

Objectives

- Develop essential knowledge and understanding.
- Appreciate the importance of the application of physics in different situations.
- Understand the interaction of physics with social, economic, and industrial fields.
- Develop an understanding of the link between theory and experiment.
- Use principles and concepts and apply them to interpret phenomena.

Recommended Reading

Author	Title	Publisher
Benn, M & George, G (2015)	*Edexcel A Level Physics Student Book 1*	Hodder
Akrill, T & George, G (2015)	*Edexcel A Level Physics Student Book 2*	Hodder
Kenneth Ford (2016)	Basic Physics	WSPC Perlego: https://ereader.perlego.com/1/book/853263/0
Priscilla Laws et al (2023)	Workshop Physics Activity guide	Wiley Perlego: https://ereader.perlego.com/1/book/4260170/1
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

Assessment title	% of module grade
Coursework	30%
End of Term Examination (2 hours)	70%

Computer Science

Term One
10% of overall grade

Introduction and Aims

Core Computer Science introduces students to the fundamentals of programming, databases, networks and web development. It also aims to develop knowledge and understanding as well as an appreciation of the applications of computer science to real-life situations in different fields. Students additionally develop research and analytical skills.

Objectives

- Demonstrate an understanding of, and the ability to apply, the underlying principles and concepts of computer science, including abstraction, decomposition, logic, algorithms and data representation.
- Show an appreciation of the analysis of problems in computational terms through solving such problems using programs appropriately.
- Demonstrate the capacity to think analytically, logically and critically.
- Appreciate a range of different aspects of computer science.
- Ability to use computer science related mathematics.
- Design, write and test programs to solve problems.
- Explain how a program works.
- Use abstraction effectively.
- Adopt a systematic approach to problem solving.

Recommended Reading

Author	Title	Publisher
Heathcote, P. M., and Heathcote, R. S. U (June 2017)	*AQA AS and A Level Computer Science*	PG ONLINE
Motopeda Oluyide (2024)	Introduction to Computer Science	Toronto Academic Press Perlego: https://ereader.perlego.com/1/book/4501042/1
Shirlee Forrest (2014)	Handbook of Computer Science	Learning Press Perlego: https://ereader.perlego.com/1/book/1239203/1
Philip Laplante (2017)	Dictionary of Computer Science, Engineering and Technology	CRC Press Perlego: https://ereader.perlego.com/1/book/1499738/0
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

Assessment title	% of module grade
Coursework	100%

Chemistry

Term One and Term Two - 20% of overall grade

Introduction and Aims

Core Chemistry introduces students to the fundamentals of physical, organic and inorganic chemistry. Students develop deeper knowledge of atomic structures and the arrangement of electrons in an atom. They also learn how to calculate amounts of substances and how to write formulae and balance equations. The main types of chemical bonding and structures will also be studied as well as an introduction to organic and inorganic chemistry.

Objectives

- Understand the structure of an atom and the driving force behind chemical bonds and chemical reactions.
- Understand the various types of mole calculation and their application.
- Attain a grasp of the behaviour of some main group elements.
- Develop an understanding of the complexity and scope of organic reactions and understand the behaviour of some key functional groups.

Recommended Reading

Author	Title	Publisher
Lister, T & Renshaw, J (2014)	AQA Chemistry A Level	Oxford
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

Assessment title	% of module grade
Coursework 1	15%
End of Term 1 Examination (2 hours)	35%
Coursework 2	15%
End of Term 2 Examination (2 hours)	35%

Further Mathematics & Mechanics

Term Two
15% of overall grade

Introduction and Aims

The course builds on the themes covered in the Core Mathematics module as well as introducing topics in Mechanics. The syllabus is predominantly based on C3, C4, and M1 from the A level Maths syllabus.

Objectives

- Further develop an understanding of basic mathematical concepts and theories, and the skills required to solve a variety of problems.
- Extend a range of mathematical skills and techniques and use them in more difficult, unstructured problems.
- Develop abilities to reason logically and recognise incorrect reasoning, to generalise and to construct basic mathematical proofs.
- Develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general.
- Acquire the skills needed to use technology such as calculators and computers effectively, recognise when such use may be inappropriate and be aware of limitations.
- Take increasing responsibility for own learning and evaluation of own mathematical development.

Recommended Reading

Author	Title	Publisher
Hooker, S & Jennings, M (2008)	Advanced Maths for Edexcel: Mechanics M1	Pearson
Pledger, K (2008)	Advanced Maths for Edexcel: Core Maths C3,	Pearson
Atwood, G (2015)	Advanced Maths for Edexcel S2	Pearson
Martin Liebeck (2018)	A Concise Introduction to Further Mathematics. 4th edition	Chapman & Hall/CRC Perlego: https://ereader.perlego.com/1/book/2193446/0
Ron Larson (2018)	Trigonometry	Cengage Learning Perlego: https://ereader.perlego.com/1/book/2728624/1
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

Assessment title	% of module grade
End of Term Examination (2 hours)	100%

Further Physics

Term Two
15% of overall grade

Introduction and Aims

The course builds on the themes covered in the Core Physics module and also develops student skills in planning and conducting practical investigations. Topics are based largely on A2 level syllabi.

Objectives

- Develop essential knowledge and understanding.
- Appreciate the importance of the application of physics in different situations.
- Understand the interaction of physics with social, economic, and industrial fields.
- Develop an understanding of the link between theory and experiment.
- Use specialised language where necessary.
- Use principles and concepts and apply them to interpret phenomena.
- Develop skills in planning and executing practical investigations.

Recommended Reading

See Reading list for Physics

Assessment

Assessment title	% of module grade
Coursework	20%
Practical Investigation	40%
End of Term Examination (2 hours)	40%

Further Computer Science

Term Two
10% of overall grade

Introduction and Aims

This course takes place in term two and both widens and deepens the topics dealt with and assessed in the core course in Computer Science in term one; the learning objectives of this course are aligned to those found at A level.

Objectives

- Demonstrate an understanding of, and the ability to apply, a wide range of underlying principles and concepts of computer science, including abstraction, decomposition, logic, algorithms and data representation.
- Show a wide appreciation of the analysis of problems in computational terms by practical program development using one or more of the following: assembly, functional, or object oriented languages as appropriate.
- Demonstrate the capacity to think analytically, logically and critically.
- Appreciate a range of different aspects of computer science including professional and ethical issues.
- Ability to select and to use computer science related mathematics correctly and effectively in various design and problem solving contexts.
- Design, write and test programs to solve problems.
- Explain how programs work for data communication, sorting and searching and data analysis.
- Use abstraction effectively in the formulation and solution of problems.
- Adopt a systematic approach to problem solving using appropriate tools and strategies such as divide conquer.

Recommended Reading

See Reading List for Computer Science

Assessment

Assessment title	% of module grade
Coursework	100%

Academic English

Term One and Term Two
0% of overall grade

Introduction and Aims

This course is designed for prospective students seeking to raise the proficiency of their productive and receptive academic language skills.

The primary study focus is on delivering the course content in a manner that prepares students for the style of teaching and learning at universities in the United Kingdom. The lesson input and participation aim to enhance overall academic expression, encourage critical thinking and promote private study.

IELTS (International English Language Testing System) is a supplementary scope of scholastic development which offers theoretical and practical insight into IELTS Academic and is of particular benefit to students who wish to build on their test techniques and improve the IELTS band score.

Objectives

Writing

- Increase range of vocabulary for academic purposes.
- Use punctuation effectively and correctly.
- Learn about British English conventions for academic writing.
- Develop skills in describing and interpreting diagrams and tables.
- Select and organise ideas.
- Develop and link supporting examples.
- Use synonyms to avoid repetition.
- Develop strategies for correcting errors and proofreading.
- Understand English syntax and use this understanding to produce syntactically correct text.
- Identify and avoid contractions, tautology, split infinitives, the passive tense, double negatives and malapropisms.

Reading

- Develop the ability to understand the general meaning and main ideas of a text within a limited amount of time.
- Understand how to interpret the inferences and applied meanings of a text.
- Increase range of vocabulary.
- Understand a writer's opinions, views and claims.
- Develop exam skills including tactics on how to answer multiple choice, short answer, yes/no/not given and true or false questions.

Listening

- Comprehend main ideas and identify factual information.
- Recognise the opinions, attitudes and purpose of a speaker.
- Pay attention to tone, cadence and interpreting the meaning of silence.
- Follow the development of an argument.
- Demonstrate an understanding of detail by matching a list of items.
- Develop skills in labelling a diagram or plan.

- Develop skills in completing graphs, forms or tables.
- Show an ability to summarise, locate and remember key words and ideas.

Speaking

- Develop fluency and coherence.
- Use a wide range of appropriate vocabulary How to answer a question, and develop an argument or theme logically.
- Use a wide range of pronunciation features.
- Express attitudes, likes and dislikes effectively.

Recommended Reading

Author	Title	Publisher
British Council	*British Council: LearnEnglish Teens* https://learnenglishteens.britishcouncil.org/	British Council
Sam McCarter	*Ready for IELTS 2nd Ed*	Macmillan
Sue O'Connell	*Focus on IELTS*	Pearson
Raymond Murphy	*English Grammar in Use 5th Ed*	Cambridge UP
IFG Pharos - Presentations, Worksheets, Video and Audio Materials, Sample Assessments		

Assessment

Assessment title	% of module grade
Academic Listening Comprehension - 30 minutes, 40 questions	25%
Academic Reading Interpretation - 60 minutes, 40 questions	25%
Academic Spoken Communication - 15 minutes, 3 tasks	25%
Academic Writing - Visual Data Report - 30 minutes, 150-200 words	10%
Academic Writing - Discursive essay - 45 minutes 250-300 words	15%

** Assessment for this module is independent of the Foundation Programme and does not therefore contribute towards the overall grade.*

Disclaimer

This handbook does not replace IFG's regulations. All students will be required, as a condition of enrolment, to abide by and submit to the procedures of IFG which are amended from time to time.

Every effort has been made to ensure the accuracy of the information contained within this handbook, but it is subject to alteration without notice. IFG will use all reasonable endeavours to deliver programmes in accordance with the descriptions set out in this handbook. However, IFG reserves the right to make variations to the contents or methods of delivery of programmes.