

# International Foundation Year (IFY)

## Programme and Module Overview





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## **PROGRAMME OVERVIEW**

## INTRODUCTION

The NCUK International Foundation Year (IFY) programme is a pre-university programme designed for international students to prepare them for study in English-language universities. It develops students' subject knowledge, study skills and English language competency to a level suitable for smooth progression to undergraduate study.

NCUK Universities recognise the programme as meeting their entry requirements for international students, with progression contingent on students satisfying the performance criteria published in the <u>NCUK Course Finder</u>. The list of accepting universities can be seen on the university pages of the <u>NCUK</u> <u>website</u>.

NCUK guarantees students a place on a programme of study at one of the NCUK Universities provided that the student performs to the level specified by the <u>NCUK Guarantee</u>.

## AIMS

The aims of the NCUK IFY programme are to:

- ⇒ Provide international students with a high quality pre-undergraduate education, with outcomes comparable with internationally recognised High School qualifications such as GCE A levels.
- ⇒ Prepare students for study at undergraduate level in English-language at universities that offer degree courses taught in English.
- ⇒ Enhance the English language ability of students to enable them to communicate and study effectively and confidently at undergraduate level.
- ⇒ Develop the study skills, subject knowledge and related capabilities required for successful study at undergraduate level in an NCUK University.
- $\Rightarrow$  Cultivate a commitment to good practice in academic work.
- ⇒ Provide students with the necessary skills to enable them to develop as independent, autonomous learners.
- ⇒ Give students practical experience of different methods that may be used to develop and assess their learning.

### LEARNING OUTCOMES

On successful completion of this programme students should be able to:

- ⇒ Use English confidently in an academic environment and demonstrate a proficiency in English language to a standard of at least NCUK EAP 'C' grade.
- ⇒ Make effective use of a range of generic and subject-specific study skills.
- ⇒ Demonstrate knowledge in subject-specific areas at a level suitable for undergraduate university entry.
- ⇒ Demonstrate their learning through a range of assessment methods that prepare them for the expectations of university degree.



## **PROGRAMME STRUCTURE**

The NCUK IFY consists of 1200 hours of study in total (600 guided learning hours, 600 independent study) and is generally delivered over one academic year (other teaching patterns are also possible). ⇒ Dependent on English language level on entry students will study one of:





#### Note:

- ⇒ Students may only take one of Maths (Business), Maths (Engineering) or Maths (Science).
- ⇒ Students may replace any of the three Mathematics modules with Half Maths. This covers half the content of the Mathematics modules and attracts half NCUK Points (see Programme Grading section below)
- ⇒ Students may take the Art & Design Extended Projects module, this is a double module which accounts for two of the three subject modules.

In addition to the above, students also take the self-study, optional module 'Skills for Success'. This is designed for students to work through independently via NCUK's learning and assessment platform and should take approximately 30 hours in total.

#### **PROGRAMME GRADING**

- $\Rightarrow$  Assessment for each module will be via a combination of coursework and examination.
- ⇒ Each subject module is graded using the table given below. Each grade has an associated number of 'NCUK points'.
- ⇒ Completing students will be presented with individual module grades and 'NCUK Points' total.

bench	% Mark	NCUK Points	
<b>A</b> *	≥80%	56 points	
А	70-79%	48 points	
В	60-69%	40 points	
с	50-59%	32 points	
D	40-49%	24 points	
E	35-39%	16 points	
U	<35%		

- ⇒ The EAP and EAPPU modules assess four different language skills Reading, Writing, Speaking and Listening. Students receive an overall grade for the module and a grade for each individual skill based on the table above. Students do not receive NCUK points for the EAP, EAPPU or RCS modules.
- ⇒ For information on the equivalencies of the NCUK EAP and EAPPU modules to widely recognised English Language qualifications please see the entry requirements section of the <u>NCUK website</u>.



## **BENCHMARK STATEMENTS**

The NCUK IFY is intended to provide outcomes in subject modules which are comparable to GCE A level (NQF<sup>1</sup> Level 3) and in English language at a minimum of CEFR<sup>2</sup> level B2.

The programme was benchmarked by UK NARIC<sup>3</sup> (now UK ENIC) in 2019 and the conclusion was that these outcomes are met.

<sup>&</sup>lt;sup>1</sup> National Qualifications Framework for England, Wales and Northern Ireland.

<sup>&</sup>lt;sup>2</sup> Common European Framework of Reference for Languages.

<sup>&</sup>lt;sup>3</sup> The National Recognition Information Centre for the United Kingdom. This organisation assesses a wide range of qualifications and equates them to standard UK and international qualifications.



## **ENTRY TO THE PROGRAMME**

Detailed, country-specific entry requirements are available on NCUK's website.

Normally, students entering the standard IFY (two-semester, full-time study programme) are expected to have successfully completed 12 years of school education to a defined level and have an English language level of at least IELTS 5.0 or equivalent. Acceptable alternative English language qualifications are also given on the entry requirements page on the NCUK website.

In general students entering an accelerated version of the programme (where it is delivered over fewer than 30 weeks), or those wishing to progress to highly competitive courses such as Medicine, should have entry qualifications well in excess of the stated minimums. NCUK will agree entry requirements with each Study Centre for alternative delivery durations.

Where a Study Centre is running an Extended IFY programme, students may enter with an English language level of IELTS 4.0 or 4.5 depending on the timetable offered. It is important that students meet the standard academic entry requirements for the programme if entering an Extended IFY.

The Study Centre is responsible for assessing and verifying entry qualifications. Records of the qualifications of all students admitted must be retained in individual student files, which are subject to audit as part of NCUK's quality assurance processes. (Refer to the NCUK Academic Handbook, Study *Centre Management: Student Systems*). Study Centres will also submit these documents electronically as part of the registration process with NCUK.



## **PROGRAMME DELIVERY**

The IFY programme is specified to be delivered over a single academic year. The programme is divided into two semesters of 15 weeks' duration, comprising 14 teaching weeks and a final assessment week. Normally teaching weeks will have a timetabled class contact time of at least 20 hours per week.

The IFY programme may be delivered over shorter or longer periods of time. Additional guidance for Study Centres on how to appropriately timetable the programme is given in the Programme Framework.

NCUK specifies minimum timetabled contact hours for its programmes but does not set a maximum class contact or total study time; it is recognised that many Study Centres will apply higher than minimum contact times to meet the learning needs of their students.

Total Number of modules	3 subject modules plus one of EAP/EAPPU/RCS
Total number of weeks	30 weeks in total 28 weeks of directed study over 2 semesters 1 week is dedicated to End of Semester 1 Tests 1 week is dedicated to Examinations
Directed Study Hours per module per week	4 hours per module = 12 hours 8 hours for EAP (or 6 hours for EAPPU/RCS) Total = 20 hours (or 18 hours if studying EAPPU/RCS)
Directed Study Hours per week	4 hours x 3 modules = 12 hours 8 hours for EAP (or 6 hours for EAPPU/RCS) Total = 20 hours (or 18 hours if studying EAPPU/RCS)
Total Directed Study Hours	20 hours per week x 30 weeks = 600 hours
Independent Study Hours	Approximately 20 hours per week (Assuming 4 hours a day for 5 days) Total = 20 hours x 30 = 600 hours
Total Learning Activity	600 directed study hours + 600 independent study hours = 1200 hours

The duration of each semester may vary according to the timing of local public holidays. Semesters may be interrupted by periods of holiday where necessary.

The programme may be delivered face-to-face or in blended/online modes as agreed with the Study Centre at the time of accreditation.



## **MODULE CHOICES**

Study Centres are not required to offer all the subject modules available on the IFY programme. Resources and student demand may dictate that Study Centres offer a smaller selection of subject modules. Guidance on how to decide which modules to offer is given in the Programme Framework. If Study Centres wish to add additional subject modules to their offering, they should inform NCUK well in advance, as the addition of some subject modules will require additional accreditation. For example laboratory facilities will need to be inspected if a Study Centre wishes to add a science module to their offering.

Study Centres are required to offer at least one of EAP, EAPPU or RCS, dependent on the English language requirements of students. Further guidance on this is given in the Programme Framework.

## CLASS SIZES

Class sizes will vary between each element of the IFY programme. However, EAP (or EAPPU/RCS) classes and pastoral care tutorials must not exceed 16 students per class/tutorial.

Subject class sizes may be varied according to the activity e.g. lecture, seminar or tutorial. The principle to be applied to timetabling and class size should be to give students the opportunity to experience different forms of learning and to maximise opportunities for small-group work and for the development of independent learning skills. In general, NCUK would not expect tutorial or seminar groups to exceed 16 students but class sizes for lectures may be larger.

Staffing of the programme should allow for some one-to-one contact for each student.



## **MODULE OVERVIEWS**



# ART & DESIGN MODULE OVERVIEW





Module Code	IFYAD002		
Module Name	Art & Design		
Programme Name	International Foundation Year		
Percentage breakdown of Coursework	100%		
Percentage breakdown of Exam/Test	0%		
Delivery period	The syllabus will usually be delivered over two 15-week semesters		
Recommended minimum teaching hours	120 hours (4 hours per week over 30 weeks)		
Recommended minimum independent study hours	120 hours (4 hours per week over 30 weeks)		

## AIMS

- ⇒ To introduce students to the necessary subject knowledge and understanding required for the successful study of art and design at undergraduate level in an NCUK partner university.
- ⇒ To produce a portfolio of practical and contextual work that demonstrates practical and theoretical knowledge and understanding of art and design through an exploration of a range of materials, tools and processes.
- ⇒ To produce a portfolio of practical and contextual work that demonstrates an understanding of how ideas can be conveyed in images and artefacts and how these relate to context.
- ⇒ To equip students with the subject specific English language, vocabulary and terminology to learn effectively in an NCUK University.
- ⇒ To develop the confidence and competence of the students as learners and to assist them in taking responsibility for their own learning through directed study and reading.
- ⇒ To practice skills introduced in EAP/EAPPU/RCS lessons and cultivate a commitment to good practice.

### **TOPICS OF STUDY**

- ⇒ Using Sketchbooks and Research & Reflective Journals
- ⇒ Drawing and Painting Techniques & Materials
- ⇒ Eye-hand Co-ordination
- ⇒ Gesture & Tone
- ⇒ Using Colour
- ⇒ Using Digital Cameras, Scanners and the Internet
- ⇒ Developing Work for a Themed Project

- $\Rightarrow$  Perspective
- ⇒ Proportion & Scale
- ⇒ Pattern & Rhythm
- ⇒ Texture & Collage
- ⇒ Visual Balance
- ⇒ Production and Presenting of Work for a Portfolio



	What is Assessed?	Topics A-AD
	Duration/Word Count	N/A
	Total Marks	100
Sketchbook	Rubric	<ul> <li>A sketchbook that contains both written and visual material. A record of the student's work throughout the module that includes:</li> <li>⇒ Research</li> <li>⇒ Exploration and development of ideas</li> <li>⇒ Reflection</li> <li>⇒ Evaluation of process and product</li> </ul>
	Contribution to Overall Grade	20%
	What is Assessed?	Topics A-AD
	Duration/Word Count	N/A
	Total Marks	100
Research and Reflective Journal	Rubric	<ul> <li>A Research and Reflective Journal that:</li> <li>⇒ Records what the student has done during the study of this module</li> <li>⇒ Reflects on what the student has done, i.e. a reflective comment on what the student has done</li> <li>⇒ Contains entries that are a minimum of 150 words</li> </ul>
	Contribution to Overall Grade	20%
	What is Assessed?	Topics A-AD
	Duration/Word Count	A Portfolio consisting of 10-15 fully realised pieces of two or three-dimensional studio work
	Total Marks	100
Portfolio	Rubric	<ul> <li>A Portfolio that:</li> <li>⇒ Is submitted electronically in PDF format</li> <li>⇒ Has a contents page allowing the examiner/moderator to navigate it easily</li> <li>⇒ Contains between 10 and 15 fully realised pieces of two or three-dimensional studio work as evidence of both practical and intellectual knowledge and understanding. Included should be at least one extended collection of work or a project that demonstrates your ability to develop an idea from initial concept to realisation and is supported by elements of work from your Sketchbooks, Research and Reflective Journals</li> <li>⇒ No more than 30 pages in length</li> </ul>
	Contribution to Overall Grade	60%



	Description	Sketchbook (20%)	Research & Reflective Journal (20%)	Portfolio (60%)	Overall
AO1	Explore and experiment with processes and techniques using appropriate media in the making of images and artefacts.	25%	~	25%	20%
A02	Plan and develop ideas using a range of contextual sources relevant to the work in progress. Critically analyse and modify ideas in light of their own evaluation.	25%	30%	25%	26%
AO3	Select and communicate informed and meaningful responses that convey a critical understanding making links between all elements visual, verbal and written as appropriate.	25%	30%	25%	26%
AO4	Record and critically reflect upon work in visual and written form.	25%	40%	25%	28%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Understand a range of art and design media processes and techniques</li> <li>⇒ Understand and use specialist terminology and language as appropriate</li> </ul>
Intellectual skills	<ul> <li>⇒ Understand how critical analysis of ideas and meaning across social and cultural contexts can be conveyed and interpreted in images and artefacts</li> <li>⇒ Critically analyse and reflect upon their own work and the work of others</li> </ul>
Practical skills	<ul> <li>⇒ Apply knowledge and understanding in the production of images and artefacts</li> <li>⇒ Develop work through experimentation and identification of alternative approaches</li> <li>⇒ Record experiences and observations in visual form</li> </ul>
Transferable skills	<ul> <li>⇒ Work independently</li> <li>⇒ Explore and analyse relevant resources</li> <li>⇒ Record, organise and communicate ideas</li> </ul>



## **BIOLOGY** MODULE OVERVIEW



Module Code	IFYBI003
Module Name	Biology
Programme Name	International Foundation Year
Percentage breakdown of Coursework	20%
Percentage breakdown of Exam/Test	80%
Delivery period	The syllabus will usually be delivered over two 15- week semesters
Recommended minimum teaching hours	120 (4 hours per week over 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week over 30 weeks)

## AIMS

This module aims to develop in students the skills, knowledge, understanding and enthusiasm in biology appropriate for entry to a degree course at an NCUK University. It will also enable students to identify and explain facts and concepts from a broad range of biological disciplines and develop a deeper understanding of specific areas. Students will further develop their skills of investigation and problem-solving through practical experience and tutorial-based learning and will apply and practise their ICT skills in the study of Biology. Students will become familiar with science-specific English language vocabulary and terminology and practise skills introduced in EAP/EAPPU/RCS lessons, preparing them to learn effectively in an English language university.

#### **TOPICS OF STUDY**

- ⇒ Structure and Function of Biological Molecules
- ⇒ Cell Membrane Structure and Transport
- ⇒ Respiration and Energy
- ⇒ DNA and Protein Synthesis
- ⇒ Mammalian Physiological Systems

- ⇒ Organs, Tissues, Cellular Organisation and Cell Structure
- ⇒ Leaf Structure, Water Movement/Transpiration and Photosynthesis
- ⇒ Interpretation of Scientific Data & Presentation of Data
- ⇒ The Cell Cycle and Cellular Replication
- ⇒ Genetics and Genetic Engineering



	What is Assessed?	Topics A-F
	Duration/Word Count	1 hour 40 minutes
End of	Total Marks	50
Semester 1 Test	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total)</li> <li>⇒ Short answer questions (20 marks in total)</li> <li>⇒ 2 longer questions from a choice of 3 (20marks in total)</li> </ul>
	Contribution to Overall Grade	10%

	What is Assessed?	Topics A-H
	Duration/Word Count	Report of 800-1000 words (plus calculations, diagrams, references etc.)
Coursework	Total Marks	100
	Rubric	$\Rightarrow$ Laboratory Practical Report
	Contribution to Overall Grade	20%

	What is Assessed?	Topics A-J		
	Duration/Word Count	2 hours 40 minutes		
	Total Marks	100		
Final Examination	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total)</li> <li>⇒ 3 short answer questions (30 marks in total)</li> <li>⇒ 3 longer questions from a choice of 5 (60 marks in total)</li> </ul>		
	Contribution to Overall Grade	70%		



	Description	End of Semester 1 Test (10%)	Coursework (20%)	Exam (70%)	Overall
A01	<b>Knowledge and Understanding:</b> Demonstrate knowledge and understanding of terminology, facts, theories and concepts related to biology.	50%	~	50%	40%
AO2	<ul> <li>Handling and Evaluating Information:</li> <li>Manipulate data accurately and use numerical and other information to identify patterns and trends.</li> <li>Use data and scientific knowledge in a theoretical context to solve problems.</li> <li>Give reasoned explanations for identified patterns and relationships.</li> </ul>	50%	~	50%	40%
AO3	<b>Practical and Investigative Skills:</b> Demonstrate the ability to plan and carry out practical work, accurately collect and record results, and analyse and interpret data to reach a conclusion.	~	100%	~	20%



## **GENERAL LEARNING OUTCOMES**

Knowledge and understanding	<ul> <li>⇒ Demonstrate general knowledge of basic biological principles and be able to communicate in a variety of topics.</li> <li>⇒ Discuss the significance of experimental results.</li> </ul>
Intellectual skills	<ul> <li>⇒ Present and interpret data as text or in tables, diagrams and graphs in appropriate and correct English.</li> <li>⇒ Carry out relevant calculations, giving units where appropriate.</li> <li>⇒ Use appropriate software in the analysis of data and presentation of findings.</li> <li>⇒ Apply knowledge and skills to solve scientific problems.</li> </ul>
Practical skills	<ul> <li>⇒ Carry out experimental procedures safely following written instructions.</li> <li>⇒ Make observations and measurements with appropriate precision and record these methodically.</li> <li>⇒ Interpret and discuss experimental results.</li> </ul>
Transferable skills	<ul> <li>⇒ Use and correctly reference information from a variety of English language sources such as texts and the internet.</li> <li>⇒ Study independently and make personal notes for revision purposes.</li> <li>⇒ Write clear and concise reports in appropriate scientific English, using text, tables and graphs.</li> </ul>

On successful completion of this module, a student will be able to:



## **BUSINESS STUDIES** MODULE OVERVIEW



Module Code	IFYBS004
Module Name	Business Studies
Programme Name	International Foundation Year
Percentage breakdown of Coursework	20%
Percentage breakdown of Exam/Test	80%
Delivery period	The syllabus will usually be delivered over two 15 week semesters
Recommended minimum teaching hours	120 (4 hours per week over 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week over 30 weeks)

## AIMS

This module aims to introduce students to the necessary subject knowledge and understanding required for the successful study of business studies and related social science disciplines at undergraduate level in an NCUK University.

Students will develop an understanding of the external environment in which businesses operate and the topical issues which affect them, with a focus on the three key functional areas of business, namely marketing, accounting & finance, and human resource management.

## **TOPICS OF STUDY**

- ⇒ Business and Its Environment
- $\Rightarrow$  Marketing
- ⇒ Finance & Accounting
- ⇒ Strategic Analysis

- ⇒ Business Size and Structure
- $\Rightarrow$  Operations
- ⇒ Human Resource Management (HRM)



End of Semester 1 Test	What is Assessed?	Topics A-J
	Duration/Word Count	1 hour 40 minutes
	Total Marks	50
	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total)</li> <li>⇒ 1 data response question (20 marks in total)</li> <li>⇒ 1 essay question from a choice of 2 (20 marks in total)</li> </ul>
	Contribution to Overall Grade	10%

Coursework	What is Assessed?	Topics A-M
	Duration/Word Count	1250-1500 words (excluding appendices and bibliography)
	Total Marks	100
	Rubric	$\Rightarrow$ Single essay/report question
	Contribution to Overall Grade	20%

Final Examination	What is Assessed?	Topics A-T
	Duration/Word Count	2 hours 40 minutes
	Total Marks	100
	Rubric	<ul> <li>⇒ 20 multiple choice questions (20 marks in total)</li> <li>⇒ 2 data response questions (40 marks in total)</li> <li>⇒ 2 essay questions from a choice of 4 (40 marks in total)</li> </ul>
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (10%)	Coursework (20%)	Exam (70%)	Overall
A01	Knowledge & Understanding: Demonstrate knowledge of business terms/concepts and theories/models to show an understanding of how business issues influence individuals and organisations.	60%	30%	40%	40%
AO2	<b>Application:</b> Apply knowledge and understanding to show how individuals and organisations are affected by, and respond to, issues in various business contexts.	20%	20%	20%	20%
AO3	<b>Analysis:</b> Analyse issues within business showing an understanding of the impact of the external and internal influences on individuals and organisations.	10%	25%	20%	20%
AO4	<b>Evaluation:</b> Evaluate information to propose evidence-based solutions and make informed judgements to business issues.	10%	25%	20%	20%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Demonstrate knowledge and understanding of the specified content, including numerical calculations where appropriate.</li> <li>⇒ Apply their knowledge and critical understanding to problems and issues arising from real world business situations.</li> </ul>
Intellectual skills	<ul> <li>⇒ Analyse problems, issues and situations using both quantitative and qualitative analysis.</li> <li>⇒ Evaluate information from a variety of English language sources, e.g. texts and the Internet.</li> </ul>
Practical skills	<ul> <li>⇒ Write reports and essays in appropriate and correct English.</li> <li>⇒ Use appropriate generic ICT software in the analysis of data and presentation of findings.</li> </ul>
Transferable skills	<ul> <li>⇒ Undertake independent study.</li> <li>⇒ Make appropriate use of information and research from a variety of sources.</li> <li>⇒ Be confident in participating in and presenting group work.</li> </ul>



## **CHEMISTRY** MODULE OVERVIEW





Module Code	IFYCH003
Module Name	Chemistry
Programme Name	International Foundation Year
Percentage breakdown of Coursework	20%
Percentage breakdown of Exam/Test	80%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 hours (4 hours per week over 30 weeks)
Recommended minimum independent study hours	120 hours (4 hours per week over 30 weeks)

#### AIMS

This module aims to develop in students the skills, knowledge, understanding and enthusiasm in Chemistry appropriate for entry to an undergraduate degree at an NCUK University. It aims to allow students to develop skills of investigation and problem-solving through practical experience and tutorial-based learning, as well as giving them an overview of important chemical concepts to act as a foundation for further study of the subject. Students will further develop their skills of investigation through practical experience and tutorial-based learning and will apply and practise their ICT skills in the study of Chemistry. Students will become familiar with science-specific English language vocabulary and terminology and practise skills introduced in EAP/EAPPU/RCS lessons, preparing them to learn effectively in an English language university.

#### **TOPICS OF STUDY**

- ⇒ Atomic Structure & Atomic Mass
- ⇒ Bonding & Structure
- ⇒ Oxidation & Reduction
- $\Rightarrow$  Group 7 (17) The Halogens
- ⇒ Organic Chemistry
- $\Rightarrow$  Halogenoalkanes
- ⇒ Aldehydes & Ketones
- ⇒ Chemical Energetics
- ⇒ Equilibrium
- ⇒ Analytical Techniques

- ⇒ Electronic Structure of Atoms & the Periodic Table
- ⇒ Amount of Substance and Quantitative Analysis in Gases and Solutions
- ⇒ Group 2 The Alkaline Earth Elements
- ⇒ Transition Metals & Co-ordination Chemistry
- ⇒ Alkanes & Alkenes
- ⇒ Alcohols, Carboxylic Acids & Esters
- ⇒ Aromatic Chemistry
- $\Rightarrow$  Kinetics
- ⇒ Bronsted-Lowry Theory of Acids & Bases

	What is Assessed?	Topics A-H
End of Semester 1 Test	Duration/Word Count	1 hour 40 minutes
	Total Marks	50
	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total)</li> <li>⇒ 2 short answer questions (20 marks in total)</li> <li>⇒ 1 longer question from a choice of 2 (20 marks in total)</li> </ul>
	Contribution to Overall Grade	10%

Coursework	What is Assessed?	Topics I-Q
	Duration/Word Count	Report of 800-1000 words (plus calculations, diagrams, references etc.)
	Total Marks	100
	Rubric	$\Rightarrow$ Laboratory Practical Report
	Contribution to Overall Grade	20%

Final Examination	What is Assessed?	Topics A-S
	Duration/Word Count	2 hours 40 minutes
	Total Marks	100
	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total)</li> <li>⇒ 3 short answer questions (30 marks in total)</li> <li>⇒ 3 longer questions from a choice of 5 (60marks in total)</li> </ul>
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (10%)	Coursework (20%)	Exam (70%)	Overall
A01	<b>Knowledge and Understanding:</b> Demonstrate knowledge and understanding of terminology, facts, theories and concepts related to chemistry.	50%	~	50%	40%
A02	Handling and Evaluating Information: Manipulate data accurately and use numerical and other information to identify patterns and trends. Use data and scientific knowledge in a theoretical context to solve problems. Give reasoned explanations for identified patterns and relationships.	50%	~	50%	40%
AO3	<b>Practical and Investigative Skills:</b> Demonstrate the ability to plan and carry out practical work, accurately collect and record results, and analyse and interpret data to reach a conclusion.	~	100%	~	20%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Describe, explain and interpret phenomena and effects covered in the syllabus in terms of principles and concepts.</li> <li>⇒ Discuss the significance of experimental results.</li> </ul>
Intellectual skills	<ul> <li>⇒ Present and interpret data as text or in tables, diagrams and graphs in appropriate and correct English.</li> <li>⇒ Carry out relevant calculations, giving units where appropriate.</li> <li>⇒ Use appropriate software in the analysis of data and presentation of findings.</li> <li>⇒ Apply knowledge and skills to solve scientific problems.</li> </ul>
Practical skills	<ul> <li>⇒ Carry out experimental procedures safely following written instructions.</li> <li>⇒ Make observations and measurements with appropriate precision and record these methodically.</li> <li>⇒ Interpret and discuss experimental results.</li> </ul>
Transferable skills	<ul> <li>⇒ Use and correctly reference information from a variety of English language sources such as texts and the internet.</li> <li>⇒ Study independently and make personal notes for revision purposes.</li> <li>⇒ Write clear and concise reports in appropriate scientific English, using text, tables and graphs.</li> </ul>



## **COMPUTER SCIENCE** MODULE OVERVIEW





Module Code	IFYCO001
Module Name	Computer Science
Programme Name	International Foundation Year
Percentage breakdown of Portfolio	30%
Percentage breakdown of Coursework	30%
Percentage breakdown of Exam/Test	40%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 (4 hours per week for 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week for 30 weeks)

### AIMS

The aim of this module is to provide students with an introduction to computing. The module topics include themes that underpin such areas as computational thinking, programming, ethics, and security. The curriculum aims to demonstrate an integration between theory and practice while developing skills and knowledge useful in real world situations.

The aims of this module are for learners to:

- $\Rightarrow$  Understand and apply the fundamental principles and concepts of Computer Science.
- $\Rightarrow$  Become confident users of various tools and techniques relevant to the course.
- $\Rightarrow$  Gain practical experience to analyse problems in computational terms.
- $\Rightarrow$  Engage in critical thinking, creativity, and innovation.
- $\Rightarrow$  Build skills needed to become independent learners.

#### **TOPICS OF STUDY**

- ⇒ Computer Architecture
- $\Rightarrow$  Programming in Python
- ⇒ Fundamentals of Computational Thinking
- ⇒ Modularity and Functions
- $\Rightarrow$  Data and Boolean Logic
- ⇒ Types of Software and Computer Systems

- ⇒ Networking and Data Communications
- ⇒ Problem Solving, Algorithms and Program Design
- $\Rightarrow$  Security
- ⇒ Software and Development Process and Concepts
- ⇒ Ethics and Impact of Computing



Portfolio	What is Assessed?	Topics B, C, D, G, I, K
	Duration/Word Count	N/A
	Total Marks	100
	Rubric	A set of programming exercises and associated tasks completed throughout Semester 1
	Contribution to Overall Grade	30%

	What is Assessed?	Topics B, C, D, E, H, I, J, K, L, M, N
Coursework	Duration/Word Count	Solution + 1500-word report
	Total Marks	100
	Rubric	Learners are given a set of scenarios from which they choose a scenario to provide the solution. Learners are expected to demonstrate, through their solution, an appropriate range of skills and knowledge identified by the topics. Evidence provided in the form of a workable solution and a report.
	Contribution to Overall Grade	30%

Final Examination	What is Assessed?	Topics A-L
	Duration/Word Count	2 hours 30 minutes
	Total Marks	100
	Rubric	<ul> <li>⇒ 20 multiple choice questions</li> <li>⇒ 8 short answer questions</li> </ul>
	Contribution to Overall Grade	40%



	Description	Portfolio (30%)	Coursework (30%)	Exam (40%)	Overall
A01	Knowledge & Understanding: Demonstrate factual, procedural and theoretical knowledge and understanding of fundamental principles and concepts of computer science.	20%	20%	60%	35%
A02	<b>Application:</b> Apply knowledge and understanding of the principles and concepts of computer science, to design and program computer systems solve well-defined problems	60%	30%	10%	30%
A03	<ul> <li>Analysis and Evaluation:</li> <li>Analyse problems in computational terms:</li> <li>⇒ to make reasoned judgements</li> <li>⇒ to design, program, evaluate and refine solutions</li> </ul>	20%	50%	30%	35%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>Demonstrate knowledge and understanding of the fundamental principles and concepts of computer science and software development.</li> <li>Apply their knowledge and critical understanding to problems and issues arising from real world situations.</li> </ul>
Intellectual skills	<ul> <li>⇒ Analyse problems in computational terms using abstraction, logic, algorithms and data representation.</li> <li>⇒ Evaluate the effectiveness of a computer program to solve a well-defined problem.</li> </ul>
Practical skills	<ul> <li>⇒ Develop computer programs written in the Python language.</li> <li>⇒ Use appropriate generic ICT software in the analysis of data and presentation of findings.</li> </ul>
Transferable skills	<ul> <li>⇒ Undertake independent study.</li> <li>⇒ Make appropriate use of information and research from a variety of sources.</li> </ul>



## **ECONOMICS** MODULE OVERVIEW



Module Code	IFYEC003
Module Name	Economics
Programme Name	International Foundation Year
Percentage breakdown of Coursework	20%
Percentage breakdown of Exam/Test	80%
Delivery period	The syllabus will usually be delivered over two 15-week semesters.
Recommended minimum teaching hours	120 (4 hours per week over 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week over 30 weeks)

## AIMS

This module is designed to introduce students to the necessary subject knowledge and understanding required for the successful study of Economics and related Business disciplines at undergraduate level in an NCUK University. This module will also develop key knowledge and understanding of economic concepts and principles in a national and global economic environment. It will also encourage students to be able to explain key economic concepts and theories and be able to apply these to a range of real-world issues and problems. Students will also develop analytical skills and the ability to evaluate the strengths and weaknesses of the market economy and the role of government within it.

## **TOPICS OF STUDY**

- ⇒ The Economic Problem
- ⇒ The Determination of Demand & Supply for Goods & Services
- ⇒ Price Determination in the Market System
- ⇒ Government Intervention in the Market System
- ⇒ Production in the Short and Long Run
- ⇒ Monopoly & Oligopoly
- ⇒ Introduction to Macroeconomics & Macroeconomic Equilibrium
- ⇒ Consumption & Investment
- ⇒ Inflation
- ⇒ Balance of Payments and Exchange Rates
- ⇒ Money and Monetary Policy
- ⇒ International Trade

- ⇒ Production Possibility Frontiers
- ⇒ Elasticity of Demand & Price Elasticity of Supply
- ⇒ Market Failure
- ⇒ Revenue, Costs & Profits and the Objectives of Firms
- ⇒ Perfect Competition
- ⇒ Monopolistic & Non-Price Competition
- ⇒ Aggregate Demand & Aggregate Supply
- ⇒ Unemployment
- ⇒ Economic Growth & Well-Being
- ⇒ Fiscal Policy
- ⇒ Supply Side Policy



End of Semester 1 Test	What is Assessed?	Topics A-O
	Duration/Word Count	1 hour 40 minutes
	Total Marks	50
	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total).</li> <li>⇒ 1 data response question (20 marks in total).</li> <li>⇒ 1 essay question from a choice of 2 (20marks in total).</li> </ul>
	Contribution to Overall Grade	10%

Coursework	What is Assessed?	Topics A-U
	Duration/Word Count	1250-1500 words (excluding appendices and bibliography)
	Total Marks	100
	Rubric	$\Rightarrow$ A single essay question
	Contribution to Overall Grade	20%

	What is Assessed?	Topics A-Z
	Duration/Word Count	2 hours 40 minutes
	Total Marks	100
Final Examination	Rubric	<ul> <li>⇒ 20 multiple choice questions (20 marks in total).</li> <li>⇒ 2 data response questions (40 marks in total).</li> <li>⇒ 1 essay question from a choice of 2 on Microeconomics (20 marks).</li> <li>⇒ 1 essay question from a choice of 2 on Macroeconomics (20 marks).</li> </ul>
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (10%)	Coursework (20%)	Exam (70%)	Overall
A01	Knowledge & Understanding: Demonstrate knowledge of terms/concepts and theories/models to show an understanding of the behaviour of economic agents and how they are affected by and respond to economic issues.	60%	30%	40%	40%
A02	<b>Application:</b> Apply knowledge and understanding to various economic contexts to show how economic agents are affected by and respond to economic issues.	20%	20%	20%	20%
AO3	<b>Analysis:</b> Analyse issues within economics, showing an understanding of their impact on economic agents.	10%	25%	20%	20%
A04	<b>Evaluation:</b> Evaluate economic arguments using appropriate evidence to support informed judgements relating to economic issues.	10%	25%	20%	20%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Demonstrate knowledge and understanding of specified economics subject content.</li> <li>⇒ Understand and apply knowledge to the problems arising from real world economic situations.</li> </ul>
Intellectual skills	⇒ To critically analyse and evaluate the economic problems arising from real world economic situations.
Practical skills	<ul> <li>⇒ Write academic essays appropriate for the study of economics in higher education.</li> <li>⇒ Use appropriate generic ICT software in the analysis of data and presentation of findings.</li> </ul>
Transferable skills	<ul> <li>⇒ Undertake independent study.</li> <li>⇒ Make appropriate use of information and research from a variety of sources.</li> </ul>



## FURTHER MATHEMATICS MODULE OVERVIEW



Module Code	IFYFM004
Module Name	Further Mathematics
Programme Name	International Foundation Year
Percentage breakdown of Coursework	0%
Percentage breakdown of Exam/Test	100%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 (4 hours per week for 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week for 30 weeks)

## AIMS

To develop students' key knowledge, understanding, skills and application of further mathematics appropriate for entry to a degree course at an NCUK University.

#### **General Aims**

- ⇒ To develop abilities to think logically, to recognise incorrect reasoning and to express ideas clearly.
- ⇒ To develop an enthusiasm for the subject and the skills required to apply the knowledge to both the further study and application of mathematics.
- $\Rightarrow$  To develop in students an understanding of how theory and application work together.
- $\Rightarrow$  To develop students' skills in modelling and the interpretation of results.
- ⇒ To develop the necessary English mathematics vocabulary and terminology to use their mathematics knowledge effectively in an NCUK University.
- ⇒ To encourage students towards a level of independence in both the planning and organisation of their studies.
- ⇒ To assist the development of competence and confidence of the students as learners, taking responsibility for their own learning through directed reading and study.

#### Specific Aims

- $\Rightarrow$  To develop further skills in algebra and link these with curve sketching where possible.
- ⇒ To demonstrate more advanced skills in complex numbers, matrices, vectors, hyperbolic functions and geometry (conics).
- $\Rightarrow$  To develop differentiation and integration techniques and to apply these to differential equations.
- $\Rightarrow$  To apply techniques from pure mathematics to the mechanics topics.
- $\Rightarrow$  To apply a Mathematical proof.
- $\Rightarrow$  To use numerical methods with the aid of calculators.



### **TOPICS OF STUDY**

- ⇒ Complex Numbers
- ⇒ Matrices
- ⇒ Further Curve Sketching and Inequalities
- $\Rightarrow$  Series
- ⇒ Roots and Coefficients of Polynomials
- ⇒ Mechanics
- ⇒ Hyperbolic Functions
- ⇒ Parametric Coordinates
- ⇒ Conic Sections

- ⇒ Maclaurin and Taylor Series
- ⇒ Further Mechanics
- ⇒ Further Complex Number Functions
- ⇒ Further Differentiation and Integration
- $\Rightarrow$  Vectors
- ⇒ Calculus and Vectors
- ⇒ Differential Equations
- ⇒ Proof by Induction

End of Semester 1 Test	What is Assessed?	Topics A-J
	Duration/Word Count	2 hours 10 minutes
	Total Marks	100
	Rubric	<ul> <li>⇒ Approximately 13 questions of varying length. Candidates attempt all questions.</li> </ul>
	Contribution to Overall Grade	30%

Final Examination	What is Assessed?	Topics A-Q
	Duration/Word Count	2 hours 40 minutes
	Total Marks	125
	Rubric	⇒ Approximately 15 questions of varying length. Candidates attempt all questions.
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (30%)	Exam (70%)	Overall
AO1	Knowledge & Understanding: Knowledge of mathematical techniques.	50%	50%	50%
A02	<b>Application and Communication:</b> Recognising the appropriate procedure and applying combinations of skills and techniques.	50%	50%	50%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	dge and anding⇒ Recognise, recall and apply specific mathematical facts, principles a techniques; and employ them in relevant and correct settings. ⇒ Use and interpret their own visual aids to enhance understanding.	
Intellectual skills	<ul> <li>⇒ Break down problems into smaller sub-problems and devise strategies for solving new problems.</li> <li>⇒ Select and apply relevant techniques to problem solving in a systematic way.</li> <li>⇒ Relate new problems to already solved problems.</li> <li>⇒ Employ critical analysis of solutions.</li> <li>⇒ Adapt, diversify and re-evaluate methods of solution.</li> </ul>	
Practical skills	<ul> <li>⇒ Carry out appropriate calculations using a formula booklet, and/or a calculator.</li> <li>⇒ Use technology to enhance understanding of graphs and loci.</li> </ul>	
Transferable skills	<ul> <li>⇒ Study independently and make personal notes for problem-solving and revision purposes.</li> <li>⇒ Source and retrieve information from a variety of locations such as textbooks, websites etc.</li> <li>⇒ Present information in a clear and logical way.</li> <li>⇒ Discuss, interpret and criticise results.</li> </ul>	



## **GLOBAL STUDIES** MODULE OVERVIEW



Module Code	IFYGS001
Module Name	Global Studies
Programme Name	International Foundation Year
Percentage breakdown of Coursework	20%
Percentage breakdown of Exam/Test	80%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 (4 hours per week over 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week over 30 weeks)

## AIMS

This module is intended to help students understand the world around them by encouraging them to engage with key global events and issues in the 21<sup>st</sup> century. It is discovery-based and has an emphasis on effective research to support students' learning.

Students may already have knowledge and understanding of some of the themes in the syllabus but will be encouraged to look at important issues and events from different perspectives and reflect on their global impact.

## **TOPICS OF STUDY**

- ⇒ Introducing Global Studies
  - Key concerns in global studies
  - Actors in global studies
  - Key themes in global studies
- ⇒ Researching Global Events
  - Key questions to ask about global events
  - Finding appropriate sources of information
  - o Statistics about global events
  - Reviewing sources of information
- $\Rightarrow$  Global Security
  - Key concepts in global security
  - Maintaining global security
  - Threats to global security
  - The Ethics of War and Conflict

- ⇒ Global Justice
  - Organisations which maintain global justice and protect people
  - Key concerns in global justice
  - Problems with global justice systems
- $\Rightarrow$  Global Inequality
  - Key aspects of global inequality
  - Poverty and global inequality
  - Measuring global inequality
  - Resolving global inequality
  - Perspectives on global inequality
- ⇒ Theoretical Views of Global Events
  - o Traditional theories
  - o Critical theories
  - Key concepts



End of Semester 1 Test	What is Assessed?	Topics A-C
	Duration/Word Count	1 hour 40 minutes
	Total Marks	50
	Rubric	<ul> <li>⇒ 5 short answer questions (30 marks in total)</li> <li>⇒ 1 essay question from a choice of 3 (20 marks in total)</li> </ul>
	Contribution to Overall Grade	10%

Coursework	What is Assessed?	Topics A-E				
	Duration/Word Count	1250-1500 words (excluding appendices and bibliography)				
	Total Marks	100				
	Rubric	$\Rightarrow$ Single essay/report question				
	Contribution to Overall Grade	20%				

Final Examination	What is Assessed?	Topics A-F
	Duration/Word Count	2 hours 40 minutes
	Total Marks	100
	Rubric	<ul> <li>⇒ 6 short answer questions (40 marks in total)</li> <li>⇒ 2 essay questions from a choice of 4 (60 marks in total)</li> </ul>
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (10%)	Coursework (20%)	Exam (70%)	Overall
A01	<b>Knowledge &amp; Understanding</b> State information about and explain the impacts of 21 <sup>st</sup> century global events	50%	40%	40%	41%
A02	Interpretation & Application Explain ways concepts, theories and evidence support points or develop arguments about 21 <sup>st</sup> century global events	30%	30%	30%	30%
AO3	Analysis & Evaluation Separate aspects and views about 21 <sup>st</sup> century global events and explain the relationship between them. Reach a conclusion or judgement based on the arguments and evidence presented about 21 <sup>st</sup> century global events.	20%	30%	30%	29%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	$\Rightarrow$ State information about and explain the meaning of syllabus content.
Intellectual skills	<ul> <li>⇒ Apply, analyse and discuss syllabus content.</li> <li>⇒ Interpret ways in which arguments and evidence about global events are constructed and how they are supported with theories.</li> <li>⇒ Understand the need to use only valid and reliable information about syllabus content.</li> </ul>
Practical skills	<ul> <li>⇒ Write coursework and exam answers using appropriate and correct English.</li> <li>⇒ Carry out research to find valid and reliable information from trustworthy sources.</li> <li>⇒ Use appropriate generic ICT software for the presentation of work.</li> </ul>
Transferable skills	<ul> <li>⇒ Learn independently.</li> <li>⇒ Reflect on and discuss different views and perspectives.</li> <li>⇒ Objectively discuss events in global society.</li> </ul>



# MATHEMATICS (BUSINESS) MODULE OVERVIEW



Module Code	IFYMB004
Module Name	Mathematics Business
Programme Name	International Foundation Year
Percentage breakdown of Coursework	0%
Percentage breakdown of Exam/Test	100%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 (4 hours per week for 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week for 30 weeks)

## AIMS

To develop student's key knowledge, understanding, skills and application of mathematics appropriate for entry to a degree course at an NCUK University.

#### **General Aims**

- $\Rightarrow$  To develop abilities to think logically, to recognise incorrect reasoning and to express ideas clearly.
- ⇒ To develop an enthusiasm for the subject and the skills required to apply the knowledge to both the further study and application of mathematics.
- $\Rightarrow$  To develop in students an understanding of how theory and application work together.
- $\Rightarrow$  To develop students' skills in modelling and the interpretation of results.
- ⇒ To develop the necessary English mathematics vocabulary and terminology to use their mathematics knowledge effectively in an NCUK University.
- ⇒ To encourage students towards a level of independence in both the planning and organisation of their studies.
- ⇒ To assist the development of competence and confidence of the students as learners, taking responsibility for their own learning through directed reading and study.

#### **Specific Aims**

- ⇒ To revise basic skills and develop further skills in algebra.
- $\Rightarrow$  To demonstrate basic skills in trigonometry and coordinate geometry.
- ⇒ To differentiate and integrate, including the selection and use of appropriate rules and techniques, and the application of the calculus.
- $\Rightarrow$  To develop concepts in probability and statistics relevant to business planning.
- $\Rightarrow$  To be confident and competent with the operations of a scientific calculator and its use.
- $\Rightarrow$  To apply mathematical techniques to simple "real life" problems.
- ⇒ To be familiar with, and competent in, the use of technology to solve pure and applied mathematical problems.



## **TOPICS OF STUDY**

- ⇒ Linear Equations
- ⇒ Quadratic Equations, Remainder Theorem, Equation of a Circle and Inequalities
- ⇒ Binomial Expansions, Sequences and Series
- ⇒ Calculus Differentiation & Further Differentiation
- $\Rightarrow$  Introduction to Statistics
- ⇒ Correlation, Linear Regression and Time Series
- $\Rightarrow$  Financial Mathematics

- ⇒ Simple Probability
- ⇒ Indices, Exponential and Logarithmic Functions
- ⇒ Trigonometric Functions
- ⇒ Calculus Integration & Further Integration
- $\Rightarrow$  Further Probability and Set Theory
- ⇒ Probability Distributions

	What is Assessed?	Topics A-H
	Duration/Word Count	2 hours 10 minutes
Semester 1	Total Marks	100
Test	Rubric	Approximately 13 compulsory questions of varying length.
	Contribution to Overall Grade	30%

Final Examination	What is Assessed?	Topics A-O
	Duration/Word Count	2 hours 40 minutes
	Total Marks	125
	Rubric	Approximately 15 compulsory questions of varying length.
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (30%)	Exam (70%)	Overall
AO1	Knowledge & Understanding: Knowledge of mathematical techniques.	50-60%	50-60%	≈55%
A02	<b>Application and Communication:</b> Recognising the appropriate procedure and applying combinations of skills and techniques.	40-50%	40-50%	≈45%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Recognise, recall and apply specific mathematical facts, principles and techniques.</li> <li>⇒ Select, organise and present relevant information clearly and logically.</li> <li>⇒ Select and apply appropriate mathematical techniques to solving problems.</li> </ul>
Intellectual skills	<ul> <li>⇒ Apply mathematical techniques to problems from a variety of relevant discipline areas.</li> <li>⇒ Present and interpret data in tables, diagrams and graphs.</li> <li>⇒ Carry out calculations using a formula booklet and calculator.</li> <li>⇒ Give answers to an appropriate degree of accuracy (i.e. to a specified number of significant figures or decimal places).</li> <li>⇒ Discuss and interpret results obtained, including an estimate of accuracy.</li> </ul>
Practical skills	<ul> <li>⇒ Specify what data are required for a given task.</li> <li>⇒ Collect relevant data in an effective and efficient way.</li> </ul>
Transferable skills	<ul> <li>⇒ Study independently and make personal notes for problem-solving and revision purposes.</li> <li>⇒ Source and retrieve information from a variety of locations such as textbooks, websites etc.</li> <li>⇒ Select and employ problem-solving skills (description, formulation, solution/analysis, interpretation).</li> <li>⇒ Manage and present data in a variety of formats.</li> </ul>



# MATHEMATICS (ENGINEERING) MODULE OVERVIEW



Module Code	IFYME004
Module Name	Mathematics Engineering
Programme Name	International Foundation Year
Percentage breakdown of Coursework	0%
Percentage breakdown of Exam/Test	100%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 (4 hours per week for 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week for 30 weeks)

## AIMS

To develop student's key knowledge, understanding, skills and application of mathematics appropriate for entry to a degree course at an NCUK University.

#### **General Aims**

- $\Rightarrow$  To develop abilities to think logically, to recognise incorrect reasoning and to express ideas clearly.
- ⇒ To develop an enthusiasm for the subject and the skills required to apply the knowledge to both the further study and application of mathematics.
- $\Rightarrow$  To develop in students an understanding of how theory and application work together.
- $\Rightarrow$  To develop students' skills in modelling and the interpretation of results.
- ⇒ To develop the necessary English mathematics vocabulary and terminology to use their mathematics knowledge effectively in an NCUK University.
- ⇒ To encourage students towards a level of independence in both the planning and organisation of their studies.
- ⇒ To assist the development of competence and confidence of the students as learners, taking responsibility for their own learning through directed reading and study.

#### **Specific Aims**

- ⇒ To revise basic skills and develop further skills in algebra.
- $\Rightarrow$  To demonstrate basic skills in trigonometry and co-ordinate geometry.
- ⇒ To differentiate and integrate, including the selection and use of appropriate rules and techniques, and the application of calculus.
- ⇒ To solve simple separable differential equations, including the exponential decay and/or growth equation.
- $\Rightarrow$  To be confident and competent with the operations of a scientific calculator and its use.
- $\Rightarrow$  To apply mathematical techniques to simple "real life" problems.



#### **TOPICS OF STUDY**

- $\Rightarrow$  Linear Equations
- $\Rightarrow$  Simple probability
- ⇒ Quadratic Equations, Remainder Theorem, Equation of a Circle and Inequalities
- ⇒ Indices, Exponential and Logarithmic Functions
- ⇒ Binomial Expansions, Sequences and Series
- ⇒ Trigonometric Functions
- ⇒ Calculus differentiation
- $\Rightarrow$  Calculus integration

- $\Rightarrow$  Further Differentiation
- $\Rightarrow$  Functions
- ⇒ Further Trigonometry
- ⇒ Further Integration
- $\Rightarrow$  Vectors
- ⇒ Differential Equations
- ⇒ Numerical Methods
- $\Rightarrow$  The Normal Distribution

End of Semester 1	What is Assessed?	Topics A-H
	Duration/Word Count	2 hours 10 minutes
	Total Marks	100
Test	Rubric	Approximately 13 compulsory questions of varying length.
	Contribution to Overall Grade	30%

Final Examination	What is Assessed?	Topics A-P
	Duration/Word Count	2 hours 40 minutes
	Total Marks	125
	Rubric	Approximately 15 compulsory questions of varying length.
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (30%)	Exam (70%)	Overall
AO1	Knowledge & Understanding: Knowledge of mathematical techniques.	50-60%	50-60%	≈55%
A02	<b>Application and Communication:</b> Recognising the appropriate procedure and applying combinations of skills and techniques.	40-50%	40-50%	≈45%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Recognise, recall and apply specific mathematical facts, principles and techniques.</li> <li>⇒ Select, organise and present relevant information clearly and logically.</li> <li>⇒ Select and apply appropriate mathematical techniques to solving problems.</li> </ul>
Intellectual skills	<ul> <li>⇒ Apply mathematical techniques to problems from a variety of relevant discipline areas.</li> <li>⇒ Present and interpret data in tables, diagrams and graphs.</li> <li>⇒ Carry out calculations using a formula booklet and calculator.</li> <li>⇒ Give answers to an appropriate degree of accuracy (i.e. to a specified number of significant figures or decimal places).</li> <li>⇒ Discuss and interpret results obtained, including an estimate of accuracy.</li> </ul>
Practical skills	<ul> <li>⇒ Specify what data are required for a given task.</li> <li>⇒ Recognise what aspect of Mathematics is required in a practical Engineering situation.</li> </ul>
Transferable skills	<ul> <li>⇒ Study independently and make personal notes for problem-solving and revision purposes.</li> <li>⇒ Source and retrieve information from a variety of locations such as textbooks, websites etc.</li> <li>⇒ Select and employ problem-solving skills (description, formulation, solution/analysis, interpretation).</li> <li>⇒ Manage and present data in a variety of formats.</li> </ul>



# MATHEMATICS (SCIENCE) MODULE OVERVIEW



Module Code	IFYMS004
Module Name	Mathematics Science
Programme Name	International Foundation Year
Percentage breakdown of Coursework	0%
Percentage breakdown of Exam/Test	100%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 (4 hours per week for 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week for 30 weeks)

## AIMS

To develop student's key knowledge, understanding, skills and application of mathematics appropriate for entry to a degree course at an NCUK University.

#### **General Aims**

- $\Rightarrow$  To develop abilities to think logically, to recognise incorrect reasoning and to express ideas clearly.
- ⇒ To develop an enthusiasm for the subject and the skills required to apply the knowledge to both the further study and application of mathematics.
- $\Rightarrow$  To develop in students an understanding of how theory and application work together.
- $\Rightarrow$  To develop students' skills in modelling and the interpretation of results.
- ⇒ To develop the necessary English mathematics vocabulary and terminology to use their mathematics knowledge effectively in an NCUK University.
- ⇒ To encourage students towards a level of independence in both the planning and organisation of their studies.
- ⇒ To assist the development of competence and confidence of the students as learners, taking responsibility for their own learning through directed reading and study.

#### **Specific Aims**

- $\Rightarrow$  To revise basic skills and develop further skills in algebra.
- $\Rightarrow$  To demonstrate basic skills in trigonometry and coordinate geometry.
- ⇒ To differentiate and integrate, including the selection and use of appropriate rules and techniques, and the application of calculus.
- $\Rightarrow$  To develop concepts in probability and statistics relevant to scientific experiments.
- $\Rightarrow$  To be confident and competent with the operations of a scientific calculator and its use.
- $\Rightarrow$  To apply mathematical techniques to simple "real life" problems.



## **TOPICS OF STUDY**

- ⇒ Linear Equations
- ⇒ Quadratic Equations, Remainder Theorem, Equation of a Circle and Inequalities
- ⇒ Binomial Expansions, Sequences and Series
- ⇒ Calculus Differentiation & Further Differentiation
- ⇒ Statistical Methods
- ⇒ Statistical Distributions

- $\Rightarrow$  Simple Probability
- ⇒ Indices, Exponential and Logarithmic Functions
- ⇒ Trigonometric Functions
- ⇒ Calculus Integration & Further Integration
- ⇒ Further Probability and Set Theory

	What is Assessed?	Topics A-H
	Duration/Word Count	2 hours 10 minutes
Semester 1	Total Marks	100
Test	Rubric	Approximately 13 compulsory questions of varying length.
	Contribution to Overall Grade	30%

Final Examination	What is Assessed?	Topics A-M
	Duration/Word Count	2 hours 40 minutes
	Total Marks	125
	Rubric	Approximately 15 compulsory questions of varying length.
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (30%)	Exam (70%)	Overall
AO1	Knowledge & Understanding: Knowledge of mathematical techniques.	50-60%	50-60%	≈55%
A02	<b>Application and Communication:</b> Recognising the appropriate procedure and applying combinations of skills and techniques.	40-50%	40-50%	≈45%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Recognise, recall and apply specific mathematical facts, principles and techniques.</li> <li>⇒ Select, organise and present relevant information clearly and logically.</li> <li>⇒ Select and apply appropriate mathematical techniques to solving problems.</li> </ul>
Intellectual skills	<ul> <li>⇒ Apply mathematical techniques to problems from a variety of relevant discipline areas.</li> <li>⇒ Present and interpret data in tables, diagrams and graphs.</li> <li>⇒ Carry out calculations using a formula booklet and calculator.</li> <li>⇒ Give answers to an appropriate degree of accuracy (i.e. to a specified number of significant figures or decimal places).</li> <li>⇒ Discuss and interpret results obtained, including an estimate of accuracy.</li> </ul>
Practical skills	<ul> <li>⇒ Specify what data are required for a given task.</li> <li>⇒ Collect relevant data in an effective and efficient way.</li> </ul>
Transferable skills	<ul> <li>⇒ Study independently and make personal notes for problem-solving and revision purposes.</li> <li>⇒ Source and retrieve information from a variety of locations such as textbooks, websites etc.</li> <li>⇒ Select and employ problem-solving skills (description, formulation, solution/analysis, interpretation).</li> <li>⇒ Manage and present data in a variety of formats.</li> </ul>



## **PHYSICS** MODULE OVERVIEW





Module Code	IFYPH004
Module Name	Physics
Programme Name	International Foundation Year
Percentage breakdown of Coursework	20%
Percentage breakdown of Examination/Test	80%
Delivery period	The syllabus will usually be delivered over two 15-week semesters
Recommended minimum teaching hours	120 (4 hours per week over 30 weeks)
Recommended minimum independent study hours	120 (4 hours per week over 30 weeks)

### AIMS

The module aims to enable students to acquire the knowledge and understanding of physics to meet the entry requirements of NCUK Universities. Students will further develop their skills of investigation through practical experience and tutorial-based learning and will apply and practise their ICT skills in the study of physics. They will develop confidence and competence as learners, taking some personal responsibility for their own learning through directed study and reading. Students will become familiar with science-specific English language vocabulary and terminology and practise skills introduced in EAP/EAPPU/RCS lessons, together preparing them to learn effectively in an English language university.

#### **TOPICS OF STUDY**

$\Rightarrow$	Mechanics	$\Rightarrow$	Fields
$\Rightarrow$	Materials	$\Rightarrow$	Waves
$\Rightarrow$	Electricity	$\Rightarrow$	Atoms

End of Semester 1 Test	What is Assessed?	Topics A - V
	Duration/Word Count	1 hour 40 minutes
	Total Marks	50
	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total)</li> <li>⇒ 2 short answer questions (20 marks in total)</li> <li>⇒ 1 longer question from a choice of 2 (20marks in total)</li> </ul>
	Contribution to Overall Grade	10%

Coursework	What is Assessed?	Topics A-AG
	Duration/Word Count	Report of 800-1000 words (plus calculations, diagrams, references etc.)
	Total Marks	100
	Rubric	$\Rightarrow$ Laboratory Report
	Contribution to Overall Grade	20%

Final Examinatio n	What is Assessed?	Topics A - AL
	Duration/Word Count	2 hours 40 minutes
	Total Marks	100
	Rubric	<ul> <li>⇒ 10 multiple choice questions (10 marks in total)</li> <li>⇒ 3 short answer questions (30 marks in total)</li> <li>⇒ 3 longer questions from a choice of 5 (60 marks in total)</li> </ul>
	Contribution to Overall Grade	70%



	Description	End of Semester 1 Test (10%)	Coursework (20%)	Exam (70%)	Overall
A01	<b>Knowledge and Understanding:</b> Demonstrate knowledge and understanding of terminology, facts, theories and concepts related to physics.	50%	~	50%	40%
AO2	Handling and Evaluating Information: Manipulate data accurately and use numerical and other information to identify patterns and trends. Give reasoned explanations for identified patterns and relationships.	50%	~	50%	40%
AO3	<b>Practical and Investigative Skills:</b> Demonstrate the ability to plan and carry out practical work, accurately collect and record results, and analyse and interpret data to reach a conclusion.	~	100%	~	20%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	<ul> <li>⇒ Describe, explain and interpret phenomena and effects covered in the syllabus in terms of physical principles and concepts.</li> <li>⇒ Discuss the significance of physical concepts and experimental results.</li> </ul>
Intellectual skills	<ul> <li>⇒ Present and interpret data as text or in tables, diagrams and graphs in appropriate and correct English.</li> <li>⇒ Carry out relevant calculations, giving units where appropriate.</li> <li>⇒ Use appropriate software in the analysis of data and presentation of findings.</li> </ul>
Practical skills	<ul> <li>⇒ Plan experimental activities, selecting appropriate techniques.</li> <li>⇒ Carry out laboratory experiments safely.</li> <li>⇒ Make observations and measurements with appropriate precision and record these methodically.</li> <li>⇒ Interpret and discuss experimental results.</li> </ul>
Transferable skills	<ul> <li>⇒ Use and reference information from a variety of English language sources such as texts and the internet.</li> <li>⇒ Study independently and make personal notes for revision purposes.</li> <li>⇒ Write clear and concise reports in appropriate scientific English, using text, tables and graphs.</li> </ul>

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## SOCIOLOGY MODULE OVERVIEW





Module Code	IFYSC001
Module Name	Sociology
Programme Name	International Foundation Year
Percentage breakdown of Coursework	20%
Percentage breakdown of Exam/Test	80%
Delivery period	The syllabus will usually be delivered over two 15 week semesters
Recommended minimum teaching hours	120 hours (4 hours per week over 30 weeks)
Recommended minimum independent study hours	120 hours (4 hours per week over 30 weeks)

### AIMS

This module aims to introduce students to key issues in sociology. It will enable students to understand why sociology is important and how sociologists explain and generate evidence to support the claims they make. The syllabus is discovery-based. Students will be expected to undertake secondary research, review data, and look at the topics from various perspectives.

## **TOPICS OF STUDY**

- ⇒ Introducing Sociology
  - Key concepts in sociology
  - Key aspects of societies in late 20th and 21st centuries
- $\Rightarrow$  Identity
  - Sources of identity
  - o Impacts of identity on life chances
  - Impacts of culture and sub-culture on identity
  - Gender and identity
  - o Race/Ethnicity and identity
  - Sexual orientation, age, religion and disability and identity
- ⇒ Global Social Challenges
  - o Globalisation
  - $\circ \quad \text{Global inequality} \\$
  - Global social phenomena

- $\Rightarrow$  Data in Society
  - Collecting data
    - Research design
    - Research theories
- $\Rightarrow$  The Family
  - Key concepts
  - Agencies of socialisation: roles and impacts
  - Purposes of social control
  - o Family diversity
  - Problems which affect people who live in families
  - Sociological explanations of the family
- $\Rightarrow$  Crime Global and National
  - Key concepts
  - Types of crime and deviance
  - $\circ$  Patterns of crime
  - o Management of crime and deviance
  - Theories of crime and deviance
  - o Global crime



End of Semester 1 Test	What is Assessed?	Topics A-C
	Duration/Word Count	1 hour 40 minutes
	Total Marks	50
	Rubric	<ul> <li>⇒ 5 short answer questions (20 marks in total)</li> <li>⇒ 2 essay questions from a choice of 3 (30 marks in total)</li> </ul>
	Contribution to Overall Grade	10%

Coursework	What is Assessed?	Topics A-E				
	Duration/Word Count	1250-1500 words (excluding appendices and bibliography)				
	Total Marks	100				
	Rubric	$\Rightarrow$ Single essay/report question				
	Contribution to Overall Grade	20%				

Final Examination	What is Assessed?	Topics A – F		
	Duration/Word Count	2 hours 40 mins		
	Total Marks	100		
	Rubric	<ul> <li>⇒ 6 short answer questions (40 marks in total)</li> <li>⇒ 2 essay questions from a choice of 4 (60 marks in total)</li> </ul>		
	Contribution to Overall Grade	70%		



	Description	End of Semester 1 Test (10%)	Coursework (20%)	Exam (70%)	Overall
A01	<b>Knowledge &amp; Understanding:</b> State and explain sociological concepts, theories, evidence, research methods and findings about social phenomena, including key aspects of late 20 <sup>th</sup> and 21 <sup>st</sup> century societies.	50%	40%	40%	41%
AO2	<b>Interpretation &amp; Application:</b> Use sociological concepts, theories, evidence and research methods to show how sociologists explain social phenomena, including key aspects of late 20 <sup>th</sup> and 21 <sup>st</sup> century societies.	30%	30%	30%	30%
A03	<b>Analysis:</b> Separate sociological views about social phenomena, including key aspects of late 20 <sup>th</sup> and 21 <sup>st</sup> century societies and explain and evidence the relationship between them. <b>Evaluation:</b> Reach a conclusion/judgement about the strengths and limitations of sociological concepts, theories, evidence and research methods based on sociological arguments and evidence presented.	20%	30%	30%	29%

## **GENERAL LEARNING OUTCOMES**

On successful completion of this module, a student will be able to:

Knowledge and understanding	$\Rightarrow$ State information about and explain the meaning of syllabus content.	
Intellectual skills	<ul> <li>⇒ Apply, analyse and discuss syllabus content.</li> <li>⇒ Interpret ways in which arguments and evidence in sociology are constructed and how they are supported with theories.</li> <li>⇒ Understand need to use only valid and reliable information about syllabus content.</li> </ul>	
Practical skills	<ul> <li>⇒ Write coursework and exam answers using appropriate and correct English.</li> <li>⇒ Carry out research to find valid and reliable information from trustworthy sources.</li> <li>⇒ Use appropriate generic ICT software for the presentation of work.</li> </ul>	
Transferable skills	rable skills       ⇒ Learn independently.         ⇒ Reflect on and discuss different views and perspectives.         ⇒ Write reports and essays.         ⇒ Objectively discuss events in global society.	

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