

## **CURRICULUM INTENT: UFP PATHWAYS and SUPPORT CURRICULUM**

The University Foundation Programme (UFP) is a one-year preparatory course that aims to provide international students with the academic and language skills necessary to succeed in their chosen undergraduate degree programme at a UK university. The UFP curriculum is designed to offer a comprehensive and challenging learning experience that prepares students for the academic demands of university study.

The UFP is typically aimed at students who have achieved a minimum level of English language proficiency, usually an IELTS score of 5.5.

NLGS offers a tailored and customized curriculum for its University Foundation Programme (UFP) that has been accredited by OCN London. This means that the UFP program has been developed by NLGS to meet the specific needs of its students and has been rigorously assessed and approved by OCD London to ensure that it meets the required standards of quality and academic rigor.

By offering a bespoke curriculum, NLGS is able to provide its UFP students with a learning experience that is designed to cater to their individual academic and personal development needs. This curriculum is flexible, allowing for adaptation and customization to meet the needs of each student, while ensuring that it covers all the essential subjects and skills necessary for successful progression to undergraduate study.

The accreditation of the UFP by OCD London is an assurance to students that the program has been developed and delivered to the highest standards of quality and academic rigor. This accreditation also ensures that the UFP program meets the necessary requirements for admission to UK universities, providing a seamless progression pathway for NLGS students to undergraduate study in the UK.

The UFP curriculum is structured around a range of modules that are designed to develop key skills in academic writing, research, critical thinking, and subject-specific knowledge. These modules are delivered through a combination of lectures, presentations, and practical sessions, and field trips with an emphasis on active and collaborative learning.

### **The UFP curriculum is informed by the following key principles:**

#### **Academic rigour:**

The UFP curriculum is designed to be academically rigorous, challenging students to develop the skills and knowledge necessary to succeed at university. This includes developing critical thinking skills, engaging with complex academic concepts, and producing high-quality written work.

#### **Subject-specific focus:**

The UFP curriculum is tailored to the requirements of specific degree programmes, providing students with subject-specific knowledge and skills that will be essential for success in their chosen field.

#### **Language proficiency:**

The UFP curriculum places a strong emphasis on language proficiency, with a focus on developing students' English language skills to the level required for university study.

#### **Research skills:**

The UFP curriculum is designed to develop students' research skills, including the ability to locate, evaluate and use sources effectively, and to produce well-researched and evidenced-based arguments.

**Supportive learning environment:**

The UFP curriculum is delivered in a supportive learning environment, with small class sizes and personalised support from experienced teachers and tutors. This enables students to receive individualised feedback and support as they develop their skills and knowledge.

Overall, the UFP curriculum is designed to provide students with the academic and language skills necessary to succeed in their chosen undergraduate degree programme at a UK university. Through a combination of subject-specific modules, language development, and research skills training, the UFP curriculum offers a challenging and rewarding learning experience that prepares students for the demands of higher education.

**CURRICULUM IMPLEMENTATION: UFP PATHWAYS and SUPPORT CURRICULUM**

The implementation of the University Foundation Programme (UFP) curriculum is crucial to the success of the programme, ensuring that students receive the education and support they need to prepare for undergraduate study in a UK university.

**The implementation of the UFP curriculum is informed by the following key considerations:****Teaching and learning approaches:**

The UFP curriculum is delivered through a range of teaching and learning approaches, including lectures, presentations, practical sessions, and field trips as well as a one-week work experience placement. These are designed to provide students with a variety of opportunities to engage with the material and develop their skills and knowledge that will prepare them for the university degree programme of their choice.

**Assessment and feedback:**

The UFP curriculum is assessed through a range of methods, including essays, exams, presentations, and group projects. Assessment is designed to be formative, providing students with regular feedback on their progress and opportunities to improve their work.

**Personalised support:**

The UFP curriculum is delivered in a supportive learning environment, with small class sizes and personalised support from experienced subject specialist teachers and tutors. This enables students to receive individualised feedback and support as they develop their skills and knowledge.

**Subject-specific modules:**

The UFP curriculum includes subject-specific modules such as Engineering and Computer Science, Business Studies, Humanities, Social Science and Law, and Business Studies that are tailored to the requirements of specific degree programmes. These modules are designed to provide students with the knowledge and skills necessary to succeed in their chosen field.

**Language development:**

The target students for the University Foundation Programme (UFP) are international students who do not have the necessary qualifications or language proficiency to gain direct entry to a UK university undergraduate degree. This may include students who have completed their secondary education in a non-UK education system or who have completed their secondary education in the UK but do not meet the entry requirements for their chosen degree programme. Therefore, the UFP curriculum

places a strong emphasis on language development, with a focus on developing students' English language skills to the level required for university study. This is achieved through a range of language development activities, including language classes, writing workshops, and language support sessions.

**Research skills training:**

The UFP curriculum includes training in research skills, including the ability to locate, evaluate and use sources effectively, and to produce well-researched and evidenced-based arguments. This is achieved through a range of research skills training activities, including library sessions, research workshops, and individual research support.

Overall, the implementation of the UFP curriculum is designed to provide students with a high-quality, supportive, and challenging learning experience that prepares them for undergraduate study in a UK university as well as a wide range of other universities in a few other countries including the US, Canada, Australia, New Zealand, and Germany. Through a range of teaching and learning approaches, personalised support, subject-specific modules, language development, and research skills training, the UFP curriculum enables students to develop the skills and knowledge necessary for success in higher education.

	AUTUMN TERM		SPRING TERM		SUMMER TERM	TRIPS AND EVENTS
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	
	Topics	Topics	Topics	Topics	Topics	
<b>Business Studies Knowledge</b>	<p><b>Business Organisations and Structure</b></p> <p>1.1. Explain, giving appropriate examples, the range of business organisation structures within different sectors of industry.</p> <p>1.2 Analyse the purpose and activities of the main functions of different business organisations.</p> <p>1.3 Evaluate the organisational structure of different business organisations.</p>	<p><b>The Business External Environment</b></p> <p>1.1. Explain government economic objectives and policies.</p> <p>1.2. Explain the effects of the different policies on business organisations.</p> <p>2.1. Explain different types of unemployment.</p> <p>2.2. Explain the effects of unemployment on business organisations and on the economy.</p> <p>3.1. Explain different causes of inflation.</p> <p>3.2. Explain the effects of inflation on</p>	<p><b>Introduction to Marketing</b></p> <p>1.1. Evaluate the importance of the role of marketing in a particular organisation.</p> <p>2.1. Explain the features of the marketing planning process.</p> <p>3.1. Analyse with examples, how a product can be promoted to satisfy a real or perceived customer need.</p> <p>4.1. Analyse characteristics of a particular targeted market.</p> <p><b>Management and Leadership</b></p>	<p><b>Management and Leadership (cont.)</b></p> <p>4.1. Explain the characteristics of teamwork and give illustrations of teams that work effectively and less effectively.</p> <p>4.2. Explain the role of the team leader in facilitating effective teamwork.</p> <p>5.1. Explain the purpose of delegation and how to do it effectively using examples.</p> <p><b>Financial Budgeting and Analysis</b></p>	<p><b>Business Communication and Information Management</b></p> <p>1.1. Identify the range of communication methods within an organisation and with external stakeholders and explain why and where these are used. 1.2. Evaluate the different methods of communication.</p> <p>2.1. Explain the barriers that may exist within an organisation to (a) internal and (b) external communication.</p> <p>2.2. Identify solutions to improve internal and external communication.</p>	

		<p>business organisations and on the economy. 4.1. Explain the effects of international trade on business organisations.</p>	<p>1.1. Compare and contrast leadership and management using specific illustrations. 2.1. Analyse the characteristics of different styles of leadership. 3.1. Evaluate the role of management in managing change.</p>	<p>1.1. Prepare a sales and production budget. 1.2. Analyse problems when preparing a budget. 1.3. Compare and contrast possible changes in cost 2.1. Use formulae to calculate break even point. 2.2. Construct a linear break-even chart from given data, show profit and loss regions of break even chart and read off profits and loss for different sales amounts. 2.3. Analyse marginal costing as a management technique. 2.4. Explain circumstances when marginal costing would be used by management. 2.5. Carry out two marginal costing calculations. 3.1. Analyse the role of budgeting in supporting management to plan</p>	<p>3.1. Explain how different types of data, including personal data, is obtained and recorded by an organisation. 3.2. Explain the different ways in which data is used by the organisation. 3.3. Evaluate the safeguards that may exist in an organisation to protect data, in particular personal data. 4.1. Explain the current legislation that covers data protection. 4.2. Explain the key requirements an organisation has to meet to be compliant with the legislation.</p> <p><b>Business Financing</b> 1.1. Explain a variety of methods of financing assess purchase including hire purchase, leasing and leaseback, loans and bonds. 1.2. Compare and contrast the strengths and weaknesses of the different methods. 2.1. Explain a variety of methods of financing working capital including</p>	
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				<p>and control an organisation's activity.</p> <p>4.1. Use a range of sources to construct a projected budget forecast including variance.</p> <p>4.2. Calculate projected back balances including variance.</p> <p>4.3. Analyse results of budget forecast and variance</p>	<p>overdrafts, factoring and invoice discounting.</p> <p>2.2. Compare and contrast the strengths and weaknesses of the different methods.</p> <p>3.1. Explain the cost of finance and its impact on the day to day activities of the company.</p> <p>3.2. Use a cash flow technique to demonstrate the consequences to or for the company of two different scenarios e.g. high/low interest rates</p>	
<p><b>Business Studies Skills</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate knowledge of terms, concepts, theories, methods and models to show an understanding of how individuals and organisations are affected by and respond to business issues</li> <li>• Apply knowledge and understanding to various business contexts to show how individuals and organisations are affected by and respond to issues</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate knowledge of terms, concepts, theories, methods and models to show an understanding of how individuals and organisations are affected by and respond to business issues</li> <li>• Apply knowledge and understanding to various business contexts to show how individuals and organisations are affected by</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate knowledge of terms, concepts, theories, methods and models to show an understanding of how individuals and organisations are affected by and respond to business issues</li> <li>• Apply knowledge and understanding to various business contexts to show how individuals and organisations are affected by and respond to issues</li> <li>• Analyse issues within business, showing an</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate knowledge of terms, concepts, theories, methods and models to show an understanding of how individuals and organisations are affected by and respond to business issues</li> <li>• Apply knowledge and understanding to various business contexts to show how individuals and organisations are affected by and respond to issues</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate knowledge of terms, concepts, theories, methods and models to show an understanding of how individuals and organisations are affected by and respond to business issues</li> <li>• Apply knowledge and understanding to various business contexts to show how individuals and organisations are affected by and respond to issues</li> <li>• Analyse issues within business, showing an</li> </ul>	

	<ul style="list-style-type: none"> <li>Analyse issues within business, showing an understanding of the impact on individuals and organisations of external and internal influences</li> <li>Evaluate quantitative and qualitative information to make informed judgements and propose evidence-based solutions to business issues.</li> </ul>	<ul style="list-style-type: none"> <li>Analyse issues within business, showing an understanding of the impact on individuals and organisations of external and internal influences</li> <li>Evaluate quantitative and qualitative information to make informed judgements and propose evidence-based solutions to business issues.</li> </ul>	<ul style="list-style-type: none"> <li>understanding of the impact on individuals and organisations of external and internal influences</li> <li>Evaluate quantitative and qualitative information to make informed judgements and propose evidence-based solutions to business issues.</li> </ul>	<ul style="list-style-type: none"> <li>Analyse issues within business, showing an understanding of the impact on individuals and organisations of external and internal influences</li> <li>Evaluate quantitative and qualitative information to make informed judgements and propose evidence-based solutions to business issues.</li> </ul>	<ul style="list-style-type: none"> <li>understanding of the impact on individuals and organisations of external and internal influences</li> <li>Evaluate quantitative and qualitative information to make informed judgements and propose evidence-based solutions to business issues.</li> </ul>	
<b>Engineering and Computer Science Knowledge</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	
	<ul style="list-style-type: none"> <li><b>Sequential Programming</b></li> <li>Introduction to High- and Low-Level Languages</li> <li>Variables and Constants in Python</li> <li>Introduction to Algorithms</li> <li>Programming Environments</li> <li>Data Types</li> </ul>	<ul style="list-style-type: none"> <li><b>Databases</b></li> <li>Introduction to Databases</li> <li>Relational Databases</li> <li>Setup Tables</li> <li>Normalisation</li> <li>Developing Databases</li> <li>Queries</li> <li>Reports and Forms</li> <li>Final Assessment</li> <li>HTML &amp; CSS</li> </ul>	<ul style="list-style-type: none"> <li><b>Introduction to Digital Microelectronic</b></li> <li>Understand Logic Families and Logic Gates</li> <li>Understand Logic Families and Logic Gates</li> <li>Understand Combinational Logic Circuits</li> <li>Understand Sequential Logic Gates</li> </ul>	<ul style="list-style-type: none"> <li><b>Basic Electronic Skills and Measurements</b></li> <li>Understand The Systems Approach to Electronics</li> <li>Circuit Assembly Techniques</li> <li>Understand Circuit Assembly Techniques</li> <li>Understand Layout of Circuitry</li> <li>Understand Test Equipment</li> </ul>	<ul style="list-style-type: none"> <li><b>Computer Networks</b></li> <li>Introduction to the Internet</li> <li>Introduction to Networks</li> <li>Types of Networks</li> <li>Mini Assessment</li> <li>Communication Methods</li> <li>Understand Networking Devices</li> <li>Understand Modes</li> <li>Protocol Parameters of Electronic Communication</li> </ul>	

	<ul style="list-style-type: none"> <li>• Logical and Boolean Expressions</li> <li>• Case Statements</li> <li>• Iterations</li> <li>• Arrays</li> <li>• Built-in Functions</li> <li>• Translators and Compilers</li> <li>• File Handling</li> <li>• Building Solutions for a Given Problem</li> <li>• Test Plan, Testing and Evaluation</li> <li>• 2D Lists</li> <li>• Functions</li> <li>• Procedures</li> <li>• Modules</li> <li>• Mini-Project</li> <li>• Assembly Language</li> <li>• Final Assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Images – The Possibilities</li> <li>• Introduction to HTML</li> <li>• Forms</li> <li>• Introduction to CSS</li> <li>• CSS Basics</li> <li>• CSS Essentials</li> <li>• Final Assessment</li> <li>• <b>Computer Aided Design</b></li> <li>• Know how to use main menus and sub-menus</li> <li>• Know how to move and copy within two-dimensional drawings</li> <li>• Know how to generate and retrieve library symbols</li> <li>• Be able to use layers and drawing types</li> <li>• Know how to apply the concept of solid modelling</li> <li>• Final Assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Understand Analogue to Digital Converters</li> <li>• Understand Digital to Analogue Converters</li> <li>• Unit Assessment</li> <li>• <b>Engineering Materials</b></li> <li>• Understand the physical properties of materials</li> <li>• Understand the mechanical properties of materials</li> <li>• Understand the Composition</li> <li>• Understand the Properties</li> <li>• Understand the Applications</li> <li>• Common Engineering Metals and Alloys</li> <li>• Understand the Properties</li> <li>• Understand the Applications</li> <li>• Wide Range of Plastics &amp; Allied Materials</li> <li>• Project</li> </ul>		<ul style="list-style-type: none"> <li>• Understand the Theoretical Models of Networking</li> <li>• Project</li> </ul>	
<b>Engineering and Computer Science Skills</b>	<ul style="list-style-type: none"> <li>• <b>Understanding:</b></li> <li>• high-and low-level programming languages.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Understanding:</b></li> <li>• relevant technical language.</li> <li>• Understanding and using entity</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Understanding:</b></li> <li>• how to use main menus and sub-menus.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Understanding:</b></li> <li>• logic families and logic gates</li> <li>• combinational logic circuits</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Understanding and developing electronic skills such as:</b></li> <li>• the systems approach to electronics</li> </ul>	

	<ul style="list-style-type: none"> <li>• Designing algorithms for a sequential program.</li> <li>• Creating and compiling a sequential program.</li> <li>• Understanding how sequential programs meet the required specification.</li> </ul>	<p>relationship models.</p> <ul style="list-style-type: none"> <li>• Understanding the principles of normalisation.</li> <li>• Normalising a set of data to third normal form explaining and justifying the stages</li> <li>• Planning queries, reports and test data.</li> <li>• <b>Understanding</b> the purpose of HTML and CSS and the CSS selectors.</li> <li>• Incorporating styling into a web page.</li> <li>• Being able to use current HTML and CSS standards to create simple layout.</li> </ul>	<ul style="list-style-type: none"> <li>• how to move and copy within two-dimensional drawings</li> <li>• how to generate and retrieve library symbols</li> <li>• how to use layers and drawing types</li> <li>• how to apply the concept of solid modelling.</li> </ul>	<ul style="list-style-type: none"> <li>• sequential logic circuits</li> <li>• analogue to digital converters</li> <li>• digital to analogue converters.</li> <li>• <b>Understanding:</b> the physical properties of materials</li> <li>• the mechanical properties of materials</li> <li>• the composition, properties and applications of common engineering metals and their alloys</li> <li>• the properties and applications of a wide range of plastics and allied materials.</li> </ul>	<ul style="list-style-type: none"> <li>• circuit assembly techniques</li> <li>• the layout of circuitry</li> <li>• test equipment.</li> <li>• <b>Understand</b> the principles of networking computers and the associated benefits.</li> <li>• Understanding the operation and uses of modern data communication methods.</li> <li>• Understand networking devices.</li> <li>• Understand modes and protocol parameters of electronic communication.</li> <li>• Understand the theoretical models of networking.</li> </ul>	
	<p style="text-align: center;"><b>Topics</b></p> <p><b>Introduction to Primary and Secondary Sources</b> Learning outcome 1: Understand the difference between primary and secondary sources.</p>	<p style="text-align: center;"><b>Topics</b></p> <p><b>Introduction to Law</b> Learning outcome 1: Understand the difference between criminal and civil.  1.1. Explain with examples the difference</p>	<p style="text-align: center;"><b>Topics</b></p> <p><b>Introduction to Psychology</b> Learning outcome 1: Understand the approaches/perspectives to psychology.</p>	<p style="text-align: center;"><b>Topics</b></p> <p><b>Introduction to Politics</b> Learning outcome 1: Understand the role of key international political organisations. 1.1. Explain the role of at least two major</p>	<p style="text-align: center;"><b>Topics</b></p> <p><b>Ways of Living, Ways of Seeing: An Introduction to Social Anthropology</b> Learning outcome 1: Understand the nature of Social Anthropology. 1.1. Analyse the nature of Social Anthropology.</p>	



<p><b>Humanities Knowledge</b></p>	<p>1.1. Explain the difference between primary and secondary sources, giving a range of appropriate examples.</p> <p>Learning outcome 2: Interpret primary sources.</p> <p>2.1. Analyse a range of primary sources in order to develop a historical argument.</p> <p>2.2. Evaluate the relevance of the main features of the originator’s situation (e.g. gender, class, ethnicity, political stance, public role) to the interpretation of the source.</p> <p>2.3. Analyse the intended audience of the source.</p> <p>2.4. Analyse the originator’s motives for producing the source considering both implicit and explicit factors.</p> <p>2.5. Evaluate the significance of the primary source relating to its wider historical context.</p>	<p>between civil and criminal law.</p> <p>Learning outcome 2: Understand the court hierarchy in the English Legal system</p> <p>2.1. Explain the structure, function and procedures of a court showing how superior courts bind those below.</p> <p>Learning outcome 3: Understand the roles of the legal profession in the legal process.</p> <p>3.1. Compare and contrast the roles of barristers, solicitors and judges in the legal process including the impact of at least one recent reform on these professions.</p> <p>Learning outcome 4: Understand the role of lay people in the legal process.</p> <p>4.1. Evaluate the importance of the role of Magistrates and juries in the English Legal System.</p>	<p>1.1. Compare and contrast two psychological approaches/perspectives.</p> <p>Learning outcome 2: Understand the types of research methods used in psychology.</p> <p>2.1. Explain different types of research methods used in psychological research.</p> <p>Learning outcome 3: Understand the importance of ethics in research.</p> <p>3.1. Evaluate the importance of ethical issues raised within psychological research.</p>	<p>international organisations.</p> <p>Learning outcome 2: Understand the impact of recent developments in international politics.</p> <p>2.1. Analyse the impact of developments in recent international politics.</p> <p>Learning outcome 3: Understand the concept of global economic relations.</p> <p>3.1. Explain key concepts and of global economic relations.</p> <p>3.2. Compare and contrast the roles of two major economic organisations in the global economy.</p>	<p>Learning outcome 2: Understand the nature of anthropological fieldwork.</p> <p>2.1. Explain the nature of anthropological fieldwork.</p> <p>Learning outcome 3: Understand the relationship between a people’s way of living or mode of subsistence, and their perceptions and values, in the context of two societies.</p> <p>3.1. Analyse the relationship between a people’s way of living or mode of subsistence, and their perceptions and values, in the context of two societies.</p>	
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<p><b>Humanities Skills</b></p>	<p>1. Frame a purposeful question to provide focus when investigating information and/or ideas.</p> <p>2. Use a purposeful question or questions across a range of sources to include at least three types of sources e.g. books, text-books, newspapers, journals, magazines, scripts, e-books, websites and audio-visual material.</p> <p>3. Use specific reading techniques to explore specific texts, documents, data, etc (e.g. skimming, scanning, reviewing, summarising).</p>	<p>1. Understanding legal systems and branches of law.</p> <p>2. Analysing legal reasoning and principles.</p> <p>3. Evaluating ethical implications within legal frameworks.</p> <p>4. Applying legal knowledge to case studies and mock trials.</p> <p>5. Assessing the societal impact of laws and legal decisions.</p>	<p>1. Understanding key psychological theories and concepts.</p> <p>2. Analysing cognitive processes and human behaviour.</p> <p>3. Conducting psychological experiments and research.</p> <p>4. Interpreting and evaluating case studies.</p> <p>5. Reflecting on personal experiences and applying psychological principles.</p>	<p>1. Understanding political systems and ideologies.</p> <p>2. Analysing political speeches and texts.</p> <p>3. Evaluating different forms of governance.</p> <p>4. Exploring the dynamics of power and political participation.</p> <p>5. Assessing the impact of international relations and public policy.</p>	<p>1. Analysing art movements and aesthetics.</p> <p>2. Interpreting symbolic meanings in artworks.</p> <p>3. Understanding the historical and cultural contexts of art.</p> <p>4. Appreciating different artistic styles and techniques.</p> <p>5. Critically evaluating the impact of art on society.</p>	
<p><b>Maths Knowledge</b></p>	<p><b>Topics</b></p> <p><b>CALCULATIONS 1</b> Place value and rounding Adding and Subtracting Multiplying and dividing including decimals.</p> <p><b>EXPRESSIONS</b> Simplifying expressions Laws/Rules of indices Expanding and factorising linear expressions Adding, subtracting, multiplying, dividing, and simplifying algebraic fractions</p> <p><b>MEASURES AND ACCURACY</b></p>	<p><b>Topics</b></p> <p><b>HANDLING DATA 1</b> Sampling, organising data. Representing data using bar and pie charts Averages (mean, mode, median) and measures of variation (range and interquartile range-IQR)</p> <p><b>FRACTIONS, DECIMALS AND PERCENTAGES</b> Add, subtract, multiply and divide fractions Mixed numbers Equivalent fractions, decimals and percentages, Percentages of amounts</p>	<p><b>Topics</b></p> <p><b>RATIO AND PROPORTION</b> Proportion, Ratio and Percentage change</p> <p><b>FACTORS, POWERS, AND ROOTS</b> Factors and multiples, Powers and roots, Surds</p> <p><b>LINEAR EQUATIONS AND INEQUALITIES</b> Solving linear equations Solving linear inequalities.</p> <p><b>EQUATIONS AND INEQUALITIES</b> Solving linear equations Solving quadratic equations (by factorising)</p>	<p><b>Topics</b></p> <p><b>GRAPHS</b> Equation of a straight line, Graphs of linear functions, Equation of a straight line, Linear and quadratic functions, Properties of quadratic functions, Kinematic graphs.</p> <p><b>FORMULA</b> Substitute values into expressions, including with positive and negative integers Rearrange formulae to change the subject.</p> <p><b>WORKING IN 3D</b></p>	<p><b>Topics</b></p> <p><b>PYTHAGORAS AND TRIGONOMETRY</b> Pythagoras' theorem, Trigonometry 1 (Sine, Cosine and Tangent ratios), Vectors</p> <p><b>CALCULATIONS 2</b> Calculating with roots and indices, Exact calculations, Standard form.</p> <p><b>COMBINED EVENTS</b> Sets, Possibility spaces, Tree diagrams.</p> <p><b>SEQUENCES</b> Linear sequences, Finding nth term, Special sequences.</p>	<p><b>BLETCHLEY PARK – CODES AND CIPHERS</b></p>

	<p>Estimation and approximation Calculator methods Measures and accuracy.</p> <p><b>ANGLES AND POLYGONS</b> Angles and lines including angles on parallel lines Triangles and quadrilaterals Congruence and similarity Angles in polygons.</p>	<p>Convert between fractions, decimals and percentages Convert a terminating decimal to a fraction.</p> <p><b>WORKING IN 2D</b> Work with angles and bearings Find areas and perimeters of 2D shapes including composite shapes. Understand and work with transformations of 2D shapes (Translation, Reflection, Rotation and Enlargement)</p>	<p>Solving linear simultaneous equations.</p> <p><b>PROBABILITY</b> Experimental probability Calculating theoretical probabilities Mutually exclusive events, probability trees, Venn diagrams.</p>	<p>3D shapes, Plans and elevations, Volume of a prism.</p> <p><b>HANDLING DATA 2</b> Sampling, organising data Representing data using bar and pie charts Averages (mean, mode, median) and range Frequency diagrams, Average and spread, Scatter graphs and correlation, Time series.</p>	<p><b>UNITS AND PROPORTIONALITY</b> Compound units, Converting between units, Direct and inverse proportion, Growth and decay</p>	
<b>Maths Skills</b>	<p>Apply the order of operations. Round to any power of 10. Round to decimal places and significant figures. Use approximations to estimate. Find errors in estimating questions.</p> <p>Read and write numbers in words and figures and understand place value. Order decimals and negatives. Add and subtract numbers, decimals and negatives.</p>	<p>Fluency in sampling techniques, organising data.</p> <p>Representing data using bar and pie charts, finding averages (mean, mode, median) and measures of variation (range and interquartile range-IQR).</p> <p>Fluency of numbers when dealing with fractions, percentages and decimals allowing conversion and more complex problem solving.</p>	<p>Fluency in solving proportion, Ratio and Percentage change problems.</p> <p>Fluency in finding factors and multiples of numbers using factor trees, accurately applying prime factorisation and Venn-diagrams to find HCF and LCM.</p> <p>Solve simple linear equations, show inequalities on number lines, write down whole number values that satisfy an inequality.</p>	<p>Fluency in drawing graphs of equation of a straight line, Fluency in drawing graphs of equation of a straight line, quadratic functions, properties of quadratic functions, and kinematic graphs.</p> <p>Substitute values into expressions and formula</p> <p>Change the subject of formula, change the subject of formula involving factorising.</p>	<p>Fluency in drawing graphs of equation of a straight line, quadratic functions, properties of quadratic functions, and kinematic graphs,</p> <p>Effectively applying Pythagoras's theorem on right angle triangles to find missing sides, applying the trigonometric ratios (sine, cosine, and tangent – SOHCAHTOA) to find missing sides and angles.</p> <p>Write column vectors and draw vector diagrams. Add, subtract and find multiples of vectors.</p>	

	<p>Multiply and divide with integers, decimals, and negatives.</p> <p>Use notation and symbols correctly, use function machines, simplify expressions by collecting like terms, multiply together simple algebraic expressions, expand single brackets, expand and simplify expressions, expand double brackets, factorise simple expressions.</p> <p>Effectively do estimation and approximation, apply measures and accuracy.</p> <p>Find angles on parallel lines, in triangles, quadrilaterals. Identify similar and congruent triangles; find interior and exterior angles in regular polygons.</p>	<p>Developing algebra skills further to solve equations to enable a linear and quadratic graph to be drawn.</p> <p>Work out angles on parallel lines and bearings, find areas and perimeters of 2D shapes including composite shapes.</p> <p>Apply transformations of 2D shapes (Translation, Reflection, Rotation and Enlargement).</p>	<p>Solve quadratic equations by factorising.</p> <p>Solve linear simultaneous equations.</p> <p>Work out experimental probability, calculate theoretical probabilities and work with mutually exclusive events effectively.</p>	<p>Fluency in recognising 3D shapes clearly identifying prisms and pyramids.</p> <p>Fluency in drawing plans and elevations of 3D shapes</p> <p>Fluency in finding/calculating volume and surface area of 3D shapes including prisms, pyramids, cylinders, cones.</p> <p>Fluency in sampling techniques, organising data.</p> <p>Representing data using bar and pie charts, finding averages (mean, mode, median) and measures of variation (range and interquartile range-IQR)</p> <p>Fluency in using frequency diagrams, averages and spread, using scatter graphs and correlation, Time series</p>	<p>Fluency in how to select and use appropriate calculation strategies to solve increasingly complex problems, including exact calculations involving multiples of <math>\pi</math> {and surds}, use of standard form and application and interpretation of limits of accuracy.</p> <p>Fluency in using Venn-diagrams to represent sets, calculating probabilities. Fluency in using tree diagrams to solve probabilities.</p> <p>Fluency in finding the nth term formulae of linear sequences, identifying special sequences.</p> <p>Fluency in working with compound units, converting between units, skills to effectively solving problems involving direct and inverse proportions, Growth and decay.</p>	
<b>English Knowledge</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	
	IGCSE Language	IGCSE Language	IGCSE Language	IGCSE Language	IGCSE Language	

<p><b>Section A</b></p> <ul style="list-style-type: none"> <li>- Close Reading texts.</li> <li>- Paraphrasing</li> <li>-</li> </ul> <p><b>IELTS</b></p> <p><b>Academic reading</b></p> <ul style="list-style-type: none"> <li>- Close reading exercises</li> <li>- Sentence Completion</li> <li>- Skim reading techniques</li> <li>- Upgrading your vocabulary</li> </ul> <p><b>Academic writing</b></p> <ul style="list-style-type: none"> <li>- Paraphrasing</li> <li>- Graphs and diagram languages</li> <li>- Useful phrases for letter writing.</li> <li>- Double question essay</li> <li>- Personal statements and CV.</li> </ul> <p><b>Speaking</b></p> <ul style="list-style-type: none"> <li>- Speaking topic 'house'</li> <li>- Speaking using idioms</li> <li>- Phonics</li> </ul> <p><b>Listening</b></p> <ul style="list-style-type: none"> <li>- Listening tips</li> <li>- Phonics</li> </ul> <p><b>IELTS Revision plans</b></p>	<p><b>Section A</b></p> <p><b>Academic reading</b></p> <ul style="list-style-type: none"> <li>- Close reading exercises</li> <li>- Sentence Completion</li> <li>- Skim reading techniques</li> <li>- Upgrading your vocabulary</li> </ul> <p><b>Academic writing</b></p> <ul style="list-style-type: none"> <li>- Paraphrasing</li> <li>- Graphs and diagram languages</li> <li>- Useful phrases for letter writing.</li> <li>- Double question essay</li> <li>- Personal statements and CV.</li> </ul> <p><b>Speaking</b></p> <ul style="list-style-type: none"> <li>- Speaking topic 'house'</li> <li>- Speaking using idioms</li> <li>- Phonics</li> </ul> <p><b>Listening</b></p> <ul style="list-style-type: none"> <li>- Listening tips</li> <li>- Phonics</li> </ul> <p><b>IELTS Revision plans</b></p>	<p><b>Section B</b></p> <p><b>Academic reading</b></p> <ul style="list-style-type: none"> <li>- Close reading exercises</li> <li>- Sentence Completion</li> <li>- Skim reading techniques</li> <li>- Upgrading your vocabulary</li> </ul> <p><b>Academic writing</b></p> <ul style="list-style-type: none"> <li>- Paraphrasing</li> <li>- Graphs and diagram languages</li> <li>- Useful phrases for letter writing.</li> <li>- Double question essay</li> <li>- Personal statements and CV.</li> </ul> <p><b>Speaking</b></p> <ul style="list-style-type: none"> <li>- Speaking topic 'house'</li> <li>- Speaking using idioms</li> <li>- Phonics</li> </ul> <p><b>Listening</b></p> <ul style="list-style-type: none"> <li>- Listening tips</li> <li>- Phonics</li> </ul> <p><b>IELTS Revision plans</b></p>	<p><b>Section B/C</b></p> <p><b>Academic reading</b></p> <ul style="list-style-type: none"> <li>- Close reading exercises</li> <li>- Sentence Completion</li> <li>- Skim reading techniques</li> <li>- Upgrading your vocabulary</li> </ul> <p><b>Academic writing</b></p> <ul style="list-style-type: none"> <li>- Paraphrasing</li> <li>- Graphs and diagram languages</li> <li>- Useful phrases for letter writing.</li> <li>- Double question essay</li> <li>- Personal statements and CV.</li> </ul> <p><b>Speaking</b></p> <ul style="list-style-type: none"> <li>- Speaking topic 'house'</li> <li>- Speaking using idioms</li> <li>- Phonics</li> </ul> <p><b>Listening</b></p> <ul style="list-style-type: none"> <li>- Listening tips</li> <li>- Phonics</li> </ul> <p><b>IELTS Revision plans</b></p>	<p><b>Section C</b></p> <p><b>IELTS</b></p> <p><b>Academic reading</b></p> <ul style="list-style-type: none"> <li>- Close reading exercises</li> <li>- Sentence Completion</li> <li>- Skim reading techniques</li> <li>- Upgrading your vocabulary</li> </ul> <p><b>Academic writing</b></p> <ul style="list-style-type: none"> <li>- Paraphrasing</li> <li>- Graphs and diagram languages</li> <li>- Useful phrases for letter writing.</li> <li>- Double question essay</li> <li>- Personal statements and CV.</li> </ul> <p><b>Speaking</b></p> <ul style="list-style-type: none"> <li>- Speaking topic 'house'</li> <li>- Speaking using idioms</li> <li>- Phonics</li> </ul> <p><b>Listening</b></p> <ul style="list-style-type: none"> <li>- Listening tips</li> <li>- Phonics</li> </ul> <p><b>IELTS Revision plans</b></p>	<p><b>Development of Cultural Capital</b></p> <ul style="list-style-type: none"> <li>- British Museum</li> <li>- Hyde Park</li> <li>- Globe Theatre</li> <li>- RAF Museum</li> <li>- Local football match?</li> </ul> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>- Bowling</li> <li>- Restaurants</li> <li>- Top Golf</li> </ul>
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**IGCSE LANGUAGE -**

**Reading -**

**AO1** – Read and understand a variety of texts, selecting and interpreting information, ideas and perspectives.

**AO2** – Understand and analyse how writers use linguistic and structural devices to achieve their effects.

**AO3** – Explore links and connections and between writers’ ideas and perspectives, as well as how these are conveyed.

**Writing -**

**AO4** - Communicate effectively and imaginatively, adapting form, tone and register of writing for specific purposes and audiences.

**AO5** – Write clearly, using a range of vocabulary and sentence structures, with appropriate paragraphing and accurate spelling.

Grammar and punctuation.

**IELTS -**

**Academic reading**

**Academic writing**

**Speaking**

**Listening**

**OCN -**

**English Skills**

**Finding and reading information**

Frame a purposeful question to provide focus when investigating information and/ or ideas.

Use a purposeful question or questions across a range of sources to include at least three types of sources e.g books, texts books, news journals, magazines, e-books, websites and audio visual material.

Use specific reading techniques to explore specific texts, documents, data, etc, (skimming, scanning, reviewing and summarising)

Explain the purpose and effect of implied meaning in a variety of texts.

**Speaking and Listening skills**

Speak clearly and confidently which suits the situation.

Vary tone and register appropriate to audience size and composition.

Maintain eye contact to monitor response from audience.

Use suitable audio-visual sensitively, giving time for audience to absorb audio-visual material before speaking again.

Listen for and analyse main points of information from presentations on a range of topics.

Respond affirmatively to the contributions of others in discussion.

Speak at some length in response to open or evaluate questions e.g in a job interview, appraisal, tutorial or following an oral presentation.

Participate actively in discussion.

Challenge opposing views constructively.

Support your opinions with evidence.

Assess the strengths and weaknesses of own oral presentation.  
Analyse strategies for improvement.

**Essay writing**

Analyse the requirements of the question or the task.

Cover the main points, omitting irrelevant details.

Include material from own research.

Include an introduction which comments on the subject and describes the treatment of it to follow in the essay.

Balance ideas and arguments with evidence and examples

Use linking sentences in paragraphs to set the new ideas in the context of the argument and the essay as whole.

Provide a conclusion which sums up the arguments and considers the implications.

Write a detached, balanced and objective.

Write formal English avoiding emotive language and colloquialisms.

Acknowledge the work of other authors both during the essay and in a list of references.

<b>ICT Knowledge</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>	<b>Topics</b>
	<b>Modern Technologies Systems Architecture, Memory &amp; Storage</b> <ul style="list-style-type: none"> <li>• The CPU</li> <li>• Function and characteristics of the CPU</li> <li>• Memory</li> <li>• Storage</li> <li>• Assessment</li> </ul> <b>Cyber-Security Wired and Wireless Networks</b> <ul style="list-style-type: none"> <li>• The Internet</li> <li>• Local Area Networks</li> <li>• Wireless networking</li> </ul>	<b>Wider-implications-of-digital-systems Systems Software and Security</b> <ul style="list-style-type: none"> <li>• Network threats</li> <li>• Identifying and preventing vulnerabilities</li> <li>• Operating systems software</li> <li>• Utility software</li> <li>• Assessment</li> </ul>	<b>Planning-and-communication Ethical, Legal, Cultural, and Environmental Concerns</b> <ul style="list-style-type: none"> <li>• Ethical and cultural issues</li> <li>• Computer systems in the modern world</li> <li>• Legislation and privacy</li> <li>• Assessment</li> </ul> <b>Algorithms</b> <ul style="list-style-type: none"> <li>• Computational thinking</li> <li>• Searching algorithms</li> <li>• Sorting algorithms</li> <li>• Flow diagrams</li> <li>• Pseudocode</li> <li>• Interpreting, correcting and</li> </ul>	<b>Programming</b> <ul style="list-style-type: none"> <li>• Programming concepts</li> <li>• Program control flow (Sequence and selection)</li> <li>• Iteration</li> <li>• Arrays</li> <li>• Functions and procedures</li> <li>• Records and files</li> <li>• Assessment</li> </ul>	<b>Data Representation</b> <ul style="list-style-type: none"> <li>• Storage units and binary numbers</li> <li>• Binary arithmetic and hexadecimal</li> <li>• ASCII and Unicode</li> <li>• Images</li> <li>• Sound</li> <li>• Compression</li> <li>• Assessment</li> </ul>

	<ul style="list-style-type: none"> <li>• Client-server and peer-to-peer networks</li> <li>• Protocols and layers</li> <li>• Assessment</li> </ul>		<p>completing algorithms</p> <ul style="list-style-type: none"> <li>• Assessment</li> </ul>			
<b>ICT Skills</b>	<ul style="list-style-type: none"> <li>• Describe setting up and using ad hoc networks</li> <li>• Describe changes to modern teams facilitated by modern technologies: <ul style="list-style-type: none"> <li>- Based worldwide, multicultural, inclusive, in different time zones, flexible</li> </ul> </li> <li>• Describe how modern technologies can be used to manage modern teams: <ul style="list-style-type: none"> <li>- Collaboration tools, communication tools, scheduling and planning tools</li> </ul> </li> <li>• Describe how organisations use modern technologies to communicate with stakeholders: Communication platforms (website, social media, email, voice communication)</li> </ul>	<ul style="list-style-type: none"> <li>• Understand why systems are attacked</li> <li>• Describe the external threats virus, Trojan, phishing and shoulder surfing</li> <li>• Understand the internal threats of stealing or leaking information, overriding security controls and downloads from the internet and untrustworthy websites</li> <li>• Understand the impact of security breaches including data and financial loss</li> <li>• Describe user access restrictions including physical security measures and passwords</li> <li>• Understand how computers are protected with anti-virus software</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how data is shared between organisations</li> <li>• Understand the responsible use of data with respect to privacy</li> <li>• Understand the impact of manufacture, use and disposal of IT systems on the environment</li> <li>• Understand the importance of providing equal access to digital services and information</li> <li>• To understand the purpose and use of acceptable use policies</li> <li>• To understand Data protection principles</li> <li>• To understand the criminal use of computer systems including unauthorised access and modification of materials</li> </ul>	<ul style="list-style-type: none"> <li>• To understand the purpose and use of acceptable use policies</li> <li>• To understand Data protection principles</li> <li>• To understand the criminal use of computer systems including unauthorised access and modification of materials</li> </ul>	<ul style="list-style-type: none"> <li>• interpret a simple data flow diagram</li> <li>• interpret an information flow diagram</li> <li>• state the use of a flowchart</li> <li>• draw a simple flowchart to describe the steps in an activity or process</li> <li>• follow a simple flowchart to show what the output will be</li> </ul>	



	<ul style="list-style-type: none"> <li>• Describe features and uses of cloud storage including synchronisation of cloud and individual devices and availability (24/7)</li> <li>• Describe features and uses of cloud computing including online applications and collaboration tools/features</li> <li>• Describe how notifications are used in cloud and traditional systems</li> </ul>	<ul style="list-style-type: none"> <li>• Understand how backups are used to recover data</li> </ul>				
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**IMPACT: UFP PATHWAYS and SUPPORT CURRICULUM:**

The University Foundation Programme (UFP) is a valuable programme that has a significant impact on the academic and personal development of the students who choose to study one of the pathway courses that we offer. The UFP prepares students for undergraduate study at one of the 90+ universities which NLGS is affiliated with, providing them with the academic and language skills, subject-specific knowledge, and personal development necessary for success in higher education. The impact of the UFP can be seen in the following ways:

**Academic achievement:**

The UFP prepares students for undergraduate study by providing them with subject-specific knowledge and the academic skills necessary for success. As a result, UFP students often go on to achieve high grades in their undergraduate degree programmes.

**Personal development:**

The UFP provides students with opportunities to develop their personal skills and attributes, such as communication skills, critical thinking, and self-motivation. These skills are valuable not only for academic success but also for personal and professional development.

**Cultural understanding:**

The UFP provides an opportunity for international students to develop an understanding of UK culture and academic practices. This prepares them for the challenges of studying and living in a foreign country and facilitates their integration into UK university life.

Improved language skills: The UFP places a strong emphasis on language development, providing students with the opportunity to improve their English language skills. This not only prepares them for the language demands of undergraduate study but also enhances their employability and communication skills.

**Enhanced employability:**

The UFP provides students with the skills and knowledge necessary for success in higher education and the workplace. As a result, UFP graduates are highly sought after by employers, and many go on to successful careers in a wide range of fields.

**Increased access to higher education:**

The UFP provides a pathway to undergraduate study for students who may not have had the necessary qualifications or language proficiency to gain direct entry to a UK university. This increases access to higher education for a diverse range of students and promotes social mobility.

Overall, the impact of the UFP is significant and far-reaching, preparing students for success in higher education and the workplace, enhancing their personal and academic development, and promoting cultural understanding and social mobility. The UFP is a valuable programme that has the potential to transform the lives of its students and contribute to the development of a diverse and skilled workforce.