ACADEMIC GUIDE

Pearson Edexcel
International Advanced Level (IAL)

INSWORLD INSTITUTE
GLOBAL ACADEMIC EXCELLENCE

Contents

Introduction

Insworld Institute teaches Pearson Edexcel International Advanced Levels. These exams were introduced in 2013 as international alternatives to the AS and A2 examinations levels offered in the UK and are recognised by universities internationally as equivalent to UK GCE A-Levels in terms of academic rigour and student attainment.

What are International Advanced Levels?

Pearson Edexcel International AS and Advanced level qualifications are benchmarked to the standards that apply to all UK GCE A-Levels. They are produced, regulated and examined by Pearson Edexcel, one of four exam boards recognised by the UK Office of Qualifications and Examinations Regulation (Ofqual). They have been developed to be more accessible to the global learner through having a more international outlook, while maintaining the same level of academic challenge as UK GCE A-Level qualifications.

The main difference from GCE A-Levels is that Pearson Edexcel International A-Levels are modular, not linear in design. Each subject is taught in discrete modules which can be examined at different times over a student's academic programme. This means students can spread the burden and stress of exams over the duration of their course. This is less stressful and can lead to better learning and better exam results. All subjects (except Law and Art subjects) offer January and June examination windows, giving students more options when applying to local and international universities.

Other key features of Edexcel International Advanced Levels:

- Exam specifications are appropriate for teaching international learners in an international context.
- Exams are 100% externally assessed.
- IAL programmes offer a continuity of progression from Level 2 qualifications, including Edexcel International GCSE and GCSE programmes.
- IAL qualifications help students to progress progression to universities, other further education opportunities and employment.

The Pearson Edexcel International Advanced Level (IAL) Programme at Insworld is usually taught over six terms (18-22 months). However, the duration of any programme can vary depending on the student's entry qualifications and prior learning.

What are International AS qualifications?

Edexcel International AS (Advanced Subsidiary) qualifications can be awarded when a student has successfully completed half of the content of a full IAL programme. The International AS qualification can be taken as a stand-alone qualification, or can form part of a full IAL course.

What are International Advanced Levels worth?

According to independent benchmarking by UK NARIC, the UK national agency for providing information, evaluation and expert opinion on qualifications worldwide, Edexcel International Advanced Levels "can be considered comparable to the overall GCE A level standard" offered in the UK.

Who Are IAL Programmes For?

The IAL programme is for students who have completed their International GCSE programme (or equivalent) at Insworld, or elsewhere, or who have completed High School in their home country. Students should preferably be 16 years old and seriously interested in preparing for entry into university. The IAL programme is open to families residing in, or planning to move to Singapore, Singapore nationals and Permanent residents and to overseas students who meet the criteria for obtaining a Student's Pass.

What Will You Study?

Depending on your future plans and the subject you wish to study at university, you will take either three or four subjects. Any combination of subjects is possible, but certain subject combinations are recommended if you wish to study subjects such as Medicine, Engineering or Law at university.

Academic Progression

The Pearson Edexcel IAL is a recognized pathway to top universities in the UK, in Singapore and internationally. worldwide.

Entry Requirements

In addition to having completed either an International GCSE (or equivalent) programme or High School in your own country, you must fulfill our English Language entry requirement. Insworld recognizes two English Language tests, TOEFL and IELTS. To enter the IAL programme you must have a minimum of 185 in TOEFL or 5.0 in IELTS.

As an alternative you can take the Insworld English Language Entry test. Students who do not meet the required level of proficiency in English may consider taking an English for Academic Study course at Insworld in order to improve their English language skills.

Average Teacher Student Ratio: 1:12

Enrolment Period

There are 4 intakes per year in January, March, July and September.

Pearson Edexcel External Examination Course Code

IAL Subjects	Course Code		Examination Course Code		Duration of Exam
	AS Level	A Level			
Mathematics	XMA01	YMA01	Unit P1	WMA11/01	1 hr 30 min each unit
Further Mathematics	XFM01	YFM01	Unit P2	WMA12/01	
Pure Mathematics	XPM01	YPM01	Unit P3	WMA13/01	
			Unit P4	WMA14/01	
			Unit FP1	WFM01/01	
			Unit FP2	WFM02/01	
			Unit FP3	WFM03/01	
			Unit M1	WME01/01	
			Unit M2	WME02/01	
			Unit M3	WME03/01	
			Unit S1	WST01/01	
			Unit S2	WST02/01	
			Unit S3	WST03/01	
			Unit D1	WDM11/01	

IAL Subjects	Course Code		Examination Course Code		Duration of Exam
	AS Level	A Level			
Accounting	XAC11	YAC11	Unit 1	WAC11/01	3 hrs
			Unit 2	WAC12/01	3 hrs
Biology	XBI11	YBI11	Unit 1	WBI11/01	1 hr 30 min
			Unit 2	WBI12/01	1 hr 30 min
			Unit 3	WBI13/01	1 hr 20 min
			Unit 4	WBI14/01	1 hr 45 min
			Unit 5	WBI15/01	1 hr 45 min
			Unit 6	WBI16/01	1 hr 20 min
Business	XBS11	YBS11	Unit 1	WBS11/01	2 hrs
			Unit 2	WBS12/01	2 hrs
			Unit 3	WBS13/01	2 hrs
			Unit 4	WBS14/01	2 hrs
Chemistry	XCH11	YCH11	Unit 1	WCH11/01	1 hr 30 min
			Unit 2	WCH12/01	1 hr 30 min
			Unit 3	WCH13/01	1 hr 20 min
			Unit 4	WCH14/01	1 hr 45 min
			Unit 5	WCH15/01	1 hr 45 min
			Unit 6	WCH16/01	1 hr 20 min
Economics	XEC11	YEC11	Unit 1	WEC11/01	1 hr 45 min
			Unit 2	WEC12/01	1 hr 45 min
			Unit 3	WEC13/01	2 hrs
			Unit 4	WEC14/01	2 hrs
English Language	XEN01	YEN01	Unit 1	WEN01/01	1 hr 45 min
			Unit 2	WEN02/01	1 hr 45 min
			Unit 3	WEN03/01	2 hrs
			Unit 4	WEN04/01	2 hrs
History	XH101	YH101	Unit 1	WH101/01	2 hrs
			Unit 2	WH102/01	2 hrs
			Unit 3	WH103/01	2 hrs
			Unit 4	WH104/01	2 hrs
Physics	XPH11	YPH11	Unit 1	WPH11/01	1 hr 30 min
			Unit 2	WPH12/01	1 hr 30 min
			Unit 3	WPH13/01	1 hr 20 min
			Unit 4	WPH14/01	1 hr 45 min
			Unit 5	WPH15/01	1 hr 45 min
			Unit 6	WPH16/01	1 hr 20 min
Psychology	XPS01	YPS01	Unit 1	WPS01/01	1 hr 30 min
			Unit 2	WPS02/01	2 hrs
			Unit 3	WPS03/01	1 hr 30 min
			Unit 4	WPS04/01	2 hrs

IAL Subjects and Course Code

IAL ACCOUNTING

This course aims to develop an understanding of basic accounting techniques and the application of those techniques, as well as the ability to compile accounting reports for use in decision making.

Unit 1: WAC11/01
The Accounting System and Costing

Students will be assessed on their knowledge, understanding and skills of accounting systems and costing.

The unit is divided into six topics:

1. Principles of accounting and double entry book-keeping
2. Control procedures
3. Financial statements of organisations
4. Introduction to costing
5. Analysis of accounting statements
6. Social and ethical accounting.

Unit 2: WAC12/01
Corporate and Management Accounting

Students will be assessed on their knowledge and understanding of and skills in corporate and management accounting.

The unit is divided into nine topics:

1. Limited companies
2. Investment ratios
3. Statement of cash flows
4. Budgeting
5. Standard costing
6. Project appraisal
7. Break-even analysis
8. Marginal costing and absorption costing
9. Information and communication technology (ICT) in accounting.

Learning Outcome:

The aims of the International Advanced Level qualifications in Accounting enables students to:

- Demonstrate knowledge of accounting procedures and techniques and an understanding of the principles and concepts upon which they are based
- Select and apply knowledge and understanding of accounting procedures, techniques, concepts and principles to a variety of accounting situations.
- Present accounting information in an appropriate Format
- Analyse financial information, interpret financial data and information and communicate reasoning, showing understanding

- Evaluate financial and non-financial evidence and make informed recommendations and decisions

Students may develop:

- An understanding of the importance of effective accounting information systems and an awareness of their limitations through a critical consideration of current financial issues and modern business practices
- An understanding of the purposes, principles, concepts and techniques of accounting
- The transferable skills of numeracy, communication, ICT, application, presentation, interpretation, analysis and evaluation in an accounting context
- An appreciation of the effects of economic, legal, ethical, social, environmental and technological influences on accounting decisions
- A capacity for methodical and critical thought which would serve as an end, as well as a basis for further study of accounting and other subjects.

What could students go on to?

The course develops problem-solving skills and helps develop an appreciation of core business functions. As such, it serves as a useful foundation for any management or business course at higher education as well an invaluable basis from which to further one's study of accounting.

IAL BIOLOGY

Qualification overview

Pearson Edexcel International Advanced Subsidiary in Biology
This qualification consists of three externally examined units. The International Advanced Subsidiary (IAS) is the first half of the International Advanced Level qualification and consists of three IAS units, Units 1, 2 and 3. This qualification can be awarded as a discrete qualification or can contribute 50% towards the International Advanced Level qualification. The qualification will include questions that target mathematics at Level 2 or above (see Appendix 6 in the course specification: Mathematical skills and exemplifications). Overall, a minimum of 10% of the marks across the papers will be awarded for mathematics at Level 2 or above.

Pearson Edexcel International Advanced Level in Biology
This qualification consists of six externally examined units. The International Advanced Level consists of the three IAS units (Units 1, 2 and 3) plus three IA2 units (Units 4, 5 and 6). Students wishing to take the International Advanced Level must, therefore, complete all six units. The qualification will include questions that target mathematics at Level 2 or above (see Appendix 6 in the course specification: Mathematical skills and exemplifications). Overall, a minimum of 10% of the marks across the papers will be awarded for mathematics at Level 2 or above.

Course of study

The structure of these qualifications allows teachers to construct a course of study that can be taught and assessed as either:
- distinct modules of teaching and learning with related units of assessment taken at appropriate stages during the course; or
- a linear course assessed in its entirety at the end.

AS: Unit 1, 2 and 3

Unit 1: WBI11
Molecules, Diet, Transport and Health

This unit includes a consideration of molecules that are important in biology – including water, carbohydrates, lipids, proteins and nucleic acids, providing a basis for many areas of biology. This leads to the relevance of diet to health and the cardiovascular system in particular. The unit includes cell membrane transport processes, such as diffusion and active transport, proteins, enzymes and protein synthesis. This unit also includes an understanding of the genetic code and how mutations can result in disorders. Students will also consider techniques for genetic screening and the associated ethical and social issues.

In order to develop their practical skills, students should be encouraged to carry out a range of core practical experiments related to this topic. There are also opportunities to carry out additional practical work, such as investigating the structure of a mammalian heart.

There are opportunities for the development of mathematical skills in this unit, including tabulation and graphical treatment of data, concentrations and using appropriate units for physical quantities, calculation of percentage changes, and finding the initial rate of enzyme-catalysed reactions.

Topic:
- Molecules, transport and health
- Membranes, Proteins, DNA and Gene Expression

Unit 2: WBI12
Cells, Development, Biodiversity and Conservation

This unit starts with the cell as the basic unit of all living organisms, leading to cell division, formation of gametes, fertilisation and the continuity of life. The roles of stem cells, gene expression, and the influence of the environment and epigenetics on phenotypes are also included. Cell development leads to an understanding of the structure and functions of plant cells, and how plants may be exploited by humans for fibres and as sources of drugs. This unit also considers the diversity of life and how biodiversity can be measured. The unit ends with an account of reasons for changes in populations over time, and the methods used by zoos and seed banks for the conservation of endangered species and their genetic diversity.

In order to develop their practical skills, students should be encouraged to carry out a range of core practical experiments related to this topic. There are also opportunities to carry out additional practical work, such as investigating factors affecting the growth of pollen tubes. Mathematical skills.

There are opportunities for the development of mathematical skills in this unit, including using ratios, percentages and fractions, substituting values into algebraic equations, calculation of magnification, understanding the terms mean, mode and median, constructing and interpreting frequency tables, bar charts and histograms.

Topic:
- Cell structure, reproduction and development
- Plant structure and function, biodiversity and conservation

Unit 3B: WBI13
Practical Skills in Biology I

Students are expected to develop experimental skills, and a knowledge and understanding of experimental techniques, by carrying out the core practicals and other recommended practical investigations and experiments while they study Units 1 and 2. This will require them to work safely, produce valid results and present data in the most appropriate format. This unit will assess students' ability to apply their knowledge and understanding of experimental design, procedures and techniques developed throughout Units 1 and 2.

Solve problems set in practical contexts.
- Apply scientific knowledge to practical contexts.
- Comment on experimental design and evaluate scientific methods.
- Present data in appropriate ways.
- Evaluate results and draw conclusions with reference to measurement uncertainties and errors.
- Identify variables, including those that must be controlled
- Plot and interpret graphs.
- Process and analyse data using appropriate mathematical skills (see Appendix 6 in the course specification: Mathematical skills and exemplifications).
- Know and understand how to use a wide range of apparatus, materials and techniques safely, appropriate to the knowledge and understanding in this specification.
- Plan an investigation to test a hypothesis. Practical skills to be developed through teaching and learning
- Apply investigative approaches and methods to practical work.
- Use a range of practical equipment and materials safely and correctly.
- Follow written instructions.
- Make and record observations.
- Present information and data in a scientific way.
- Use appropriate software and tools to collect and process data.
- Use online and offline research skills, including websites, textbooks and other printed scientific sources of information.
- Cite sources of information correctly.
- Use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding included in this specification.

Students will be assessed on their ability to:	
Plan an experiment	- identify the apparatus required - identify the dependent and independent variables, standardised or controlled variables - describe how to measure relevant variables using the most appropriate instrument and correct measuring techniques - identify and state how to control all other relevant variables to make it a fair test - discuss whether repeat readings are appropriate - identify health and safety issues and discuss how they may be dealt with - discuss how the data collected will be used - identify possible sources of uncertainty and/or systematic error and explain how they may be reduced or eliminated - comment on the implications of biology (for example benefits/risks) and on its context (for example social/environmental/historical).

Implementation and measurements	- comment on the number of readings taken - comment on the range of measurements taken - comment on significant figures - check a reading that is inconsistent with other readings, for example a point that is not on the line of a graph - comment on how the experiment may be improved, possibly by using additional apparatus (for example to reduce errors).
Processing results	- perform calculations, using the correct number of significant figures - plot results on a graph using an appropriate scale - use the correct units throughout - comment on the relationship obtained from the graph - determine the relationship between two variables or determine a constant with the aid of a graph, for example by determining the gradient using a large triangle - suggest realistic modifications to reduce errors - suggest realistic modifications to improve the experiment discuss uncertainties, qualitatively and quantitatively.

A2: Unit 4, 5 and 6

Unit 4: WBI14

Energy, Environment, Microbiology and Immunity

This unit begins with energy capture in photosynthesis and the synthesis of organic compounds by plants, and the flow of energy in ecosystems. This is followed by a consideration of the carbon cycle and how disruption of this cycle may lead to climate change. Students will also consider changes that occur in populations, both in the short term and long term, as a result of mutation and natural selection. The unit continues with an introduction to the diversity and features of microorganisms and how hosts respond to infection by pathogens. This leads to a consideration of the role of microorganisms in decomposition of organic materials and the techniques and applications of polymerase chain reaction (PCR) and gel electrophoresis.

In order to develop their practical skills, students should be encouraged to carry out a range of core practical experiments related to this topic.

There are opportunities for the development of mathematical skills in this unit, including tabulation and graphical treatment of data, understanding the principles of sampling, exponential and logarithmic functions and the use of statistics.

Topic:

- Energy flow, ecosystems and the environment
- Microbiology, immunity and forensics

Unit 5: WBI15
Respiration, Internal Environment, Coordination and Gene Technology

Following on from energy and the environment in Unit 4, this unit starts by considering energy within organisms and how energy is made available for processes, including muscle contraction. There are further details of some of the topics in AS, including coordination of the heartbeat. Students will also consider some aspects of maintenance of the internal environment, with specific references to kidney function and the mode of action of hormones. This leads on to the topic of coordination in mammals and in flowering plants, the effects of drugs on the nervous system and how modern techniques of gene technology are used for the production of drugs. Modern aspects of gene technology, including the use of microarrays, provide a foundation for further study in this area.

In order to develop their practical skills, students should be encouraged to carry out a range of core practical experiments related to this topic. There are also opportunities to carry out additional practical work, such as investigating habituation. There are opportunities for the development of mathematics.

There are opportunities for the development of mathematical skills in this unit, including using ratios, constructing and interpreting frequency tables, bar charts and histograms and the use of statistical tests.

Topic:

- Respiration muscles and the internal environment
- Coordination, response and gene technology

Unit 6: WBI16
Practical Skills in Biology II

Students are expected to develop a wide knowledge and understanding of experimental procedures and techniques throughout the whole of their International Advanced Level course. They are expected to carry out the core practicals and other recommended practical investigations and experiments while they study Units 4 and 5. Students are expected to become aware of how these techniques and procedures might be used to investigate interesting biological questions. This unit will assess students' ability to apply their knowledge and understanding of experimental procedures and techniques, and their ability to plan whole investigations, analyse data and to evaluate their results and experimental methodology.

Practical skills identified for assessment

- Solve problems set in practical contexts.
- Apply scientific knowledge to practical contexts.
- Comment on experimental design and evaluate scientific methods.
- Present data in appropriate ways.
- Evaluate results and draw conclusions with reference to measurement uncertainties and errors.
- Identify variables, including those that must be controlled.
- Plot and interpret graphs.
- Process and analyse data using appropriate mathematical skills (see Appendix 6 in the course specification: Mathematical skills and exemplifications).
- Know and understand how to use a wide range of apparatus, materials and techniques safely, appropriate to the knowledge and understanding in this specification.
- Plan an investigation to test a hypothesis.

Practical skills to be developed through teaching and learning

- Apply investigative approaches and methods to practical work.
- Use a range of practical equipment and materials safely and correctly.
- Follow written instructions.
- Make and record observations.
- Present information and data in a scientific way.
- Use appropriate software and tools to collect and process data.
- Use online and offline research skills, including websites, textbooks and other printed scientific sources of information.
- Cite sources of information correctly.
- Use a wide range of experimental and practical instruments, equipment and techniques appropriate to the knowledge and understanding in this specification.

Students will be assessed on their ability to:	
Plan an experiment	- identify the most appropriate apparatus, giving details. Apparatus may include the range and resolution of instruments and/or relevant dimensions of apparatus (for example the area of a quadrat used for an ecological investigation) - formulate a null hypothesis - identify the dependent and independent variables, standardised or controlled variables - discuss calibration of instruments, for example whether a meter reads zero before measurements are made - describe how to measure relevant variables using the most appropriate instrument(s) and techniques - identify and state how to control all other relevant variables to make it a fair test - discuss whether repeat readings are appropriate - identify health and safety issues and discuss how they may be dealt with - identify any ethical issues involved with the use of living organisms - discuss how the data collected will be used.
Implementation and measurements	- comment on how the experiment could have been improved, possibly by using additional apparatus (for example to reduce errors) - comment on the number of readings taken - comment on the range of measurements taken - comment on significant figures – students may be required to identify and/or round up any incorrect figures in a table of results - identify and/or amend units that are incorrect - identify and check a reading that is inconsistent with other readings, for example a point that is not on the line of a graph
Processing results	- explain how data should be tabulated, with appropriate units - perform calculations, using the correct number of significant figures - plot results on a graph using an appropriate scale and units – the graph could be logarithmic in nature - use the correct units throughout

	- comment on the trend/pattern obtained - determine the relationship between two variables or determine a constant with the aid of the graph, for example by determining the gradient using a large triangle - suggest realistic modifications to reduce errors - suggest realistic modifications to improve the experiment.

Learning Outcome:
The aims of the IAL in Biology enable students to:
- develop their interest in, and enthusiasm for, biology including developing an interest in further study and careers in the subject
- appreciate how society makes decisions about biology-related issues and how biology contributes to the success of the economy and society
- develop and demonstrate a deeper appreciation of the skills, knowledge and understanding of *How Science Works*
- develop essential knowledge and understanding of different areas of biology and how they relate to each other.
- recognise, recall and show understanding of scientific knowledge
- select, organise and communicate relevant information in a variety of forms
- analyse and evaluate scientific knowledge and processes
- apply scientific knowledge and processes to unfamiliar situations
- assess the validity, reliability and credibility of scientific information.

What could I go on to?
The course provides an excellent foundation for study of a wide range of sciences including biology, environmental science, life sciences, medicine, nursing, dentistry, psychology and pharmacy.

IAL BUSINESS

An IAL in Business will give students enhanced career choice and progression opportunities. The specification may be co-taught by two or more teachers. Guidance will be given within the specification on possible ways of teaching topic areas. A variety of assessment techniques will be used – supported multiple-choice questions, data-response questions, case studies and a decision-making report.

The qualification is built around a core unit with an enterprise theme, to enable students to think of a new business idea and how they might research and develop it. Students will think about how their learning applies to their own business idea. The qualification will introduce students to international business, equipping them either to work in or to manage a business in an international context.

Unit 1: WBS11/01
Marketing and People

In this unit, students are introduced to the market, explore the marketing and people functions and investigate entrepreneurs and business start-up. This unit enables students to understand how businesses identify opportunities and to explore how businesses focus on developing a competitive advantage through interacting with customers. Students develop an understanding of how businesses need to adapt their marketing to operate in a dynamic business environment. It also considers people, exploring how businesses recruit, train, organise and motivate employees, as well as the role of enterprising individuals and leaders. Students should investigate different types and sizes of organisation in various business sectors and environments, and in local, national and global contexts. Students need to have acquired competence in quantitative skills that are relevant to this unit.

- Meeting Customer Needs
- The Market
- Marketing Mix and Strategy
- Managing People
- Entrepreneurs and Leaders

Unit 2: WBS12/01
Managing Business Activities

In this unit, students explore the finance and operations functions, and investigate external influences on business. This unit enables students to develop an understanding of raising and managing finance and measuring business performance. It outlines the importance of using resources efficiently within a business to ensure that goods or services can be delivered effectively and efficiently, and to a high quality. Students also consider the external influences that have an impact on businesses, including economic and legal factors. Students should investigate different types and sizes of organisation in various business sectors and environments, and in local, national and global contexts. Students need to have acquired competence in quantitative skills relevant to this unit.

For this unit, students will also need to be able to apply the accounting ratios given in Appendix 9 in the course specification: Financial statements and accounting ratios. These ratios will not be supplied in the examination.

- Planning a business and raising finance
- Financial planning
- Managing Finance
- Resource Management
- External influences

Unit 3: WBS13/01
Business decisions and Strategy

In this unit, students develop their understanding of the concepts introduced in Units 1 and 2 and explore influences on business strategy and decision making. This unit moves from functions to strategy, enabling students to develop their understanding of the core concepts and to take a strategic view of business opportunities and issues. Students analyse corporate objectives and strategy against financial and non-financial performance measures and how businesses grow and develop an understanding of the impact of external influences. The unit also covers the causes and effects of change and how businesses mitigate risk and uncertainty. Students should investigate different types and sizes of organisation in various business sectors and environments, and in local, national and global contexts. Students need to have acquired competence in quantitative skills that are relevant to this unit. For this unit, students will also need to be able to apply the accounting ratios given in Appendix 9 in the course specification: Financial statements and accounting ratios. These ratios will not be supplied in the examination.

- Business objectives and strategy
- Business growth
- Decision-making techniques
- Influences on business decisions
- Assessing competitiveness
- Managing change

Unit 4: WBS14/01
Global Business

In this unit, students develop their understanding of the concepts introduced in Units 1, 2 and 3, and explore business activity in a global context. Students investigate businesses that trade on a global scale and explore their reasons for doing so. Students develop an understanding of the globally competitive environment and consider the ethical and moral dimensions of global business activities. In this unit, it is important to note that the impacts of globalisation and global markets covered in 4.3.1 and 4.3.2 will need to be understood in relation to businesses. Students should investigate different types and sizes of organisation in various business sectors and environments. Students need to have acquired competence in quantitative skills relevant to this unit.

- Globalisation
- Global markets and business expansion
- Global marketing
- Global industries and companies (Multinational corporations)

Learning Outcome:

The aims of the International Advanced Level qualifications in Business are to enable students to:

- develop an interest in and enthusiasm for the study of business
- gain a holistic understanding of business
- develop a critical understanding of organisations and their ability to meet society's needs and wants
- understand that business behaviour can be studied from a range of perspectives
- generate relevant solutions to business problems and issues
- be aware of the ethical dilemmas and responsibilities faced by organisations and individuals
- acquire a range of relevant business and generic skills, including decision making, problem solving, the challenging of assumptions and the quantification and management of information.

These IAL qualifications in Business require students to:

- investigate different types of businesses that develop and sell products and/or services in a local, national or international marketplace. At IA2 level, students will study the ways in which companies make decisions, and grow and operate in the global marketplace
- be able to analyse numerical information and understand how it assists the decision-making process of a business
- understand how a business is managed, how its performance is analysed and
- how it could trade internationally
- use both qualitative and quantitative methods to make justifiable decisions.

IAL CHEMISTRY

Qualification overview

Pearson Edexcel International Advanced Subsidiary in Chemistry

This qualification consists of three externally examined units. The International Advanced Subsidiary (IAS) is the first half of the International Advanced Level qualification and consists of three IAS units – Units 1, 2 and 3. This qualification can be awarded as a discrete qualification or can contribute 50% towards the International Advanced Level qualification. The qualification will include questions that target mathematics at Level 2 or above. Overall, a minimum of 20% of the marks across the papers will be awarded for mathematics at Level 2 or above.

Pearson Edexcel International Advanced Level in Chemistry

This qualification consists of six externally examined units. The International Advanced Level consists of the three IAS units (Units 1, 2 and 3) plus three IA2 units (Units 4, 5 and 6). Students wishing to take the International Advanced Level must, therefore, complete all six units. The qualification will include questions that target mathematics at Level 2 or above (see Appendix 6 in the course specification: Mathematical skills and exemplifications). Overall, a minimum of 20% of the marks across the papers will be awarded for mathematics at Level 2 or above.

Course of study

The structure of these qualifications allows teachers to construct a course of study that can be taught and assessed as either:

- distinct modules of teaching and learning with related units of assessment taken at appropriate stages during the course; or
- a linear course assessed in its entirety at the end.

Unit 1: WCH11/01
Structure, Bonding and Introduction to Organic Chemistry

This unit gives students opportunities to develop the basic chemical skills of writing formulae and equations and calculating chemical quantities. The study of atomic structure includes a description of s, p, and d orbitals and shows how electronic configurations can account for the arrangement of elements in the Periodic Table. This leads to an appreciation of one of the central features of chemistry: the explanation of the properties of elements and the patterns in the Periodic Table in terms of atomic structure. An understanding of the electronic structure of atoms leads to an appreciation of the three types of strong chemical bonding: ionic, covalent and metallic. Following from this, shapes of molecules can then be considered. The basic principles of organic chemistry are covered and students study alkanes and alkenes and will begin to develop a mechanistic approach to organic chemistry.

Chemistry in action

The study of atomic structure gives some insight into the methods that scientists use to study the structure of atoms. This leads to the introduction of the mass spectrometer and its importance in sensitive methods of analysis in areas such as space research, medical research and diagnosis, in detecting drugs in sport and in environmental monitoring. Chemists set up theoretical models and gain insight by comparing real and theoretical properties of chemicals. This is illustrated in the unit by considering the evidence for the different kinds of chemical bonding. Electron-pair repulsion theory is also used to show how chemists can develop theories and use them to make predictions. Students start to use the conventions for mechanisms in organic chemistry as a way to represent the movement of electrons in reactions.

Practical skills

Students can start with simple test-tube reactions to illustrate a range of chemical equations. They can then build up to carrying out practical work that can be used to find reaction quantities, covered in the first core practical on molar volume. Simple practical work can be used to investigate the properties of substances with different types of bonding. The introduction to organic chemistry shows how chemists work safely with hazardous chemicals by managing risks. A number of possible practicals can be used to explore the chemistry of alkenes.

Mathematical skills

There are opportunities for the development of mathematical skills in this unit. This includes converting between units such as cm③ and dm③, using standard form with the Avogadro constant, rearranging formulae for calculating moles in solids and in solutions and the ideal gas equation, calculating atom economy, dealing with percentage errors, calculating a relative atomic mass from isotopic composition data, using simple probability to calculate the peak heights for the mass spectrum of molecules such as chlorine, using logarithms to compare successive ionisation energies for an element, representing shapes of molecules with suitable sketches, plotting data to investigate trends in boiling temperatures of alkanes and calculating the yield of a reaction.

Topic:

1. Formulae, Equations and Amount of Substance
2. Atomic Structure and the Periodic Table
3. Bonding and Structure
   Covalent Bonding
   Shapes of Molecules
   Metallic Bonding
4. Introductory Organic Chemistry and Alkanes
5. Alkenes

Unit 2: WCH12/01
Energetics, Group Chemistry, Halogenoalkanes and Alcohols

This unit develops the treatment of chemical bonding by introducing intermediate types of bonding and by exploring the nature and effects of intermolecular forces. Study of the Periodic Table is extended to cover the chemistry of Groups 1, 2 and 7, where ideas about redox reactions are applied to the reactions of halogens and their compounds. The study of energetics in chemistry is of theoretical and practical importance.
In this unit, students learn how to define, measure and calculate enthalpy changes. They will see how a study of enthalpy changes helps chemists to understand chemical bonding. The unit also develops an understanding – mostly at a qualitative level – of the ways in which chemists can control the rate, direction and extent of chemical change in reactions. The organic chemistry in this unit covers halogenoalkanes and alcohols and explores the mechanisms of selected reactions. The study of spectroscopy gives further examples of the importance of accurate and sensitive methods of analysis, which can be applied to study chemical changes but also to detect drugs such as ethanol.

The use of models in chemistry is illustrated by the way in which the Maxwell-Boltzmann distribution and collision theory can account for the effects of temperature on the rates of chemical reactions. The unit shows how chemists can study chemical changes at an atomic level and propose mechanisms to account for their observations. The study of rates and equilibria shows the contribution that chemistry can make to a more sustainable economy by redeveloping manufacturing processes to make them more efficient, less hazardous and less polluting.

Again, students can begin their practical work for this unit with simple reactions, in polystyrene cups, to investigate energy changes in chemical reactions. This leads to the first core practical in this unit. Inorganic chemistry and basic redox reactions can also be explored with simple test-tube reactions. The techniques of volumetric analysis are introduced in this unit, with two core practicals to develop competence in this key skill. The effect of temperature, concentration and surface area on the rate of a reaction can be explored through a variety of reactions, and also forms part of the first core practical in organic chemistry. Further core practicals in organic chemistry are used to develop students' skills in using glassware and techniques such as reflux, use of a separating funnel and distillation. The final core practical considers qualitative analysis for ions and organic functional groups.

There are opportunities for the development of mathematical skills in this unit. This includes plotting and extrapolating graphs of temperature rise against time for displacement reactions, calculating enthalpy changes in J and kJ mol-1, using algebra to solve Hess's Law problems, calculating enthalpy changes using bond enthalpies and evaluating experimental results in terms of measurement uncertainties and systematic errors in the context of measuring energy changes and in titrations. Also, calculating oxidation numbers within a complex system, balancing equations for redox reactions by combining ionic half-equations, calculating rates from reaction time, plotting graphs

and having an appreciation of the graph for a Maxwell-Boltzmann distribution, and deriving an algebraic expression for the equilibrium constant. Further mathematical skills can be developed in analysing mass and infrared spectra.

Topic:

1. Energetics
2. Intermolecular Forces
3. Redox Chemistry and Groups 1, 2 and 7
    - Redox Chemistry
    - The elements of Groups 1 and 2
    - Inorganic chemistry of group 7
4. Introduction to Kinetics and Equilibria
    - Kinetics
    - Equilibria
5. Organic Chemistry; Halogenoalkanes, Alcohols and Spectra
    - General Principles
    - Halogenoalkanes
    - Alcohols, Mass spectra and IR

Unit 3: WCH13/01
Practical Skills in Chemistry I

This unit consists of a written practical examination, covering the skills and techniques developed during practical work in Units 1 and 2. Although the unit content contains eight core practical activities, the examination will not be limited to recall of these core practicals but may include questions where students are expected to apply their knowledge to new practical situations. Students should, therefore, develop their practical skills by completing a range of different practicals that require a variety of different techniques. As students carry out practical activities, they should be encouraged to write laboratory reports using appropriate scientific, technical and mathematical language, conventions and symbols.

Students are expected to develop experimental skills and a knowledge and understanding of the necessary techniques by carrying out a range of practicals while they study Units 1 and 2. This unit will assess students' knowledge and understanding of the practical procedures and techniques they develop. To prepare for assessment of this unit, centres should give students opportunities to carry out practical activities, collect and analyse data, and draw conclusions. Students should at the least carry out the eight core practicals in class.

By completing these practicals students will be able to:

- follow and interpret experimental instructions, covering the full range of laboratory exercises set throughout the course, with minimal help from the teacher
- always work with interest and enthusiasm in the laboratory, completing most laboratory exercises in the time allocated
- manipulate apparatus, use chemicals, carry out all common laboratory procedures and use data logging (where appropriate) with the highest level of skill that may be reasonably expected at this level
- work sensibly and safely in the laboratory, paying due regard to health and safety requirements without the need for reminders from the teacher
- gain accurate and consistent results in quantitative exercises, make most of the expected observations in qualitative exercises and obtain products in preparations of high yield and purity.

Independent thinking in a practical context	- Solve problems set in a practical context. - Apply scientific knowledge to practical contexts.
Use and application of scientific methods and practices	- Identify and state how to control variables to improve experimental validity. - Present data in appropriate ways. - Evaluate results and draw conclusions. - Appreciate measurement uncertainties and errors. - Comment on the method for an experiment.
Numeracy and the application of mathematical concepts in a practical context	- Plot and interpret graphs. - Process and analyse data using appropriate mathematical skills. - Use appropriate numbers of significant figures based on the experimental data. - Consider the accuracy and precision of data.
Use of apparatus and equipment	- Recognise a range of laboratory apparatus and select appropriate apparatus for a particular scenario. - Understand how to use a range of apparatus and techniques appropriate to the knowledge and understanding included in this specification. - Consider the range and resolution of apparatus. - Identify health and safety issues and discuss how these may be dealt with.

Unit 4: WCH14/01
Rates, Equilibria and Further Organic Chemistry

In this unit, students make a quantitative study of chemical kinetics and extend their study of organic reaction mechanisms. The topics of entropy and equilibria show how chemists are able to predict quantitatively the direction and extent of chemical change. The unit tests the equilibrium law by showing the degree to which it can accurately predict changes during acid-base reactions, notably the changes to pH during titrations. The organic chemistry in this unit covers carbonyl compounds, and carboxylic acids and their derivatives. Students are required to apply their knowledge gained in Units 1 and 2, to all aspects of this unit. This includes nomenclature, ideas of isomerism, bond polarity and bond enthalpy, reagents and reaction conditions, reaction types and mechanisms. Students are also expected to use formulae and balanced equations and calculate chemical quantities.

This unit shows how the principles of kinetics and thermodynamics can help to identify optimal conditions for the manufacture of chemicals. The study of entropy links thermodynamics and equilibrium and shows how chemists' approach fundamental questions about the stability of chemicals and the direction of chemical change. The historical development of theories explaining acids and bases shows how scientific ideas change as a result of new evidence and fresh thinking. The study of buffer solutions shows the importance of equilibrium systems in living cells, in medicines, in foods and in the natural environment. The two broad areas of application of chemistry are synthesis and analysis. In this unit, synthesis is illustrated by reactions of carbonyl compounds (notably with cyanide ions) and the production of esters for use as solvents, flavourings and perfumes. The main analytical technique featured is nuclear magnetic resonance (NMR), including coverage of magnetic resonance imaging.

Through practical work, students will learn about the methods used to measure reaction rates. They will collect data, analyse it and interpret the results. They then see how knowledge of rate equations and other evidence can enable chemists to propose models to describe the mechanisms of reactions. Simple practical work can be used to investigate equilibrium systems. Students can develop their skill at volumetric analysis, with a number of titration activities as part of their exploration of acid-base equilibria. Although the organic section of the unit contains no core practical activities, students would be expected to encounter simple test-tube reactions for organic functional groups – such as the use of Benedict's or Tollens' reagents. There are also opportunities to undertake synthetic reactions, for example to make and purify an ester.

There are opportunities for the development of mathematical skills in this unit. This includes plotting and justifying the shapes of rate-concentration and concentration-time graphs, calculating the half-life of a reaction, calculating the activation energy from a suitable graph and rearranging the Arrhenius equation. Also, calculating entropy changes, constructing Born-Haber cycles and calculating missing values, constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change in value of an equilibrium constant when a variable changes, using logarithms and exponentials for converting from concentration to pH of a buffer solution, plotting and interpreting titration curves and representing chiral molecules with appropriate diagrams. There is also an opportunity for calculating Rf values and interpreting infrared spectra and using the (n + 1) rule for proton NMR.

Topic

6. Kinetics
7. Entropy and Energetics (Entropy, Lattice Energy)
8. Chemical Equilibria
9. Acid-base Equilibria
10. Organic Chemistry, Carbonyls, Carboxylic Acids and Chirality
    - Chirality
    - Carbonyl Compounds
    - Carboxylic Acids
    - Carboxylic and Acid Derivatives
    - Spectroscopy and Chromatography

Unit 5: WCH15/01
Transition Metals and Organic Nitrogen Chemistry

In this unit, the study of electrode potentials builds on the study of redox in Unit 2, including the concept of oxidation number and the use of redox half equations. Students will study further chemistry related to redox, including transition metals. The organic chemistry section of this unit focuses on arenes and organic nitrogen compounds such as amines, amides, amino acids and proteins. The organic synthesis section requires students to use the knowledge and understanding of organic chemistry that they have gained over the entire specification. This unit draws on all the other units in the International Advanced Level in Chemistry and students are expected to use their prior knowledge when learning about the areas in this unit. Students will again encounter ideas of isomerism, bond polarity and bond enthalpy, reagents and reaction conditions, reaction types and mechanisms. Students are also expected to use formulae and balanced equations and calculate chemical quantities.

The study of chemical cells illustrates the impact on scientific thinking when it emerges that ideas developed in different contexts can be shown to be related to a major explanatory principle. In this unit, cell emfs and equilibrium constants are shown to be related to the fundamental criterion for the feasibility of a chemical reaction: the total entropy change. The explanatory power of the energy-level model for electronic structures is further illustrated by showing how it can help to account for the existence and properties of transition metals. In this context there are opportunities to show the limitations of the models used at this level and to indicate the need for more sophisticated explanations. Study of the structure of benzene is another example that shows how scientific models develop in response to new evidence. This links to further investigations of the models that chemists use to describe the mechanisms of organic reactions. The study of catalysts touches on a 'frontier' area for current chemical research and development, which is of theoretical and practical importance. This provides an opportunity to show how the scientific community reports and validates new knowledge

As in previous units, students can begin their practical work in this unit with some simple test-tube reactions, investigating the reactions of transition metal ions in solution. This may lead to an exploration of redox reactions and, therefore, to the core practical on electrochemical cells. Skills in volumetric analysis can be consolidated through titrations for redox systems such as iodine-thiosulfate or manganite (VII) titrations. An opportunity to explore preparative inorganic chemistry is provided in the core practical devoted to making a transition metal complex. In organic chemistry, there are further functional groups to explore and the possibility of preparing an azo dye. The final core practical is an organic synthesis and can be used to showcase a selection of the techniques that students have developed to carry out reactions and purify products efficiently and safely.

There are opportunities for the development of mathematical skills in this unit. This includes calculating redox potentials, balancing redox equations from half cells, calculating masses and concentrations from redox titrations, investigating the geometry of transition metal complexes, calculating the resonance stability of benzene from thermodynamic data and calculating percentage yields.

Topic:

1. Redox Equilibria
2. Transition Metals and their Chemistry
3. Organic Chemistry – Arenes
4. Organic Nitrogen Compounds: Amines, Amides, Amino Acids and Proteins
5. Organic Synthesis

Unit 6: WCH16/01
Practical Skills in Chemistry II

This unit consists of a written practical examination, covering the skills and techniques developed during practical work in Units 4 and 5, as well as the tests for anions and cations, gases and organic functional groups from Units 1 and 2. Although the unit content contains eight core practical activities, the examination will not be limited to recall of these core practicals, there may be questions where students need to apply their knowledge to new practical situations. Students should, therefore, develop their practical skills by completing a range of different practicals that require a variety of different techniques. As students carry out practical activities, they should be encouraged to write laboratory reports using appropriate scientific, technical and mathematical language, conventions and symbols.

Students are expected to develop experimental skills and knowledge and understanding of the necessary techniques by carrying out a range of practicals while they study Units 4 and 5. This unit will assess students' knowledge and understanding of the practical procedures and techniques that they develop. To prepare for assessment of this unit, centres should give students opportunities to carry out practical activities, to collect and analyse data, and to draw conclusions.

Students should – at the least – carry out the eight core practicals in class. By completing these practicals, students will be able to:

- follow and interpret experimental instructions, covering the full range of laboratory exercises set throughout the course, with minimal help from the teacher
- always work with interest and enthusiasm in the laboratory, completing most laboratory exercises in the time allocated
- manipulate apparatus, use chemicals, carry out all common laboratory procedures and use data logging (where appropriate) with the highest level of skill that may be reasonably expected at this level
- work sensibly and safely in the laboratory, paying due regard to health and safety requirements without the need for reminders from the teacher
- gain accurate and consistent results in quantitative exercises, make the most of the expected observations in qualitative exercises and obtain products in preparations of high yield and purity.

Independent thinking in a practical context	- Solve problems set in a practical context. - Apply scientific knowledge to practical contexts
Use and application of scientific methods and practices	- Identify and state how to control variables to improve experimental validity. - Present data in appropriate ways. - Evaluate results and draw conclusions. - Appreciate measurement uncertainties and errors. - Comment on the method for an experiment.
Numeracy and the application of mathematical concepts in a practical context	- Plot and interpret graphs. - Process and analyse data using appropriate mathematical skills. - Use appropriate numbers of significant figures based on the experimental data. - Consider the accuracy and precision of data.
Use of apparatus and equipment	- Recognise a range of laboratory apparatus and select appropriate apparatus for a particular scenario. - Understand how to use a range of apparatus and techniques appropriate to the knowledge and understanding included in this specification. - Consider the range and resolution of apparatus. - Identify health and safety issues and discuss how these may be dealt with.

Learning Outcome:

The aims of the IAL in Chemistry enable students to develop:
- an interest in, and enthusiasm, for chemistry including developing an interest in further study and careers in chemistry
- an appreciation of how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society
- a deeper understanding of the skills, knowledge and understanding of *How Science Works*
- essential knowledge and understanding of different areas of the subject and how they relate to each other.

The IAL qualifications in Chemistry require students to:
- recognise, recall and show understanding of scientific knowledge
- select, organise and communicate relevant information in a variety of forms
- analyse and evaluate scientific knowledge and processes
- apply scientific knowledge and processes to unfamiliar situations
- assess the validity, reliability and credibility of scientific information.

What could I go on to?

The course provides an essential foundation for study of chemistry, chemical engineering medicine, nursing, pharmacy, life sciences and environmental sciences. As a pure science it is valued by employers and universities alike and particularly demonstrates a high level of practical skill.

IAL ECONOMICS

Pearson Edexcel International Advanced Subsidiary in Economics This qualification consists of two externally examined units.

The International Advanced Subsidiary is the first half of the International Advanced Level qualification and consists of two IAS units, Units 1 and 2. This qualification may be awarded as a discrete qualification or may contribute 50 per cent towards the International Advanced Level qualification.

Pearson Edexcel International Advanced Level in Economics This qualification consists of four externally examined units. The International Advanced Level consists of the two IAS units (Units 1 and 2) plus two IA2 units (Units 3 and 4). Students wishing to take the International Advanced Level must, therefore, complete all four units.

Course of study
The structure of these qualifications allows teachers to construct a course of study that can be taught and assessed as either:

- distinct modules of teaching and learning with related units of assessment taken at appropriate stages during the course; or
- a linear course assessed in its entirety at the end.

Unit 1: WEC11/01
Markets in Action

This unit gives students an introduction to the nature of economics and examines how the price mechanism allocates resources in local, national and global markets. Students will learn to apply supply and demand analysis to real-world situations and will be able to suggest reasons for consumer behaviour. This will involve looking at how consumers act in a rational way to maximise utility and how firms maximise profit but also why consumers may not behave rationally. Students will analyse the nature and causes of market failure and understand the strengths and weaknesses of possible policy remedies. Students will need to be able to apply relevant quantitative skills to the content covered in this unit, including calculations, the use of data and the drawing of diagrams.

Topics:

- Introductory Concepts
- Consumer behaviour and demand
- Supply
- Price determination
- Market failure
- Government intervention in markets

Unit 2: WEC12/01
Macro Economics Performance and Policy

This unit introduces the key measures of economic performance and the main objectives and instruments of economic policy in an international context. Students will learn how to use a basic AD/AS model to analyse changes in real output and the price level. Students will look at when demand and/or supply side policies may be appropriate ways of improving an economy's performance; consider these policies in an historical context; predict the possible impact of such policies and recognise the assumptions involved. Students should understand different approaches that may be used by policy makers to address macroeconomic problems and to identify criteria for success. Students will need to be able to apply relevant quantitative skills to the content covered introduced in this unit, including calculations, the use of data and the drawing of diagrams.

Topics:

- Measures of economic performance
- Aggregate demand
- Aggregate supply
- National income
- Economic growth
- Macroeconomic objectives and policies

Unit 3: WEC13/01
Business Behaviour

This unit develops the content of Unit 1 and examines how pricing and the nature of competition between firms is affected by the number and size of market participants. At the end of this unit, students should be able to analyse and evaluate the pricing and output decisions of firms in different contexts and understand the role of competition in business decision making. They should also be capable of making an appraisal of government intervention aimed at promoting competitive markets.

- The importance of multi-national corporations
- Pricing policies
- Issues between governments and very large companies
- Regulation of activities of suppliers of some goods and services

Unit 4: WEC14/01
Developments in the Global Economy

This unit develops the knowledge and skills gained in Unit 2. The application, analysis and evaluation of economic models is required as well as an ability to assess policies that might be used to deal with economic problems. An awareness of trends and developments in the global economy over the last 40 years, including contemporary issues, is required. Wider reading and research will enable students to use up-to-date and relevant examples in their analysis and evaluation of issues and developments in the global economy.

- Globalisation
- The role of the WTO
- Changing international competitiveness
- Exchange rate systems
- The European Union
- Unemployment, inflation, fiscal and monetary policies

Learning Outcome:

The aims and objectives of these qualifications are to enable students to:

- develop an interest in, and enthusiasm for, the subject
- appreciate the contribution of economics to the understanding of the wider economic and social environment
- develop an understanding of a range of concepts and an ability to use those concepts in a variety of different contexts
- use an enquiring, critical and thoughtful approach to the study of economics and develop an ability to think as an economist
- understand that economic behaviour can be studied from a range of perspectives
- develop analytical and quantitative skills, together with qualities and attitudes that will equip them for the challenges, opportunities and responsibilities of adult and working life

What could I go on to?

Students can progress from these qualifications to:

- higher-education courses such as an economics degree with a focus on theory, or a degree in applied economics, such as environmental economics, labour economics, public sector economics or monetary economics. Alternatively, students may choose to go on to study a business economics, mathematical economics or business degree
- a wide range of careers ranging from finance, banking, insurance, accountancy, management and consultancy to becoming professional economists.

IAL ENGLISH LANGUAGE

International Advanced Level English Language key qualification features are:
- A focus on how language is used to construct identity.
- Study of how other languages have affected the development of English and how English has developed outside of the British Isles.
- Students create their own texts. One on unseen source texts linked to a single topic and one where they are given a genre and then choose their own audience, purpose and context.
- Carry out an independent research topic.

Broad and deep development of learners' skills – we designed the International Advanced Level qualifications to extend learners' knowledge by broadening and deepening skills, for example learners will:
- develop and apply their understanding of the concepts and methods appropriate for the analysis and study of language
- develop their skills as producers and interpreters of language
- learn to work independently in the investigation of language
- explore data and examples of language in use.

Unit 1: WEN01/01
Language, Context and Identity

This unit introduces students to how language is used in data from a range of sources. Students will explore how the contexts of production and reception affect language choices in spoken and written language. Students will also explore how writers and speakers present themselves to their audiences, constructing identities through their language choices. They will also demonstrate their understanding by creating a new text. By concentrating on what language does and how it varies to perform different functions, teaching can build on students' prior knowledge from GCSE and International GCSE English Language, and on their experience as language users.

Students will study:
- the range of contexts in which language is produced and received
- how the contexts of production and reception affect language choices
- how writers/speakers present themselves to their audience in a variety of modes
- how writers/speakers choose language to reflect and construct their identity or identities
- how writers create texts for different forms, purposes, audiences, and contexts.

Unit 2: WEN02/01
Language in Transition

This unit introduces students to the ways in which languages change, with a focus on English in a global context. They will also explore and critically evaluate how language varies over time.

Students will study:
- the influence of other languages on the development of English
- pidgins and creoles
- the development of English outside the British Isles.

Students will explore the ways in which languages change, with a focus on English in a global context. Students will need to know about the mechanisms of language change, but they will not need to study the historical development of English.

Unit 3: WEN03/01
Crafting Language (Writing)

In this unit students will demonstrate their skills as writers, crafting texts for different genre, audience, purpose and context. They will also reflect on their work in an accompanying commentary, making connections with their study of a range of specified writing genres and styles.

Students will explore a range of specified writing genres and appropriate style models. They will demonstrate their skills as writers in re-creating texts for different genres, contexts, purposes and audiences. They will reflect on the writing process in an analytical commentary. The genres selected for study are:

- feature articles
- journalist interviews
- speeches
- travel writing
- biography
- reviews

The source texts will be taken from a wide range of genres, and not only from those listed above.

Students will explore:

- distinctive features of the selected genres
- texts that exemplify key features of the genres and the effect of language choices
- discourse strategies for different contexts

Students will:

- study a range of specified writing genres and appropriate style models
- demonstrate their skills as writers in re-creating texts for different context, purpose and audience.

Unit 4: WEN04/01
Investigating Language

In this unit, students will have the opportunity to develop their research skills. They will consolidate their knowledge of language frameworks and key language concepts gained from Units 1, 2 and 3.

Students will apply these skills to one topic area from a choice of:

- Global English
- Child Language Development
- Language and Power
- Language and Technology.

A subtopic for each of the specified topics will be pre-released to provide a focus for students' research and prepare them for external assessment.

Global English
This topic will explore aspects of varieties of global English, including those from outside the UK, such as Ireland, the Americas and the Caribbean, the Pacific and Australasia, Africa, South and Southeast Asia.

Child Language Development
This topic will explore the development of spoken and written English as a first language between the ages of 0 and 8. The unit will cover the ways in which speech develops across the language levels and theories relevant to the acquisition of English as a first language. It will also include the relationship between spoken language acquisition and the literacy skills children are taught, including the beginnings of learning to write and theories relevant to the development of literacy.

Language and Power
This topic will explore the way language use in society can create and enforce power relationships. Students will explore aspects such as instrumental and influential power, political discourse, and discourses in unequal power relationships, persuasion, prestige and politeness.

Language and Technology
This topic will explore the ways in which technological developments have influenced the English language over time. The topic will cover the introduction of the printing press, the influences of scientific discovery, and the development of electronic forms of communication, visual English and English in cyberspace.

Students will select one research focus from four topic areas:
- Contemporary Global English
- Children's Language Development
- Language and Power
- Language and Technology

Students will:
- develop their research and investigation skills
- undertake a focused investigation of their selected topic
- apply their knowledge of language levels and key language concepts developed through the whole course
- develop a personal language specialism.

Learning Outcome:

The aims and objectives of this qualification are to enable students to:
- develop and apply their understanding of the concepts and methods appropriate for the analysis and study of language
- explore data and examples of language in use
- engage creatively and critically with a varied programme for the study of English
- develop their skills as producers and interpreters of language
- independently investigate language in use.

IAL HISTORY

Evaluate and analyze historical evidence. Study elements of history of various countries. Develop research and writing skills.

Unit 1: WHI01/01
Depth Study and Interpretations

Option 1C: Germany, 1918–45
IAL compulsory unit externally assessed

This option comprises a study in depth of the momentous years in Germany between the end of the First World War and the end of the Second World War. These events had a devastating effect on twentieth-century Europe and throughout the modern world. Students will gain an in-depth understanding of revolutionary change in Germany in 1918–19, the emergence of a functioning democracy and its transformation into a repressive tyranny, which was to threaten the peace of the world and cause misery to millions.

This option is forbidden in combination with Unit 3C: Germany, 1870–1990: United, Divided and Reunited.

- The Democratic Experiment (1918-1929)
- The Rise of the Nazis (1919-1933)
- Nazi Germany (1933-1939)
- Germany at war (1939-1945)

Unit 2: WHI02/01
Breadth Study with Source Evaluation

Option 1A: India, 1857–1948: The Raj to Partition
IAL compulsory unit externally assessed

This option comprises a study in breadth of the transition of the Indian sub-continent from a colony to independence. Students will gain an understanding of the changing relationship between Britain and India, from the outbreak of the Indian mutiny to the achievement of independence for the Indian subcontinent, and of the reasons for this, with particular reference to Indian nationalism. This option also contains a study using two sources that relate to nominated areas of the specification content, shown in bold italics.

- The British Raj: The Government of India (1857-1948)
- The Economics of Empire (1857-1948)
- Resistance to British Rule (1857-1948)
- Military Power and Its limits (1857-1948)

Unit 3: WHI03/01
Thematic Study with Source Evaluation

The options in this unit are focused on breadth, requiring broad knowledge and understanding of developments and changes over an extended timescale. The content for each option is organised into five key topic areas, they cover the various significant developments of the period. Themes that span the period are also given.

In addition to understanding the content, students will need to develop skills necessary to answer questions that target knowledge and understanding of the period (AO1) and questions that target the ability to analyse and evaluate sources (AO2).

Unit 3 option 1B: The British Experience of Warfare, 1803–1945 is forbidden in combination with Unit 4 option 1A: The Making of Modern Europe 1805–1971.

Unit 3 option 1C: Germany: United, Divided and Reunited, 1870– 1990 is forbidden in combination with Unit 1 option 1C: Germany, 1918–1945.

Option 1D: Civil Rights and Race Relations in the USA, 1865-2009

This option explores developments that have shaped contemporary America and remain a fundamental issue in US society: the changing pattern of race relations between black and white Americans over a period that began with millions of black Americans in slavery and ended with Barack Obama as President. The five key topics are linked by certain key themes, namely:

1. The role of Congress, the presidency and the Supreme Court, in changing race relations
2. The pressure groups and individuals campaigning for enhanced civil rights
3. The forces resisting enhanced civil rights
4. The changing economic and educational opportunities for black Americans
5. The changing pattern of settlement and housing for black Americans.

- Free at last (1865 to 1877)
- The Triumph of 'Jim Crow' (1883 to 1900)
- Roosevelt and Race Relations (1933 to 1945)
- I have a dream (1954 to 1968)
- Race relations and Obama's campaign for the presidency (2000 to 2009)

Unit 4: WHI04/01
International Study with Historical Interpretation

The options in this unit are focused on the interpretation of events in history. They require detailed knowledge and understanding of a broad historical period. The content for each option is organised into four key topic areas, they cover the various significant developments of the period. In addition to understanding the content, students will need to develop skills to answer questions that target knowledge and understanding of the period (AO1) and questions that target the ability to analyse and evaluate different interpretations of the period (AO3).

Unit 4 option 1A: The Making of Modern Europe 1805–71 is forbidden in combination with Unit 3 option 1B: The British Experience of Warfare, 1803–1945.

Option 1C: The World Divided: Superpower Relations, 1943–90

IA2 compulsory unit externally assessed
This option contains a study in depth of historical interpretations on a broad question, namely the reasons for the outbreak and development of the Cold War in the years 1943 to 1953. This is contextualised by, and overlaps with, a study of superpower relations (USA, USSR and China) in the years 1953 to 1990. The two main themes are confrontation and the threat of war on the one hand, and Détente and the resolution of conflict on the other.

- Historical interpretations: What explains the outbreak and development of the Cold War in the years 1943 to 1953?
- Conciliation and confrontation, 1953 to 1964
- Stalemate and Détente, 1964 to 1979
- Renewed confrontation and resolution, 1980 to 1990

Learning outcome:

The aims and objectives of these qualifications are to enable students to:

- develop their interest in and enthusiasm for history and an understanding of its intrinsic value and significance
- acquire an understanding of different identities within society and an appreciation of aspects such as social, cultural, religious and ethnic diversity, as appropriate
- build on their understanding of the past through experiencing a broad and balanced course of study
- improve as effective and independent learners, and as critical and reflective thinkers with curious and enquiring minds
- develop the ability to ask relevant and significant questions about the past and to research them
- acquire an understanding of the nature of historical study, for example that history is concerned with judgements based on available evidence and that historical judgements are provisional
- develop their use and understanding of historical terms, concepts and skills
- make links and draw comparisons within and/or across different periods and aspects of the past
- organise and communicate their historical knowledge and understanding in different ways, arguing a case and reaching substantiated judgements.

IAL MATHEMATICS, FURTHER MATH AND PURE MATH

Advanced Level Mathematics is a much sought-after qualification for entry to a wide variety of full-time courses in higher education. There are also many areas of employment that see it as an important qualification, and it is often a requirement for the vocational qualifications related to these areas.

Students may study a variety of units, following pathways to their desired qualification. The following table shows the combinations of units required to achieve the desired Advanced level qualification in Mathematics:

Qualification	Compulsory Units	Optional Units
International Advanced Subsidiary in Mathematics	P1, P2	M1, SI, DI
International Advanced Subsidiary in Further Mathematics	FP1	FP2, FP3, M1, M2, M3, S1, S2, S3, DI
International Advanced Subsidiary in Pure Mathematics	P1, P2, FP1	

Qualification	Compulsory Units	Optional Units
International Advanced Subsidiary in Mathematics	P1, P2, P3, P4	M1 and S1 or M1 and DI or M1 and M2 or S1 and D1 or S1 and S2
International Advanced Subsidiary in Further Mathematics	FP1 and either FP2 or FP3	FP2, FP3, M1, M2, M3, S1, S2, S3, DI
International Advanced Subsidiary in Pure Mathematics	P1, P2, P3, P4, FP1	FP2 or FP3

Note: Please check with the school on the units offered at the time of your enrolment.

Title	Unit	Summary of unit content
Core Mathematics	P1	- Algebra and functions - coordinate geometry in the (x, y) plane - trigonometry; - Differentiation integration
	P2	- Proof - Algebra and functions - coordinate geometry in the (x, y) plane - sequences and series - exponentials and logarithms - trigonometry - differentiation - integration
	P3	- Algebra and functions - Trigonometry - Exponential and logarithms - Differentiation - Integration - Numerical methods
	P4	- Proof - Algebra and functions - Coordinate in geometry in the (x, y) plane - Binomial expansion - Differentiation - Integration - Vectors
Further Pure Mathematics	FP1	- Complex numbers - roots of quadratic equations - numerical solution of equations; matrix algebra integration - transformations using matrices - series, proof

Title	Unit	Summary of unit content
	FP2	- Inequalities - series - further complex numbers - first order differential equations - second order differential equations - Maclaurin and Taylor series - Polar coordinates
	FP3	- Hyperbolic functions - further coordinate systems - differentiation; integration - vectors - further matrix algebra
Mechanics	M1	- Mathematical models in mechanics - vectors in mechanics - kinematics of a particle moving in a straight line - dynamics of a particle moving in a straight line or plane - statics of a particle - moments
	M2	- Kinematics of a particle moving in a straight line or plane - centres of mass - work and energy - collisions - statics of rigid bodies
	M3	- Further kinematics - elastic strings and springs - further dynamics - motion in a circle - statics of rigid bodies
Statistics	S1	- Mathematical models in probability and statistics - representation and summary of data; probability - correlation and regression - discrete random variables - discrete distributions - the Normal distribution.
	S2	- The Binomial and Poisson distributions - continuous random variables - continuous distributions - hypothesis tests.
	S3	- Combinations of random variables - Sampling - estimation, confidence intervals and tests - goodness of fit and contingency tables - regression and correlation.
Decision Mathematics	D1	- Algorithms - algorithms on graphs - algorithms on graphs II - critical path analysis - linear programming

Learning Outcome

The 12 units have been designed for schools and colleges to produce courses which will encourage students to:

- develop their understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment
- develop abilities to reason logically and recognise incorrect reasoning, to generalise and to construct mathematical proofs „ extend their range of mathematical skills and techniques and use them in more difficult, unstructured problems
- develop an understanding of coherence and progression in mathematics and of how different areas of mathematics can be connected
- recognise how a situation may be represented mathematically and understand the relationship between 'real-world' problems and mathematical models and how these can be refined and improved use mathematics as an effective means of communication
- read and comprehend mathematical arguments and articles concerning applications of mathematics
- acquire the skills needed to use technology such as calculators and computers effectively, recognise when such use may be inappropriate and be aware of limitations
- develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general
- take increasing responsibility for their own learning and the evaluation of their own mathematical development

IAL PHYSICS

Develop an essential knowledge and understanding in Physics, how it has developed and is used in modern society, expertise in practical work, and appreciate its relationship with mathematics.

Unit 1: WPH01
Mechanics and Materials

This unit covers mechanics and materials. This topic may be studied using applications that relate to mechanics, for example sports and to materials, for example spare-part surgery. This topic also enables students to develop practical and mathematical skills.

In order to develop their practical skills, students should be encouraged to carry out a range of practical experiments related to this topic. Possible experiments include strobe photography or the use of a video camera to analyse projectile motion, determine the centre of gravity of an irregular rod, investigate the conservation of momentum using light gates and air track, Hooke's law and the Young modulus experiments for a variety of materials.

Mathematical skills that could be developed in this topic include: plotting two variables from experimental data; calculating rate of change from a graph showing a linear relationship; drawing and using the slope of a tangent to a curve as a measure of rate of change; calculating or estimating, by graphical methods as appropriate, the area between a curve and the x-axis and realising the physical significance of the area that has been determined; distinguishing between instantaneous rate of change and average rate of change and identifying uncertainties in measurements; using simple techniques to determine uncertainty when data are combined; using angles in regular 2D and 3D structures with force diagrams and using sin, cos and tan in physical problems.

Topic:

- Mechanics
  This topic covers rectilinear motion, forces, energy and power. It may be studied using applications that relate to mechanics such as sports. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments.
- Materials
  This topic covers density, flow of liquids, Hooke's law, the Young modulus and elastic strain energy. This topic should be studied using a variety of applications, for example making and testing food, engineering materials, spare-part surgery for joint replacement. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments

Unit 2: WPH12/01
Waves and Electricity

This topic covers waves and the particle nature of light and electric currents. This topic may be studied using applications that relate to electricity, for example space technology and to waves, for example medical physics. This topic also enables students to develop practical and mathematical skills.

In order to develop their practical skills, students should be encouraged to carry out a range of practical experiments related to this topic. Possible experiments include estimating power output of an electric motor, using a digital voltmeter to investigate the output of a potential divider and investigating current/voltage graphs for a filament bulb, thermistor and diode, determining the refractive index of solids and liquids, demonstrating progressive and stationary waves on a slinky.

Mathematical skills that could be developed in this topic include substituting numerical values into algebraic equations using appropriate units for physical quantities and applying the equation $y = mx + c$ to experimental data, using calculators to handle sin x, identifying uncertainties in measurements and using simple techniques to determine uncertainty when data are combined.

Topic:

- Waves and Particle Nature of Light
  This topic covers the properties of different types of waves, including standing waves. Refraction, polarisation and diffraction are also included and the wave/particle nature of light. This topic should be studied by exploring the applications of waves, for example applications in medical physics or music. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments.
- Electric Circuits
  This topic covers the definitions of various electrical quantities, for example current, potential difference and resistance, Ohm's law and non-ohmic conductors, potential dividers, e.m.f. and internal resistance of cells and negative temperature coefficient thermistors. This topic should be studied using applications such as space technology. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments.

Unit 3: WPH03
Practical Skills in Physics I

Students are expected to develop experimental skills, and a knowledge and understanding of experimental techniques, by carrying out a range of practical experiments and investigations while they study Units 1 and 2. This unit will assess students' knowledge and understanding of experimental procedures and techniques that were developed when they conducted these experiments

Students should carry out a variety of practical work during the IAS course to develop their practical skills. This should help them to gain an understanding and knowledge of the practical techniques that are used in experimental work. In order to prepare students for the assessment of this unit, centres should give students opportunities to plan experiments, implement their plans, collect data, analyse their data and draw conclusions. Experiments should cover a range of different topic areas and require the use of a variety of practical techniques.

Plan and experiment

- identify the apparatus required
- the range and resolution of measuring instruments including Vernier calipers (0.1mm) and micrometer screw gauge (0.01mm)
- discuss calibration of instruments, e.g., whether a meter reads zero before measurements are made
- describe how to measure relevant variables using the most appropriate instrument and correct measuring techniques
- identify and state how to control all other relevant variables to make it a fair test
- discuss whether repeat readings are appropriate
- identify health and safety issues and discuss how these may be dealt with
- discuss how the data collected will be used
- identify possible sources of uncertainty and/or systematic error and explain how these may be reduced or eliminated
- comment on the implications of physics (e.g., benefits/risks) and on its context (e.g., social/environmental/historical).

Implementation and measurements

- comment on the number of readings taken
- comment on the range of measurements taken
- comment on significant figures
- check a reading that is inconsistent with other readings, e.g., a point that is not on the line of a graph – students may be shown a diagram of a micrometer that is being used to measure the diameter of a wire and be expected to write down the reading to the correct number of significant figures
- comment on how the experiment may be improved, possibly by using additional apparatus (e.g., to reduce errors) – examples may include using a set square to determine whether a ruler is vertical to aid the measurement of the extension of a spring.

Processing Results

- perform calculations, using the correct number of significant figures
- plot results on a graph using an appropriate scale use the correct units throughout
- comment on the relationship obtained from the graph
- determine the relationship between two variables or determine a constant with the aid of a graph, e.g., by determining the gradient using a large triangle

- suggest realistic modifications to reduce errors
- suggest realistic modifications to improve the experiment
- discuss uncertainties, qualitatively and quantitatively
- determine the percentage uncertainty in measurements for a single reading using half the resolution of the instrument and from multiple readings using the half range (students are not expected to compound percentage uncertainties).

Unit 4: WPH014/01
Further Mechanics, Fields and Particles

This topic covers further mechanics, electric and magnetic fields, and nuclear and particle physics. This topic may be studied using applications that relate to mechanics, for example transportation and fields, for example communications and display techniques. This topic also enables students to develop practical and mathematical skills.

In order to develop their practical skills, students should be encouraged to carry out a range of practical experiments related to this topic. Possible experiments include investigating the effect of mass, velocity and radius of orbit on centripetal force, using a coulomb meter to measure charge stored and using an electronic balance to measure the force between two charges.

Mathematical skills that could be developed in this topic include translating between degrees and radians and using trigonometric functions, sketching relationships that are modelled by y = k/x, and y = k/x2, using logarithmic plots to test exponential and power law variations, interpreting logarithmic plots and sketching relationships that are modelled by y = e-x.

Further Mechanics	This topic covers impulse, conservation of momentum in two dimensions and circular motion. It can be studied using applications that relate to, for example, a modern rail transportation system. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments.
Electric and Magnetic Fields	This topic covers Coulomb's law, capacitors, magnetic flux density and the laws of electromagnetic induction. This topic may be studied using applications that relate to, for example, communications and display techniques. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiment.
Nuclear and Particle Physics	This topic covers atomic structure, particle accelerators and the standard quark-lepton model. This topic is the subject of current research, involving the acceleration and detection of high energy particles. It may be taught by exploring a range of experiments such as: - - alpha scattering and the nuclear model of the atom - accelerating particles to high energy - detecting and interpreting interactions between particles

Unit 5: WPH05
Thermodynamics, Radiation, Oscillations and Cosmology

This topic covers thermal energy, nuclear decay, oscillations and astrophysics and cosmology. This topic may be studied using applications that relate to thermodynamics, for example space technology, and to nuclear radiation, for example nuclear power stations and medical physics. This topic also enables students to develop practical and mathematical skills.

In order to develop their practical skills, students should be encouraged to carry out a range of practical experiments related to this topic. Possible experiments include investigating the relationship between the volume and temperature of a fixed mass of gas, measuring the half-life of a radioactive material, measuring gravitational field strength using a simple pendulum and measuring a spring constant from simple harmonic motion

Mathematical skills that could be developed in this topic include substituting numerical values into algebraic equations using appropriate units for physical quantities, applying the concepts underlying calculus (but without requiring the explicit use of derivatives or integrals) by solving equations involving rates of change, for example. $\Delta x/\Delta t = -\lambda x$ using a graphical method or spreadsheet modelling and understanding probability in the context of radioactive decay, sketching relationships that are modelled by $y = \sin x$, $y = \cos x$, $y = k/x$, $y = k/x2$

Thermodynamics	This topic covers specific heat capacity, specific latent heat, internal energy and the gas equation. This topic may be studied using applications that relate, for example, to space technology. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments.
Nuclear Decay	This topic covers radioactive decay. This topic may be studied using applications that relate to, for example, medical physics and carbon dating. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments.
Oscillations	This topic covers simple harmonic motion and damping. This topic may be studied using applications that relate to, for example, the construction of buildings in earthquake zones. This unit includes many opportunities for developing experimental skills and techniques by carrying out more than just the core practical experiments
Astrophysics and Cosmology	This topic covers gravitational fields and the physical interpretation of astronomical observations, the formation and evolution of stars and the history and future of the universe.

Unit 6: WPH16/01
Practical Skills in Physics II

Students are expected to further develop the experimental skills they acquired in Units 1 and 2. Students are expected to develop these skills, and a knowledge and understanding of experimental techniques, by carrying out a range of practical experiments and investigations while they study Units 4 and 5. This unit will assess students' knowledge and understanding of experimental procedures and techniques that were developed when they conducted these experiments.

Students should carry out a variety of practical work during the IA2 course to develop their practical skills. In order to prepare students for the assessment of this unit, centres should give students opportunities to plan experiments, implement their plans, collect data, analyse their data and draw conclusions. Experiments should cover a range of different topic areas and use a variety of practical techniques. Students should gain experience of using log graphs to determine the relationship between two variables. The graphs do not always need to be obtained for variables that are related by the exponential function. For example, students could investigate how the pressure of a fixed mass of gas varies with its volume at constant temperature and plot an appropriate log/log graph to determine the relationship between the pressure and volume of the gas.

Plan and experiment	- identify the most appropriate apparatus, giving details. These may include the range and resolution of instruments and/or relevant dimensions of apparatus (e.g., the length of string used for a pendulum) - discuss calibration of instruments, e.g., whether a meter reads zero before measurements are made - describe how to measure relevant variables using the most appropriate instrument(s) and techniques - identify and state how to control all other relevant variables to make it a fair test - discuss whether repeat readings are appropriate - identify health and safety issues and discuss how these may be dealt with - discuss how the data collected will be used.
Implementation and measurements	- comment on how the experiment could have been improved, possibly by using additional apparatus (e.g., to reduce errors) – examples may include using set squares to measure the diameter of a cylinder and using a marker for timing oscillations - comment on the number of readings taken - comment on the range of measurements taken - comment on significant figures – students may be required to identify and/or round up any incorrect figures in a table of results - identify and/or amend units that are incorrect - identify and check a reading that is inconsistent with other readings, e.g., a point that is not on the line of a graph.
Processing Results	- perform calculations, using the correct number of significant figures - plot results on a graph using an appropriate scale and units – the graph could be logarithmic in nature - use the correct units throughout - comment on the trend/pattern obtained - determine the relationship between two variables or determine a constant with the aid of the graph, e.g., by determining the gradient using a large triangle - use the terms precision, accuracy and sensitivity appropriately - suggest realistic modifications to reduce errors - suggest realistic modifications to improve the experiment discuss uncertainties qualitatively and quantitatively - compound percentage uncertainties correctly - determine the percentage uncertainty in measurements for a single reading using half the resolution of the instrument and from multiple readings using the half range.

Learning Outcome:

The aims of the IAL in Physics are to enable students to:

- progress from the Key Stage 4 programme of study and enable students to sustain and develop an enjoyment of, and interest in, physics and its applications
- develop an understanding of the link between theory and experiment and foster the development of skills in the design and execution of experiments
- develop essential knowledge and understanding in physics and, where appropriate, the applications of physics with an appreciation of their significance and the skills needed for the use of these in new and changing situations including How Science Works

- demonstrate the importance of physics as a human endeavour that interacts with social, philosophical, economic and industrial matters
- prepare for higher educational courses in physics and related courses.
- recognise, recall and show understanding of scientific knowledge s
- select, organise and communicate relevant information in a variety of forms „ analyse and evaluate scientific knowledge and processes
- apply scientific knowledge and processes to unfamiliar situations
- assess the validity, reliability and credibility of scientific information
- demonstrate and describe ethical, safe and skillful practical techniques and processes, selecting appropriate qualitative and quantitative methods
- make, record and communicate reliable and valid observations and measurements with appropriate precision and accuracy
- analyse, interpret, explain and evaluate the methodology, results and impact of their own and others' experimental and investigative activities in a variety of ways

What could I go on to?

The course provides an excellent foundation for study of a wide range of sciences including biology, environmental science, life sciences, medicine, nursing, dentistry, psychology and pharmacy. Students can pursue university degrees in physics such as astrophysics, quantum physics, particle physics, mathematical physics, nanotechnology, thermodynamics etc. and follow career paths in engineering, automotive and aerospace industries, healthcare, energy, technology, computing and IT, science and communication, space exploration and astronomy, scientific research in physics (research scientist), geophysics, architecture, software development, education etc.

IAL PSYCHOLOGY

The IAL in Psychology is aimed to help students to develop awareness and understanding of psychological theories, research, case studies and methods used to collect data. In addition, students learn to:

- explore topics which reflect current contemporary issues, as well as earlier case studies
- explore the different areas of psychology, in particular cognitive, social and physiological psychology
- participate in and conduct psychological investigations, collecting appropriate data
- analyse and interpret your own or second-hand data and evaluate the findings
- develop awareness of the ethical issues in psychology, particularly in the field of research.

Unit 1: WPS01/01
Social and Cognitive Psychology

Shows an understanding of cognitive processes and aspects of human behavior that involves the individuals' relationship to other persons, groups and society, including cultural influences on behavior.

- Social Psychology
  Obedience and Prejudice
  Students must show an understanding that social psychology is about aspects of human behaviour that involve the individual's relationship to other persons, groups and society, including cultural influences on behaviour.

- Cognitive Psychology
  Memory and Forgetting
  Students must show an understanding that cognitive psychology is about the role of cognition/cognitive processes in human behaviour. Processes include perception, memory, selective attention, language and problem solving. The cognitive topic area draws on how information is processed in the brain. There are opportunities for students to develop mathematical skills throughout the content. Students are required to apply the skills to relevant psychological contexts

Unit 2: WPS02/01
Biological Psychology, Learning Theories and Development

Explains about the mechanisms within our body and how they affect our behavior. Leads to an understanding of different learning theories, concepts and ideas focusing on individual differences

- Biological Psychology
  Students must show an understanding that biological psychology is about the mechanisms within our body and how they affect our behaviour, focusing on aggression and body rhythms.

- Learning Theories and Development
  Students must show an understanding that learning theories are about learning from the environment and the effects of conditioning, reinforcement, punishment, the role of reward and social learning. Students must also show an understanding of learning theories as theories of development and psychodynamic ideas and concepts as different explanations for development, as well as focusing on individual differences. There are opportunities for students to develop mathematical skills throughout the content. Students are required to apply the skills to relevant psychological contexts.

Unit 3: WPS03/01
Applications to Psychology

Expose the students to understand the concept of development from before birth to adolescence and beyond. They will be able to understand the causes of crime and anti-social behavior

- Development Psychology
  Students must show an understanding that developmental psychology is about the development of the individual from before birth to adolescence and beyond, in that what we experience as children affects us including our later development.
- Criminal logy Psychology
  Students must show an understanding that criminological psychology is about the definition and causes of crime and anti-social behaviour, issues around identification of offenders, and treatment of offenders.
- Health Psychology
  Students must show an understanding that health psychology is about understanding health from a biological, cognitive and social basis, focusing on stress, and that health psychology is about promoting good health. There are opportunities for students to develop mathematical skills throughout the content. Students are required to apply the skills to relevant psychological contexts.

Unit 4: WPS04/01
Clinical Psychology and Psychological Skills

Leads to understanding about mental health issues, features and symptoms, explanation, treatments and therapies

- Clinical Psychology
  Students must show an understanding that clinical psychology is about mental health issues, including issues in diagnosing such issues, features and symptoms, explanations, and treatments and therapies.
- Psychological Skills
  This is a synoptic section in which students will be asked to draw on other areas of the qualification in order to understand conceptual and methodological issues. Students will develop an understanding of how to use theories, methodology and evidence from many areas of psychology and apply them to issues. Relevant psychological skills have been contextualised in Topics A–H. This topic collects them together (excluding Topics F and G) in order to ensure that all content has been covered. Students must consider issues and debates from across all topics in order to develop a general knowledge of key issues and debates. There are opportunities for students to develop mathematical skills throughout the content. Students are required to apply the skills to relevant psychological contexts

Learning Outcome:

The aims and objectives of the Pearson Edexcel IAL Subsidiary and the Advanced Level in Psychology are to enable students to:
- develop essential knowledge and understanding of different areas of psychology and how they relate to each other
- develop and demonstrate a deep appreciation of the skills in using scientific methods, knowledge and understanding of scientific methods
- develop competence and confidence in using a variety of practical, mathematical and problem-solving skills
- develop their interest in and enthusiasm for psychology, including developing an interest in further international study and careers associated with psychology
- appreciate how society makes decisions about scientific issues and how psychology contributes to the success of the economy and society.

What could I go on to?

Follow a degree course in psychology, social science, nursing, advertising or housing. Seek employment in the area of human resources, the care sector, hotel management or advertising.

Pearson Edexcel General Certificate of Education Advanced Level

Insworld offers the following two subjects at Pearson Edexcel GCE Advanced Level: -

Art & Design

Art and Design Pathway	Examination Course Code	
Fine Art	Component 1 Component 2	9FA0/01 9FA0/02
Graphic Design	Component 1 Component 2	9GCO/01 9GCO/02
Photography	Component 1 Component 2	9PY0/01 9PY0/02

Component 1 Personal Investigation	**Fine Art 9FA0/01** **Graphic Design 9GC0/01** **Photography 9PY0/01**
Overview of Content	This component allows students opportunities to generate and develop ideas, research primary and contextual sources, record practical and written observations, experiment with media and processes, and refine ideas towards producing personal resolved outcome(s). This will require students to address each of the Assessment Objectives given on page 3. Students must work within one of the following titles: Art, Craft and Design, Fine Art, Graphic Communication, Textile Design, Three-dimensional Design, Photography.
Overview of assessment	Incorporates three major elements: supporting studies, practical work, and a personal study. - Supporting studies and practical work will comprise a portfolio of development work and outcomes based on themes and ideas developed from personal starting points. - The personal study will be evidenced through critical written communication showing contextual research and understanding in a minimum 1000 words of continuous prose, which may contain integrated images. The personal study comprises 12% of the total qualification and is marked out of 18. - Work must cover all four Assessment Objectives and be marked using the assessment grid on page 33–35 of the course specification. - Marks available: 90.

Component 2 Externally Set Assignment	**Fine Art 9FA0/02** **Graphic Design 9GC0/02** **Photography 9PY0/02**
Overview of Content	This component allows students opportunities to generate and develop ideas, research primary and contextual sources, record practical and written observations, experiment with media and processes, and refine ideas towards producing personal resolved outcome(s) in response to an externally set theme. This will require students to address each of the Assessment Objectives given on page 3 of the course specification. Students must continue to work within the same title as component 1.

Overview of assessment	- Incorporates two major elements: preparatory studies and the 15–hour period of sustained focus. - Preparatory studies will comprise a portfolio of practical and written development work based on the Externally Set Assignment. - During the 15–hour period of sustained focus under examination conditions, students will produce final outcome(s) extending from their preparatory studies in response to the Externally Set Assignment. - The Externally Set Assignment is released on 1 February and contains a theme and suggested starting points. - Students have from 1 February until the commencement of the final 15–hour period of sustained focus to develop preparatory studies. - The 15–hour period of sustained focus under examination conditions may take place over multiple sessions (a maximum of five, within three consecutive weeks). - Work must cover all four Assessment Objectives and be marked using the assessment grid on pages 33–35 of the course specification - Marks available: 72.

Fine Art (9FA0)

Introduction

Fine art requires engagement with aesthetic and intellectual concepts through the use of traditional and/or digital media, materials, techniques and processes for the purpose of self-expression, free of external constraints. Fine art may be created to communicate ideas and messages about the observed world, the qualities of materials, perceptions, or preconceptions. It can also be used to explore personal and cultural identity, society and how we live, visual language, and technology. Fine Art allows us to consider and reflect on our place in the world, both as individuals and collectively.

Drawing and other materials processes

Drawing in fine art forms an essential part of the development process from initial idea to finished work; from rough sketches to diagrams setting out compositions, to digital drawings used for installations or as part of three-dimensional work. Students should use a variety of tools, materials and techniques, as appropriate, for recording their surroundings and source materials. Students should consider the application and implications of new and emerging technologies that can be used in conjunction with traditional and digital fine art materials.

Contextual understanding and professional practice

Contexts for fine art can be found in a wide range of sources, for example, from historical works in museums, contemporary art shows and fairs, an exhibition at a local gallery, films, architecture, music, literature and nature. Students are required to develop the knowledge, skills and understanding outlined on pages 5 and 6. When undertaking work in fine art, students should also engage with:

- concepts such as figuration, representation and abstraction
- how the formal elements evoke responses in the viewer
- various forms or presentation in fine art and the ways that audiences may respond to or interact with them
- sustainable materials and production processes in the construction of work
- the potential of collaborative working methodologies in the creative process

Disciplines within fine art
For the purposes of this qualification, fine art is sub-divided into the following four disciplines:

- painting and drawing
- printmaking
- sculpture
- lens-based image making.

Students will be required to work in one or more of the disciplines to communicate their ideas. By working across disciplines, they will extend their understanding of the scope of fine art; by focusing on one discipline, they will gain a deeper understanding of specific processes within fine art.

Painting and drawing
Students will develop integrated knowledge, skills and understanding of the following:

- characteristics of materials such as plasticity, opacity, translucence, malleability and transparency
- properties of colour, such as hue, tint, saturation, tone and colour perception
- materials such as graphite, wax crayon, oil pastel, soft pastel, aquarelle, charcoal, ink, chalk, conté crayon, gouache, watercolour, acrylic paint, oil paint, dyes and computer software
- the use of a range of tools, such as artists' brushes, decorators' tools, knives, sponges, digital software, fingers, card squeegees, scrapers, sticks, found objects and natural forms
- the potential for exploring combinations of materials, such as combining drawn and painted elements, collage, found objects, including inert materials to add textures/impart meaning.

Lens-based image making Students will develop integrated knowledge, skills and understanding of the following:

- the production processes of artworks in a range of lens and time-based media, such as mixed media, installation, site-specific, montage, digital, film and video, animation and sound
- elements that can contribute to lens-based image making such as lighting, sets, environments and sound
- qualities and functions of various film and video formats, such as 8mm film, analogue video, digital video, HD, 4K, .flv, .mov, .wmv, animated gif
- editing, including knowledge of the variety of ways in which images might be juxtaposed to create appropriate effects, such as in-camera editing, non-linear, offline edits, use of time key, compression, in and out points.

Graphic Communication 9GC0

Introduction
Graphic communication conveys information and ideas through visual means. The critical element for a graphic designer is the effective communication of a message or idea through the organisation of images and words. The scope of graphic communication has been extended through the growth of design applications in the home and in public and through the development of the internet. Graphic designers need to understand user and audience needs and how these groups respond to various forms of visual communication; as well as how changes to working practices lead to new forms of communication and presentation.

Drawing and other materials processes
Drawing in the context of graphic communication forms an essential part of the development process from initial idea to finished product; from rough sketches to diagrams setting out designs, including digital drawings. Students should use a variety of tools and materials, as appropriate, for

recording their surroundings and source materials. Students must be alert to the possibilities offered by a range of materials, techniques and processes within graphic communication and of the important role of signs and symbols. They must be able to balance aesthetic and commercial considerations when producing graphic solutions to defined problems.

As well as developing skills in their use, students should become aware of and be able to judge when it is appropriate to use traditional or computer-based methods within graphic communication processes, for example in developing roughs, layouts and mock-ups of potential design solutions, in recording and developing ideas and for final designs and presentation. Sometimes ideas or feelings need to be recorded and developed rapidly; the keys to rapid execution are familiarity with and availability of materials. Students should consider the application and implications of new and emerging technologies that can be used in conjunction with traditional and digital graphic communication materials.

Contextual understanding and professional practice
Contexts for graphic communication can be found in a wide range of sources; for example, from historical collections and museums, contemporary graphic communication shows and fairs, the local environment of signage, advertising and branding, films, architecture, music, literature and nature. Students should consider the issues, opportunities and constraints involved in image and content copyright. They should be aware of the circumstances and conditions in which it is acceptable to incorporate images and design concepts originated by others, and of the appropriate steps to take to ensure permission to reproduce their own work is suitably managed.

Students are required to develop the knowledge, skills and understanding outlined on pages 5 and 6 in the Course Specification. When undertaking work in graphic communication, students should also engage with:

- how audiences may respond to the use of words, images and how the formal elements evoke responses in the viewer
- the basic typographical and layout requirements for digital and print-based products
- sustainable materials and production processes in the construction of work the potential of collaborative working methodologies in the creative process.

Disciplines within graphic communication
For the purposes of this qualification, graphic communication is sub-divided into the following four disciplines:

- advertising
- illustration
- branding
- information design.

Students will be required to work in one or more of the disciplines to communicate their ideas. By working across disciplines, they will extend their understanding of the scope of graphic communication; by focusing on one discipline, they will gain a deeper understanding of specific processes within graphic communication.

Advertising
Students will develop integrated knowledge, skills and understanding of the following:

- how graphic communication is used to convey information, arouse interest, tell stories, create brand recognition, sell a product or service, promote brand loyalty
- the role of graphic communication within marketing strategies, promotional campaigns, corporate identity design, logo design

- design briefs, clients, audiences, web-based and digital advertising, use of social media
- the use of images and typography in advertising, such as photography, animation and video.

Illustration

Students will develop integrated knowledge, skills and understanding of the following:

- the relationships between illustration and narrative
- illustration briefs, clients and audiences
- thumbnails, sketches, dissections, plans and elevations
- the use of digital technology such as photo-editing and vector-based software alongside and in combination with traditional wet and dry working processes
- illustration for a variety of purposes, such as book, magazine, advertising, covers, web-based, interactive
- infographics as a way of communicating data through imaginative charts and diagrams.

Branding

Students will develop integrated knowledge, skills and understanding of the following:

- how packaging is determined by its contents
- marketing briefs, clients and audiences, brand identity, brand loyalty
- making suitable production drawings, which may include computer-generated ideas and developments
- surface images, illustration decoration or pattern for packaging
- development and construction of three-dimensional prototypes, considering production materials, recyclable design, using sustainable or renewable materials
- planning and developing procedures for reproduction and manufacture
- specifying sustainable materials and production processes that are suitable for recycling and/or reuse
- the legal requirements for information that must be included on certain types of packaging, and for barcoding and tracking.

Information design

Students will develop integrated knowledge, skills and understanding of the following:

- letter forms, font types, serif and sans serif fonts, leading, paragraph indents, hanging indents, justification, alignment, headings, kerning and sub-headings
- typographical requirements for digital and print-based products, such as magazine design, newspaper design, web page design, leaflet and poster design
- the appropriate use of templates, page layout, style sheets, image manipulation, compression, workflow and file types
- 3d digital graphic techniques, such as modelling objects, rotation, lathing, extruding, linking, creating and applying textures and lighting effects
- moving image/time-based digital graphic techniques, such as storyboarding, sound, animation, colour consistency
- the appropriate use and combination of words, visual 2D and 3D representations, time and desired user behaviours and responses
- interface design, such as the use of symbols and words to aid and enhance navigation, principles of control panel display, use of navigational structures and levels
- a variety of presentation formats for different audiences, such as web-based, projection, touchscreen, mobile phones, DVD, downloadable content.

Photography ((PY0)

Introduction
Photography has been used by practitioners to record, document and present examples of everyday life, in ordinary and extraordinary circumstances. It has also been used as the vehicle for artistic expression, communicating personal ideas about the world around us. It is used to convey personal identity more widely than any other art form, is applied in the creative process across art, craft and design and is widely used in social, commercial and scientific contexts. The development of affordable lens-based technology has changed the way that both professionals and the public use photography.

Drawing and other materials processes.
The word photography could be taken to mean 'a graphic representation with light'. In this way a photograph can take on the qualities of a drawing. In the context of this endorsed title, drawing forms an essential element of both development and final product. A camera can record the observed world but is not able on its own to explore ideas. Students must reflect on, refine and apply the observations they make with a camera, and determine which tools or techniques are most appropriate in their exploration of ideas. Drawing methods such as pen or pencil on paper may enhance their development and understanding of photographic ideas, for example to plan shots, analyse and deconstruct their own imagery, or record ways in which practitioners have used formal elements and visual language. Students should use a variety of tools and materials, as appropriate, for recording their surroundings and source materials.

Photography includes works in film, video, digital imaging and light-sensitive materials. Sometimes specific techniques and processes are used to convey messages and create works related to other disciplines, such as web-based animations, photographic images in printed journals, and light projections within theatrical or architectural spaces.

Many practitioners define their image before it has even been taken by scouting locations and by planning a shot around specific weather conditions or time of day, using filters, studio lighting, reflectors, soft boxes, props, makeup, or backgrounds to control each element within the frame. Students should consider the application and implications of new and emerging technologies that can be used in conjunction with traditional and digital photography materials.

Contextual understanding and professional practice
Contexts for photography can be found in a wide range of sources; for example, from galleries and museums, contemporary photography shows, web-based sources, films, architecture, music, literature and nature.

Students must consider the issues, opportunities and constraints involved in image and content copyright. They should be aware of the circumstances and conditions in which it is acceptable to incorporate images and content originated by others, and of the appropriate steps to take to ensure permission to reproduce their own work is suitably managed. Students should be familiar with contemporary and emerging concepts and learn how to analyse and critically evaluate photography, demonstrating an understanding of purposes, meanings and contexts.

Students are required to develop the knowledge, skills and understanding outlined on pages 5 and 6 in the course specification. When undertaking work in photography, students should also engage with:

- the operations and principles of creating a photographic image, including the use of available and controlled light, lenses, cameras and light-sensitive materials, including

digital and non-digital
- a range of materials used in photography, including print and screen-based materials
- how the formal elements evoke responses in the viewer
- the processes for production of digital and print-based photographs
- methods of presentation of photographic images
- sustainable materials and production processes in the construction of work
- the potential of collaborative working methodologies in the creative process.

Disciplines within photography

For the purposes of this qualification, photography is sub-divided into the following three disciplines:

- film-based photography
- digital photography
- film and video.

Students will be required to work in one or more of the disciplines to communicate their ideas. By working across disciplines, they will extend their understanding of the scope of photography; by focusing on one discipline, they will gain a deeper understanding of specific processes within photography.

Film-based photography

Students will develop integrated knowledge, skills and understanding of the following:

- film types, film speeds, specialised films which will facilitate the processes of generating and developing ideas, pushing/pulling films, reciprocity failure
- viewpoint, composition, focus, aperture, shutter speed, exposure, through the lens metering
- darkroom techniques, using appropriate paper types, developing and printing, emulsions, exposures, tone and contrast
- techniques such as polarisation and solarisation when printing, photograms, photomontage
- acquisition, manipulation and distribution of the image through computers, scanners, photocopiers and computer software.

Digital photography

Students will develop integrated knowledge, skills and understanding of the following:

- the principles of digital photography, including the pixel and digital processing
- viewpoint, white balance, composition, focus, aperture, shutter speed, exposure, shooting modes, histograms
- the use and qualities of image acquisition hardware and software, image manipulation and analogies between digital and other forms of photography
- the relationships between colour and tone for screen and print-based media, screen calibration, colour gamut, file formats such as raw, jpeg, tiff, png
- the use of a range of source material, software and hardware in the generation and development of ideas.

Film and video

Students will develop integrated knowledge, skills and understanding of the following:

- synopsis, storyboards, scripting, camera angles, viewpoints, length of shot, cutting, composition, cropping and pacing, which may include computer generated ideas and developments

- various animation processes, such as stop-frame, rostrum and 3D modelling and associated hardware and software
- qualities and functions of various film and video formats, such as 8mm film, analogue video, digital video, HD, 4K, .flv, .mov, .wmv, animated gif
- the use of sound, narration and storyline and their relation to moving images
- editing, including knowledge of the variety of ways in which images might be juxtaposed to create appropriate effects, such as in-camera editing, non-linear, offline edits, use of time key, compression, in and out points.

Chinese (9CN01)

Chinese	Examination Course Code	
Listening, reading and translation	Unit 1	9CN0/01
Written response to works and translation	Unit 2	9CN0/02
Speaking	Unit 3	9CN0/03M/03C

The Pearson Edexcel Level 3 Advanced GCE in Chinese (spoken Mandarin/ spoken Cantonese) consists of two externally examined papers assessing listening, reading and writing and a speaking assessment. The speaking assessment is externally set and conducted by a teacher-examiner*. All assessments are marked by Pearson.

Unit 1: Listening, reading and translation

Students will be assessed on their understanding of spoken and written Chinese from a variety of types of authentic texts and listening material, as well as their ability to translate accurately from Chinese into English. Texts and recordings vary in length to include some extended passages. All spoken and written materials are culturally relevant to China and Chinese-speaking countries and are drawn from the four theme).

Students should be able to:
- understand main points, gist and detail from spoken and written material
- infer meaning from complex spoken and written material
- assimilate and use information from spoken and written sources, including material from online media
- summarise information from spoken sources, reporting key points and subject matter
- translate from Chinese into English.

Listening
The listening section will be made up of spoken passages covering different registers and types, including authentic communication involving one or more male and female speakers. Sources will include material from online media.

Reading
The reading section will be made up of texts containing both factual and abstract content and will be authentic or adapted from authentic sources, written for different purposes and audiences.

Translation into English
The content of the translation will be taken from one of the four themes.

Unit 2: Written response to works and translation

Students should be able to:

- develop a detailed understanding and appreciation of the works studied, by writing critical and analytical responses in the language of study to the works, taken from the prescribed list provided (using the Prescribed literary texts and films)
- produce responses that relate to aspects such as the form and the technique of presentation, key concepts and issues and the social context, as appropriate to the work studied
- present viewpoints; develop arguments; persuade; and analyse and evaluate in writing
- manipulate language accurately through translating an unseen passage from English into Chinese.

Students must study two discrete Chinese works: either two literary texts, or one literary text and one film. The works must be taken from the list in Appendix 2 in the course specification: Prescribed literary texts and films. The literary texts listed include novels and short stories. All the films are feature length. The content of the translation will be a passage based on one of the four themes.

Unit 3: Speaking

Students should be able to demonstrate:

- knowledge and understanding of the cultural context by giving ideas, examples and information on one of the themes and on a chosen subject of interest they have researched linked to the social and cultural context of the Chinese-speaking world
- the ability to analyse aspects of the cultural context by presenting and justifying valid arguments, viewpoints and conclusions
- the ability to interact and hold a natural and fluent discourse
- skill in manipulating language accurately
- the ability to respond to written language in speech. These aspects are assessed via two distinct tasks conducted in Chinese, which are carried out in consecutive order in one session.

Task 1 (discussion on a Theme)
Content for this task will be based on any one of the eight sub-themes from one of the four overall themes listed on pages 9- 10. Stimulus cards will be given as a springboard to the discussion.

Task 2 (presentation and discussion on student's independent research project)
This task is in two parts. Content for this task will be based on the subject of interest that students have chosen for their independent research project. This may be based on any of the four themes of study listed on pages 9-10 or on a subject of interest of the student's choosing. However, it must relate to the cultural and social context of the Chinese-speaking world.

The aims and objectives of this qualification are to enable students to:

- enhance their linguistic skills and promote and develop their capacity for critical thinking on the basis of their knowledge and understanding of the language, culture and society of the country or countries where the language is spoken
- develop control of the language system to convey meaning, using spoken and written skills, including an extended range of vocabulary, for both practical and intellectual purposes as increasingly confident, accurate and independent users of the language

- develop their ability to interact effectively with users of the language in speech and in writing, including through online media
- develop language learning skills and strategies, including communication strategies to sustain communication and build fluency and confidence
- engage critically with intellectually stimulating texts, films and other materials in the original language, developing an appreciation of sophisticated and creative uses of the language and understanding them within their cultural and social context
- develop knowledge about matters central to the society and culture, past and present, of the country or countries where the language is spoken
- mediate between cultures and between speakers of the language and speakers of English foster their ability to learn other languages
- equip themselves with transferable skills such as autonomy, resourcefulness, creativity, critical thinking, and linguistic, cultural and cognitive flexibility that will enable them to proceed to further study or employment
- develop their capacity for critical and analytical thinking through the language of study
- develop as independent researchers through the language of study.

Paper	**Assessment Objectives**				**Total for all Assessment Objectives**
	A01%	**A02%**	**A03%**	**A04%**	
Paper 1: Listening, Reading and translation	15	25	-	-	40%
Paper 2: Written response to works and translation	-	-	20	10	30%
Paper 3: Speaking	5	5	10	10	30%
Total for GCE A level	**20**	**30**	**30**	**20**	**100%**

Awarding and Reporting

The IAS qualification will be graded on a five-grade scale from A to E. The full international Advanced Level will be graded on a six-point scale A* to E.

A pass in an International Advanced Subsidiary subject is indicated by one of the five grades A, B, C, D, E of which grade A is the highest and grade E the lowest. A pass in an International Advanced Level or GCE A Level subject is indicated by one of the six grades A*, A, B, C, D, E of which grade A* is the highest and grade E the lowest. To be awarded an A* students will need to achieve an A on the full qualification and an A* aggregate of the IA2 units. Students whose level of achievement is below the minimum judged by Pearson to be of sufficient standard to be recorded on a certificate will receive an unclassified U result.

In International Advanced Level specifications, students generally take units at Advanced Subsidiary level (IAS) for an IAS qualification, which is a free-standing qualification and may be awarded separately. Students will then do the additional units to complete the specifications needed for the full International Advanced Level or GCE A level.

- Accounting – consists of a one unit at IAS, and an additional unit at IA2 for the full IAL qualification.
- Business, English Language, History, Psychology and Economics, each consist of two IAS units and two IA2 units.
- Biology, Chemistry Mathematics and Physics - each consist of three IAS units and three IA2 units.
- Mathematics - There are 12 units available in the IAL specification, including the combined Core Mathematics units. Combinations of these 12 units can lead to IAL qualification awards in Mathematics, Further Mathematics and Pure Mathematics. There is a separate Entry, Aggregation and Certification document that is specific to Mathematics, which explains in more detail the ways in which the 12 units can be combined to achieve the three qualification award options.
- For International Advanced Level in Mathematics, A* will be awarded to students who have achieved grade A overall (at least 480 of the 600 maximum uniform mark) and at least 180 of the 200 combined maximum uniform mark for the P3 and P4 units.
- For International Advanced Level in Further Mathematics, A* will be awarded to students who have achieved a grade A overall (at least 480 of the 600 maximum uniform mark) and at least 270 of the 300 combined maximum uniform mark for their best three IA2 units (whether pure or application units).
- For International Advanced Level in Pure Mathematics, A* will be awarded to students who have achieved a grade A overall (at least 480 of the 600 maximum uniform mark) and at least 270 of the 300 combined maximum uniform mark for their IA2 units.

Unit results

Students will receive a uniform mark between 0 and the maximum uniform mark for each unit. The uniform marks at each grade threshold for each unit are:

Subjects	Units	Max Unit Marks	A	B	C	D	E
Biology Chemistry Physics	1, 2 4, 5	120	96	84	72	60	48
Biology Chemistry Physics	3, 6	60	48	42	35	30	24
Accounts	I, 2	300	240	210	180	150	120
Business Economics History	1, 2 3, 4	100	80	70	60	50	40
Psychology	1, 3	80	64	56	48	40	32
Psychology	2, 4	120	96	84	72	60	48
Mathematics	All	100	80	70	60	50	40

International Advanced Subsidiary

Qualification Grade	Maximum Uniform Mark	A	B	C	D	E
Chemistry Biology Physics Accounts Mathematics Further Maths Pure Maths	300	240	210	180	150	120
Business Economics History Psychology	200	160	140	120	100	80

International Advanced Level

Qualification Grade	Maximum Uniform Mark	A	B	C	D	E
Chemistry Biology Physics Accounts Mathematics Further Maths Pure Maths	600	480	420	360	300	40
Business Economics History Psychology	400	320	280	240	200	160

Students with uniform mark in the range of 0-239 will be Unclassified (U).
To be awarded an A*, students will need to achieve an A for the International Advanced Level qualification (at least 480 uniform marks) and at least 90% of the total uniform marks available across the IA2 units combined (at least 270 uniform marks).

Resitting of units
There is one resit opportunity allowed for each unit prior to claiming certification for the qualification. The best available result for each contributing unit will count towards the final grade. After certification, all unit results may be reused to count towards a new award. Students may re-enter for certification only if they have retaken at least one unit. Results of units are held in the Pearson unit bank and have a shelf life limited only by the shelf life of this specification. Please see the following page for further information: qualifications.pearson.com/IAL-entry-certification-procedures.

Qualification Grades

The maximum uniform mark for the qualification and the minimum uniform mark required for each grade:

Qualification grade	A	B	C	D	E
Advanced Subsidiary (AS) where maximum uniform mark is 100	80	70	60	50	40
Advanced Subsidiary (AS) Where maximum uniform mark is 200	160	140	120	100	80
Advanced Subsidiary (AS) Where maximum uniform mark is 300	240	210	180	150	120

Qualification grade	A*	A	B	C	D	E
Advanced (A-Level) Where maximum uniform mark is 200	See Note	160	140	120	100	80
Advanced (A-Level) Where maximum uniform mark is 400	See Note	320	280	240	200	160
Advanced (A-Level) Where maximum uniform mark is 600	See Note	480	420	360	300	240

Note

The general rule for the award of A* is:
- a grade A overall at A-level and
- 90% of the maximum uniform mark on the aggregate of the A2 units

The rule in Mathematics is:
- a grade A overall at A-level and
- 90% of the maximum uniform mark on Unit Core Mathematics 34

The rule in Further Mathematics is:
- a grade A overall at A-level and
- 90% of the maximum uniform mark on the aggregate of the three best A2 units

Internal End of Term Examination Schedule

Term 1	Two (2) weeks before the end of the term
Term 2	Two (2) weeks before the end of the term
Term 3	Two (2) weeks before the end of the term
Term 4	Two (2) weeks before the end of the term

Weekly Assessments

There will be a maximum of 9 weekly assessments per term.

Insworld Weekly and Termly Grading System

Week	1	2	3	4	5	6	7	8	9	10	Average Weekly Test (%)	Exam (%)	*Term Aggregate (%)	Attendance (%)
Grade														

Attainment	
A =	Outstanding
B =	Good
C =	Satisfactory
D =	Poor
E =	Unacceptable work and/or No work completed

Effort	
1 =	Outstanding
2 =	Good
3 =	Satisfactory
4 =	Poor
5 =	No real effort and/or Absent without authority

Term Aggregate: 40% of Weekly test results and 60% end of term results.

Sample of daily timetable

Time	Monday	Tuesday	Wednesday	Thursday	Friday
0900 hr to 0945 hr					
0945 hr to 1030 hr					
1030 hr to 1115 hr					
1115 hr to 1200 hr					
1200 hr to 1245 hr					
1245 hr to 1330 hr					
1130 hr to 1415 hr					
1415 hr to 1500 hr					
1500 hr to 1545 hr					
1545 hr to 1630 hr					
1630 hr to 1715 hr					

All students are expected to collect their new timetable at the beginning of each term.

- ECA is usually scheduled on every Tuesday and Thursday from 1545 hr to 1715 hr.
- First lesson usually starts at 0900 hr whereas the last lesson usually ends no later than 1715 hr.
- On some days, test sessions may end at 1645 hr.
- The school reserves the right to amend the timetable and a new timetable will be given to the students as and when changes are made.

Internal Assessment and Appeals – End of Term Examination Results

The end of term examination results will be released by the last week of the term before term break. Any students who wish to make an appeal for results must submit the appeal within seven (7) working days after the release of the term results.

To appeal, student must submit a fully complete an Appeal of Results form which may be download from the school's website www.insworld.edu.sg or Student's Portal and submit to Student Services by email to studentservices@insworld.edu.sg.

The deadline for submission of any appeal is within seven (7) working days after release of results. The outcome of the appeal will be released within seven (7) working days upon receipt of the Appeal Results form. Any changes in the results will be reflected in the end of term report.

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