Cambridge House
BRITISH INTERNATIONAL SCHOOL
VALENCIA

Cambridge House British International School

Parent Handbook: Sixth Form

2026-
2028

Shaping the world

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Dear Families and Students,

This booklet is about the Sixth Form at Cambridge House British International School. It gives information about the courses we offer and the choices that must be made by students at this stage of their educational career.

This handbook is designed to help parents understand life in our Sixth Form. Should you have any further questions please contact a member of our team.

The Sixth Form Team

- Secondary Headteacher: Carl Uren
- Head of 6th Form: Alicia Hilton
- Technical Director: Ana Más
- Head of Year 12: Paula Mateu
- Head of Year 13: Jack Reilly
- Head of BTEC: Ruth Tadina

Cambridge House British International School contributes to the development of unique individuals in a unique environment. It is a place where students learn to understand and respect themselves, each other and the international community. We are dedicated to promoting lifelong learners who explore, participate and contribute throughout society showing tolerance and compassion with the confidence to make a difference.

Our mission
We prepare our students to shape tomorrow through excellence in British education, with a global perspective

Our vision
To be the first-choice international school in Valencia, building a community of lifelong learners for a better future

Our School Values

- Enthusiasm
- Kindness
- Community Spirit
- Curiosity
- Perseverance

The Sixth Form: overview

The school provides a diverse academic curriculum through our A Level choices, Selectivo subjects and our BTEC programmes. We have a commitment to providing an appropriate education for all our students, regardless of their ability range and preferred learning style.

It is the aim of Cambridge House British International School to provide our post-16 students with a stimulating and purposeful curriculum, leading to qualifications which are internationally recognised and accepted as entry requirements for university. Students will benefit from an education through the medium of English and are offered not only a broad and balanced

curriculum, but also opportunities to develop into responsible members of the adult community who are able to offer a variety of skills when seeking future employment.

Any student who aspires to join our Sixth Form must demonstrate a high degree of self-discipline and motivation and be prepared to put in the maximum effort to succeed in their goals. Students must apply to enter our Sixth Form and they will be invited for an interview with a senior member of staff.

Our Sixth Form programme incorporates 19 subject options at A Level and 9 Spanish PCE options. Consequently, students will be able to prepare for between 4 and 5 A Levels plus 2 or 3 Selectivo subjects. In addition, we offer 2 BTEC Level 3 courses in Business Management and Sports and Business and Management. Both pathways provide students with the Spanish ´Título de Bachiller´ and 'acceso a la universidad'.

Our Sixth Form students are well prepared for local and national Spanish universities but also universities based in the UK, USA, Holland and other European countries. Recently, our students have chosen to study Aeronautical Engineering, Medicine, Law, International Business, Maths, Physics, Computer Science, Art and Psychology.

A Levels
A Levels are recognised worldwide as a requirement for entry into university. Study and examination at A Level give students in-depth knowledge and life-long skills that prepare them for success in higher education and future employment. A Levels take two years to complete and offer a flexible course of study that gives students the freedom to select the subjects that are right for them.

Students choosing A Levels are expected to have a minimum of five grade C/grade 4 or above at IGCSE level, including English, Mathematics and/or Science. However, it is important to understand that subjects have minimum requirements at IGCSE to take the subject at A Level. These minimum requirements are in place based on specialist teacher experience, understanding the requirements of a higher level of studies.

AS and A Level examination sessions take place in May/June, with results issued in August. Students do not just sit written examinations, they also have orals, practical or coursework elements depending on the subject. Consequently, a wide range of assessment processes and techniques are used to supplement formal written examinations in various subjects where they are the most effective and appropriate means of measuring attainment.

BTEC Level 3
Sometimes a more professional, specialised course may be preferable for the student and parents should consider this very carefully. While our policy of inclusion enables all students, whatever their ability, to prepare for A Levels, some are better suited studying for a more practical alternative.

Curriculum

The Sixth Form spans two school years (Years 12 and 13) during which students prepare for AS and then A levels or BTEC which involves 16 subjects in total, 8 per year. The A Level subjects chosen in Year 12 are continued into Year 13. The BTEC curriculum requires students to pass each unit in Year 12 before moving into Year 13. Our aim is to enable each student to achieve their academic potential, prepare for a career that most suits them and gain the maximum points for entry to university.

Given our policy of inclusion, which recognises the importance of catering for every student's unique capability, we aim to select, for each student, the optimum number and choice of subjects to enable them to compete at the highest level, making the most of their individual skills and ability.

Prior to applying for a place in our Sixth Form, students should consider very carefully the high standard required. The school expects any student embarking on Sixth Form studies to be prepared to work in a mature and independent manner and with self-discipline; completing subject assignments on time, researching for coursework and preparing their chosen subjects at the very highest level.

In addition to our educational pathways, we also offer our students enrichment activities during daily tutorial that include activities to help support students apply for university and the world of work.

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A Level, Spanish and Selectivo Option choices 2026

Option Block 1	Option Block 2	Option Block 3	Option Block 4	Option Block 5
Biology	Chemistry	Mathematics	Biology	Mathematics
Physics	Mathematics	French	Physics	Media Studies
Business	Business	Art	English Literature	French
Geography	History	Physical Education	French	Travel & Tourism
Drama	Computer Science	Music	Italian	BTEC
BTEC	Travel & Tourism		BTEC	

Spanish	Economia	Spanish	Economía	Spanish	Física	Spanish	Mates II	Spanish	Economía
Mates Aplicadas	Mates II	Química	Mates II	Geografía	Mates Aplicadas	Mates Aplicadas		Física	Química
Dibujo Técnico	Historia del Arte		Biología	Further Maths		IAL Spanish		Biología	
				IAL Spanish					

BTEC Level 3 Business Management

	Semester 1	**Semester 2**
Year 1	• Business Decision Making • Business Finance • Exploring Business • Team Building in Business	• Business Decision Making • Training and Development • Research and Plan a Marketing Campaign • Business Ethics
Year 2	• Human Resources • Principles of Management • Managing an Event • Branding	• Investigating Customer Service • Creative Promotion • Career Planning • Pitching for a New Business

BTEC Level 3 Sports, Business & Management

	Semester 1	**Semester 2**
Year 1*	•Sports Tourism •Business in Sport •Ethics, Behaviours and Values •Sports Journalism	•Nutrition for Physical Performance •Sports Psychology •Marketing Communications •Marketing Careers in the Sport & Active Leisure Industry •History of Liverpool Football Club
Year 2*	•Research Project in Sport • Enterprise and Entrepreneurs •Sports Performance Analysis •Health, Wellbeing & Sport	•Research Project in Sport •Fitness Testing • Organising Events in Sport & Physical Activities • Self Employment in Sport & Physical Activity

*optional subjects to be confirmed

Additional activities and skills

Optional sports activities, music, drama and art are also made available to students. The drama department is of a high quality and performs to the public regularly. We also participate in a variety of cultural programmes such as the opportunity to support motor-challenged students on their trip to Lourdes (during Easter), the European Youth Parliament and the Model United Nations, helping them to focus on their public speaking skills, knowledge of current affairs and debating technique with students from other schools. We also have a Senior Student Council that students can apply to join and a volunteering programme with our younger students. Finally, regular sports competitions are organised at a local and national level.

Access to universities

UK and International
Alongside entry via A level, universities will consider students' achievements in BTEC Level 3. Throughout Year 12, but specifically at the beginning of Year 13, students will decide whether to apply for a UK university through UCAS (the University Clearing and Admissions' Service). The school helps prepare students' academic paperwork for all universities and will help them make the best university choice.

Direct Access and Homogolación for Spanish universities
If staying in Spain, students may apply to local and national universities in Spain. The school deals with the admissions process on behalf of the students; this is called 'Acceso Directo' or 'Homogolación'. Valencia is lucky to boast two excellent public universities and several well-known private ones. .

The current Spanish law allows students to apply for university access via their A Levels and BTEC courses, but students must be aware prior to entering Sixth Form of strict university entrance requirements. For example, Science students will study two Spanish Selectivo subjects chosen from Biology, Maths, Physics, Chemistry and Technical Drawing and Social Science students will study two subjects from Spanish Geography, History of Art, Mathematics Applied to Social Sciences and Economics. These two Spanish specific subjects are optional and assessed with a weighting factor according to conversion tables created by the universities themselves. For students opting for Homologación, an additional two Selectivo subjects (Inglés, Francés, Italiano) will be added to their timetable in Year 13

Information is given to parents and students during the second term of year 11, prior to entry into the Sixth Form. Students are asked to make provisional option choices before the end of the second term with final choices being made once IGCSE external results are issued in August.

The UCAS tariff points:

		A*	A	B	C	D	E
UCAS points	**AS**		20	16	12	10	6
	A-Level	56	48	40	32	24	16

British & Spanish system equivalence table:

UCAS Conversion table Spain			
UCAS	**Spain**	**UCAS**	**Spain**
48	**5.00**	**144**	**7.73**
56	**5.23**	**152**	**7.95**
64	**5.45**	**160**	**8.18**
72	**5.68**	**168**	**8.41**
80	**5.91**	**176**	**8.63**
88	**6.14**	**184**	**8.86**
96	**6.36**	**192**	**9.09**
104	**6.59**	**200**	**9.32**
112	**6.82**	**208**	**9.54**
120	**7.04**	**216**	**9.77**
128	**7.27**	**224**	**10.00**

136	**7.50**		

Expectations
Our Sixth Form students are young adults aged between 16 and 18 and they have reached a post-compulsory stage in their education. For these reasons, we give them more freedom and privileges than the other students. However, sixth formers are expected to set an example to the younger students, and we require from them a high degree of responsibility and excellent behaviour.

Off school site
Students are expected to attend school every day at 9:10am for registration and stay on site until taught lessons are completed. Year 12 parents can choose to permit their child to be allowed to leave the school premises once timetabled lessons have finished for the day. Year 13 students are allowed off site when they do not have a timetabled lessons and during breaks with parental permission. When off site, students are the parents' responsibility; therefore, parents should consider carefully whether to give this permission. Students must sign in and out at Reception.

Study areas
Students are encouraged to use the study areas available to them during study periods. These areas are places of quiet independent work, and the rules should be followed. They are specifically only for the Sixth Form students.

Tutorial
Year 12 tutorial time takes place every day between 9:10 and 9:30. It is the time when students can speak with their tutor and participate in activities using the Unifrog platform. Year group and Sixth Form assemblies follow a rota every Tuesday. It is, therefore, important that students be punctual.

Sports
During the school day, students can play basketball or football when the courts have been scheduled for the Sixth Form.

School cafeteria
Sixth Form students are allowed to purchase snacks and drinks from the school cafeteria during break time.

Dress rules
The Sixth Form dress code is very simple. It reflects the standards expected in business and professional workplaces. Additionally, we believe the dress code should set an example to the younger members of the school community, parents and visitors to the school. As a reflection of our diverse community, we offer a gender-neutral dress code.

Appropriate attire:

- Shirt
- High-neck jumper
- Polo shirt, t-shirt or shirt
- Jeans/trousers without rips
- Appropriate skirt or dress
- Jacket
- Proper footwear

Inappropriate attire:

- Flip flops
- Caps and hats
- Inappropriate messages on clothes
- Skirts, shorts or tops that are too short
- Swimwear
- Tracksuits
- Sportswear clothing such as basketball shorts and tracksuits

Students should not have visible tattoos or extremes of hair colour. Failure to adhere to the above dress rules or any other expectation set by the school, will be dealt with in accordance with the school's discipline policy.

Attendance
The Sixth Form operates a policy of a minimum requirement of 90% attendance. We understand for some students there are exceptional circumstances e.g. élite sporting commitments. In these cases, we would work with families to offer our support. In other cases where school had concerns around attendance impacting on progress we would speak to families and consider appropriate next steps. In cases where school had serious concerns, we would discuss whether the students should continue with their academic programme.

Discipline
All disciplinary procedures common to the rest of the students apply to the Sixth Form student. Discipline is extremely important for this age group, and we need strong cooperation between parents, tutors and teachers. To achieve it, we will maintain close communication with parents and inform them about any discipline concerns regarding their children if we feel it necessary. The school behaviour policy is available on the school's website.

Summary of expectations

- Respect every member of the school community.
- Be punctual at registration, lessons and prep periods.
- Be organised.
- Work hard to maintain a high standard of education.
- Participate in class and interact positively with teachers.
- Respect school regulations.
- Make maximum effort to ensure the highest possible grades.
- Be responsible and act as a good example for the rest of the students in school.

Continuation at the Sixth Form
If the school feels students are consistently not meeting the expectations set out above, they will work with families to address the issue. If the required improvements are not seen over time the school will consider the students' future as a member of our Sixth Form.

Promotion from Year 12 to Year 13
A Levels, BTEC and Selectivo courses are much more demanding and challenging than IGCSEs, so we insist upon a high effort level from the students from the very first day of school. We work closely with families, so that their children achieve their highest potential and acquire adequate habits of individual and independent study as well as exemplary behaviour.

The effort level will be judged in a rigorous and objective way, based on individual and specific work. Students must be aware that unless they show clear evidence of effort, preparation and motivation, they will not be registered to sit the external examinations. They will, instead, be assessed internally at the end of the year to decide whether they are given the opportunity to continue.

At the end of year 12, if a student fails two AS subjects specific to their chosen career path, they may be recommended to repeat year 12. In subjects where there are no external exams at the end of Year 12, students will be asked to sit internal assessments. These internal assessments will then be used to decide whether students are allowed to progress from Year 12 to Year 13.

Use of mobile phones & electronic devices
In Year 12 and Year 13, pupils are permitted to use mobile phones and devices, but only for educational purposes. Please see the separate mobile phone policy for more information.

Subject information

Students should consider carefully which subjects they wish to study at A level and Selectivo or whether the BTEC course is more suited to them. The school operates expectations that students will maintain a minimum requirement of A Levels throughout their time at the Sixth Form. Please see the table below.

	Year 12			Year 13		
Pathway	**AS Level**	**A Level**	**Selectivo**	**A Level**	**Selectivo**	**Hrs of study**
1	3	1 (Spanish)	2 or 3	3	2 or 3	24
2	4	1 (Spanish)*	1	4	-	30
3	4	-	2	4	2	30
4	5	-	-	5	-	30
5	BTEC Business Management or Sports Business Management plus A Level Spanish and optional 2 Selectivo subjects: 15 + 9 hours Guided Learning study (24 hours)					

*Full A Level sat in January of year 13

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Minimum expected grades for entry into A Level subjects

Subject	Minimum requirement recommendations for A level study
Art	minimum grade C in the relevant subject
Biology	minimum grade 6/6 in Co-ordinated Science and minimum grade B/7 in Mathematics
Business	minimum grade 6 in Business (preferably grade 7), and/or minimum grade 6 in English Literature/English First Language
Chemistry	minimum grade 6/6 in Co-ordinated Science and minimum grade B/7 in Mathematics
Computer Science	minimum grade 6 in Computer Science or a relevant subject subject such as Mathematics or Science
English Literature	minimum grade 6 in English Literature and English First Language
French	minimum grade 6 (preferably a grade 7).
Further Mathematics	IGCSE grade 9 in Mathematics
Geography	minimum grade 5 in Geography, and/or C or 5 in Maths and English First Language
History	minimum grade C in History, and/or minimum grade 6 in English Literature/English First Language

Italian	minimum grade 6 (preferably a grade 7)

Mathematics	minimum grade 7 in Mathematics
Media Studies	minimum grade 5 in a related subject or minimum grade 5 in English First Language
Music	Minimum grade 8-9 at IGCSE or Enseñanzas Profesionales (EP) or ABRSM Grade 5 theory + Grade 5/6 instrumental.
Physics	minimum grade 6/6 in Co-ordinated Science and minimum grade B/7 in Mathematics
Physical Education	Minimum grade C in the relevant subject or minimum grade 5 in English First Language
Spanish (IAL Edexcel & A Level CIE)	Minimum grade C in Spanish Literature (preferably B) and minimum grade A/8 in Spanish Foreign Language (preferable A*/9)
Travel & Tourism	minimum grade C in Travel and Tourism or minimum grade C/4 in English & Maths

Please see subject specific information on the following pages

A Level English Literature

Subject Summary
CIE A Level Literature in English will provide learners with the opportunity to gain further knowledge and understanding of international poetry, prose and drama, with candidates studying all genres at both levels.

Learners will study a wide range of set texts that offer a depth and breadth of literary study and encourage lively and stimulating classroom discussion. At AS Level learners will study three set texts and prepare for one unseen text. At A Level they will study four further set texts.

Throughout the AS and A Level course learners will be encouraged to practise their skills in close reading through the study of literary extracts and unseen texts; developing skills of analysis and interpretation of texts, alongside their expression of personal response to the texts studied. Learners will explore the conventions of genres of texts and the contexts in which works have been written, read and received.

The aims are to enable students to:

- enjoy the experience of reading literature
- develop an appreciation of and an informed personal response to literature in English in a range of texts in different forms, and from different periods and cultures
- communicate effectively, accurately and appropriately in written form
- develop the interdependent skills of reading, analysis and communication
- analyse and evaluate the methods writers use in creating meaning and effects
- encourage wider reading and an understanding of how it may contribute to personal development
- build a firm foundation for further study of literature

Component	Weighting	
	AS Level	A Level
Paper 1: Drama and Poetry 2 hour exam Respond to two questions	50%	25%
Paper 2: Prose and Unseen 2 hour exam Respond to two questions	50%	25%
Paper 3: Shakespeare and Drama 2 hour exam Respond to two questions	–	25%
Paper 4: Poetry and Prose 2 hour exam Respond to two questions	–	25%

A Level Media Studies

Subject Summary

CIE A Level Media Studies is recognised by universities and employers as proof of knowledge and understanding of the media and its role in our daily lives. Learners develop a set of transferable skills, including the skill of thinking critically about mediated information, understanding its rhetorical qualities, and being aware of the significance of its conditions of production and reception. Learners will also be able to practise this skill to communicate their own ideas in a variety of forms. These skills can be applied across a wide range of subjects and equip learners well for progression to higher education or directly into employment.

The aims are to enable students to:

- develop critical understanding of international media through engagement with media products and concepts
- develop critical understanding of international media through engagement with the creative application of practical skills
- explore production processes, technologies and contexts
- develop independence in research skills and their application
- enjoy and appreciate the media and its role in their daily lives
- appreciate and engage with a variety of global and local media texts
- explore the impact of the media within a variety of cultures and how this influences social values

Component	Weighting	
	AS Level	A Level
Component 1: Foundation Portfolio Coursework - candidates produce part of their own magazine that includes digital evidence of the process of their work and a creative critical reflection.	50%	25%
Component 2: Media Texts and Contexts Two hour exam ● Moving image analysis - representation and technical codes ● Film case studies - audiences and institutions	50%	25%

Component 3: Advanced Portfolio Coursework - Candidates produce a campaign of media products, digital evidence of the process of their work and reflect upon their finished products, in the form of an evaluative essay of around 1500 words. Candidates work either individually or as part of a group to complete this coursework.	–	25%
Component 4: Media Debates Two hour exam Section A: Media debates - Candidates answer two from a choice of three questions. Section B: Media ecology - Candidates answer one question.	–	25%

A Level Maths

Subject summary:
Cambridge International AS & A Level Mathematics develops a set of transferable skills. These include the skill of working with mathematical information, as well as the ability to think logically and independently, consider accuracy, model situations mathematically, analyse results and reflect on findings. Learners can apply these skills across a wide range of subjects and the skills equip them well for progression to higher education or directly into employment.

The key concepts for Cambridge International AS & A Level Mathematics are:
• Problem solving Mathematics in Algebra, Geometrical techniques, Calculus, Mechanical models, Statistical methods and Probability.
• Communication of Mathematical proof and reasoning.
• Application of mathematical modelling in different real-world situations and problems, leading to predictions and solutions.

Course overview:

Component	Weighting	
	AS level	**A level**
Paper 1: Pure Mathematics 1 Topics studied - • Quadratics • Functions • Coordinate geometry • Circular measure • Trigonometry • Series • Differentiation • Integration	60%	30%
Paper 3: Pure Mathematics 3 Topics studied - • Algebra • Logarithmic and exponential functions • Trigonometry • Differentiation • Integration • Numerical solution of equations • Vectors • Differential equations • Complex numbers	-	30%
Paper 4: Mechanics Topics studied - • Forces and equilibrium • Kinematics of motion in a straight line • Momentum • Newton's laws of motion • Energy, work and power	40% (Dependant on option block, only one of Mechanics or Statistics will be taken at AS the other at A level)	20%

Paper 5: Probability & Statistics 1 Topics studied - ● Representation of data ● Permutations and combinations ● Probability ● Discrete random variables ● The normal distribution		20%

A Level Further Mathematics

Subject summary:

Cambridge International AS & A Level Further Mathematics develops a set of transferable skills. These include the skill of working with mathematical information, as well as the ability to think logically and independently, consider accuracy, model situations mathematically, analyse results and reflect on findings.
Learners can apply these skills across a wide range of subjects, and the skills equip them well for progression to higher education or directly into employment. Learners will find that the additional time spent studying this subject will support their understanding of A-Level Mathematics.

Our approach in Cambridge International AS & A Level Further Mathematics encourages learners to be:
confident, using and sharing information and ideas, and using mathematical techniques to solve problems. These skills build confidence and support work in other subject areas as well as in mathematics.
responsible, through learning and applying skills which prepare them for future academic studies, helping them to become numerate members of society.
reflective, through making connections between different branches of mathematics and considering the outcomes of mathematical problems and modelling.
innovative, through solving both familiar and unfamiliar problems in different ways, selecting from a range of mathematical and problem-solving techniques.
engaged, by the beauty and structure of mathematics, its patterns and its many applications to real life situations.

Component	Weighting	
	AS level	**A level**
Paper 1: Further Pure Mathematics 1 Topics studied - 1.1 Roots of polynomial equations 1.2 Rational functions and graphs 1.3 Summation of series 1.4 Matrices 1.5 Polar coordinates 1.6 Vectors 1.7 Proof by induction	60%	30%
Paper 2: Further Pure Mathematics 2 Topics studied - 2.1 Hyperbolic functions 2.2 Matrices 2.3 Differentiation 2.4 Integration 2.5 Complex numbers 2.6 Differential equations	-	30%

Paper 3: Further Mechanics Topics studied - 3.1 Motion of a projectile 3.2 Equilibrium of a rigid body 3.3 Circular motion 3.4 Hooke's law 3.5 Linear motion under a variable force 3.6 Momentum	40%	20%
Paper 4: Further Probability & Statistics Topics studied - 4.1 Continuous random variables 4.2 Inference using normal and t-distributions 4.3 X^2 -tests 4.4 Non-parametric tests 4.5 Probability generating functions		20%

A Level Music

Subject summary

The course provides a unique combination of academic study and creative opportunity. Students broaden their musical experience and interests, develop imagination and foster creativity. They recognise the interdependence of musical knowledge, understanding and skills, and make links between the integrated activities of performing, composing, and appraising underpinned by attentive listening. The course leads students on to higher education at both university and conservatoire level. It is a varied course and is a well-regarded and accepted A-Level into university and the music industry.

The course covers

- the development of performing skills to demonstrate an understanding of musical elements, style, sense of continuity, interpretation, and expression
- the development of composing skills to demonstrate the manipulation of musical ideas and the use of musical devices and conventions
- the development of knowledge and understanding of a variety of instruments and styles, and of relevant approaches to both performing and composing
- appraising contrasting genres, styles, and traditions of music, and develop understanding of musical contexts and a coherent awareness of musical chronology

Course overview

Component	Weighting A Level
Component 1 · Performing · A public performance for a minimum of 8 minutes of one or more pieces, performed as a recital. · Performance can be playing or singing a solo, in an ensemble, improvising, or realising music using music technology.	30%
Component 2 · Composing · Total of two compositions, one set a brief set by Pearson and one either free composition or also to a brief. · One composition must be from a list of briefs or a free composition and must be at least 4 minutes in duration. · One composition must be from a list of briefs assessing compositional technique and must be at least 1 minute in duration.	30%
Component 3 · Appraising - Exam 2 hours 10 minutes · Application of knowledge and understanding of musical elements, contents, and language through the context of six areas of study: Vocal Music, Instrumental Music. Music for Film, Popular and Jazz, Fusions and New Directions.	40%

A Level Biology

Subject summary

Biology AS and A level offers students a much deeper understanding of the living world around them from topics that include; Cells as the Unit of Life, Biochemical Processes, DNA, the molecule of hereditary, Natural Selection and Organisms and their Environment. This course provides students with the confidence to apply knowledge and skills in new situations and practise these skills with the practical element of the course. Cambridge International AS and A Level Biology helps learners develop the knowledge and skills that will prepare them for successful university study and beyond.

The key concepts for Cambridge International AS & A Level Biology are:

- Cells as the units of life
  A cell is the basic unit of life, and all organisms are composed of one or more cells. There are two fundamental types of cells: prokaryotic and eukaryotic. Understanding how cells work provides an insight into the fundamental processes of all living organisms.
- Biochemical processes
  Cells are dynamic structures within which the chemistry of life takes place. Biochemistry and molecular biology help to explain how and why cells function as they do.
- DNA, the molecule of heredity
  Cells contain the molecule of heredity, DNA. DNA is essential for the continuity and evolution of life by allowing genetic information to be stored accurately, to be copied to daughter cells, to be passed from one generation to the next and for the controlled production of proteins. Rare errors in the accurate copying of DNA known as mutations result in genetic variation and are essential for evolution.
- Natural selection
  Natural selection acts on genetic variation and is the major mechanism in evolution, including speciation. Natural selection results in the accumulation of beneficial genetic mutations within populations and explains how populations can adapt to meet the demands of changing environments.
- Organisms in their environment
  All organisms interact with their biotic and abiotic environment. Studying these interactions allows biologists to better understand the effect of human activities on ecosystems, to develop more effective strategies to conserve biodiversity and to predict more accurately the future implications for humans of changes in the natural world.
- Observation and experiment
  The different fields of biology are intertwined and cannot be studied in isolation. Observation, enquiry, experimentation and fieldwork are fundamental to biology, allowing relevant evidence to be collected and considered as a basis on which to build new models and theories. Such models and theories are further tested by experimentation and observation in a cyclical process of feedback and refinement, allowing the development of robust and evidence-based conceptual understandings.

Candidates for Cambridge International AS Level Biology study the following topics:

1. Cell structure
2. Biological molecules
3. Enzymes

4 Cell membranes and transport
5 The mitotic cell cycle
6 Nucleic acids and protein synthesis
7 Transport in plants
8 Transport in mammals
9 Gas exchange
10 Infectious diseases 11 Immunity

AS Level candidates also study practical skills.

Candidates for Cambridge International A Level Biology study the AS topics and the following topics:

12 Photosynthesis
13 Homeostasis
14 Control and coordination
15 Inheritance
16 Selection and evolution
17 Classification, biodiversity and conservation
18 Genetic technology

A Level candidates also study practical skills.

Course overview

Component	Weighting	
	AS Level	A Level
Paper 1 **Multiple Choice; Exam 1 hour 15 minutes** Topics studied: Questions are based on topics listed in Paper 2 section	31%	15.5%
Paper 2 **As Level Structured Questions; Exam 1 hour 15 minutes** Topics studied: Cell Structure, Biological Molecules, Transport in Plants and Mammals, Amino Acids and Cell Replication amongst others	46%	23%
Paper 3 **Advanced Practical Skills; Exam 2 hours** Practical Skills and structured questions	23%	11.5%
Paper 4 **A Level structured questions; Exam 2 hours** Topics Include: Homeostasis, Coordination, Evolution and Selection and Genetic Technology amongst others.	–	38.5%
Paper 5 **Planning, Analysis and Evaluation; Exam 1 hour 15 mins** Questions are based on the practical skills of planning, analysis and evaluation. The context of the questions may be outside the syllabus content		11.5%

A Level Chemistry

Subject summary

The aims describe the purposes of a course based on this syllabus. The aims are to enable students to study:

- Atoms and forces
  Matter is built from atoms interacting and bonding through electrostatic forces. The structure of matter affects its physical and chemical properties and influences how substances react chemically.
- Experiments and evidence
  Chemists use evidence gained from observations and experiments to build models and theories of the structure and reactivity of materials. Theories are tested by further experients, and an appreciation of accuracy and reliability is gained.
- Patterns in chemical behaviour and reactions
  Patterns in chemical behaviour can be identified and used to predict the properties of substances. By applying these patterns, useful new substances can be designed, and synthetic routes created.
- Chemical bonds
  The understanding of how chemical bonds are made and broken by the movement of electrons allows us to predict patterns of reactivity. Appreciation of the strength of chemical bonds leads to the understanding of a material's properties and its uses.
- Energy changes
  The energy changes that take place during chemical reactions can be used to predict the extent, feasibility and rate of such reactions. An understanding is gained of why and how chemical reactions happen.

Physical chemistry

1 Atomic structure
2 Atoms, molecules and stoichiometry
3 Chemical bonding
4 States of matter
5 Chemical energetics
6 Electrochemistry
7 Equilibria
8 Reaction kinetics

Inorganic chemistry

9 The Periodic Table: chemical periodicity
10 Group 2
11 Group 17
12 Nitrogen and sulphur

Organic chemistry

13 An introduction to AS Level organic chemistry
14 Hydrocarbons
15 Halogen compounds

16 Hydroxy compounds
17 Carbonyl compounds
18 Carboxylic acids and derivatives
19 Nitrogen compounds
20 Polymerisation
21 Organic synthesis

AS Level candidates also study practical skills.

Physical chemistry

22 Chemical energetics
23 Electrochemistry
24 Equilibria
25 Reaction kinetics

Inorganic chemistry

26 Group 2
27 Chemistry of transition elements

Organic chemistry

28 An introduction to A Level organic chemistry
29 Hydrocarbons
30 Halogen compounds
31 Hydroxy compounds
32 Carboxylic acids and derivatives
33 Nitrogen compounds
34 Polymerisation
35 Organic synthesis

Analysis

36 Analytical techniques

A Level candidates also study practical skills.

Course overview

Component	Weighting	
	AS Level	A Level

Paper 1 **Multiple Choice 1 hour 15 minutes** 40 marks; 40 multiple-choice questions	31%	15.5%
Paper 2 **AS Level Structured 1 hour 15 minutes** 60 marks; Structured questions	46%	23%
Paper 3 **Advanced Practical Skills 2 hours** 40 marks; Practical work and structured questions	23%	11.5%
Paper 4 **A Level Structured Questions 2 hours** 100 marks; Structured questions	-	38.5%
Paper 5 **Planning, Analysis and 1 hour 15 minutes** 30 marks; Questions based on the experimental skills of planning, analysis and evaluation.	-	11.5%

A Level Physics

Subject summary

The key concepts for Cambridge International AS & A Level Physics are:

- Models of physical systems
  Physics is the science that seeks to understand the behaviour of the Universe. The development of models of physical systems is central to physics. Models simplify, explain and predict how physical systems behave.
- Testing predictions against evidence
  Physical models are usually based on prior observations, and their predictions are tested to check that they are consistent with the behaviour of the real world. This testing requires evidence, often obtained from experiments.
- Mathematics as a language, and problem-solving tool
  Mathematics is integral to physics, as it is the language that is used to express physical principles and models. It is also a tool to analyse theoretical models, solve quantitative problems and produce predictions.
- Matter, energy and waves
  Everything in the Universe comprises matter and/or energy. Waves are a key mechanism for the transfer of energy and are essential to many modern applications of physics.
- Forces and fields
  The way that matter and energy interact is through forces and fields. The behaviour of the Universe is governed by fundamental forces with different magnitudes that interact over different distances. Physics involves study of these interactions across distances ranging from the very small (quantum and particle physics) to the very large (astronomy and cosmology).

Candidates for Cambridge International AS Level Physics study the following topics:

1 Physical quantities and units
2 Kinematics
3 Dynamics
4 Forces, density and pressure
5 Work, energy and power
6 Deformation of solids
7 Waves
8 Superposition
9 Electricity
10 D.C. circuits
11 Particle physics

AS Level candidates also study practical skills.

Candidates for Cambridge International A Level Physics study the AS Level topics **and** the following topics:

12 Motion in a circle
13 Gravitational fields
14 Temperature
15 Ideal gases
16 Thermodynamics
17 Oscillations
18 Electric fields
19 Capacitance
20 Magnetic fields
21 Alternating currents
22 Quantum physics
23 Nuclear physics
24 Medical physics
25 Astronomy and cosmology

A level candidates also study practical skills.

Course overview

Component	Weighting	
	AS Level	A Level
Paper 1	31%	15.5%
Paper 2	46%	23%
Paper 3	23%	11.5%
Paper 4	–	38.5%
Paper 5	-	11.5%

A Level Geography

Subject summary
Geography occupies a central position in understanding and interpreting issues affecting people, places and environments, and change in both space and time. Edexcel International AS and A Level Geography helps learners develop the knowledge and skills that will prepare them for successful university study.

The course covers

- an understanding of the principal processes operating within physical geography and human geography
- an understanding of the causes and effects of change on natural and human environments
- an awareness of the usefulness of geographical analysis to understand and solve contemporary human and environmental problems
- the ability to handle and evaluate different types and sources of information
- the skills to think logically, and to present an ordered and coherent argument in a variety of ways

Course overview

Component	**Weighting**	
	AS Level	**A Level**
Unit 1 **Global Challenges: Exam 1 hour 45 minutes** Topics studied: Word at Risk Going Global	60%	30%
Unit 2 **Geographical Investigations: Exam 1 hour 30 minutes** Topics studied: Crowded Coasts Urban Problems, Planning and Regeneration	40%	20%
Unit 3 **Contested Planet: Exam 2 hours** Topics studied: Atmosphere and Weather Systems Biodiversity Under Threat Energy Security Superpower Geographies	–	30%

Unit 4 **Researching Geography: Exam 1 hour 30 minutes** Topics studied: One optional subject from: - Tectonic Activity and Hazards - Feeding the World´s People - Cultural Diversity: People and Landscapes - Human Health and Disease	–	20%

A Level Travel and Tourism

Subject summary

Travel and Tourism is the world's largest service industry and as such requires students with senior leadership aspirations to be trained for the industry. The A Level course recognises that despite the players in the market being susceptible to global influences, trends and disruption, the benefits of achieving a sustainable and economically viable Travel and Tourism Industry are of such enormity that potential stakeholders need more education and awareness on aspects such as:

- The scale of the travel and tourism industry.
- Customer needs and wants.
- The importance of customer service.
- Market Research and Branding.
- The economic, sociocultural and environmental impacts of the Travel and Tourism industry.

Students taking this subject will be required to bring a device to school to write the coursework element of the qualification.

Course overview

Component	Weighting	
	AS Level	A Level
Paper 1 **Themes and Concepts; Exam 2 hours** The changing nature of travel and tourism Travel and tourism destinations Trends in travel and tourism Customer service in travel and tourism	50%	25%
Coursework: Planning and Managing a Travel and Tourism Event; Coursework Candidates work on a project which involves planning and managing a travel and tourism event. Candidates work in a team but present their project individually.	50%	25%
Paper 3 **Destination Marketing; Exam 1 hour 30 minutes** **Topics studied:** Market analysis research methodologies and tools analysis. Product positioning. Creating a brand identity. Key Performance Indicators	-	25%

Paper 4 **Destination Management; Exam 1 hour 30 minutes** **Topics studied** Impacts of Tourism development Partnerships required in the industry. Destination management activities. The positive and negative economic impacts of tourism.	-	25%

A Level History

Subject summary

Cambridge International AS and A Level History aims to enable students to develop:

- an interest in the past and an appreciation of human endeavour
- a greater knowledge and understanding of historical periods or themes
- a greater awareness of historical concepts such as cause and consequence, change and continuity similarity and difference, significance and interpretations
- an appreciation of the nature and diversity of historical sources available, and the methods used by historians
- an exploration of a variety of approaches to different aspects of history and different interpretations of particular historical issues
- the ability to think independently and make informed judgements on issues
- an empathy with people living in different places and at different times
- a firm foundation for further study of History.

Course overview:

AS History European option: Modern Europe, 1750–1921

- France, 1774–1814
- The Industrial Revolution in Britain, 1750–1850
- Liberalism and nationalism in Germany, 1815–71
- The Russian Revolution, 1894–1921

A2 History: International history, 1945–92

- The origins and development of the Cold War
- US–Soviet relations during the Cold War, 1950–91
- The spread of communism in East and Southeast Asia, 1945–91
- Conflict in the Middle East, 1948–91

Component	**Weighting**	
	AS Level	**A Level**
Paper 1 **Historical Enquiry** **Exam 1 hour 15 minutes**	40%	20%
Paper 2 **Outline Study**	60%	30%
Paper 3 **Historiography** **Exam 1 hour 15 minutes**	–	40%

Paper 4 **Depth study** **Exam: 1 hour 45 minutes**	–	60%

International A Level Business reflects today's global world as students develop an understanding of current global issues that impact on business, by focusing on real businesses. Students are encouraged to contextualise theory and respond to real-life international business case studies and stimulus material.

The course enables students to:

- 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 perspective
- generate enterprising and creative approaches to business opportunities, problems and issues
- be aware of the ethical dilemmas and responsibilities faced by organisations and individuals

Course overview

Unit	Weighting	
	AS Level	**A Level**
Unit 1 Marketing and People, Exam 2 hours Topics studied: The Market Meeting Customer Needs The Marketing Mix and Strategy Managing People Entrepreneurs and Leaders	50%	25%
Unit 2 Managing Business Activities, Exam 2 hours Topics studied: Planning a business and raising finance Financial Planning Managing Finance Resource Management External influences	50%	25%
Unit 3 Business Decisions and Strategy, Exam 2 hours Topics studied: Business objectives and Strategy Business Growth Decision Making Techniques Influences on Business Decisions Assessing Competitiveness Managing Change	–	25%
Unit 4 Global Business; Exam 2 hours Topics studied: Globalisation Global Markets and Expansion Global Marketing Global Industries and companies	–	25%

A Level Art

Subject summary

The aims are to enable students to:
• develop an inquisitive, creative approach to research and problem-solving
• develop the ability to record from first-hand observation, personal experience and other sources
• effectively communicate their personal response by improving technical skills in a range of processes and media
• develop independent expression by analysing, evaluating and applying concepts and techniques
• articulate ideas and responses to their work and the work of others using a relevant vocabulary
• develop a clear contextual framework that aids critical reflection of their work
• develop a critical understanding of important concepts and formal elements of art and design • develop the skills needed to study art and design at higher education.

Course overview

Art Candidates may focus on one or combine several of the following: • painting • drawing • • • print making • mixed media • experimental – assemblage/construction.

Component	Weighting	
	AS Level	A Level
Component 1 Candidates research, develop and realise a project from one area of study developing a theme of their choice There are two parts to the coursework: – a portfolio and – a final outcome	50%	25%
Component 2 Candidates choose one starting point to develop into a personal response. There are two parts to the assignment: – supporting studies, created during the preparation period and – a final outcome, produced during a supervised test of 15 hours' total duration.	50%	25%
Component 3 Candidates investigate a theme, idea, concept or process that is personal to them based pre released material There are two parts to the investigation: – practical work and – written analysis (1000–1500 words). The practical work and written analysis must form an integrated submission.	-	50%

A Level Computer Science

Subject summary

Computer Science A Level is a qualification designed for students who want to develop their understanding of computer science and its applications.

The course covers a wide range of topics, including programming, algorithms, data structures, computer hardware and software, computer networks, and database systems. It also includes practical skills such as programming in a high-level language and database design and implementation.

The aims of this course are to enable students to develop:

- computational thinking skills
- an understanding of the main principles of solving problems using computers
- an understanding of the component parts of computer systems and how they interrelate, including software, data, hardware, communication and people
- an understanding of the different methods of communication and the functionality of networks and the internet
- the skills necessary to apply this understanding to develop computer-based solutions to problems.

Course overview

Component	**Weighting**	
	AS Level	**A Level**
Paper 1 **Theory Fundamentals; Exam 1 hour 30 minutes** Topics studied: 1 Information representation 2 Communication 3 Computers and their components 4 Logic Gates and Logic Circuits 5 Processor Fundamentals 6 Assembly Language and Bit manipulation 7 System Software. Operating Systems. Language Translators 8. Security, privacy and data integrity 9 Ethics and Ownership 9 Databases	50%	25%
Paper 2 **Fundamental problem-solving and programming skills** **Exam 2 hours** Topics studied: 10 Algorithm Design and Problem-Solving 11 Data Types and structures 12 Programming 13 Software Development	50%	25%

Paper 3 **Advanced Theory; Exam 2 hours** Topics studied: 14 Data Representation 15 Communication and internet technologies 16 Hardware and Virtual Machines 17 Boolean Algebra and Logic Circuits 18 System Software. Purposes of an Operating System (OS) 19 Translation Software 20 Security 21 Artificial Intelligence (AI)	–	25%
Paper 4 **Practical; Exam 2 hour 30 minutes** Topics studied: 22 Algorithms 23 Recursion 24 Further Programming 25 Programming Paradigms 26 File Processing and Exception Handling	–	25%

A Level Spanish

Subject summary

The subject content is organised into six topic areas at A Level. These provide contexts for acquisition of vocabulary and the study of grammar and structures. The study of these topic areas enables students to progress from the knowledge and skills developed at IGCSE.

- Culture
- Health and well-being
- Education and future plans
- Community and society
- Our responsibility for the planet
- Science and technology.

Course overview

Component	A Level
Paper 1 **Reading – 1 hour 30 minutes – 40 marks** Candidates read a number of texts and answer multiple-choice and matching questions.	33%
Paper 2 **Writing – 2 hours – 40 marks** Candidates complete two writing tasks: one argumentative/discursive task and one narrative or descriptive writing task.	33%
Paper 3 **Literature – 2 hours – 40 marks** Candidates answer two questions, one question from each section - Section A passage-based questions - Section B essay questions	33%

LITERARY TEXTS: “La casa de Bernarda Alba” by Federico García Lorca and “Crónica de una muerte anunciada” by Gabriel García Márquez.

INTERNATIONAL ADVANCED LEVEL (IAL) Spanish

Subject summary

Pearson Edexcel International Advanced Level in Spanish This qualification consists of four externally assessed 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. The subject content is organised into six topic areas at A Level. These provide contexts for acquisition of vocabulary and the study of grammar and structures. The study of these topic areas enables students to progress from the knowledge and skills developed at IGCSE.

Course overview

Content and assessment overview

IAS **Unit 1: Spoken expression and response**	***Unit code: WSP01/01**	
Externally assessed spoken examination: 8-10 minutes Availability: January and June. First assessment: June 2017 40 marks	30% of the total IAS	15% of the total IAL
Content overview • Youth matters; Lifestyle, health and fitness; Environment and travel; Education and employment.		
Assessment overview **Section A: Spoken response –** Requires students to respond to four Pearson-set questions on a stimulus related to **one** of the student's **two** chosen general topic areas (GTAs). **Section B: Discussion –** Requires the teacher/examiner to engage the student in a discussion that, although still relating to the same GTA and its linked topics, moves away from the main focus of the stimulus. Centres must record the responses and discussion for all students and submit the recording(s) electronically to Pearson (see Administrative support guide on our website for further guidance).		

IAS **Unit 2: Understanding and written response**	**Unit code: WSP02/01**	
Externally assessed written examination: 2 hours and 30 minutes Availability: January and June. First assessment: June 2017 90 marks	70% of the total IAS	35% of the total IAL
Content overview • Youth matters; Lifestyle, health and fitness; Environment and travel; Education and employment.		
Assessment overview **Section A: Listening –** Requires students to listen to a range of authentic material recorded in Spanish and to retrieve and convey information given in the recording by responding to a range of questions in Spanish. **Section B: Reading and Grammar –** Requires students to read authentic printed materials in Spanish and to retrieve and convey information by responding to a range of questions in Spanish. **Section C: Writing** – Requires students to write an email or article of a recommended length of 240–280 words in Spanish based on a short, printed stimulus written in Spanish and four related bullet points.		

GENERAL TOPIC AREAS – UNIT 1 + 2	SUBTOPICS
YOUTH MATTERS	• Family relationships and friendships • Peer pressure and role models • Music and fashion • Technology and communication
LIFESTYLE, HEALTH AND FITNESS	• Food and diet • Sport and exercise • Health issues • Urban and rural life
ENVIRONMENT AND TRAVEL	• Tourism, travel and transport • Natural disasters and weather • Climate change and its impact • Energy, pollution and recycling
EDUCATION AND EMPLOYMENT	• Education systems and types of schooling • Pupil/student life • Volunteering and internships • Jobs and unemployment

IA2 **Unit 3: Understanding and spoken response**	**Unit code: WSP03/01**	
Externally assessed spoken examination: 11-13 minutes Availability: January and June. First assessment: January 2018 40 marks	30% of the total IA2	15% of the total IAL

Content overview

- Debate on **any** issue chosen by the student followed by a discussion of at least two further issues chosen by the teacher/examiner from any of the IAL general topic areas (GTAs).

Assessment overview

Section A: Presentation and debate – Requires students to demonstrate the effectiveness of their Spanish-language skills by presenting and taking a clear stance on any issue of their choice for about one minute. Students will then interact with the teacher/examiner as they defend and justify their views for up to four minutes.

Section B: Discussion – The teacher/examiner initiates a spontaneous discussion on at least two further issues, moving the conversation away from the students' chosen issue. If these further issues relate to the IAS GTAs, then they do not have to be rooted in Spanish-language culture. However, if these issues relate to the IA2 specific GTAs, they must be rooted in Spanish-language culture.

Students will be expected to use debating skills and argument to discuss their chosen issue. They will be assessed on their reading and research skills in their chosen issue, as well as their communication skills and quality of spoken language.

Centres must record the presentation and discussion for all students and submit the recording(s) electronically to Pearson (see Administrative support guide on our website for further guidance).

IA2 **Unit 4: Research, understanding and written response**	**Unit code: WSP04/01**	
Externally assessed written examination: 2 hours and 30 minutes Availability: January and June. First assessment: June 2018 90 marks	70% of the total IA2	35% of the total IAL
Content overview • Youth matters; Lifestyle, health and fitness; Environment and travel; Education and employment; Technology in the Spanish-speaking world; Society in the Spanish-speaking world; Ethics in the Spanish-speaking world. • Set topics, literary texts and films.		
Assessment overview **Section A: Listening** – Requires students to listen to a range of authentic material recorded in Spanish and to retrieve and convey information given in the recording by responding to a range of questions in Spanish. **Section B: Reading and Grammar** – Requires students to read authentic printed materials in Spanish and to retrieve and convey information by responding to a range of questions in Spanish. **Section C: Writing** – Requires students to answer one question, in Spanish, from a choice of two, that relates to a topic, a literary text or a film chosen from the prescribed list. Students should write 300-400 words. The assessment rewards students for communicating relevant information effectively as well as for the quality of the Spanish language produced.		

GENERAL TOPIC AREAS – UNIT 3 + 4	SUBTOPICS
YOUTH MATTERS	• Family relationships and friendships • Peer pressure and role models • Music and fashion • Technology and communication
LIFESTYLE, HEALTH AND FITNESS	• Food and diet • Sport and exercise • Health issues • Urban and rural life
ENVIRONMENT AND TRAVEL	• Tourism, travel and transport • Natural disasters and weather • Climate change and its impact • Energy, pollution and recycling
EDUCATION AND EMPLOYMENT	• Education systems and types of schooling • Pupil/student life • Volunteering and internships • Jobs and unemployment
TECHNOLOGY IN THE SPANISH-SPEAKING WORLD	• Scientific advances • Technological innovations • Impact on life and environment
SOCIETY IN THE SPANISH-SPEAKING WORLD	• Migration • Equality • Politics • Customs
ETHICS IN THE SPANISH-SPEAKING WORLD	• Beliefs • Law and order

	• Moral issues (e.g. euthanasia, adoption, genetic modification)

SET TOPIC BASED ON THE LITERARY TEXT: “Como agua para chocolate” by Laura Esquivel.

A Level Italian

Subject summary

We believe languages should appeal to all students. Our new Edexcel Level 3 Advanced GCE in Italian has been developed to inspire all students who have an appreciation of the language, literature, film and culture of the Italian-speaking world.

Edexcel Italian A Level helps learners develop the knowledge and skills that will prepare them for successful university study. It will enable our students to develop advanced level knowledge for higher education and it will enhance their employability profile.

This linear course covers

- four engaging themes – *Changes in Italian society; Political and artistic culture in Italian-speaking countries; Italy: an evolving society; From Fascism to the present day.*
- two works: one literary book (*Io non ho paura (I'm not scared), Niccolò Ammaniti) and* one film (*La vita è bella (Life is beautiful), Roberto Benigni*)
- content builds on the understanding developed at Key Stage 4 and gives students the opportunity to learn and apply important transferable skills in critical thinking and analysis.
- understanding of the Italian language, the culture of Italy and other Italian-speaking countries and communities, as well as practical and valuable language and transferable study skills.

Course overview

Component	**Weighting**	
		A Level
Paper 1: Listening, reading and translation - 2 hours Section A: Listening Students will respond to comprehension questions based on a variety of contexts and sources. Section B: Reading A reading assessment based on a variety of text types and genres where students must respond to comprehension questions. Section C: Translation from Italian into English An unseen passage to be translated from Italian to English.	-	40%
Paper 2: Written response to works and translation **2 hour 45 minutes** Section A: Translation from English into Italian Students translate an unseen passage from English into Italian. Section B: Written response to works Students select one question from a choice of two for each of the prescribed literary text(s). Section C: Written response to works Students must now write an extended response on one of the prescribed films.	-	30%

Paper 3: Speaking (21 and 23 minutes, which includes 5 minutes' formal preparation time) Task 1 (discussion on a theme based on a stimulus containing two different statements). Task 2, Part 1 (independent research presentation) Students present a summary of at least two of the written sources. Task 2, Part 2 (discussion on independent research) Students answer questions on their presentation and then have a wider discussion on their research.	–	30%

International A Level French

Subject summary

We believe languages should appeal to all students who have an appreciation of the language, history, film and culture of the French-speaking world. This Edexcel qualification will equip students with transferable skills such as autonomy, resourcefulness, creativity, critical and analytical thinking, and linguistic, cultural and cognitive flexibility that will enable them to develop advanced level knowledge for higher education and it will enhance their employability profile.

This modular course covers

- engaging topics: Youth matters; Lifestyle, health and fitness; Environment and travel; Education and employment (AS) and Technology, Society and Ethics in the French-speaking world (A2)
- a wide variety of complex texts for different purposes on unfamiliar and familiar topics
- the ability to write clear, well-structured texts using an appropriate style, highlighting relevant salient issues, providing points of view with supporting arguments (where appropriate) and showing controlled use of organisational patterns, connectives and cohesive devices.
- the ability to express themselves fluently, spontaneously and appropriately in a range of speaking contexts with little obvious searching for expressions or use of avoidance strategies.
- the skills necessary for further study or employment, either in French-speaking countries or where French is used as the main medium of communication for business and commerce.
- the period during the Second World War when France was occupied by Nazi Germany. Students learn to analyse the historical period critically and write essays for Unit 4: Section C.

Course overview

Component	Weighting	
	AS	A Level
Unit 1: Spoken expression and response (8-10 min) **Recorded, externally assessed** Section A: Spoken response – Requires students to respond to four Pearson-set questions on a stimulus related to one of the student's two chosen general topic areas (GTAs). Section B: Discussion – Requires the teacher/examiner to engage the student in a discussion.	30%	15%

Unit 2: Understanding and written response - 2 hours 30 min Section A: Listening – Requires students to listen to a range of authentic material and respond to a range of questions in French. Section B: Reading and Grammar – Requires students to read authentic printed materials in French corresponding to a range of questions in French. Section C: Writing – Requires students to write an email or article of a recommended length of 240–280 words in French based on a short, printed stimulus written in French and four related bullet points.	70%	35%
Unit 3: Understanding and spoken response (11-13 min) **Recorded, externally assessed** Section A: Presentation and debate – Requires students to demonstrate the effectiveness of their French-language skills by presenting and taking a clear stance on any issue of their choice for about one minute. Students will then interact with the teacher/examiner as they defend and justify their views for up to four minutes. Section B: Discussion – The teacher/examiner initiates a spontaneous discussion on at least two further issues. Students will be expected to use debating skills and argument to discuss their chosen issue. They will be assessed on their reading and research skills as well as their communication skills and quality of spoken language.	30%	15%
Unit 4: Research, understanding and written response (2 hours 30 min) Section A: Listening – Requires students to listen to a range of authentic material and respond to a range of questions in French. Section B: Reading and Grammar – Requires students to read authentic printed materials in French corresponding to a range of questions in French. Section C: Writing – Requires students to answer one question, in French, from a choice of two, that relates to a topic, a literary text or a film chosen from the prescribed list. Students should write 300-400 words.	70%	35%

A Level PE

Subject summary

The aims of a course based on this syllabus, whether leading to a Cambridge International AS or A Level qualification, are:

- to provide a knowledge and understanding of the conceptual basis, structure and function of a selection of physical education activities
- to develop understanding and problem-solving skills (interpretation and evaluation)
- to develop planning and practical skills for effective performance
- to foster an ability to relate practice to theory, and theory to practice
- to develop an understanding of the physiological, socio-cultural and psychological factors which influence physical education
- to provide an experience which is valuable, both as a means of personal development and as a foundation for employment or more advanced study.

In addition, the Advanced Level syllabus aims to encourage candidates:

- to develop the capacity to think critically about the relationships between the different factors influencing performance
- to develop a capacity to explain global trends in physical education and sport

Students complete an AS with Cambridge before moving to compete a full A Level with Edexcel in Year 13. The grade from the AS does not carry over in any way to the A Level.

Course overview AS PE

Component	**Weighting**	
	AS Level	**A Level**
Component 1 AS written paper, consisting of three sections: Section A: Applied anatomy and physiology Section B: Acquiring, developing and performing movement skills Section C: Contemporary studies in physical education and sport	50%	-

Paper 2 AS Coursework Candidates will follow a minimum of two activities from the activity profiles offered. Assessment will take place in conditioned competitive situations/prescribed situations.	50%	-

Component	**Weighting**	
	AS Level	**A Level**
Component 1 Scientific Principles of Physical Education ● Topic 1: Applied anatomy and physiology ● Topic 2: Exercise physiology and applied movement analysis	-	40%
Component 2 Psychological and Social Principles of Physical Education ● Topic 3: Skill acquisition ● Topic 4: Sport psychology ● Topic 5: Sport and society	-	30%
Component 3 Practical Performance ● Skills performed in one physical activity as a player/performer OR ● Skills performed in one physical activity as a coach	-	15%

Component 4 - Performance Development Program ● In the role of player/performer or coach analyse two components of a physical activity (one physiological component and either a tactical or technical component). ● In the role of player/performer or coach analyse, implement and evaluate a Performance Development Programme.	-	15%

Pearson BTEC International Level 3 Extended Diploma Qualifications

Purpose

The Pearson BTEC International Level 3 qualifications are career-focused, designed to enable learners to gain the knowledge and skills required for employment, or to be taken as part of a wider study programme or apprenticeship.

They have been designed for international learners, and have therefore been developed in collaboration with employers, HE Institutions and teaching professionals from around the world. This is reflected in the depth and breadth of the content, and the design of the assessment. They are designed to enable the combination of theory and practice in teaching and learning which is then assessed through a combination of written and practical tasks set in work-related contexts.

They are designed for learners aged 16+ intending to progress into higher education, higher applied courses or direct to employment.

Assessment

Pearson BTEC International Level 3 qualifications are 100% internally assessed through written assignments and practical tasks. Most assessments are set and marked by educators in the school or college and verified by Pearson. Pearson will set and provide centres with assignments for some mandatory units (approximately 25% of all units).

This means that all assessments can be arranged at a time that best accommodates the academic year. This style of assessment gives learners the opportunity to build up a portfolio of evidence which demonstrates how they can apply their knowledge, skills and achievements in real-life scenarios.

BTEC assessments typically include a mix of coursework and practical assessments, with no examinations. This mix allows students to demonstrate their skills and knowledge acquired through a variety of evidence types, accommodating different learning styles and abilities.

Cambridge House
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Pearson BTEC International Level 3 Extended Diploma in Business

Mandatory units
There are six mandatory units, three internal units and three set assignment units. Learners must complete and achieve a Pass or above in all mandatory units.

Optional units
Learners must complete at least nine optional units totalling at least 540 GLH

	Semester 1	**Semester 1**	**Semester 1**	**Semester 1**
Business Int. Level 3 Extended Diploma Year 1 **570 GL**	U1 Exploring Business Mandatory 90 GL	U7 Business Decision Making Mandatory Set Assignment 120 GL	U9 Team Building in Business Optional 60 GL	U3 Business Finance Mandatory 90 GL
	Semester 2	**Semester 2**	**Semester 2**	**Semester 2**
	U21 Training and Development Optional 60 GL	U7 Business Decision Making Mandatory Set Assignment (120 GL)	U20 Business Ethics Optional 60 GL	U2 Research & Plan a Marketing Campaign Mandatory Set Assignment 90 GL
	Semester 3	**Semester 3**	**Semester 3**	**Semester 3**
Business Int. Level 3 Extended Diploma Year 2 **510 GL**	U8 Human Resources Optional 60GL	U19 Pitching for a New Business Optional 60GL	U6 Principles of Management Mandatory Set Assignment 60GL	U24 Branding Optional 60GL
	Semester 4	**Semester 4**	**Semester 4**	**Semester 4**
	U4 Managing an Event Mandatory 90GL	U18 Creative Promotion Optional 60GL	U30 Career Planning Optional 60GL	U14 Investigating Customer Service Optional 60GL

Cambridge House
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Pearson BTEC International Level 3 Extended Diploma in Sport, Business and Management

Mandatory units

There are eight mandatory units. Learners must complete and achieve a Pass or above in all mandatory units.

Optional units

Learners must complete optional units totalling at least 480GLH.

Sport, Business & Management Int. Level 3 Diploma Year 1 **540 GL**	**Semester 1**	**Semester 1**	**Semester 1**	**Semester 1**	
	U12 Sports Tourism Mandatory 60 GL	U11 Business in Sport Mandatory 60 GL	U4 Ethics, Behaviours & Values Mandatory 60 GL	U13 Sports Journalism Mandatory 60 GL	
	Semester 2	**Semester 2**	**Semester 2**	**Semester 2**	**Semester 2**
	U26 Nutrition for Physical Performance Optional 60 GL	U27 Sports Psychology Optional 60 GL	U2 Careers in the Sport & Active Leisure Ind. Mandatory 90 GL	U14 Marketing Communications Mandatory 60 GL	U21 History of Liverpool Football Club Optional 30GL

Sport, Business & Management Int. Level 3 Diploma Year 2 **540 GL**	**Semester 3**	**Semester 3**	**Semester 3**	**Semester 3**
	U3 Research Project in Sport Mandatory Set Assignment 120GL	U39 Enterprise and Entrepreneurs Optional 90 GL	U32 Sports Performance Analysis Optional 60 GL	U1 Health, Wellbeing & Sport Mandatory Set Assignment 90 GL
	Semester 4	**Semester 4**	**Semester 4**	**Semester 4**
	U3 Research Project in Sport	U28 Fitness Testing	U30 Organising Events in Sport & Physical Activities	U5 Self-Employment in Sport & Physical Activity

	Mandatory Set Assignment 120GL	Optional 60 GL	Optional 60 GL	Optional 60 GL

Biología

BLOQUE I

- TEMA 1. La base molecular y físico-química de la vida.
- TEMA 2. Glúcidos.
- TEMA 3. Lípidos.
- TEMA 4. Proteínas, enzimas y vitaminas.
- TEMA 5. Ácidos nucléicos.

BLOQUE II

- TEMA 6. La célula.
- TEMA 7. La membrana plasmática.
- TEMA 8. Orgánulos membranosos.
- TEMA 9. Metabolismo celular.
- TEMA 10. Catabolismo.
- TEMA 11. Anabolismo.
- TEMA 12. La reproducción celular.

BLOQUE III

- TEMA 13. Las leyes de la herencia.
- TEMA 14. El DNA, portador del mensaje genético.
- TEMA 15. Mutaciones.
- TEMA 16. La evolución.

BLOQUE IV

- TEMA 17. Microorganismos.
- TEMA 18. Microorganismos, enfermedades y aplicaciones.

BLOQUE V

- TEMA 19. Inmunología.
- TEMA 20. Anomalías del sistema inmunitario.

Dibujo Técnico

BLOQUE I. GEOMETRÍA Y DIBUJO TÉCNICO

I.1. RESOLUCIÓN DE PROBLEMAS GEOMÉTRICOS:
I.1.1 - Proporcionalidad.
I.1.2 - El rectángulo áureo. Aplicaciones.
I.1.3 - Construcción de figuras planas equivalentes.
I.1.4 - Relación entre los ángulos y la circunferencia.
I.1.5 - Arco capaz. Aplicaciones.
I.1.6 - Potencia de un punto respecto a una circunferencia.
I.1.7 - Determinación y propiedades del eje radical y del centro radical.
I.1.8 - Aplicación a la resolución de tangencias.
I.1.9 - Inversión. Determinación de figuras inversas. Aplicación a la resolución de tangencias.

TRAZADO DE CURVAS CÓNICAS Y TÉCNICAS:
I.2.1 - Curvas cónicas. Origen, determinación y trazado de la elipse, la parábola y la hipérbola.
I.2.2 - Resolución de problemas de pertenencia, tangencia e incidencia. Aplicaciones.
I.2.3 - Curvas técnicas. Origen, determinación y trazado de las curvas cíclicas y evolventes. Aplicaciones.

I.3. TRANSFORMACIONES GEOMÉTRICAS:
I.3.1 - Afinidad. Determinación de sus elementos.
I.3.2 - Trazado de figuras afines
I.3.3 - Construcción de la elipse afín a una circunferencia. Aplicaciones.
I.3.3 - Homología. Determinación de sus elementos. Trazado de figuras homólogas. Aplicaciones.

BLOQUE II. SISTEMAS DE REPRESENTACIÓN

II.1 PUNTO, RECTA Y PLANO EN SISTEMA DIÉDRICO:
II.1.1 - Resolución de problemas de pertenencia, incidencia, paralelismo y perpendicularidad.
II.1.2 - Determinación de la verdadera magnitud de segmentos y formas planas.
II.1.3 - Abatimiento de planos. Determinación de sus elementos. Aplicaciones.
II.1.4 - Giro de un cuerpo geométrico. Aplicaciones.
II.1.5 - Cambios de plano. Determinación de las nuevas proyecciones. Aplicaciones.

II.2 CONSTRUCCIÓN DE FIGURAS PLANAS:
II.2.1 - Afinidad entre proyecciones. Problema inverso al abatimiento.
II.2.2 - CUERPOS GEOMÉTRICOS EN SISTEMA DIÉDRICO:
II.2.2.1 - Representación de poliedros regulares. Posiciones singulares.
II.2.2.2 - Determinación de sus secciones principales. Representación de prismas y pirámides. Determinación de secciones planas y elaboración de desarrollos.
II.2.2.3 - Intersecciones. Representación de cilindros, conos y esferas. Secciones planas.

II.2.3 - SISTEMAS AXONOMÉTRICOS ORTOGONALES:
II.2.3.1 - Posición del triedro fundamental.
II.2.3.2 - Relación entre el triángulo de trazas y los ejes del sistema.
II.2.3.3 - Determinación de coeficientes de reducción.
II.2.3.4 - Tipología de las axonometrías ortogonales.
II.2.4 - Representación de figuras planas. Ventajas e inconvenientes.
II.2.5 - Representación simplificada de la circunferencia.
II.2.6 - Representación de cuerpos geométricos y espacios arquitectónicos.
II.2.7 - Secciones planas. Intersecciones.

BLOQUE III. DOCUMENTACIÓN GRÁFICA DE PROYECTOS

III. ELABORACIÓN DE BOCETOS, CROQUIS Y PLANOS.
III.1 EL PROCESO DE DISEÑO/FABRICACIÓN:
III.1.1 – Perspectiva histórica y situación actual.
III.2.2 – El proyecto: tipos y elementos. Planificación de proyectos.
III.2.3 – Identificación de las fases de un proyecto. Programación de tareas. Elaboración de las primeras ideas. Dibujo de bocetos a mano alzada y esquemas. Elaboración de dibujos cotados. Elaboración de croquis de piezas y conjuntos.
III.2 - Tipos de planos. Planos de situación, de conjunto, de montaje, de instalación, de detalle, de fabricación o de construcción.
III.3 - Presentación de proyectos. Elaboración de la documentación gráfica de un proyecto gráfico, industrial o arquitectónico sencillo.
II.2.4.1 - Posibilidades de las Tecnologías de la Información y la Comunicación aplicadas al diseño, edición, archivo y presentación de proyectos.

III.4 - DIBUJO VECTORIAL 2D.
III.4.1 - Dibujo y edición de entidades.
III.4.2 - Creación de bloques.
III.4.3 - Visibilidad de capas.

III.5 - DIBUJO VECTORIAL 3D.
III.5.1 - Inserción y edición de sólidos.
III.5.2 - Galerías y bibliotecas de modelos.
III.5.3 - Incorporación de texturas.
III.5.4 - Selección del encuadre, la iluminación y el punto de vista.

Economía

Tema 1: El Papel De La Empresa En La Economía

Tema 2: Clases Y Formas De Empresas

Tema 3: Entorno Y Estrategia De La Empresa

Tema 4: El Desarrollo De La Empresa

Tema 5: La Función Productiva De La Empresa

Tema 6: Productividad, Eficiencia E Innovación

Tema 7: La Función Comercial De La Empresa

Tema 8: Los Instrumentos Del Marketing Mix

Tema 9: La Financiación De La Empresa

Tema 10: Las Inversiones De La Empresa

Tema 11: El Patrimonio Y Las Cuentas De La Empresa

Tema 12: Análisis Financiero De La Empresa

Tema 13: Análisis Económico Y Social De La Empresa

Tema 14: Dirección Y Organización De La Empresa

Tema 15: La Dirección De Recursos Humanos

Física

YEAR 12

- Tema 0: Introducción a la actividad científica.

- Repaso de contenidos de cálculo de vectores, cinemática y dinámica
- Uso de la calculadora y expresión de resultados en notación científica.
- Concepto de sistema de referencia. Elaboración de gráficas para dos y tres variables.

- Tema 1: Interacción gravitatoria.

- Orígenes del estudio orbital y de los cuerpos celestes (Teorías geocéntricas, Copérnico, Galileo, etc.)
- Relación de movimientos orbitales y Leyes de Kepler.
- Ley de Gravitación Universal. Concepto de Campo, Líneas de campo, Intensidad de campo gravitatorio, campo conservativo, superficie equipotencial y principio de superposición.
- Aspectos energéticos de los movimientos orbitales. Concepto de Energía mecánica, potencial y cinética. Velocidad y Energía de escape. Concepto de trabajo y potencial gravitatorio.

- Materia Oscura, tipos de satélites y caos determinista.

- Tema 2: Campo eléctrico.

- Relación de conceptos de campo aplicados a cargas puntuales en el espacio. Ley de Coulomb, Intensidad de Campo eléctrico y Carga Eléctrica.

- Carácter conservativo del campo eléctrico. Similitudes y diferencias con el campo gravitatorio.

- Ley de Gauss para Campo Eléctrico. Concepto de Flujo.

- Tema 3: Movimiento Armónico Simple y Ondas.

- Ecuaciones de Onda. Magnitudes asociadas a las ondas. Ondas armónicas, longitudinales y transversales.

- Principios energéticos aplicados a las ondas. Principio de Huygens, Ley de Snell, Interferencia, Reflexión y Difracción.

- Estudio del sonido. Efecto Doppler. Intensidad sonora y efectos de resonancia en la vida cotidiana. Tecnologías asociadas al sonido.

- Espectro electromagnético. Radiación electromagnética.

- Tema 4: Óptica Geométrica.

- Ley de Snell. Ángulo crítico, Fenómeno de reflexión total e Índice de refracción.

- Sistemas ópticos: Lentes y Espejos. Leyes de las lentes delgadas. Ecuaciones asociadas a cada sistema y formación e interpretación de imágenes.

- El Ojo Humano. Defectos en la visión y correcciones.

<u>YEAR 13</u>

Tema 5: Interacciones electromagnéticas. Inducción electromagnética.

- Campo magnético, fenómenos asociados y relación con el campo eléctrico.

- Estudio de cargas puntuales en movimiento en presencia de un campo magnético. Ley de Lorentz. Regla de la mano derecha.

- Generación de un campo magnético a través de una corriente eléctrica en conductores rectilíneos, espiras, solenoides y toroides. Ley de Ampère y Ley de Biot-Savart.

- Fenómeno de Inducción electromagnética. Experiencia de Faraday-Henry. Ley de Faraday y Ley de Lenz. Generadores.

Tema 6: Introducción a la Física del siglo XX. Física Cuántica y Relativista.

- Teoría Especial de la Relatividad. Dilatación temporal y contracción espacial a velocidades cercanas a la luz.

- Experimento de Michelson-Morley.

- Insuficiencia de la Física Clásica para explicar ciertos fenómenos. Hipótesis de Planck, energía de un fotón con respecto de su frecuencia o longitud de onda. Einstein y el efecto fotoeléctrico.

- Cuantización de la energía y relación con los modelos atómicos (Bohr).

- Dualidad onda-corpúsculo. Carácter probabilístico de la mecánica cuántica (Heisenberg y De Broglie).

Tema 7: Introducción a la Física Nuclear.

- Tipos de radiación. Láseres, funcionamiento, tipos y aplicaciones.

- Relación entre composición y masa nucleares, isótopos. Periodo de emidesintegración.

- Fisión y Fusión Nuclear. Aplicaciones de dichos fenómenos.

- Distinción entre las cuatro interacciones de la naturaleza y sus procesos. Unificación de las interacciones fundamentales.

- Partículas elementales y composición de la materia. Origen del universo y cronología del Big Bang.

- Fronteras de la física actual.

Geografía

BLOQUE I Naturaleza y Medio Ambiente en el territorio Español.

1. El relieve.
2. El clima.
3. La hidrografía
4. La vegetación.
5. Paisajes naturales.

BLOQUE II La población y los espacios urbanos en España

1. La población.
2. La ciudad y los espacios urbanos.

BLOQUE III Las actividades económicas en España.

1. Los espacios rurales y el sector primario.
2. El sector secundario.
3. El sector terciario.

BLOQUE IV Organización territorial en España

1. Organización territorial de España.

Historia del Arte

BLOQUE I Arte clásico: Grecia y Roma.

1. El arte Griego
2. El arte Romano
3. El arte Romano en Hispania.

BLOQUE II La Edad Media.

1. Arte Paleocristiano y Bizantino.
2. Arte Hispanomusulmán.
3. Arte Románico.
4. Arte Gótico.

BLOQUE II La edad del humanismo. El Renacimiento.

1. Renacimiento Italiano el Quattrocento.
2. Renacimiento Italiano el Cinquecento.
3. Miguel Ángel.
4. Renacimiento Europeo.
5. Renacimiento en España.

BLOQUE IV El Barroco y el Neoclasicismo.

1. Arte Barroco en Italia.
2. Arte Barroco en Europa.
3. Arte Barroco en España.
4. Neoclasicismo.

BLOQUE V Arte contemporáneo

1. Arte del S.XIX
2. Arte del S.XX

Matemáticas Aplicadas

Álgebra

1.- Matrices

2.- Sistemas De Inecuaciones Lineales

3.- Programación Lineal

Análisis Matemático = Cálculo

1.- Límites, Continuidad Y Asíntotas

2.- Derivadas

3.- Aplicaciones A Las Derivadas

4.- Integrales

Probabilidad

1.- Probabilidad De Sucesos

- Leyes De Morgan

2.- Probabilidad Condicionada

3.- Sucesos Independientes

4.- Teorema De Bayes

5.- Probabilidad Total

Estadística

1.- Distribuciones Muestrales

2.- Intervalos De Confianza

Matemáticas II

BLOQUE I. PROCESOS, MÉTODOS Y ACTITUDES EN MATEMÁTICAS

I.1 - Planificación del proceso de resolución de problemas.

I.2 - Estrategias y procedimientos puestos en práctica: relación con otros problemas conocidos, modificación de variables, suponer el problema resuelto.

I.3 - Soluciones y/o resultados obtenidos: coherencia de las soluciones con la situación, revisión sistemática del proceso, otras formas de resolución, problemas parecidos, generalizaciones y particularizaciones interesantes.

I.4 - Iniciación a la demostración en matemáticas: métodos, razonamientos, lenguajes, etc.

I.5 - Métodos de demostración: reducción al absurdo, método de inducción, contraejemplos, razonamientos encadenados, etc.

I.6 - Razonamiento deductivo e inductivo.

I.7 - Lenguaje gráfico, algebraico, otras formas de representación de argumentos.

I.8 - Elaboración y presentación oral y/o escrita de informes científicos sobre el proceso seguido en la resolución de un problema o en la demostración de un resultado matemático.

I.9 - Realización de investigaciones matemáticas a partir de contextos de la realidad o contextos del mundo de las matemáticas.

I.10 - Elaboración y presentación de un informe científico sobre el proceso, resultados y conclusiones del proceso de investigación desarrollado.

I.11 - Práctica de los procesos de algorítmica matemática y modelización, en contextos de la realidad y en contextos matemáticos.

I.12 - Confianza en las propias capacidades para desarrollar actitudes adecuadas y afrontar las dificultades propias del trabajo científico.

I.13 - UTILIZACIÓN DE MEDIOS TECNOLÓGICOS EN EL PROCESO DE APRENDIZAJE:

I.13.1 - La recogida ordenada y la organización de datos.

I.13.2 - La elaboración y creación de representaciones gráficas de datos numéricos, funcionales o estadísticos.

I.13.3 - Facilitar la comprensión de propiedades geométricas o funcionales y la realización de cálculos de tipo numérico, algebraico o estadístico.

I.13.4 - El diseño de simulaciones y la elaboración de predicciones sobre situaciones matemáticas diversas.

I.13.5 - La elaboración de informes y documentos sobre los procesos llevados a cabo y los resultados y conclusiones obtenidos.

I.13.6 - Comunicar y compartir, en entornos apropiados, la información y las ideas matemáticas.

BLOQUE II. NÚMEROS Y ÁLGEBRA

II.1 - Estudio de las matrices como herramienta para manejar y operar con datos estructurados en tablas y grafos.

II.2 - Clasificación de matrices.

II.3 - Operaciones con matrices.

II.4 - Aplicación de las operaciones de las matrices y de sus propiedades en la resolución de problemas extraídos de contextos reales.

II.5 - Determinantes.

II.6 - Propiedades elementales de los determinantes.

II.7 - Rango de una matriz.

II.8 - Matriz inversa.

II.9 - Representación matricial de un sistema de ecuaciones lineales: Sistemas equivalentes.

II.10 - Discusión según parámetros.

II.11 - RESOLUCIÓN DE SISTEMAS.

II.11.1 - Aplicación del método de Gauss.

II.11.2 - Aplicación de la regla de Cramer.

II.12 - Resolución de problemas reales mediante matrices y sistemas de ecuaciones

lineales

BLOQUE III. ANÁLISIS MATEMÁTICO

III.1 - LÍMITE DE UNA FUNCIÓN:

III.1.1 - En un punto y en los dos infinitos.

III.1.2 - Rectas asíntotas.

III.2 - Continuidad de una función: En un punto, en un intervalo y en su dominio.

III.3 - Tipos de discontinuidad.

III.4 -Teorema de Bolzano para funciones continuas en un intervalo. Aproximación de la solución de una ecuación.

III.5 - FUNCIÓN DERIVABLE EN UN PUNTO:

III.5.1 - Interpretaciones de la derivada.

III.5.2 - Recta tangente a la gráfica de una función en un punto.

III.6 - Función derivada.

III.7 - Tabla de derivadas de las funciones elementales.

III.8 - Técnicas de derivación.

III.9 - Teorema de Rolle y Teorema del valor medio.

III.10 - La regla de l'Hôpital. Aplicaciones al cálculo de límites.

III.11 - ESTUDIO DE LA VARIACIÓN DE UNA FUNCIÓN:

III.11.1 - Aplicaciones de la derivada.

III.11.2 - Problemas de optimización.

III.12 - Funciones primitivas de una función. Integral indefinida.

III.13 - Tablas de funciones primitivas de funciones elementales.

III.14 - Técnicas elementales para el cálculo de primitivas.

III.15 - La integral de una función en un intervalo: Integral definida.

III.16 - Teorema del valor medio, Teorema fundamental del Cálculo Integral.

III.17 - Cálculo de una integral definida: Regla de Barrow.

III.18 - Aplicación de la integral y cálculo del área de región plana.

BLOQUE IV. GEOMETRÍA

IV.1 - Vectores en el espacio tridimensional.

IV.1 - PRODUCTOS DEFINIDOS CON VECTORES:

IV.1.1 - Producto escalar e interpretación geométrica.

IV.1.2 - Producto vectorial e interpretación geométrica.

IV.1.3 - Producto mixto e interpretación geométrica.

IV.3 - PUNTOS DEL ESPACIO:

IV.3.1 - Puntos alineados.

IV.3.2 - Puntos coplanarios.

IV.4 - RECTAS EN EL ESPACIO:

IV.4.1 - Tipos de ecuaciones de una recta.

IV.4.2 - Vectores directores de una recta.

IV.4.3 - Incidencia de una recta en un punto.

IV.4.4 - Haz de rectas.

IV.5 - PLANOS EN EL ESPACIO.

IV.5.1 - Tipos de ecuaciones de un plano.

IV.5.2 - Pareja de vectores directores de un plano.

IV.5.3 - Incidencia de un plano en un punto.

IV.5.4 - Haz de planos.

IV.6 - POSICIONES RELATIVAS:

IV.6.1 - De planos, de rectas y de rectas y planos.

IV.6.2 - Paralelismo y perpendicularidad.

IV.7 - PROPIEDADES MÉTRICA EN EL ESPACIO:

IV.7.1 - Medida de ángulos.

IV.7.2 - Medidas de distancias.

IV.7.3 - Medidas de áreas.

IV.7.4 - Medida de volúmenes.

BLOQUE V. ESTADÍSTICA Y PROBABILIDAD

IV.1 - Reiteración de sucesos:

IV.1 - Frecuencia relativa.

IV.1 - Probabilidad de un suceso: Regla de Laplace.

IV.2 - Axiomática de Kolmogorov.

IV.3 - Aplicación de la combinatoria al cálculo de probabilidades.

IV.4 - Experimentos aleatorios simples y compuestos.

IV.5 - Probabilidad condicionada.

IV.6 - Dependencia e independencia de sucesos.

IV.7 - Teoremas de la probabilidad total y de Bayes.

IV.8 - Probabilidades iniciales y finales y verosimilitud de un suceso.

IV.9 - Variables aleatorias discretas.

IV.10 - Distribución de probabilidad.

IV.11 - Media, varianza y desviación típica.

IV.12 - Distribución binomial. Caracterización e identificación del modelo. Cálculo de probabilidades.

Química

Tema 0. Formulación inorgánica.

Tema 1. Formulación orgánica, isomería y reactividad.

Tema 2. Estequiometría.

Tema 3. Estructuras electrónicas y sistema periódico.

Tema 4. Enlace químico.

Tema 5. Cinética química.

Tema 6. Equilibrio químico.

Tema 7. Equilibrio ácido-base.

Tema 8. Equilibrio de solubilidad.