
Mathematics Faculty

Head of Faculty: Mrs H Lopez

T1

Mathematics

The students will cover some topics of Pure Mathematics (P1) and some of Mechanics (M1)

Pure Mathematics (P1)

Coordinates, points and lines

Surds and indices

Functions and graphs

Quadratics

Inequalities

Binomial theorem

Arithmetic & Geometric sequences

Trigonometry & radians

Mechanics (M1)

Velocity and acceleration

Force and motion

Vertical motion

Resolving forces

Newton's third law

Motion due to gravity

Maths (Further Mathematics)

This term, the students will cover all topics of Pure Mathematics 1, some of Pure Maths 3, 1 topic of Mechanics 1 and Statistics 1.

Pure Mathematics 1

Quadratics

Functions

Coordinate Geometry

Circular measure

Trigonometry

Vectors

Series

Differentiation

Integration

Pure Mathematics 3

Algebra
Logarithmic & exponential functions
Trigonometry
Differentiation
Integration
Trapezium rule

Mechanics 1

Kinematics of motion in a straight line

Statistics 1

Representation of data

T2

Mathematics

The students will complete the Pure Maths (PI) and mechanics modules (MI)

P1

Vectors
Differentiation & its applications
Integration & its applications

M1

Friction
Work, Energy and Power
Use differentiation and integration with respect to time to solve simple problems concerning displacement, velocity and acceleration.
Force as a vector quantity

Following this they will be revising for the AS examination.

Further Mathematics

Students will complete the P3 module and do the M1 and S1 modules

P3

Vectors: lines in two and three dimensions, planes in three dimensions
Solving equations numerically

Complex numbers
Differential equations

M1

Newton's laws of motion
Forces and equilibrium
Friction
Energy, work and power
Use differentiation and integration with respect to time to solve simple problems concerning displacement, velocity and acceleration.
Force as a vector quantity

S1

Measures of location & spread
Permutations and Combinations
Probability
Discrete random variables
Binomial distribution
Expectation & variance of a random variable
Normal distribution

Following this they will be revising for the A level examination.

T3

Mathematics

After mock exams, students will prepare for their AS exam by revising and practicing past exam papers.

After the AS exam, they will begin the study of A2 work. The topics are:

Polynomials
Modulus Functions
Exponentials and Logarithms
Differentiating products and quotients
Rational Functions
The Binomial Expansion

Further Mathematics

Mechanics M2

The Motion of Projectiles
Equilibrium of a rigid body

Statistics S2

The Poisson distribution
Linear Combinations of Random Variables
Continuous Random Variables

Pure Mathematics

Rational functions
Polynomials

English Faculty

Head of English: Ms A Owen

Literature in English: AS Syllabus 9695 Cambridge

AS English Literature involves the study of four texts in detail, thus two will be studied in term one, with the other two being studied in term two.

During term one, the prose text, Bronte's, Jane Eyre will be studied, looking at such areas as language, construct and authorial purpose, concentrating upon the key areas of the writer's choice of form, structure and language to shape meanings.

The second text during term one will be Shakespeare's Henry iv, pt 1, where students will consider the use of language and the themes, placing the text within its historical context. They will also consider the author's choice of setting and his construction of the text for a purpose.

During term two, poetry and a second drama text will be studied. Students will examine a selection of poems by Wordsworth, looking at the Romantic period and the life of the poet; poetic structure, imagery, language choice and historical context.

They will also study a modern Twentieth Century text, Miller's View From A Bridge. They will be looking at Miller's intense control of language, scene direction; characterization and the text as a piece for performance.

Throughout the course, students will be encouraged to express their opinions and interpretations in class discussions and complete written tasks diligently, all as preparation for their AS examinations in the summer term and to hone their skills for all future studies.

During term three, the English classes will focus on revising all areas in preparation for the AS examinations: Paper 3 (Poetry and Prose) and Paper 4 (Drama).

After their AS examinations, students will return to school to begin their A2 course on Shakespeare and a Pre-twentieth century author.

Assessment Methods:

Formal assessment will take the form of essays, regularly set by the teacher and assessed according to the AS level criteria in the Cambridge syllabus, details of which are in the sixth form hand book.

Although not formally assessed, class contributions to discussions and group work, as well as independent research, reading and small project work also contributes to their overall understanding and further develops their ability to express themselves effectively and precisely.

Science Faculty

Head of English: Ms N Mason

Biology

Head of Biology: Miss J Kaur

T1

- Cell Structure
- Biological Molecules
- Enzymes
- Cell membranes and Transport
- Cell and Nuclear Division
- Genetic Control

T2

- Transport in Plants and Animals
- Gaseous Exchange
- Infectious Disease
- Immunity
- Ecology

End of term exams (including a practical test)

T3

- Ecology
- Revision

Chemistry

Head of Chemistry: Mr J Donaldson

T1

Physical Chemistry

- Atoms, Molecules and stoichiometry
- Atomic Structure
- Chemical Bonding
- States of Matter

- Chemical Energetics
- Electrochemistry
- Equilibria
- Reaction Kinetics

T2

- Organic Chemistry any synthetic pathways
- Groups II and VII
- Nitrogen and Sulphur
- Industrial Electrolyses

T3

- Carboxylic acids
- Nitrogen Compounds
- Polymerisation
- Revision

Physics

Head of Physics: Mr J Grierson

T1

Unit 1 Quantities and Their Measurement

- Physical Quantities and Units
- Measurement Techniques

Unit 2 Force Motion and Energy

- Kinematics
- Dynamics
- Forces
- Work, Energy & Power

Unit 4 Matter

- Phases of Matter
- Pressure
- Stress Strain characteristics

T2

- Electric Fields
- Current Electricity
- DC Circuits
- Nuclear Physics

T3

Following the AS level examination students will be starting the A2 Physics course with the topics of;

- Non uniform acceleration
- Fields

Modern Foreign Languages Faculty

Head of Faculty: Miss G Bruce

French

Head of French: Gianfranco Conti

T1

The students will practice the four language skills across the following topic areas: Youth culture and concerns; Lifestyle, health and fitness. They will also practise all the tenses of the indicative and be introduced to the subjunctive mood.

T2

The students will practice the four language skills across the following topic areas: Education and employment; customs, traditions, beliefs and religions. They will also practise the subjunctive and conditional mood as well as the

T3

The students will practice the four language skills across the following topic areas: The world around us: travel, tourism, environmental issues and the French-speaking world, national and international events: past, present and future.

Spanish

Head of Spanish: Mr N McKenna

T1

Students will start their AS Level study using the Edexcel Spanish for A Level textbook as well as other resources and will study the following topics:

Youth Culture and Concerns

- Family Relationships
- The modern-day Spanish family
- Spanish Youth concerns
- Social Problems for 21st century youth
- Mobile telephones

Lifestyle, Fitness and Health

- Spanish eating habits
- The Mediterranean diet
- Tobacco and drugs

Throughout the term, students will undertake a variety of activities in class which will be graded in accordance with AS mark schemes. The activities will include listening, speaking, reading and writing activities.

T2

In term two, students will continue to use the set textbook Edexcel Spanish for A Level, studying the following topic areas:

The World Around Us

- Transportation
- Tourism
- Climate
- Environmental Issues

Education and Employment

- Secondary and Further Education
- Policies and Student Issues
- The World of Work

Work will continue to focus on the key skills of listening, speaking, reading and writing. Internet research into topics will be necessary and students will be expected to refine their use of the subjunctive. Throughout the term, students will undertake a variety of activities in class which will be graded in accordance with AS mark schemes. The activities will include listening, speaking, reading and writing activities.

T3

By way of preparation for their forthcoming AS examinations students will undertake a series of revision activities covering the above four topics. These activities will include oral conversation and listening activities as well as a range of past paper questions.

When the examinations are completed, students will return to class to begin their A2 studies and will study in greater depth; the topic of immigration. This will include the following topics:

- African immigrants in Spain
- Mexican immigrants in the US
- Problems and issues related to the above.

Comprehension of the above topic will be evaluated both through essays and oral conversation.

Mandarin

Head of Mandarin: Mrs V Yap

T1

The AS Mandarin students will study a new syllabus which has incorporated a speaking assessment in Unit 1 and a listening assessment together with a new format of translation in Unit 2. To prepare students for the new syllabus, they will work on Jia You, Chinese Made Easy book 4 and Practical Chinese Reader III, studying the following topic areas:

- About China: its language, geography and food.
- Summer holidays.
- Travel.
- Grammar aspects : functional words
- Various recorded listening practices
- Translating Chinese to English through audio-visual exercises

Students are assessed regularly by class tests and an end of unit test at the end of the term.

T2

In term two, students will work on Chinese Made Easy Book 4 and Jia Yu studying the following topic areas:

- Holidays and travel
- World famous cities
- Home life and family tree
- Chinese festivals
- Idioms and Chinese folk tales

In addition, students will listen to various recorded listening practices and translating Chinese to English through audio-visual exercises as required in new syllabus. They will also work on oral skills to meet the spoken expression requirement in the new syllabus.

- Various recorded listening practices
- Translating Chinese to English through audio-visual exercises

They are assessed regularly by class tests and an end of unit test at the end of term.

T3

In term three, students will continue to work on Chinese Made Easy Book 5, studying the following topic areas:

- Healthy life style
- Chinese folk tales

They will continue to revise for Edexcel syllabus by working through past papers and learn the skill of translating English passages into Chinese.

In addition, students will also finalise coursework on topics of their own choice, which are based on Lu Xun: Gu Xiang (My Hometown) and Ru Zhi Juan's Bai He Hua (Lily).

Humanities Faculty

Head of Humanities: Ms K Haward

History

Head of History: Mr. D Kinvig

YEAR 12 and YEAR 13 (for 2010 examination)

AS and A2 students are prepared for CIE Paper 1: Modern European History 1789 - 1945

This paper focuses on the key developments that shaped European History from 1789 to 1939. To provide candidates with an holistic understanding of Europe as a region, these key developments will be studied in relation to the wider European context and in the light of broader issues: revolution, nationalism, imperialism, war and totalitarianism.

Topics include:

- Source-Based Study: The Origins of the First World War, 1870-1914

In this study, students will develop an understanding of how conditions and events in Europe during the period 1870-1914 led to the outbreak of World War I. Students will also need to examine the historical controversies on the origins of the war.

- The French Revolution
- The Russian Revolution
- Totalitarianism between the Wars, 1919-39

Students are regularly assessed at the end of each unit of work using past paper questions and these are marked according to AS and A2 criteria using the CIE mark schemes and grade boundaries.

Geography

Head of Faculty / Geography: Miss K Haward

AS level studies begin with the physical core unit of Hydrology and the human core unit of Population Change. The Hydrology unit includes the study of drainage basins, rivers and the

interaction of people with hydrological systems. Population studies cover natural and migration components of change, population-resources relationships and the management of population growth.

Students continue into the second term with another Physical Core unit, Weather and Climate and the Human Core unit of Settlement Dynamics. Towards the end of the AS course, Students undertake a mock exam and review, before completing the final physical core unit, Rocks and weathering

All of these units provide a foundation for students learning to study at Advanced level. Students are also encouraged to develop their independent research skills and examination technique. Students are assessed at regular intervals throughout the course. They are given opportunities for peer- and self-assessment of their work as well as end-of-unit tests.

Sociology

Head of Sociology: Mr I Ruck

T1

Students will cover the following topics in term one:

- An introduction to socialization, culture and identity.
- Social theory: Functionalism, Marxism, Interactionism, Weberianism, Post modernism
- Social differentiation; the different groups that make up a society and the relationship between these.

T2

Students will complete social differentiation, in particular, gender. Having completed this they will start the third and final Module on Research Methods. At the end of each Unit students should be given an End of Unit test to assess their learning in this area.

T3

Students will start the term revising for the AS exam. On their return they will begin a module on Crime and Deviance.

Information and Communications Technology Faculty

Head of Faculty: Mr. M Smith

APPLIED ICT

T1

Students will be working on a range of collaborative projects covering document production, web site design, and a range of theory topics. They will work with their peers in designing a house

style which conveys a company image and individually they will create automated word processing systems for use within an office environment. This will include documents such as a memorandum, fax cover sheet and invoice. They will then investigate web design in order to create a web site simulating the promotion of a range of input, output and storage devices with detailed information about all.

T2

Students will continue to study the broad range of ICT theory topics this term alongside practising their practical skills in communications, presentations, databases, and spreadsheets. The AS ICT practical exam will take place before the end of April and pupils are strongly encouraged to maintain their practical skills across all disciplines throughout the course. Theory topics will include the Systems Lifecycle, How organisations use ICT and the Impact of ICT on Society.

Pupils will be exposed to some case-study based tasks in preparation for the summer theory examination.

T3

Pupils will use the remaining time to revise the full range of theory topics and practice applying their knowledge to case studies in preparation for the final theory examination which is highly time pressured.

On return from study-leave, pupils will start the A2 part of the course by investigating the use of mail merge in word processing and by starting a research project which will require additional work over the summer holidays.

Drama Faculty

Head of Faculty: Miss J Lee

T1

Unit one of the AS level is entitled Exploration of drama and theatre. In this unit students will be involved in a practical and theoretical in-depth study of two plays from different genres. This year we are studying '4.48 Psychosis' and 'A Midsummer Night's Dream'. 1500 words of exploratory notes accompany the practical coursework.

T2

This term students will complete the re-drafting of their coursework pieces and start rehearsing their Unit 2 Examination Performance. This unit enables students to work as performers and to communicate with an audience through the application of their theatre skills. Students will draw on their experiences of the rehearsal process and present a coherent interpretation of the text in performance. Within the performance itself, students are expected to show use of appropriate performance styles, and an understanding of their role as performer.

We are fortunate to have the opportunity to perform in KLpac. This professional space demands the highest quality of performance and is always an exciting project.

T3

Students will prepare and perform the second part of the Unit 2 examination: duologues. This combined with the KLpac group performance completes the AS specification. There is no written exam at the end of the AS year.

Assessment

The coursework is internally marked and externally moderated by the Edexcel Examination Board.

The Unit 2 Exam performance is filmed and a DVD sent to the UK to be marked externally.

Music Faculty

Head of Faculty: Mr J Long

T1

AS Music aims to further develop the 3 main aspects from IGCSE, Listening, Performing and Composing.

This term will be an introduction to the Set Works within the context of their musical periods; Classical and Twentieth Century. Students will learn technical skills like how to analyse a musical score, as well as gaining an aesthetic appreciation of what the composer is trying to evoke. They will also work on a detailed appreciation of the periods of Musical History.

In Performance, students will be encouraged to broaden their instrumental repertoire and perform at various intervals to the class and other groups. They will select their performance/composition options within the first few weeks.. Students will also start planning and preparing for their recitals.

Composition will be taught through short exercises, which will gradually develop an understanding of harmonic language.

T2

Students will continue their analysis of the set works, which will be completed this term. They will also continue work on their detailed appreciation of the periods of Musical History for Section C of the exam paper – Wider Listening and Analysis.

Performance practice will continue as students finish preparing for their solo performance, to be recorded by mid April.

Recordings and assessments will take continue to take place for the Element 2, component 2 part of the course.

T3

Students will have completed their Performances and Coursework by mid April.

The remainder of the term will be spent revising the set works and doing timed essays in preparation for the exam.

Art Faculty

Head of Faculty: Miss C Smithyman

T1

Year 12 students will work on the coursework component of their AS course this term. This component is worth 40% of their final AS grade. The students must submit a finished project at the beginning of February comprising of 4 x A1 sheets of supporting work and one final piece (a painting, print or sculpture).

The intention of this component is to allow the student to pursue a field of study in research, development and realization in depth, and the assessment emphasis is placed on the development of ideas and the use of processes rather than the resolution of the final piece itself. Students should devote their lesson and homework time to producing preparatory research and development work as they design the piece they will produce under timed test conditions in the final 'mock' exam next term.

T2

Year 12 students will complete the coursework component of their AS course this term. This component is worth 20% of their final A' level grade (or 40% if they are only taking art as an AS).

The intention of this component is to allow the student to pursue a field of study in research, development and realization in depth, and the assessment emphasis is placed on the development of ideas and the use of processes rather than the resolution of the final piece itself. After submitting the coursework, students will be issued with the final examination paper for the AS course. They will then devote all of their lesson and homework time to producing preparatory research and development work as they work towards the piece they will produce under timed test conditions in the final exam next term. All of this supporting work must be submitted with the examination piece. Together, the preparatory and final exam work is worth 30% of their final A' level grade (or 60% if only taking the AS).

T3

Yr 12 Art students will complete their examination during May, effectively concluding their A/S course. The final preparation for hanging work for the exam exhibition will take place in the weeks following their exam. Students may be required to come into school to assist with the presentation of their own work at this point.

As soon as the exam leave is over, the students begin on their A2 programme of study. They need to submit a proposal for their related study component to CIE before the end of this term in order to be accepted onto the year 13 course next year. They will need to continue this study during the holiday to maintain their high level of attainment and to investigate the work of their chosen artists(s) closely. It is therefore vital that students continue to attend lessons right up until the last day of this term.

Physical Education Faculty

Head of Faculty: Mr P Wellington

Head of Secondary PE: Mr M Springall

T1

AS Level PE

The unit content for 2009 is now divided into two sections:

Unit 1 Participation in Sport and Recreation

- Part A: Healthy and Active Lifestyles
- Investigate how body responds and adapts to exercise
- Components of physical/skill fitness and different methods of fitness training
- Fitness assessments and protocols
- Part B: Opportunities and Pathways
- Develop knowledge of how competitive sport has developed over time
- Lifelong involvement in sport

Unit 2 The Critical Sports Performer

- Develop performance in two chosen roles from performer, leader and official
- Undertake a study into the provision for all three roles at a local level, followed by a study of the provision for one role at a national level
- Produce an analysis of their performances in one sport/activity through five prescribed yet open-ended exercises.

Community Sports Leaders Award (CSLA)

Students will complete the first four modules of the course this term. These are:

- Organisational skills
- Safety in sport
- Know your friends
- Fitness for sport

T2

AS Level PE

Unit 1

Students study the theory participation in sport and recreation in terms of healthy lifestyles, fitness, and effects of exercise, performance pathways and lifelong involvement.

Unit 2

The critical sports performer has a more practical feel from a playing, leading and officiating point of view. Students also undertake a local and national study, and an in-depth performance analysis

Community Sports Leaders Award (CSLA)

Students will complete the second four modules of the course this term. These are:

- Events and competitions
- Improvisation of activities
- Games and activity experience
- 10 hours of voluntary service

Students will also plan and carry out a coaching session that will be evaluated by an external moderator.

T3

AS Level PE

Having finished their practical moderations students will focus on completing their fitness testing. This will prepare them for writing their Personal Exercise Plan for A2 once they have sat their AS exams.

CSLA

Students will be making final preparations to host a sports carnival for local children.

Design Technology Faculty
Head of Faculty: Mr M Perry

AS study has only one terminal examination, combining the general knowledge of design theory and understanding of materials and processes of manufacture. Three coursework projects are also part of the final assessment and will occupy much of the student's time. The projects will help a great deal in developing knowledge for the examination. The course concentrates on

trying to build the skills, experience and know how to be a useful designer, whether of a technical or aesthetic bent.

The first term will start with introductory projects designed to bring the group up to the level required at AS. This will be followed after approximately six weeks with the coursework projects based around research, designing and manufacture.

Business and Economics Faculty

Head of Faculty: Mrs C Hooper

Business Studies

T1

The following topics will be covered this term:

Business Environment:

- The need for business
- Types of economic system
- Business ownership
- Measurement of size
- Objectives
- External Environment
- Stakeholders

Marketing:

- Market planning and strategy.
- Market segmentation.
- Market research.
- The marketing mix.
- International marketing.

Students will then begin to study the topics of 'Accounting and Finance' and 'Human Resource Management'.

T2

Students will cover the following topics:

- The business environment; the social, legal, economic, political and technical environment within which businesses operate.
- Human resource management

- Business organization
- Finance: final accounts, ratio analysis, cash flow forecasts, investment appraisal, capital and revenue expenditure
- Information for decision-making

T3

Students will be prepared for their AS examinations. Following their external examinations, students will undertake skills based case study and essay work where they will be required to apply theory learned at A2 level to the business environment.

Accounting

Term 1

The following topics will be covered this term:

- The accounting equation.
- Double entry system.
- Trial Balance.
- Trading and profit and loss account.
- Balance sheet.
- The basic structure of accounting records.
- Accounting concepts and conventions.
- The cash book and petty cash book.
- Books of prime entry.
- Bad debts and provision for bad debts and discounts.
- Distinguish between capital and revenue expenditure.
- Provision for depreciation.
- Adjustments for accruals and prepayments of expenses and income.
- Stock valuation.
- Control accounts.
- Correction of errors.
- Bank reconciliation statements.
- Incomplete records and single entry.
- Accounts of non-profit making organisations.

Term 2

Students will cover the following topics:

- Partnership accounts
- Partnership changes
- Purchase of existing partnership and sole traders businesses
- Limited companies
- Share and loan capital
- Redemption and purchase of shares and debentures
- The published final accounts of limited companies
- Limited companies taking over other businesses
- Departmental Accounts
- Accounting ratios

- Analysis and interpretation of accounting statements
- Manufacturing accounts
- Absorption and marginal costing
- Break-even analysis

Term 3

Students will be prepared for their AS examinations. Following their external examinations, students will cover the following topics:

- Process costing.
- The purchase of existing partnerships and sole traders businesses.
- Take over of other firms by limited company.
- Cash flow statements.

Economics

T1

The following topics will be covered this term:

Micro Economics: Basic economic ideas;

- Scarcity,
- Choice and resource allocation,
- Factors of production, the production possibility curve,
- Different allocative mechanisms.

Micro Economics: The price system;

- Demand and supply curves, factors affecting demand, supply and equilibrium price,
- Price, income and cross elasticities of demand,
- Price stabilisation and consumer surplus.

Macro Economics: Macro economic indicators:

- Inflation.
- Employment.
- Balance of payments.

Macro Economics: Influences on the size and structure of the working population

Macro Economics: Inflation:

- RPI as a measure of inflation and deflation.
- Costs and causes of inflation.

Macro Economics: Introduction to international trade:

- Benefits from trade.

T2

Students will cover the following topics

Micro economics:

- Public and merit goods and externalities
- How and why the government intervenes in the price mechanism

Macro economics:

- Examination of exchange rates and the balance of payments including the theory of exchange rate determination
- Examination of various exchange rate regimes and issues
- Examination of the causes, consequences and cures of balance of payments disequilibria

T3

Students will be prepared for their AS examinations. Following their examinations students will undertake skills based on case study work and will use stimulus material to apply theory learned at A2 level to world economic affairs.