

Year 13

Mathematics Faculty

Head of Faculty: Mrs H Lopez

T1

Mathematics

Pure Mathematics (P3)

- Trigonometry
- Differentiation
- Integration
- Complex numbers

Statistics (S1)

- Representation of data
- Measures of spread & locations
- Probability
- Permutations and Combinations

Further Mathematics

Pure Mathematics

- Complex numbers
- Matrices
- Differentiation and Integration
- Differential equations

Mechanics

- Momentum and Impulse
- Circular motion
- Simple harmonic motion
- Hooke's law
- Linear motion under a variable force.

Statistics

- Sampling and Estimation
- Hypothesis Testing
- Correlation & regression

T2

Mathematics

P3

- Vectors (lines)
- Differential equations
- Solving equations numerically
- Trapezium rule

S1

- Probability distribution
- Expectation and variance of random variables
- Normal distribution
- Binomial distributions

After the completion of the syllabus, students will revise for the A2 exam. They will be completing revision sheets and past exam papers.

Further Maths

Statistics

- Hypothesis tests and confidence intervals
- Chi Squared tests
- Further work on Distributions

Mechanics

- Equilibrium of a rigid body under coplanar forces
- Rotation of a rigid body

Pure

- Mathematical induction
- Linear spaces
- Polar coordinates
- Integration : centroids

T3

Mathematics

- Vectors : planes in three dimensions

Revision for A2 exam.

Further Mathematics

- Mathematical induction

Revision and practising past exam papers.

English Faculty

Head of English: Ms A Owen

Literature in English: A2 Syllabus 9695 Cambridge

For the A2 English Literature course, students will study four texts in detail, therefore, two will be studied in term one and two more in term two.

During term one, students will tackle Shakespeare's, Hamlet, where they will look closely at language, structure and authorial purpose, placing the text within its social and historical setting. They will consider the play as a performance piece as well as a text for language and character motivation analysis.

They will also study a pre twentieth century novel, Hardy's, Mayor of Casterbridge. They will look at the language, structure and themes of the text, explore Hardy's purpose in writing and the historical and social context of the novel.

In term two, they will move on to look at two twentieth century drama texts. With Pinter's The Homecoming, they will consider the play in its historical context as well as looking at its power as a piece of theatre. They will study his choice of language and his use of silence as a voice. Churchill's Top Girls will be looked at as a piece of political theatre, both for its socialist and feminist issues. The play will also be considered as a piece for performance leading to a discussion of the writer's craft and purpose.

In term three, the focus will be on intense revision for the final examinations: Paper 5 (Shakespeare & other pre twentieth century texts) and Paper 6 (Twentieth Century Texts).

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.

For A2, students are expected to read texts which offer a critique of the works studied and be able to refer to these critics effectively and concisely in their A2 final examination, therefore, emphasis is placed on developing this skill in all written responses at A2.

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

A2 is split into two parts, core and applications; both are tested on a single 2 hour paper.

Following on from Photosynthesis and Respiration studied last term, this terms A2 core subjects include:

- Inherited change and Gene Technology
 - The passage of information from parent to offspring
 - The nature of genes and alleles and their role in determining the phenotype
 - Monohybrid and dihybrid crosses

- Regulation and control
 - The importance of homeostasis
 - Excretion
 - Control of water and metabolic wastes
 - Nervous and hormonal communication
 - Response to changes in the external environment
 - Regulation of the internal environment
 - Communication and control in flowering plants
 - Plant growth regulators

- Selection and evolution.

These make up 85% of the A2 written paper.

The second part, Applications of Biology, will be taught next term.

T2

Topics covered

- Regulation and Control
- Genetic control

T3

- At this stage all topics will have been completed. Time will be spent in practising practical skills and in doing past papers. Some time will be devoted to improving both examination and revision technique.

Chemistry

Head of Chemistry: Mr J Donaldson

T1

Physical Chemistry

- Reaction Kinetics
- Equilibria – Acids and Bases
- Solubility product
- Electrochemistry
- Chemical Energetics

Inorganic Chemistry

- Group ii
- Group iv
- Group vii

Organic Chemistry

- Arenes and Phenol
- Carboxylic and derivatives
- Nitrogen compounds
- Reactions with aqueous iodine to give tri-iodomethane

T2

- Topic 9.2g,h Group II elements (1 week)
- Topic 9.3 Group IV elements (2 weeks)
- Topic 9.4c Group VII elements (1 week)
- Topic 9.5 – Transition Metals (4 weeks)
- Practical Module 4-Planning,Evaluation exercises (3 weeks)
- Topic 11.1 Chemistry of Life (4 weeks)
- Topic 11.2 Applications of Analytical Chemistry (4 weeks)
- Topic 11.3 Design and Materials (3 weeks)

T3

- At this stage all topics will have been completed. Time will be spent in practising practical skills and in doing past papers. Some time will be devoted to improving both examination and revision technique.

Physics

Head of Physics: Mr J Grierson

T1

- Circular Motion
- Gravitational field
- Temperature
- Thermal properties of materials
- Oscillations
- Electric fields
- Capacitance
- Magnetic fields
- Electromagnetic induction
- Alternating currents
- Changed Particles
- Quantum Physics
- Nuclear Physics

T2

- Communications module
- Modern Physics

T3

- At this stage all topics have been completed. Time will be spent in practising past papers. Some time will be devoted to improving revision technique.

Modern Foreign Languages Faculty

Head of Faculty: Miss G Bruce

Spanish

Head of Spanish: Mr N McKenna

T1

Students will continue their A2 using the Edexcel Spanish for A Level textbook as well as other resources and will study the following topics:

Literature and the Arts

- Spanish Cinema

Students will study a variety of 20th and 21st century Spanish cinema and study a variety of themes which they will be required to write essays and discuss in the target language.

- Spanish Literature and Reading Habits
- Spanish Music and interest in music

National and international events

- Spanish and Argentinean History
- Spanish and Argentinean culture and people
- Important modern events
- The threat of terrorism

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 all tenses. 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

Students will continue their A2 using the Edexcel Spanish for A Level textbook as well as other resources and will study the following topics:

Customs, traditions, beliefs and religions

- Human Rights (for women, for the aged, for immigrants)
- The Spanish Constitution
- Crime
- Safety in society

Students will also begin to revise the topics covered in the AS course.

Work will continue to focus on the key skills of listening, speaking, reading and writing. There will be increased focus on areas of concern for the forthcoming A2 examinations and past papers will be completed regularly.

T3

By way of preparation for their forthcoming A2 examinations students will undertake a series of revision activities covering the seven topics studied over the previous 2 years. These activities will include oral conversation and listening activities as well as a range of past paper questions.

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 markschemes and grade boundaries.

Geography

Head of Faculty / Geography: Miss K Haward

A2 studies begin with two key themes: Hazardous Environments and International Trade and Development. These units provide opportunities to cover a very wide range of places and themes, with increasing emphasis on student autonomy and research skills.

In the second term, students study the second Advanced Physical option, Coastal Environments and a second Human option, with the study of Environmental Management. Preparations for the final examinations continue, with continued emphasis on exam techniques and the learning of detailed case studies and terminology

Students undertake a mock exam and review as part of preparations for their final A2 exams. All aspects of the course including exam technique and past papers are included in the revision.

Sociology

Head of Sociology: Mr I Ruck

T1

Students will cover the following topics:

- The Sociology of Crime and Deviance
- The Sociology of Religion
- The Sociology of Education

T2

A2 students will complete the Education and then study their 4th and final Module on Media. At the end of each Unit students should be given an End of Unit test to assess their learning in this area.

After completion of the syllabus, students will prepare for the A2 examination. They will answer past examination questions and will develop their revision and examination skills.

T3

Students will be reviewing their mock examination performance and then revising for their A2 exam.

Information and Communications Technology Faculty**Head of Faculty: Mr. M Smith**

APPLIED ICT**T1**

Pupils should arrive fully conversant in the ways of mail merge, along with a draft of their research project. They will continue to learn additional methods of automation for the practical part of the course. Theory classes will investigate a wider range of topics in ever greater depth. It is essential that pupils learn how to apply their knowledge to given scenarios. Topics to be covered include: expert systems, monitoring and measurement, project management, modeling, market research, research applications, online applications, and stock control. Pupils will also learn about ICT in home entertainment, auctions, booking systems, information services, Government and education.

T2

In preparation for the April practical examination, pupils will put their practical skills to the test by developing a range of automated office systems. The final theory topic to be studied is computer networks. Pupils will learn about network types, security and uses. They will then begin to revise all topics thoroughly for the final examination.

T3

This will be dedicated to compounding practical skills for the examination which takes place during April. The remaining time will be spent consolidating learning of all theory topics and applying this knowledge to case studies in preparation for the final theory examination.

Drama Faculty**Head of Faculty: Miss J Lee**

T1

In order to fully prepare for the 60% written exam, the A2 students will be perform the examination text 'Woyzeck'. Working as actor and director they will create a workshop version of the play by choosing a selection of key scenes. They will ultimately write about the rehearsal process and performance decisions from a point of practical experience in the final exam.

The second half of term is devoted to the Unit 3 devising process. This enables students to develop strategies for shaping ideas into a piece of theatre for a selected audience. Through the process of researching, devising and presenting their own piece of theatre, this unit offers opportunities for the students to utilize and further develop the skills, understanding and knowledge acquired in the AS units. Students will draw on their knowledge of forms, genres, performance styles and the work of directors, designers and performers gained in AS.

T2

In the first week of this term the A2 students will perform their devised Unit 3 coursework piece at KLPac. This professional space demands the highest quality of performance and will be a wonderful venue for the final public performance. Once the practical performance is complete the written coursework will be submitted.

T3

This term sees students work on Unit 4 of the course which culminates in the final written exam. Students will have to demonstrate their knowledge of 'Woyzeck', exploring the text from a director's perspective and considering the advice they might give to actors or designers using their own vision. Having performed the piece in Term 1, writing about the piece analytically under exam conditions will be the main focus. In addition, they will prepare a research log based on a live adapted performance of a historical play comparing it with other interpretations over the centuries.

Assessment

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

The final Unit 4 written examination is externally marked.

Music Faculty

Head of Faculty: Mr J Long

T1

A2 Music gives the student opportunity to pursue certain selected skills in depth and these choices will be made at the start of the term.

Students intending to study music at College or University will be given help and advice with their applications and audition material. For students intending to study overseas, auditions are usually made by recording and these will be made during this term as necessary.

In Performance, students will be encouraged to broaden their instrumental repertoire and perform at various intervals in and out of class. 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. The composition topic will be discussed, planned and commenced

T2

The composition topic will be continued and developed and tested in performance. It should be completed and possibly recorded by the end of term.

Performance practice will continue as students finish preparing for their solo recital which will be recorded before the end of term.

T3

Students will have completed their Performances and Composition Coursework by mid April. The remainder of the term will be spent preparing for future music careers as appropriate.

Art Faculty

Head of Faculty: Miss C Smithyman

T1

The two main components of the second year of Art A' Level are:

1. Their major coursework project (worth 60% of the A2 final grade).
2. Their Related Study (worth 40% of the A2 final grade).

These two projects are closely linked and therefore students will be working on both projects throughout the coming term. Over the Summer holidays the students should have worked on their in-depth artists' studies which will be developed throughout this term, as well as starting their coursework project.

Due to the individual nature of these projects, the students have weekly tutorials to set and assess work and review progress. Parents should refer to the students 'evidence' file for up to date information on work set and progress made.

The Related Study is marked by the visiting examiners but the deadline is set for term one to enable the students to work on the larger practical project. This is therefore the most crucial term for our candidates, and they should be putting in as much additional time into their studies as possible in order to produce the highest standard of work possible.

T2

Due to the individual nature of these projects, the students have weekly tutorials to set and assess work and review progress.

The work for both of these components has to be submitted early in the third term; there is no final examination and this course ends once this work is submitted. Therefore this is the most

crucial term for our candidates, and they should be putting in as much additional time into their studies as possible and discuss their work constantly with staff, in order to produce the highest standard of work possible.

T3

The Students will complete their A2 course shortly and the exhibition is currently being prepared for the visiting moderators. Students may be required to come into school to assist with the preparation for hanging of particular pieces but are no longer required to attend lessons after they have handed in all their work. The students have produced some truly exceptional pieces of work this year and we all look forward to the exhibition in early June.

Physical Education Faculty

Head of Faculty: Mr P Wellington

Head of Secondary PE: Mr M Springall

T1

A Level PE

Unit 3:

Preparation for Optimum Sports Performance

Students will develop a knowledge and understanding of the short and long term physiological and psychological preparations made by elite athletes.

Areas to be covered are:

- Short term physiological preparation
- Short term psychological preparation
- Managing elite performance
- History and development of elite sport

Unit 4:

The Developing Sports Performer

Students will construct a development plan to further progress their performance as performers, leaders, or officials.

They will also research one of these roles in an international context taking in grass roots participation, elite performance and other factors. Students will then continue to refine their performances in one chosen role.

Areas to be covered are:

- Development plan
- International Study

T2

A Level PE

Unit 3:

Preparation for Optimum Sports Performance

Students will develop a knowledge and understanding of the short and long term physiological and psychological preparations made by elite athletes.

Areas to be covered are:

- Short term technical preparation
- Fatigue and the recovery process
- Long term physiological preparation
- Long term psychological preparation

Assessment for this based upon questions papers during examination week and carries no coursework requirements.

Unit 4:

The Developing Sports Performer

Students will then continue to refine their performances in one chosen role. Students will plan their life in physical activity, outlining a 'time line', through school, college, university, club and veterans.

Areas to be covered are:

- Progressive participation
- Life Plan

T3

A Level PE

Having finished their practical moderations students will focus on completing final coursework requirements and exam revision.

Design Technology Faculty
Head of Faculty: Mr M Perry

For A2, students will primarily concentrate on the coursework project with the intention of completing most of the design work before the Christmas break. Manufacturing will continue until March with the whole project brought to a conclusion in April. Alongside this work students will be studying for their examination building on the topics they studied at AS. A good understanding of materials and the process of manufacture being essential knowledge for design students.

Business and Economics Faculty
Head of Faculty: Mrs C Hooper

Business Studies

T1

The following topics will be covered this term:

Marketing:

- Revision of AS sub topics
- Time series analysis
- Value analysis
- Income elasticity of demand, cross price elasticity of demand

Accounting and Finance:

- Revision of AS sub topics
- World Bank and International Monetary Fund
- Accounting concepts and conventions
- Depreciation, goodwill and stock valuation
- Investment appraisal

Operations management:

- Revision of A1 subtopics
- R & D
- Lean production, quality control and operational efficiency

- Linear programming
- CPA
- Costing and Break even

Information for decision-making:

- Decision trees and cost benefit analysis

T2

Students will cover the following topics:

- The business environment
- Human resource management
- Marketing
- Finance
- Business organization and communication

Whilst they will also be completing Information for decision making which is a new element for Year 13. They will then revise for A level examination using past papers

T3

Having completed the A2 syllabus, students will be prepared for their external examinations.

Accounting

Term 1

The following topics will be covered this term:

- Capital expenditure appraisal (capital budgeting)
- Budgeting and budgetary control
- Cash Budgets
- Co-ordination of budgets
- Standard costing
- Variance analysis: material and labour variances
- Variance analysis: sales variances
- Management of company financing
- Social accounting

Term 2

Students will cover the following topics:

- Redemption and purchase of shares and debentures
- The published final accounts of limited companies
- Purchase of existing partnership and sole trader businesses
- Limited companies taking over other businesses

- Accounting ratios and interpretation of accounts
- Analysis and interpretation of accounting statements
- Company financing
- Cash flow statement
- Process costing
- Budgeting
- Standard costing
- Investment appraisal

The above A2 topics and all AS topics will be revised for A level examination using past papers.

Term 3

Having completed the A2 syllabus, students will be prepared for their external examinations.

Economics

T1

The following topics will be covered this term:

A. Micro Economics

- The theory of firm; different market structures, conduct of firms and performance of firms in terms of output, profit and efficiency.

B. Macro Economics

- Theory and measurement in the macro economy; national income statistics as measurement of economic growth and living standards, circular flow of income, aggregate expenditure function, aggregate demand and aggregate supply, schools of economics thought – Keynesian vs Monetarist.

T2

Students will cover the following topics

Macro economics

- Examination of the macro economy through aggregate demand and aggregate supply analysis
- Compare and contrast different schools of economic thought
- Monetary theory
- Key macro economic objectives and the policy tools available to achieve these
- Highlight areas of conflict, which may arise between policy objectives

Micro economics

- Different measures of economic efficiency
- Conflicts between efficiency and privatisation policies
- Wage markets
- Government micro economic policies and their effectiveness

They will then revise for A level examination using past papers

T3

Having completed the A2 syllabus, students will be prepared for their external examinations.