



Sixth Form Curriculum

2012 - 2013

Details are correct at the time of printing but may be subject to change.
November 2011

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AS and A Levels

An AS level course covers the first year of a full A level course and leads to a stand alone qualification. The second year of an A level course is called the A2 year. At the end of the AS level course, a student may choose to stop studying a subject or she may choose to continue studying the subject in the A2 year, thus completing the A level qualification.

The pattern for the two sixth form years has become:

Year 1: Part 1 (AS) with 50% weighting, examined in May/June of Six One

Year 2: Part 2 (A2) with 50% weighting, examined in June of Six Two

but in some subjects, examinations are taken in the January of the Six One and Six Two years.

Four subjects at AS level in Six One, with three subjects extending to A2 level in Six Two has become the standard model. This three A level, plus one AS package appears to be a realistic workload if girls are to keep the valued balance with extra-curricular activities, but the provision is in place for some girls to take other permutations, dependent upon their abilities and needs.

	4 AS / 3 A2	- the normal expectation
OR	4 AS / 4 A2	- the four A level package
OR	3 AS / 3 A2	
OR	3 AS / 2 A2	

Whilst a five AS/four A2 combination is theoretically possible, the exceptionally heavy workload and time commitment seriously reduces participation in the broadening available via the general courses and extra-curricular programme with consequent loss of opportunities to develop certain Key Skills. HMC and GSA do not feel a five subject AS curriculum in the first year of sixth form is advisable.

The subjects available for choice and the entry requirements are shown overleaf.

Internal assessment with external moderation of coursework and oral tests continues to be a feature of some specifications and some A2 (A level) courses have a synoptic unit to test skills acquired across the whole course as well as questions on cross-unit themes which integrate knowledge derived from the different areas.

All girls take AS level examinations in place of internal summer examinations in the summer of Six One and unit results are therefore available for UCAS forms submitted in the autumn term of Six Two for university entrance. Certain subjects take one or more of the AS assessment units in January of Six One and one or more A2 units in January of Six Two. The opportunity to re-sit units is available, but is not encouraged. Where agreed, preparation for re-sits takes place via 'clinic' sessions - no additional class teaching time is provided. AS and A2 are graded from A to E, candidates achieving grade A overall at A level and an average of 90% or more in the A2 units will be awarded an A* grade.

Extended project qualification (EPQ): This qualification allows students to study in depth an aspect of their curriculum for which they show a particular interest. With the help of a supervisor, students manage totally the planning, research, presentation and evaluation of their project. This qualification, provided by AQA, is a useful tool for Universities to discriminate between two candidates presenting a similar profile. We offer this qualification to girls who have very good academic and organisational skills, starting during the Six One year and completing in Six Two.

AS subjects on offer and minimum entry requirements

To commence a four AS/three A2 programme (the standard expectation), the school normally requires a girl to have achieved GCSE grades as shown in the table below:

AS Subject	Normally accepted GCSE grade	Other entry requirements
Art & Design	C	
Biology	B	
Business Studies*	B	GCSE C in Mathematics & English Language
Chemistry	B	
Classical Civilisation*		GCSE B in English Language and in one other literary/essay based subject
Drama & Theatre Studies*		GCSE A in English Language and fluent spoken English.
Economics*		GCSE B in Mathematics & English Language
English Language & Literature	B	
English Literature	B	
French	A	
Further Mathematics	A*	
Geography*	B	GCSE B in Mathematics, English Language and in a Humanity subject
German	A	
Government & Politics*		GCSE B in English Language and in either Geography or History
History*	B	GCSE B in English Language or in a Humanity subject
History of Art*		GCSE B in English Language or in a Humanity subject

Latin	B	
Mathematics	A	
Music	A	
Philosophy & Ethics*		GCSE C in both English Language and Religious Studies short course
Physics	A	
Physical Education*		We are considering introducing AS/A2 PE from September 2012. A GCSE in PE is not required to take this course. Assessment is 50% coursework and 50% written examination, but we have yet to decide which examination board we will use. A final decision will be made as soon as possible and will, of course, depend on the number of students expressing an interest; the course would only be viable if there is a class of at least four students.
Psychology*		GCSE B in Biology or Science and a B in Mathematics & English Language.
Spanish	A	

* subjects that can be taken at AS level without being previously studied

Progression from AS to A2

The expectation is that a student should achieve a grade D or above at AS level in any subject that she wishes to continue to A2 level.

The Sixth Form Programme includes:

1 All Six One students follow the sixth form curriculum extension course. This is comprised of five units, each taught over five weeks, with two periods per week. The units are:

Library & Extended Project Research Skills: Roedean aims to equip its students to become independent thinkers. This course encourages students to think beyond the boundaries of the AS and A2 specifications.

Global Citizenship: Roedean is a worldwide community and the students of today will be the decision makers in an increasingly globalised world. This course raises awareness and understanding of the particular issues that young people must face up to once they have completed their studies.

Communication and Presentation Skills: Essential skills to enable students to make the right impression at interviews and get their opinions across at meetings.

Ethics: With the pace of technological developments and the harsh realities of world economics it is essential that leaders and decision makers of tomorrow are not just well schooled in particular academic disciplines but have a broader ethical framework.

Well Being: Coping with the stresses and strains of contemporary life and feeling at ease with oneself are valuable keys to success.

2 **General Studies Courses** which are planned around the AS/A2 level programmes. These are designed partly to support particular subject combinations and partly to extend the breadth of individual programmes.

(a) **ICT Skills:** the internationally recognised European Computer Driving Licence (ECDL) scheme is followed, providing a flexible, modular course covering the main software applications required at this level. This is an optional course open to all new students and current students who have not already obtained the EDCL qualification.

(1 period per week)

(b) **Modern European Language Skills:** (French and Spanish) can be maintained and developed beyond GCSE level in non-certificated continuation classes provided for those girls not taking the language(s) at AS level. These run for two terms only in Six One. Depending on demand, complete beginners may also take French or Spanish for two terms in Six One. (1 period per week)

- (c) A **Practical Skills** option (Six One only) may be selected from a range which typically includes whole year courses:

Engineering Project
Debating Society
Young Enterprise Business - learning by doing

and half year courses (two may be taken):

Badminton or Trampoline
Cookery Course, eg Delia Smith's "One is Fun"
Fashion and Fabrics
Horse riding

- 3** There is an extensive **Careers Programme** incorporating the Wednesday careers talk which is usually given by invited speakers. (2 periods per week)
- 4** A wide range of **Sports Activities** is offered, including aerobics, archery, badminton, basketball, cricket, football, golf, hockey, horse riding, indoor rock climbing, karate, netball, racquet ball, rounders, softball, squash, swimming, tennis, trampolining, volleyball, weight training, windsurfing and yoga. (2 periods per week)
- 5** In addition, the **Extra-curricular** programme features:
- (a) a very full selection of clubs and teams, the Duke of Edinburgh's Award Scheme, choirs, ensembles, orchestras and drama productions.
- (b) students may also become involved in Voluntary Services in the Community work in the Brighton area. (3 periods per week)
- (c) other languages: Roedean actively promotes languages that are not currently taught within the curriculum, either as **independent entry** or as part of a **limited private tuition** programme.

Languages with limited private tuition (either individually or in small groups) for which there is a charge: Chinese, Japanese and Italian (beginners)

Independent languages with no tuition - We have many girls in the school who wish to take an external examination in their mother tongue. In the MFL Department, we believe that this is positive, as long as the extra examinations do not interfere with a girl's main subjects. One briefing meeting will be offered to outline the rubric of the examination if the board is Edexcel/OCR/AQA. The examinations only take place in the summer.

Many of the activities listed above are excellent for developing teamwork and leadership. The intention is to provide a very broad education and to encourage students to take full advantage of the opportunities offered, but tutors take great care to ensure that a girl's programme is realistic, balanced and meets her individual needs.

The Sixth Form Tutorial Programme

This begins with an induction programme during the first week of the autumn term in Six One.

During the term, each sixth form girl meets with her personal tutor formally for one period per week, the tutor period, and at other times by arrangement. She will have the opportunity to discuss her individual progress and to receive support and encouragement from her personal tutor. The tutorial programme is delivered during the tutor period and the key features of this include the following:

- 1 Continual Self-Assessment and Target Setting**
- 2 Global Current Events**
- 3 Presentation Skills**
- 4 Preparing your CV and Writing Letters of Application**
- 5 Examination Preparation**
 - Coping with anxiety
 - Organising your revision
 - Taking examinations

The tutorial programme is complemented by the careers programme and Horizons lectures. Although the Horizons lectures will vary from year to year, the following talks are delivered by outside speakers on a yearly basis:

- Personal Safety
- Safety when Travelling Abroad
- Breast Awareness
- Alcohol Awareness
- Managing your Finances at University
- Relaxation Techniques

Careers

In the sixth form you will follow a careers programme which encourages you to develop career management skills and the knowledge required to make informed decisions about your future. Members of the careers department work with you, supported by a professional adviser from the Independent Schools Careers Organisation (ISCO). In the autumn term of Six One you will be assigned a Roedean careers adviser. New pupils will have the opportunity to take Futurewise, a series of tests and subsequent interview, which help girls decide on their future career.

During the first year you will participate in a weekly careers programme delivered by the department and a wide range of outside speakers. The Sixth Form Speaker programme includes a range of presentations in order to introduce you to a wide variety of careers and university options. You will also attend a UCAS Higher Education Convention. You will be encouraged to participate in careers courses and conferences, work experience, practice interviews and university open days.

The Careers Centre provides the latest resources with information about careers and higher education opportunities. Other careers-related programmes are provided on the intranet and the internet. A weekly email is sent out to Six One students containing information about careers and university news, as well as upcoming opportunities.

Entry to University and Colleges

Entry to universities and colleges in the UK is via UCAS (Universities and Colleges Admissions Service). The entry procedure is explained fully during the summer term of Six One and you are expected to discuss your applications with your parents during the summer holidays. You will then submit your application forms in the autumn term of the Six Two year. If you prefer, you may apply post-A level. Applicants for Medicine and Law are normally required to sit an aptitude test.

Entry to Oxford and Cambridge is based on A level grades, which must be high – a minimum of A*AA for Cambridge and A*A*A – AAA at Oxford – and you may apply either pre- or post-A level. You may be asked to send a sample of your written work before the interviews in December. Some subjects also require you to take an aptitude test in the November of Six Two. There may be written tests at interview. Cambridge colleges may ask you to take a STEP (Sixth Term Examination Paper) in Mathematics as part of a conditional offer.

Advice is also provided for American College applicants. You should apply only if you really want to go to the USA as the application process is very demanding, especially for students new to the sixth form.

Study Time in the Sixth Form - a guide for students

Your AS/A2 level subjects are the most important part of your sixth form programme and as such must take priority over everything else.

At sixth form level the expectation is for students to spend three to four hours prep/private study time per AS/A2 level subject each week, in addition to the four – five hours timetabled lesson time with their teachers. You must allow a minimum of sixteen hours a week spread over seven days for prep/private study and this should be planned into your weekly timetable before any extra-curricular activities are added. Be realistic about the time you can allow for these extra commitments.

It is important to realise that this normal expectation is to be used as a guide - a 'slow' worker will need longer and those aiming for top grades and the new Advanced Extended Tests will want to spend considerably longer. In Six Two more curriculum time is made available for private study. It should be noted that in addition to this, students must allow time for reading around their subjects.

Try to average out your study time, be sure to make good use of the periods during the day when you are not being taught and do expect to spend time on your subjects at weekends and during holiday periods.

These recommendations are not unique to Roedean; entrance to universities/colleges has become increasingly competitive and we want to ensure that when you put in an application form you have every chance of meeting requirements and obtaining the place of your choice.

Libraries/Resources Centre

The main school library, The Dame Emmeline Tanner Library, which is located at the main entrance of the school, offers a quiet welcoming environment for all students and seats up to eighty girls.

The library contains a large collection of fiction and non-fiction books. The non-fiction books, including reference material, are continuously updated through consultation with Heads of Department. Other resources include a document section, audio CDs, DVDs, periodicals, newspapers and online reference resources (e.g. e-journals, art images, e-books and online newspapers and encyclopaedias). The library also has eight computers, a scanner, photocopier and printer and is wireless networked. The library houses the school's archive collection of uniforms, photos, books, school magazines and many unusual artefacts.

The library supports the sixth form in background reading for university and provides material to support UCAS applications. In the main library, there are also resources on study skills, referencing and life skills such as learning to drive, cooking and managing money. Additional access to resources for the sixth form EPQ project is offered through links with the British Library and Brighton University libraries.

All resources are searchable via the computer catalogue. The catalogue may be accessed on a dedicated computer at the entrance to the library and is also available on the school intranet. Sixth formers are allowed to borrow up to ten books at any one time.

The library staff organise sixth form library induction lessons, archive talks, displays and reading events. In addition, the library staff plan and deliver sixth form programme lessons on library resources, plagiarism and referencing. Sixth formers regularly get involved with the libraries by volunteering to be student librarians for evening library duty, helping out at reading events, making suggestions for library purchases, volunteering to be student archivists, putting together library displays and participating in library surveys and book quizzes. Student librarians and archivists may use their library experience to count towards the Duke of Edinburgh award.

The library is open as follows:

Monday to Friday	8:00 am – 9:00 pm
Saturdays	8:30 am – 1:00 pm
Sundays	2:00 pm – 5:00 pm and 7:30 pm – 9:00 pm

The Old Reference library, which is located next to Roedean House, may be used by the sixth form as a quiet study area when not in use for meetings. It contains the Old Roedeanian Authors' collection, heritage stock, extra copies of fiction titles and books which are no longer relevant to the curriculum but still of value to the school.

ADVANCED LEVEL CURRICULUM 2012 - 2013

ART AND DESIGN: Edexcel

This qualification encourages a broad approach to Art and Design, and builds on the skills, knowledge and understanding acquired at GCSE. It would be helpful if you had studied Art at GCSE level as the AS course has considerable pace and will not examine very basic skills.

The aims are to encourage ability in visual thinking, communication and expression, expanding the capacity to observe and to feel, to seek out, select and develop ideas, to be aware of the environment and all forms of Art and Design and to appreciate the history and philosophy of these rich areas. To this end, a wide range of activities is presented, enabling you to build up portfolios of work for the future while preparing for the examination. The main areas of study are Drawing and Painting, Graphic Design (including Computer Graphics and digital Media), and 3D Construction. Observation work forms the basis for study in all the areas and, as reflected in the investigations in the AS and A2 courses, cultural and historic contexts are emphasised.

The **AS course** is divided into the two units specified below. Each unit is timed, ie with definite cut-off dates. Coursework contains an 'experimental skills' area to bring all new Roedean pupils up to a similar level of experience. Within it, skills relevant to each area of study are gained during a period of practical investigation. A carefully considered practical project is then developed over a timed period using the skills built in the first part of the year. The Externally Set Assignment is the final examination of eight hours duration with a six week preparation time. The examination is normally carried out at the very beginning of May. The AS qualification is then awarded by means of internal assessment and external moderation.

If you wish to carry on to A2, you will continue in the Art Studios after the AS examination and will begin the new course with sessions of 'Extension Skills' which will further extend your practical capabilities.

The **A2 course** will consist of two further units of work, namely a practical project, which contains an element of written work – the Personal Study (research and written) and the Externally Set Assignment, being the final examination of twelve hours' duration.

The four units collectively form the full advanced level qualification and the final qualification is awarded by the same means as AS.

Why study Art at AS and A2? First, many other subjects go well with Art, from Humanities to Languages or Science. It is not merely a recreational subject, but enhances visual awareness and lateral thinking which are invaluable skills in career areas as diverse as Medicine, Dentistry and Law. Opportunities in the subject for pure enjoyment and enrichment are wholeheartedly supported, but our very exciting course also provides foundations for creative opportunities in different fields. We are proud of our successes in Architecture, where we prepare pupils for entry to the top institutions for this profession, such as Cambridge, UCL and other important universities in UK and abroad. Our recent series of 'Focus Weekends' in different European capitals has recently centred on Architecture in Paris and London with Sixth Form pupils receiving a design-brief from the prestigious Richard Rogers Partnership and also on Fine Art, where we gained unprecedented access to the personal studios of well-known artists. Other 'Weekends' are planned for Fashion and Jewellery. Links are

being made to SCAD (Savannah College of Art & Design, USA) to increase our provision of creative Photography and Digital Art.

Our new programme of talks from outside professionals in creative fields will provide invaluable information to pupils and parents alike as to the possibilities for employment across the world, particularly relevant as the creative industry now holds a major key to top salaries in these difficult economic times. Our excursions to Art Galleries locally and in London are very popular, and provide both stimulus and a solid research-base. With a qualification in Art, you can go on to Higher Education, such as an Art Foundation Course, Architecture (both real and virtual), Exhibition Design and Stage Design, or work in the Art industry, which is an ever-expanding field also incorporating Fashion and Textiles, Illustration, Computer Design and Animation, Photography, Graphic Design, Computer Games Design and web-site design. There are also interesting new courses in Textile Construction, Printed Textiles, Lingerie Design, Fashion Journalism and Fashion forecasting.

AS Specification

Unit 1 – Art & Design Coursework 60% of total AS marks
Internally set, internally marked, externally moderated 30% of total GCE marks

Unit 2 – AS Art & Design Externally Set Assignment 40% of total AS marks
Externally set, internally marked, externally moderated 20% of total GCE
8 hours' timed examination

A2 Specification

Unit 3 – Art & Design Coursework 60% of total A2 marks
Internally set, internally marked, externally moderated 30% of total GCE marks

Unit 4 – A2 Art Design Externally Set Assignment 40% of the total A2 marks
Externally set, internally marked, externally moderated 20% of total GCE marks
12 hours' timed examination

BUSINESS STUDIES: AQA

Business Studies draws on a variety of disciplines and develops a range of interrelated skills including decision-making and problem-solving via evaluation and the quantification and management of information. A solid background in Mathematics at GCSE level or equivalent is useful. GCSE Business Studies is also useful but not essential.

The course provides a useful insight and foundation for further study of finance and management-orientated subjects in higher education. In addition, it is a worthwhile course for students looking to broaden their education via a complement to their core subjects.

The course is designed to encourage a critical understanding of organisations, the markets they serve and the process of adding value. This involves consideration of the internal management of organisations and, in particular, the process of decision-making in a dynamic external environment. In addition, we study business behaviour from the perspectives of a range of stakeholders. Furthermore, we explore the impact of the external environment on organisations including economics, ethics, government, and law, along with social, technological and environmental change. Finally, we investigate business practice, as reflected in current events and issues affecting both commercial and non-commercial organisations in different sectors and environments.

The course is consistent with all other A levels with the AS forming the first half and the A2 completing the course to A level.

Key areas of the course are:

Marketing: we investigate marketing in an integrated context within the organisation. The study of marketing focuses on the processes of identifying, targeting and satisfying customers with an emphasis on marketing objectives, strategy and tactics. You will be able to analyse and evaluate the potential of different marketing strategies, tactics and techniques for enabling businesses to identify and adapt to changing market opportunities and achieve their objectives.

Finance: we study the essential techniques of financial analysis and accounting. You will learn how to use a range of performance measures and how to critically evaluate the appropriateness of different financial techniques in shaping decision-making in the context of the wider strategic objectives of business. You will acquire the ability to use a variety of financial concepts and understand how they are affected by factors outside the control of individual firms and how firms' strategies are influenced by this.

People: we study a variety of management theories related to motivation and leadership. You will understand the significance of various management and organisational structures for a business and its employees. Also, you will learn to recognise the opportunities and constraints, in relation to people in organisations, created by the business/legal environment.

Operations: study focuses on the way organisations use inputs and manage business processes efficiently to satisfy customers. These efficiencies are then related to financial controls and marketing benefits. You will learn how to analyse and evaluate the use of different operations management tools to enhance decision-making in order to improve efficiency and quality.

Influences: this covers external business influences which affect the decision-making processes. You will gain an awareness of how the business environment provides opportunities and imposes constraints on the pursuit of short-term and long-term objectives.

Strategy: here students draw together their knowledge of the subject and their skills of analysis and evaluation and integrate them in the context of a case study based business situation. The emphasis here is on the interactive nature of the business world and the strategic importance of clear objectives. In relation to various business situations, you will be able to recognise potential conflict between the objectives of different stakeholders, and to suggest and evaluate resolutions. You will also be able to devise and evaluate strategies which aim to anticipate, respond to and manage change.

Owing to the dynamic nature of the subject the course includes the use of field trips and guest speakers to facilitate both skill and knowledge development.

Business Studies is a broad and multi-disciplinary subject relevant in application to a wide range of current issues. It equips students with a solid foundation of knowledge and skills which they can then confidently apply both at university and in the future in professional careers. In addition, the study of Business Studies can contribute to a student's wider understanding of moral, ethical, social and cultural issues. Students learn that business decisions are influenced invariably by the value systems of individuals, firms and governments reflecting cultural background and moral views of the world.

Business Studies is gaining both in importance and popularity as universities and businesses alike recognise the value of the skills and cognitive abilities students develop in this applied subject. All universities place full value on the A level. Business and Management is now the most popular university first degree course. In addition, there is an increasing trend amongst universities to offer Business combined with other disciplines, eg Mathematics, Engineering, Design, Languages and Chemistry.

CLASSICS

The Classics department provides AS and A2 courses in Latin and Classical Civilisation. The courses in Classical Civilisation require no previous knowledge of any classical subject.

The Classics programme aims to provide courses which complement many combinations of A level subjects. You may attend lectures or plays outside school and visit museums as part of your AS and A2 level courses.

A degree in Classics, which is highly regarded by employers for the analytical and communication skills it teaches, will provide access to a wide variety of careers, e.g. law, politics, the civil and diplomatic services, banking, education, advertising, journalism and broadcasting.

Latin: OCR

The aim of the AS year is to strengthen and develop your understanding of the language beyond GCSE level, while also extending reading of literature in the original.

AS: At the end of the year, these skills are tested in an examination which requires translation from Latin into English and some literary comment on prepared texts.

A2: By the end of this year, you will have further extended your translation skills and reading. You will be expected to translate unseen Latin verse as well as prose, and will have covered more prepared texts.

There is no coursework in this examination. Translation from English into Latin is available but not required.

Progression beyond A level

You have a wider choice of Classics and Archaeology degrees with Latin at A level, but there are also opportunities for those who have not studied it before, to start at university if you have taken Classical Civilisation to A level.

Having Latin at either AS or A level is a sign to universities that you have the potential for learning other languages from scratch or coping with the linguistics element of English degrees. You may also use it in the study of modern European languages, Philosophy, Theology or History.

Classical Civilisation: AQA

This course is taught entirely in English and does not require any knowledge of Latin or Greek. Most people who take this course have never studied the subject before.

The ancient Greeks and Romans controlled the ancient Mediterranean world for centuries. The Athenians invented democracy, Alexander the Great's soldiers have left modern descendants in Iraq, Iran, Pakistan and Afghanistan, while the Romans changed the face of city life in Western Europe for ever.

Their literature, art and beliefs have influenced almost every aspect of modern European and American culture. When you study Classical Civilisation, you gain a real understanding of the origins of modern politics and civilisation.

There is a wide choice of options at AS and A2. You would normally study Homer's *Odyssey* and Aristophanic Comedy for AS level and Virgil's *Aeneid* and Greek Tragedy at A2. This gives a good grounding in mythology, archaeology, literature and religion and links well with English, Theatre Studies, History, Art, Politics and related subjects. Other units cover the Myceneans, Greek and Roman Comedy, Greek vase painting and aspects of ancient politics and history, including the careers of Alexander the Great and the early Roman Emperors. This means that we can offer a range of options to suit the interests of the group.

Study of each unit involves reading Greek or Roman texts in translation or studying a range of art works and/or archaeological sites. On each paper you answer a series of questions and also have to write one essay.

There is no coursework.

Progression beyond A level

A sample of twenty universities, including Oxford, Cambridge, Bristol, Warwick and St Andrews, have stated that they welcome Classical Civilisation on an equal footing with any other A level subject as a degree course qualification. They regard it as a demanding course which prepares students for a wide range of degrees, especially those based round History, Politics and English. You can, of course, also apply for degrees in Ancient History or Classical World.

ECONOMICS: Edexcel

Economics is a challenging subject at A level and does not suit all students. The successful candidate is likely to have a combination of the following attributes: high levels of both numeracy and literacy, strong analytical, communication and evaluative skills, the ability to apply models and theoretical concepts to the real world, in order to make sense of case studies, and a willingness to read regularly and widely. Note that university Economics degrees invariably now require a high grade in A level Mathematics and we have noted that strong A level mathematicians perform well at A level Economics.

The A level is examined in four modular examinations, each linked to a unit in the specification (syllabus). Examinations contain a combination of multiple choice, data-response and essay questions. There is no coursework.

AS Specification

The AS level contains two units, each examined in ninety minutes. Unit 1 is an introduction to micro-economics and considers the market model of supply and demand, opportunity costs, production possibilities and the comparison of economic systems. It also considers market failure, especially the occurrence of monopoly. Unit 2 introduces macro-economics, including a consideration of inflation, unemployment, economic growth and the balance of payments. Aggregate supply and demand theory is studied and a comparison of fiscal and monetary policy takes place.

A2 Specification

Demanding economic theory is studied in the first A2 unit, namely the theory of the firm. This is then applied to complex case studies. The second unit studies economic development and the global economy. The UK's economic performance in the globalised system is the final topic.

ENGLISH LANGUAGE AND LITERATURE: AQA (A specification)

This course is designed to encourage and foster an enjoyment in the study of both language and literature, paying special attention to the inter-relationship of the two. It offers the chance to study a broad range of classic and contemporary texts, and places importance on analytical and comprehension skills. It emphasises writing for a variety of purposes. You will develop your explicit knowledge and understanding of how language works. You will also develop your range of reading and your understanding of how both literary and non-literary texts work.

AS Specification

Unit 1 – Integrated Analysis and Text Production

Written paper, 1½ hours

50% of total AS marks

25% of total A level marks

Two questions on two set texts: one will address literary and stylistic issues; one will be a language production task.

Unit 2 – Analysing Speech and Its Representation

Written paper, 1½ hours

50% of total AS marks

25% of total A level marks

Two questions: one on a set text, one an unseen analysis.

A2 specification

Unit 3 – Comparative Analysis and Text Adaptation

Written paper, 2½ hours

30% of total A level marks

Two questions: one an unseen analysis, one on a set text.

Unit 4 – Comparative Analysis through Independent Study

Coursework

20% of total A level marks.

One coursework task to be completed on an aspect of two texts (one of which must be poetry) chosen from a list specified by AQA.

ENGLISH LITERATURE: AQA (B specification)

We offer English Literature at AS and A2 levels. These courses aim to develop an interest in literature and its study by extending your understanding of different literary forms, their characteristics and uses. You will be encouraged to develop skills of reading and appreciation so that you become an independent, autonomous commentator on your reading. You should learn to write, in a clear and concise form, logical and relevant argument, and to offer articulate, well-reasoned contributions in class discussion. We encourage girls to read widely as well as in depth. Our class reading of texts is supported by the use of video, DVD, outside speakers, workshops, discussions and theatre visits. A lively and balanced course, English Literature includes a range of drama, poetry and prose texts.

AS Specification

Unit 1 – Aspects of Narrative

60% of total AS marks

Written paper, 2 hours, open book.

30% of total A level marks

Section A – close analysis of narrative method in one text

Section B – comparing an aspect of narrative across three other texts

Unit 2 – Dramatic Genres

40% of total AS marks

Coursework

20% of total A level marks

Two pieces:

- a study of an aspect of the dramatic / tragic genre with regard to a Shakespeare play (1200 – 1500 words).
- a study of an aspect of the dramatic / tragic genre with regard to another play (1200 – 1500 words).

A2 specification

Unit 3 – Texts and Genres

Written paper, 2 hours, closed book

30% of total A level marks

Section A – text specific question

Section B – comparing an aspect of the chosen topic across at least three texts

Unit 4 – Further and Independent Reading

Coursework

20% of total A level marks

Two pieces:

- a comparative study of an aspect of two texts (1500 – 2000 words)
- an application of an aspect of pre-released critical anthology to a literary text (1200 - 1500 words).

GEOGRAPHY: AQA

AS specification

Unit 1 – Physical and Human Geography

Core Physical Geography topic: Rivers, Floods and Management

Physical option topics: one chosen from Cold Environments; Coastal Environments; Hot Deserts and their Margins. We usually study Deserts as it is a new topic for most people, so extending your knowledge.

Core Human Geography topic: Population Change

Human option topics: one chosen from Food Supply Issues; Energy Issues; Health Issues. We sometimes do Energy and we make links to Roedean's increasing environmental awareness. However, the group may have some input into this option choice, so in 2011 – 2012 we are studying the Health option.

Unit 2 – Geographical Skills

A short paper, based on either the Rivers or Population topics, along with your fieldwork experience. Between one and 3 days' fieldwork is required as a basis for this paper. (The cost varies – free if one day locally, about £150 maximum otherwise).

A2 specification

Unit 3 – Contemporary Geographical Issues

Three of the following topics, including at least one which is Physical Geography and one Human Geography:

- Plate tectonics and associated hazards
- Weather and climate and associated hazards
- Ecosystems: change and challenge
- World cities
- Development and globalization
- Contemporary conflicts and challenges

Unit 4 – Geographical Skills

A field work study is undertaken at a field centre in the UK or abroad. The assessment is by an exam paper based on your own field work. The cost varies according to location. A UK field centre 3 day course would cost in the region of £200.

Geography is a very broad subject, encompassing a wide range of skills, (literacy, numeracy and ICT-based) so equipping the student for a wide range of professions. It combines well with any mix of Arts, Humanities or Science subjects.

GOVERNMENT AND POLITICS: Edexcel

This A level is open to any student with proven skills at GCSE in English and one Humanities subject (Geography, History or Religious Studies). It studies a broad range of topics and requires both a theoretical and a practical understanding of the subject, which is divided into four units. Units are examined in separate modules, but students will be expected to be able to integrate themes and ideas. Examinations take the form of structured questions and essays. Successful candidates must be willing to read both core texts and wider recommended sources, and to develop an understanding of current events as they relate to the specification (syllabus). Use of the internet as a source of material is encouraged.

At AS level we study British politics while at A2 we opt for international politics.

AS Specification

The AS is examined in two papers, each lasting 90 minutes. The first paper examines the basic ingredients of liberal democracy, such as elections and electoral systems, parties, pressure groups and citizens' rights and responsibilities. It also considers the key elements of the UK's uncodified constitution, such as the functions of Parliament, the powers of the executive and the role of the judiciary. Comparison with other political systems, such as the USA, also takes place.

The second paper considers the changing nature of UK politics, with detailed study of how the themes in paper 1 have changed and developed in the last ten years. Thus study of the last two general elections and the impact of recent constitutional changes takes place. The developing relationship with the EU and the tensions arising from devolution are other examples.

A2 Specification

In the second year we opt to study International Politics (Edexcel option D). This topic focuses upon the nature of decision-making in world affairs. Thus we study the nature of international power and seek to identify the most powerful states. We consider the changes to the power structure since the end of the cold war and the impact of the 'war on terror' on international relations. The functions and effectiveness of major organisations, including the UN, IMF, EU and WTO are considered. Major themes include nuclear proliferation, international law, human rights, environment and international terrorism. Detailed case studies are also covered, including Israel-Palestine, Iraq, Afghanistan, the former Yugoslavia, Rwanda and Darfur. A2 also includes the UK's relationships and role in international politics.

HISTORY: OCR

Changes in the specification have offered us new opportunities to provide exciting courses which develop a range of skills. The emphasis will be on giving students confidence in building up important skills while at the same time ensuring that the subjects covered are interesting and relevant.

AS Specification

Students will have to take two papers, one an essay paper (Period Studies) and one a source based paper (Enquiries). One must be on English History and one on European and World History.

The options for English History will be Churchill 1920-1945 or England in a New Century 1900-1924. Both the options have major events which are still relevant to British life. Churchill follows the career of one of Britain's great leaders through a period of intense change and conflict. It includes the study of the General Strike, India in the inter-war period, British policy towards the Dictators in the 1930s and the Second World War. It is more than a biography of a fascinating and unique historical figure, it is the study of a period which proved to be a watershed in British history.

The earlier study deals with Britain's adjustment to the needs of a modern industrial society, the origins of the Welfare State, the rise of Labour, the impact of the First World War, the campaign for Votes for Women and the charismatic impact of David Lloyd George.

The approach in both papers is for the student to look at a range of sources and learn how to develop their critical use of evidence. This builds on GCSE but can be tackled without previous GCSE study in the subject, provided that students are prepared to work hard in developing skills.

One of the period studies currently involves the study of German History between 1919 and 1963. This involves an analysis of the Weimar Republic (Was it doomed from the start? Why did it survive for so long?). We will be answering the following questions: How and why did the Nazi Party come to power in 1933? How effectively did Hitler establish and consolidate Nazi authority 1933-1945? To what extent did the Nazis transform German economic policy and society? Finally we study the history in Germany in the post war period, examining the division of the country in 1945 and the early years of the Federal republic down to 1963.

The alternative is a paper on the development of nineteenth century America from 1803 to 1890. The fascinating growth of America, the hardships and triumphs of westward migration, the impact on Native Americans and the tensions between states which maintained slavery and those who were free make for a very satisfying course. Students also have a chance to look at the American Civil War and the growth of industrial America in the later part of the period. There is a strong element of social history and the course deals with the origins of civil rights.

A2 Specification

There is one written examination of two hours and two pieces of coursework of 2000 words each. The written paper is based on a study of Theme over time. We offer Civil Rights in the USA from 1865-1980. This option tests the ability of students to analyse developments through a long period, comparing development, continuity and change.

The first part of the coursework is based on investigating interpretations of the past. It is intended to be a taught unit and the Board offers questions on twenty-three different topics. Students consider interpretations by historians of distinct debates, allowing them to understand more about the nature

of history. The main topic is the Origins of the Cold War. In addition, there is a source-based independent inquiry based on a topic chosen by each student with the guidance of the department's staff. This will allow more independent research and continue the department's tradition of allowing girls to follow individual interests and enthusiasms.

The range of skills developed at A2 will stand students in good stead for university and will give them valuable insight into a wide range of historical topics.

HISTORY OF ART: AQA

The new course involves a survey of painting, sculpture and architecture from Classical Greece until the end of the twentieth century. The AS course offers candidates a structure through which they can establish a foundation of knowledge and understanding of the History of Art.

Candidates will develop a good basic knowledge of the History of Art and will learn how to analyse works of art (painting, sculpture and architecture) in terms of composition, colour, formal design, structure, materials, light and tone etc.

The AS course serves as an introduction to the A2 course where selected periods in the History of Art are studied at greater depth. As well as providing you with an AS or A2 level qualification, this course will help you to develop a life-long appreciation of the History of Art.

AS Specification

The specification assumes no previous knowledge of History of Art. This consists of two separate but fundamentally related areas of study (units):

1: formal analysis and interpretation of works of architecture, painting and sculpture.

2: exploration of art historical themes.

The AS course is tested by two examination units:

Visual Analysis and Interpretation (1 hour examination)

Themes in History of Art (1 hour 30 minute examination)

A2 Specification

The two components of this course will be:

Art and Architecture in nineteenth-century Europe: Amongst much else, students will gain a knowledge and understanding of the work of individual artists and architects that was produced during the nineteenth century. Topics will include Romanticism, Realism, Impressionism, Post-Impressionism and Symbolism. Individual Artists/Architects will include: Gericault, Delacroix, Goya, Friedrich, Courbet, Manet, Monet, Renoir, Pissarro, Morisot, Van Gogh, Gauguin, Seurat, Cezanne, Rodin, James Ensor and Edvard Munch.

Art and Architecture in Europe and the United States between 1900 and 1945: Students will study and gain an understanding of the work of individual artists and architects which was produced between 1900 and 1945. This covers the period up to, and between, the two world wars and accounts for the move towards abstraction. Topics will include: Fauvism, Cubism, Expressionism and Futurism. Individual Artists/Architects will include: Matisse, Picasso, Kandinsky, Mondrian, Hopper, O'Keefe, Moore, Hepworth, Frank Lloyd-Wright, Le Corbusier and Mies van der Rohe.

MATHEMATICS AND FURTHER MATHEMATICS: OCR

Mathematics, by virtue of its logical rigour and universal relevance, is held in high regard both for its own sake and as a preparation for many careers. An A level in Mathematics is greatly valued by universities and helps in obtaining offers through UCAS. Mathematics may be taken in combination with Science, Arts, and Humanities subjects alike.

Further Mathematics is best viewed as an enrichment of the A level course. If you have interest and ability in Mathematics you will find this course more fulfilling than the standard A level. Many universities consider the study of Further Mathematics as an enormous advantage for students intending to study for a degree in Mathematics, Economics, Physical Sciences, Engineering, or Computing. Studying Further Mathematics is helpful if you will be taking STEP or other entrance tests and examinations.

Mathematics in the sixth form at Roedean involves the study of Pure Mathematics and Applied Mathematics (a combination of Mechanics and Statistics).

In Pure Mathematics the algebraic and trigonometric skills learned at GCSE are extended. A major topic of study, however, is calculus, which could be described as 'the mathematics of change' and which has widespread applications in the natural sciences and beyond. Pure Mathematics is useful but it also possesses inherent beauty and coherence, an appreciation of which we aim to develop.

Mechanics essentially deals with the effects forces have on objects. We use Pure Mathematics to construct mathematical models of physical situations, such as the motion of a ball thrown into the air. The interpretation of these models throws considerable light on to everyday situations and could be regarded as an essential part of a general education.

In Statistics we model random behaviour with probability distributions and carry out hypothesis testing in order to draw conclusions from data with predetermined reliability. The skills and techniques learnt have many applications in fields such as Science, Geography, Social Sciences, and the financial markets, and the understanding of them is increasingly relevant in a variety of occupations.

The Mathematics courses are modular:

AS Mathematics: 3 units (2 Pure and 1 Applied)

A level Mathematics: 6 units (4 Pure, 2 Applied)

Further Mathematics: This leads to either one AS level and two A levels (12 units), or to two AS levels and one A level (9 units). These units allow students to extend the range of topics studied in Mathematics. They build upon the skills acquired, but the extra examinations are not significantly harder than those of the single subject.

MODERN EUROPEAN LANGUAGES

The aims of the AS and A2 courses in French, German and Spanish, which build on the listening, reading, writing and speaking skills of GCSE, are to enable you to communicate confidently and accurately in the foreign language, both orally and in writing, and to understand the written and spoken word. In addition, we seek to foster a positive and active interest in the culture of each country. Linguistic research and study skills are nurtured. The courses are designed to be academically challenging and enjoyable as well as being of practical use in the world beyond school. Studies have shown that language learning confers distinct cognitive gains, as well as social advantages and improved income potential.

New Examination Board curriculum specifications were introduced nationally in September 2008. These are based around specified general topic areas of direct relevance and interest to the world we live in today. There are a total of four units, two in Six One and two in Six Two, with one Oral paper and the other combined Listening, Reading and Writing. In the first year of sixth form study, the AS examination follows a logical progression featuring the individual skills of listening, reading, speaking and writing to raise and extend cultural awareness of the target-language countries and command of relevant linguistic constructions. During the second year, the A2 examination will develop these skills further. There is increasing emphasis on synthesis of skills and knowledge, with in-depth research of one aspect of the target-language society or culture including film and literature. Traditional tasks such as translation also feature. Students learn about the culture and civilisations of France and the francophone world, and of Spain and Latin America, and of Germany and the German speaking world.

In both the AS and A2 courses, great emphasis is placed on contemporary materials and sources. We have native speakers and other language specialists who inject dynamism and enrichment into the programme and aid the acquisition of fluent oral skills. Development of communication skills features strongly. A thorough study of grammar is undertaken and wide general reading is encouraged, with subscriptions to a range of paper and electronic publications and resources. The courses are fully integrated with a virtual learning environment, incorporating a comprehensive range of downloadable, interactive material which can be accessed remotely from any computer for all curriculum languages.

Full subject specifications can be accessed via the relevant examination board websites at www.aqa.org.uk and www.edexcel.com

The multi-media Languages Centre, although primarily a teaching room, is also open to students for vital independent language study, not least as many of the examination courses are now fully integrated with a virtual learning platform. Students can make use of language specific interactive CD ROMs and language programmes designed to foster self-access learning. Several European television channels are streamed via Satellite through the MFL student intranet. All Language teaching rooms have internet access and digital projectors, which are an integral feature of the learning programme.

Students are encouraged to attend holiday courses or visit families in the countries of the language(s) being studied. A school residential French trip is being offered in 2012. Sixth formers regularly attend talks, immersion study days and conferences, visits are made to exhibitions and the theatre, and there are annual reading competitions.

The study of one or more modern language to advanced level may be continued in higher education, with many exciting and varied courses available. University applications and offer trends demonstrate that studying a language at AS and A level is an important way for students to differentiate themselves from other candidates, not just for language degree courses. Languages are also a strong point of entry to Universities where such courses may be under subscribed, including Oxbridge. Language graduates pursue careers such as in finance, the Civil and Diplomatic services, law, engineering, accountancy, publishing, journalism, translating, interpreting, teaching, broadcasting, and many others.

MUSIC: AQA

Everyone in the sixth form can participate in music, whether or not they choose to study this subject at an advanced level. In addition to instrumental lessons, a wide variety of choirs, orchestras and all kinds of ensembles are available in order to accommodate the needs of individual players. We hope that everyone in the sixth form will feel welcome to enjoy and make full use of the many opportunities for music-making which exist at Roedean.

Advanced level music is both musically and academically demanding but is also extremely rewarding. It is a natural choice for students who are fairly advanced on their instruments and who wish to gain a deeper musical and historical perspective. Apart from careers in performing and teaching music, the possession of a pass in advanced level music can steer students in the direction of arts administration, broadcasting, sound recording, music therapy, theatre, journalism or librarianship. Even if you are not intending to study music at university or music college, a good pass in music can be an excellent qualification for entry into higher education. The assessment structure is as follows:

AS Specification

This specification will enable candidates to develop an understanding of the organisation of sounds, the context of music, and musical styles and genres. Candidates will create musical ideas with technical control and expressive understanding, making creative use of musical devices, conventions and resources.

Candidates offer two performances which may be solo, ensemble and/or technology based. Each performance may be one longer piece or several shorter ones.

Candidates may perform their own composition(s).

Unit 1 – Influences on Music

30% of total AS marks

Written Paper, 1 hour 45 minutes, externally assessed
80 marks

15% of total A level marks

- Structured listening questions using a CD of musical excerpts
- Two essay questions, one on each Area of Study

Two Areas of Study:

- The Western Classical Tradition (compulsory) and a choice of one from:
 - Choral Music in the Baroque Period
 - Music Theatre: a study of the musical from 1940 – 1980
 - British Popular Music from 1960 – the present day

Unit 2 – Composing Creating Musical Ideas

30% of total AS marks

Coursework and composing, externally assessed
60 marks

15% of total A level marks

- Respond to one brief from a choice of three
- 20 hours maximum

Choice of one from:

Brief A: Compositional techniques

- Harmonisation of a 16 bar diatonic melody
- Controlling texture

Brief B: Free composition or pastiche in response to a given genre

- Vocal music, small ensemble, electronic music or keyboard music
- 3-6 minutes

Brief C: Arranging

Arrange a given folk song melody and text, vocally and/or instrumentally

Unit 3 – Performing Interpreting Musical Ideas

40% of total AS marks

Performing, 10-16 minutes, internally assessed

20% of total A level marks

80 marks

- Two performances
- 5-8 minutes each
- Choice of six, including music technology opportunities

Two from:

- Solo performance on an instrument
- Solo performance on voice
- Solo performance on a second instrument
- Ensemble performance
- Technology-based performance – sequencing
- Technology-based performance – multi-track/close microphone recording

A minimum standard of Grade 4 in one instrument is required by the end of the course.

A2 Specification

At A2, the specification enables candidates to acquire, explore and apply musical language and context. Candidates will create and develop musical ideas with greater technical control and expressive understanding, making increased use of musical devices, conventions and resources. Candidates will offer two (or more) contrasting pieces to form a short programme for either acoustic performance and/or performance via music technology.

Unit 4 – Music in Context

Written Paper, 2 hours 15 minutes

20% of total A level marks

100 marks

- Structured listening questions using a CD of musical excerpts
- Two essay questions, one on each Area of Study

Two Areas of Study:

- The Western Classical Tradition (compulsory) and a choice of one from:
 - English Choral Music in the 20th Century
 - Chamber Music from Mendelssohn to Debussy
 - Four Decades of Jazz and Blues (1910 – 1950)

Unit 5 – Composing Creating Musical Ideas

Coursework, composing, externally assessed
60 marks

15% of total A level marks

- Respond to one brief from a choice of three
20 hours maximum

Choice of one from:

Brief A: Compositional techniques

- Harmonisation of a Bach chorale melody and a classical string quartet

Brief B: Free composition or pastiche

- Single, substantial piece in any style or genre
- Any combination of voices and/or instruments

Brief C: Arranging

- Arrange a piece of popular 'classical' music in a recognised pop, rock or jazz style
5 – 8 minutes

Unit 6 - A Musical Performance

Performing, 15 minutes, externally assessed
60 marks

15% of total A level marks

- Two (or more) contrasting performances
- Programme of 10-15 minutes

Two or more performances chosen from:

- Solo acoustic performances
- Technology-based performances
- One solo performance and one technology-based performance (each at least 5 minutes)

A minimum standard of Grade 5 in one instrument is required by the end of the course.

PHILOSOPHY & ETHICS: AQA

Have you ever sat quietly and asked yourself questions like; ‘Why are we here?’; ‘Does God exist?’; or ‘Are we really free?’ If you have then you are philosophical by nature. What is Philosophy? Put simply, it is a love of wisdom! In Philosophy you use rational argument and logical thinking to illuminate life’s big questions. In doing so you gain a greater understanding of the world we live in.

You think, therefore you are.

Why study Philosophy? Philosophy will help you to become a great thinker. You’ll consider abstract subjects, like ‘How do I know what is real?’ and apply them to everyday life. This is personally useful **and** an essential skill in a number of career choices. First I need to explain the course content.

Your key learning topics

In your AS year you’ll be introduced to Philosophy and Ethics. In Philosophy you’ll learn how Ancient Greek and Judaeo-Christian ideas influenced philosophy of religion, evaluate the possibility that God exists and explore some huge challenges to religious belief. You’ll ask big questions like ‘How can I know this world is real?’ and ‘Does the existence of evil prove there is no God?’ In Ethics you’ll explore key theories like Natural Law, Utilitarianism (a cornerstone of Law) and Religious Ethics. You’ll apply them to the world around you by investigating key questions which have concerned human beings for millennia, for example ‘Why should I be moral?’ and ‘Am I really free to choose what to do?’, ‘Is killing always wrong?’.

The first year gets you into the mindset of Philosophy & Ethics. From there you spread your wings and consider even deeper questions! In year two you’ll explore subjects like political philosophy and moral philosophy i.e. medical ethics. You’ll get your head round some of the issues pondered by great philosophers i.e. ‘Do all lives have equal value?’

How will I learn?

Of course there is regular written work through which you’ll develop your research and written skills; which will set you up well for University and your future career. You will also take part in lively debates and discussions, role plays and use a variety of resources such as films and topical news. Above all you will be encouraged to put forward **your** answers to ancient questions as well as discovering how others’ have grappled with them!

On your marks...

Following the OCR Religious Studies Philosophy & Ethics specification; at the end in your first year you will sit two 1.5h written papers (one each for Philosophy and Ethics) each accounting for 50% of the total AS GCE marks. You will then be certificated with your AS grade. In the second year you’ll also sit two 1.5h written papers, also worth 50% each and be awarded your final A level grade.

What skills will I learn?

You will learn to think for yourself; to challenge the norm; to critically examine information; to set out your arguments logically; to form insightful judgements; to put your point of view across clearly verbally and in writing and to take responsibility for your own learning.

Where will success take me?

Your enhanced intellect can be applied to many careers! Law, Politics, Accountancy, Medicine, Business Management, and Engineering are just some where your ability to turn abstract subjects into solid concepts will be prized. Religious Studies (Philosophy & Ethics) is a highly regarded discipline which the influential Russell Group highlights as one of a narrow range of subjects providing 'suitable preparation for entry to University'. <http://www.russellgroup.ac.uk/media/informed-choices/InformedChoices-latest.pdf>

SCIENCE – BIOLOGY: OCR

This course follows a specification which is wide-ranging and forms an excellent basis for all biologically-orientated higher education courses and careers. You will be expected to have achieved at least a grade B in GCSE Biology or Combined Science, or an equivalent qualification (eg Overseas O level or IGCSE) before embarking on this course.

The aims of this specification are to encourage candidates to:

- develop their interest in and enthusiasm for biology, including developing an interest in further study and careers in biology;
- appreciate how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society;
- develop and demonstrate a deeper appreciation of the skills, knowledge and understanding of *How Science Works*;
- develop essential knowledge and understanding of different areas of biology and how they relate to each other.

The course and examination consists of units and the content will be as follows:

AS Specification

Unit 1 - *Cells, Exchange and Transport*

Unit 2 - *Molecules, Biodiversity, Food and Health*

Unit 3 - *Practical Skills in Biology 1*

A2 Specification

Unit 4 - *Communication, Homeostasis and Energy*

Unit 5 - *Control, Genomes and Environment*

Unit 6 - *Practical Skills in Biology 2*

Teacher assessment of practical work will be carried out throughout the course. Assessment tasks will be set by the examination board and will take place under controlled conditions. All Biology students will be expected to attend two Ecology field trips. **Attendance at both Ecology sessions is compulsory and may involve a weekend commitment.**

SCIENCE – CHEMISTRY: Edexcel (8CH01) AS and Edexcel (9CH01)

We aim to make the study of Chemistry at AS and A2 level interesting, challenging and fulfilling. It is not an easy option. You will be expected to have achieved a grade A* or A in GCSE/IGCSE Chemistry (or an equivalent qualification) before embarking on this course.

The course covers organic, inorganic, physical and theoretical chemistry. Three of the nine periods each week will be devoted to practical work. Practical work is internally assessed. The assessment looks at general practical competence, qualitative observation, quantitative measurement and preparation. You will be taught by at least two teachers. There are usually four AS and three A2 groups.

Trips are arranged to outside lectures/events and students from other schools are invited to join our sixth formers to hear visiting lecturers in the school theatre. Six One students have the opportunity of entering the Cambridge Chemistry Challenge and Six Two students the Royal Society of Chemistry's Chemistry Olympiad.

Our A level chemists go on to a wide variety of careers. Popular courses taken at university include Medicine, Law, Veterinary Science, Chemical, Electrical, Biochemical and Aeronautical Engineering, Biology, Biochemistry, Chemistry, Physics, Mathematics, Natural Sciences, Dentistry, Sports Science, Accountancy, Economics, Architecture, Psychology, Computer Science, Pharmacy, Nutrition, Cosmetics Science, Business Management and Art Renovation.

AS Specification (8CH01)

Unit 1 – The Core Principles of Chemistry (1 hour 30 minutes) 20%

Formulae, equations and amounts of substance (moles)
Energetics
Atomic structure and the periodic table
Bonding
Introductory organic chemistry - alkanes, alkenes

Unit 2 – Applications of Core Principles of Chemistry (1 hour 30 minutes) 20%

Shapes of molecules and ions
Intermediate bonding and bond polarity
Intermolecular forces
Redox
The periodic table - groups 2 and 7
Kinetics
Chemical equilibria
Organic chemistry - alcohols, halogenoalkanes
Mechanisms
Mass spectra and IR
Green chemistry and climate change

Unit 3 – Internally assessed 10%

Internal assessment of experimental skills to include inorganic analysis, volumetric analysis, enthalpy change measurements, inorganic and organic preparations

A2 Specification (9CH01)

Unit 4 – General Principles of Chemistry 1 (1 hour 40 minutes) 20%

Rates

Entropy

Equilibria

Applications of rates and equilibrium

Acid/base equilibria

Further organic chemistry - chirality, carbonyls, carboxylic acids, carboxylic acid derivatives

Spectroscopy and chromatography

Unit 5 – General Principles of Chemistry 2 (1 hour 40 minutes) 20%

Redox and the chemistry of transition metals

Organic chemistry - arenes, nitrogen compounds and synthesis

Unit 6 – internally assessed 10%

Internal assessment of experimental skills to include kinetics, equilibria, transition metal chemistry, organic preparations and analysis

For further details see www.edexcel.com

SCIENCE – PHYSICS: Edexcel

This subject has an experimental basis and wherever possible we shall use an experimental approach to foster the acquisition of knowledge and understanding of physical concepts and principles. In the process, the skills of experiment design, manipulation, observation, measurement, interpretation of results and the use of ICT as a tool will be developed. The inclusion of Modern Physics further ensures that this will be a very relevant course for the 21st century.

Girls intending to study AS or A level Physics should be working towards a grade A in GCSE Physics or Combined Science (or equivalent). Girls studying Physics usually also take Mathematics to at least AS level.

AS Specification

The Edexcel specification will provide a framework for the study of AS and A level Physics.

Topics for AS include:

Mechanics, Quantum Phenomena, Electricity, Materials and Waves

These topics lead on from GCSE studies and cover:

- equations of motion, forces, Newton's laws, dynamics, energy and the properties of materials
- electric current and potential difference, electrical circuits and the conservation of energy
- electromagnetic radiation, quantum phenomena and wave particle duality

Practical work will form part of the course; the assessment mechanism is not onerous and allows practical work to be an enjoyable experience to aid the understanding of the course topics.

A2 Specification

Topics for the full A level lead on from the AS course and include:

Nuclear Physics, Thermal Physics, Fields and Forces

- Nuclear structure, $E = mc^2$, nuclear energy, particle physics and kinetic theory.
- Gravitational fields including circular and satellite motion, electric fields, capacitance, magnetic fields and electromagnetic induction.
- Astrophysics including the structure of the universe and the birth, life and death of stars.

Physics aids an understanding of all the sciences and gives an insight into how the (relatively few) laws of nature have shaped the world in which we live.

For further details see www.edexcel.com