

# **NEWPORT GIRLS' HIGH SCHOOL ACADEMY TRUST**

**MATHS, COMPUTING & SCIENCE  
SPECIALIST COLLEGE**



**AS AND A LEVEL COURSES  
INFORMATION  
FOR 2012 - 2013**

## CONTENTS

Art & Design	2
Biology	4
Economics & Business	5
Chemistry	7
Critical Thinking	9
Design & Technology	10
English Literature	11
Extended Project Qualification (EPQ)	12
French	13
Geography	14
German	15
Government & Politics	16
History	17
ICT	18
Mathematics	20
Further Mathematics	21
Music	22
Physical Education	23
Physics	24
Psychology	25
Subject Exam Codes	26

**ART & DESIGN**  
**AS AND A LEVEL**  
**Examining Board OCR**  
**Course Nos F411, F421 (AS) and F431, F441 (A2)**

**COURSE REQUIREMENTS**

While it is an advantage to have studied Art at GCSE level, the A level course requires a questioning mind, and a student who is not afraid to experiment and "try things out". An enthusiasm for the subject is important as well as an interest in and enjoyment of Art and Design. The intellectual, imaginative, creative and intuitive powers will be developed during the course as well as aesthetic understanding and critical judgement. Students will be given opportunities to visit galleries to increase their knowledge and first hand experience of Art from other cultures and societies past and present. They will be encouraged to visit local galleries collections of Art independently throughout the course. There may also be a gallery trip abroad during the year which of course is optional but a great opportunity to broaden cultural awareness.

There is an element of work from the life-model during both years and students achieve and benefit greatly from these life studies lessons.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

Students who wish to pursue further studies in Art and Design often go on to a foundation course prior to degree courses in a wide range of Art related subjects. Newport Girls' High School's Art department has a particularly good working relationship with Stafford College of Art and Design which has excellent facilities and provides, through the nature of the foundation course, an important step to the next stage of Art education. Students have applied to a wide range of courses at universities; Edinburgh, Bristol, Birmingham and Leeds in the last two years. It is also possible to apply directly to a degree course and students will be advised appropriately for their needs at the time.

**COURSE OUTLINE**

**AS**

*Coursework Portfolio (F411)*

Students are required to produce a portfolio of work from given starting points, topics or themes. There is a strong emphasis on work with the life model as a foundation for other ideas.

The focus is on showing that ideas have been explored, researched, and skills and techniques have been acquired during the course.

### *Controlled Assignment (F421)*

Students will be given an early release question paper from which they will select one starting point.

They will have a minimum of three weeks (usually six) to plan and prepare their ideas. Students will have a five hour (1 exam day) exam to work on developing their ideas to realisation/outcome.

### **A2**

### *Personal Investigation (F431)*

Students develop a major project that has a personal significance to them.

The investigation includes a related personal study that must be between 1000 - 3000 words.

### *Controlled Assignment (F441)*

Students are given an early release question paper from which they select one starting point.

They are given a minimum of three weeks (but usually six weeks) to prepare and plan their ideas.

Students are given 15 hours (3 exam days) exam time to realise their ideas into a final outcome or piece of work.

### *Areas of Study Offered*

Fine Art      Painting, Drawing skills  
                    Sculpture, mixed media

Tutor *Mrs W Wilson*

**BIOLOGY**  
**AS & A LEVEL**  
**Examining Board AQA**

**COURSE REQUIREMENTS**

Good GCSE grades in Additional Science or Separate Science Biology and mathematics are required. A keen interest and enthusiasm for the subject and how it is developing in the 21<sup>st</sup> century.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

Many of the students studying Biology have gone to a variety of courses including Medicine, Pharmacy, Veterinary Science, Biomedical and Biological Sciences, Genetics, Agriculture and Teaching.

**COURSE OUTLINE**

The course builds on concepts and skills that will have been developed in the GCSE Science courses. Biology is presented as exciting, relevant and challenging. It emphasises the way in which scientists work and the contribution of science to modern society.

Three units are studied at AS:

- Unit 1        Biology and disease.
- Unit 2        The variety of living organisms.
- Unit 3        Investigative and practical skills.

The three units studied at A2 are:

- Unit 4        Population and the environment.
- Unit 5        Control in cells and in organisms.
- Unit 6        Investigative and practical skills for A2.

Throughout each unit students will be expected to:

- use their knowledge and understanding to pose scientific questions and define scientific problems;
- carry out investigative activities, including management, in a range of contexts;
- analyse and interpret data they have collected to provide evidence;
- evaluate their methodology, evidence and data, resolving conflicting evidence.

At both AS and A2, students are assessed throughout the course on their practical skills. The Investigative Skills Assignment (ISA) leads on from the approach at GCSE. It is comprised of three stages:

- i) practical work and collection of relevant data;
- ii) processing of data;
- iii) completion of a written test.

Unit 3 and Unit 6 are worth, respectively, 20% of the AS award and 10% of the Advanced level award 7.

A Fieldwork day to the Welsh Coast takes place in June.

Tutors *Mrs S Cunningham*  
*Mrs S Adams*

**ECONOMICS AND BUSINESS**  
**AS & A LEVEL**  
**Examining Board Edexcel, Course No 8EB01**

**INTRODUCTION**

This is a new course at NGHS. It builds upon GCSE Business Studies which has been taught here since 2008. Economics is a logical progression from this and Business Studies knowledge is also built upon. The addition of Economics provides something a little different as well as a challenge for students. The course contains elements of both subjects and is awarded as AS/A2 in Economics and Business so providing students with the *best of both* - the dynamic nature of Business and the rigours of Economics.

**WHAT IS ECONOMICS?**

Economics is the study of how people choose to use resources.

Resources include the time and talent people have available, the land, buildings, equipment, and other tools on hand, and the knowledge of how to combine them to create useful products and services.

**COURSE REQUIREMENTS**

It is desirable, but not essential, to have studied Economics or Business Studies at GCSE. A keen interest and enthusiasm for this subject is required. Economics and Business will combine well with many A Level subjects including Maths, Psychology, English and History.

**WHAT DO I NEED TO KNOW, OR BE ABLE TO DO, BEFORE TAKING THIS COURSE?**

You may not have studied any business or economics related subjects before, but that does not matter! What is much more important is that you want to know how to succeed in setting up and running a business and how running a business may be affected by the economy.

Business Studies is a dynamic subject, keeping pace with the ever changing world in which we live. Students are encouraged to take an active interest in business developments by reading newspapers, following current affairs, visiting businesses and drawing on their own and other's experiences at work.

**WHAT WILL I LEARN?**

Business Studies and Economics span several subjects including law, psychology, accounting and marketing. The course structure is outlined below:

**Unit 1: Developing New Business Ideas** covers the thinking and activities that entrepreneurs and existing businesses undertake when developing and researching new business ideas.

**Unit 2b: Business Economics** considers the market that a business may be operating in, how competition in the market and macroeconomic change is likely to affect it and how businesses can seek to minimise uncertainty through their actions.

**Unit 3: International Business** introduces you to what businesses need to consider if they were to trade internationally, such as which countries to sell their product in, and why some companies sell their products worldwide.

**Unit 4b: The Wider Economic Environment and Business** considers why certain markets fail, how government decision making affects the economy and markets that companies operate in, and the income and welfare of private individuals. It should enable you to assess why Government economic policy can succeed or fail.

Units 1 and 2 are AS units. Units 3 and 4 are A2 units.

### **SKILLS DEVELOPED DURING THE COURSE**

Throughout the course you will develop a clear and to-the-point style of writing, enabling you to communicate effectively in a business setting. You will also learn how to analyse and interpret economic indicators, to work out how they may affect a business and what action should be taken to benefit from these, or minimise the damage.

At the end of the course, you will be able to develop arguments in written, numerical and diagrammatical form. The ability to develop arguments, discuss courses of action and compare and contrast options is developed along with quantitative decision making techniques. The emphasis of the course is solving problems based on real economic and business situations. There are visits to local and national businesses organised to support the course.

### **IS THIS THE RIGHT SUBJECT FOR ME?**

This course is suitable if you:

- are prepared to take an interest in current economic issues, national and international business news
- want to learn how to analyse information effectively and be able to suggest solutions to real problems affecting businesses, the economy and individuals
- enjoy analysing and presenting the merits of alternative courses of action
- want to gain a background in economics and business to enable you to gain a future management position in any organisation.

### **OPPORTUNITIES AFTER STUDYING THE COURSE**

Many students will on to study Economics and/or business at University. There are first degrees in both subjects separately as well as as combined subjects. Other related degree courses include: European Business, Management Studies, Marketing, Accounting and Finance.

### **EXAM STRUCTURE**

AS qualification is gained after examination in June of the first year. A2 examined in January and/or June of the second year

<b>AS</b>	<b>Unit 1: Developing New Business Ideas</b>	<b>Exam length: 1 hour 15</b>
	<b>Unit 2b: Business Economics</b>	<b>Exam length: 1 hour 15</b>
<b>A2</b>	<b>Unit 3: International Business</b>	<b>Exam length: 1 hour 30</b>
	<b>Unit 4b: The Wider Economic Environment</b>	<b>Exam length: 1 hour 30</b>

**CHEMISTRY**  
**AS & A LEVEL**  
**OCR SYLLABUS A**

**COURSE REQUIREMENTS**

Good GCSE grades in Additional Science or Separate Science Chemistry and mathematics are required.

The greatest difference between GCSE and A level is encountered in physical chemistry. Many of the ideas have been discussed at GCSE level, but more calculations are involved. Some people find these difficult but anyone, who has coped well with GCSE level Maths and gained good science GCSE results, should be capable of them and many people enjoy the challenge of solving problems.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

Chemistry 'A' level is a specific requirement for many courses at university and can lead to careers in Chemistry, Medicine, Pharmacy, Biological Sciences and other less obvious areas such as law.

Chemistry is an exciting subject; it is also of enormous importance for the well being and advancement of our civilisation. You have only to consider how the chemicals industry provides for your food (fertilisers, agrochemicals, preservatives), clothing (fibres, detergents), shelter (construction materials), transport (fuels, lubricants) and health (drugs, pharmaceuticals) to realise that life as we know it would stop almost overnight if the fruits of past chemical research and development were not available. Chemistry also has a major part to play in environmental issues.

**COURSE OUTLINE**

The OCR syllabus A is offered.

The first module "Atoms, Bonds & Groups" includes much material that is familiar from GCSE but builds on this to give students the skills to explain many topics met later in the course.

Part of the week is usually spent carrying out practical. This reinforces theory covered in other lessons. During practical work, you have the opportunity to use a range of apparatus and techniques.

An understanding of organic chemistry is of great importance to anyone studying biological sciences. In its own right, organic chemistry forms the basis of much modern industrial chemistry, particularly petrochemicals and pharmaceuticals.

Petrochemicals (plastics etc) are playing an increasingly important part in everyday life.

Inorganic chemistry involves a knowledge of the relationship between the periodic table and atomic structure and the properties of the elements. The work is very similar but obviously more detailed than at GCSE level.

Physical chemistry helps develop your numerical skills and will involve use of theory and calculations to help you explain some concepts such as pH that you have already met.

### **EXAM STRUCTURE**

AS 2 x theory module papers (80%) January 1 hour - Atoms, Bonds & Groups  
June  $1\frac{3}{4}$  hours - Chains, Energy &  
Resources

plus

1 x internal assessment of practical skills (20%)

A2 2 x theory module papers (80%) January 1 hour - Rings, Polymers &  
Analysis  
June  $1\frac{3}{4}$  hours - Equilibria, Energetics &  
Elements

plus

1 x internal assessment (20%)

Tutors *Mr R Freckleton*  
*Mr J Wade*

**CRITICAL THINKING**  
**A LEVEL**  
**Examining Board OCR**  
**Course No. H052 and H452**

**COURSE REQUIREMENTS**

All students at the High School follow a course in Critical Thinking.

**OPPORTUNITIES PROVIDED BY STUDYING THE COURSE**

Critical Thinking is a useful additional qualification. The possession of a CT qualification could be a key factor for an admissions tutor in comparison with a candidate who has not undertaken the course. The skills which it teaches, such as identifying elements in an argument, contrasting well-reasoned arguments, and discussing ethical questions and reaching balanced judgments, are widely applicable in a considerable range of subjects, both at A Level, University and beyond.

**COURSE OUTLINE**

In the AS year the elements of argument are identified, and candidates construct reasoned accounts of typical issues, with balanced judgments. An awareness of topical events in the media is encouraged and students learn how to assess the credibility of arguments.

**EXAM STRUCTURE**

The qualification comprises 2 units over 1 year, Units 1 and 2 being taken at the end of Year 12. The exams are a mixture of short-response answers, multiple-choice questions, and longer structured arguments.

**AS Modules**

**Unit 1 - Introduction to Critical Thinking**

**Unit 2 - Assessing and Developing Argument**

Tutors *Mrs F Green*  
*Mrs S Letza*  
*Miss V Maxwell*  
*Mr A Reeves*

## DESIGN & TECHNOLOGY - PRODUCT DESIGN (3D DESIGN)

### AS & A LEVEL

#### Examining Board AQA Course No 6550

This course will appeal to students who have an enquiring mind. The course encourages innovation, takes account of the varied interests of the student and enables students to learn about design in a design-make-test-evaluate context.

#### COURSE REQUIREMENTS

It is desirable, although not compulsory requirement, that the candidate has followed Design and Technology to GCSE level.

#### OPPORTUNITIES AFTER STUDYING THE COURSE

Product Design can be combined with your other favourite subjects to create a wide range of possible career paths. For example combining with maths or physics creates opportunities for architecture, civil and mechanical engineering.

Product Design with business studies would make a strong application to marketing or advertising courses.

Product Design with art lends itself to foundation studies, theatre and fashion design. This is not an exhaustive list. Please see staff for other options.

#### COURSE OUTLINE

There are three main areas to this course, the Practical Coursework project (in which students are encouraged to be as creative as possible before making their idea as a finished working product), Materials and Components (in which students learn the reasons for choosing particular materials) and Design and Market Influences (in which students learn about how their ideas could affect their surroundings). Graphic techniques are an integral part of Product Design to enable students to clearly communicate their ideas.

No.	Unit	Assessment	AS	A2
1	Materials, components and application	Written paper 2 hours	YES	YES
2	Coursework project	Portfolio and outcome (50 hours)	YES	YES
3	Coursework project	Portfolio and outcome (60 hours)	NO	YES
4	Design and Manufacture	Written paper 2 hours	NO	YES

Tutors *Miss T Wells, Mr G Thompson*

**ENGLISH LITERATURE**  
**AS & A LEVEL**  
**Examining Board OCR**  
**Course No - H071 AS Level**  
**Course No - H471 A Level**

**COURSE REQUIREMENTS**

Students who do well at English Literature A level are those who have a genuine interest in books and reading and probably in the arts in general. We hope that you will enjoy the idea of lively debate and discussion.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

Admissions tutors for English at university level look for high grades in applicants, as it is a popular course. A degree in English can be the basis for all sorts of post-graduate training in commerce and industry, as well as leading into more predictable areas like journalism, publishing, teaching and public relations.

**COURSE OUTLINE**

There are two units of study leading to AS qualification, and a further two in the second (A2) year to achieve the full A level. A minimum of twelve texts will be studied (six at AS, six at A2). Examinations will be taken in June of each year, and there will also be a coursework component in each.

Texts from a wide range of genres and times are read to include a blend of classic and contemporary titles. These will be examined in "closed-book" exams or through coursework. Theatre trips are arranged regularly, to Stratford and other venues, in addition to University visits to extend student knowledge and understanding of examination texts.

**EXAM STRUCTURE**

**AS**

Unit 1	Poetry and Prose (1800 - 1945)	Two hour examination
Unit 2	Literature Post-1900 Prose	Coursework (3000 words)

**A2**

Unit 3	Drama and Poetry Pre-1800	Two hour examination
Unit 4	Texts in Time	Coursework (3000 words)

Tutors *Mrs J Stanway*  
*Mrs K Carey*  
*Ms S A Edis*

# **EXTENDED PROJECT QUALIFICATION**

## **A LEVEL**

### **Examining Board AQA**

#### **Course No. 9990**

### **COURSE REQUIREMENTS**

All students at the High School follow the EPQ course beginning in the summer term and throughout Year 13.

### **OPPORTUNITIES PROVIDED BY STUDYING THE COURSE**

The Extended Project Qualification is an extremely useful additional new qualification and is proving to be an important factor in university interview preparation. The skills developed, such as critically selecting information from a range of sources, analysing data and demonstrating understanding of linkages, connections and complexities of a topic provide ideal preparation for all undergraduate courses.

### **COURSE OUTLINE**

Students will develop an idea for an individual project title, supported by an individual tutor, and carry out research in order to submit an extended report as well as a Production Log to record their learning as the report progresses. Students will then present their findings to a non-specialist audience using appropriate media and answer questions in a live question and answer session. To support students further, a taught element is incorporated to detail the format and structure of accepted academic forms of research, project management and other skills or techniques that will be required for the execution of the project.

### **EXAM STRUCTURE**

The qualification is awarded on the submission of a report and Production Log with no final examination.

Tutors *Miss V Maxwell*  
*Mrs S Letza*  
*Mr A Reeves*  
*Mrs J Haycock*

**FRENCH**  
**AS & A LEVEL**  
**Examining Board WJEC**

**COURSE REQUIREMENTS**

To study French you should have a good grade in GCSE French and feel confident about GCSE grammar.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

There are many opportunities open to students after studying French at A level. Many employers see languages as a great advantage and consider communication skills as vital to the vast majority of careers. A degree in French may lead to careers in business, law, the Civil Service, publishing, journalism, translating, librarianship and teaching.

**COURSE OUTLINE**

The course, leads to the A and AS levels of the WJEC Examination Board involves a wide range of topics, now including the World of Literature, the World of Cinema and the Regions of France.

**Topics at Advanced Subsidiary (AS)**

- (a) *Leisure and Lifestyle*, including travel and tourism, sport, hobbies, entertainment, customs, traditions, healthy living - health and nutrition, diet and exercise; unhealthy living (drugs, aids, smoking and alcohol), with reference to French speaking countries.
- (b) *The Individual and Society*, including relationships and responsibilities, gender issues, youth culture (values, peer groups, fashions and trends etc., education, vocational training and future careers), with reference to French speaking countries.

**Topics at Advanced Level (A2)**

- (a) *Contemporary Issues*, including the role of the media, racism, immigration, social exclusion and integration, terrorism, world of work (employment, commerce, globalization etc.) with specific reference in French speaking countries.
- (b) *Environmental Issues*, including technology, energy, conservation, pollution, global warming, nuclear energy, renewable energies, conservation, recycling, sustainability and transport, with specific reference to French speaking countries.

**EXAM STRUCTURE**

<b>AS Level</b>	<b>Weighting of AS Level</b>	<b>Weighting of A Level</b>
Speaking	40%	20%
Listening, Reading & Writing	60%	30%
<b>A2 Level</b>		
Speaking		20%
Listening, Reading & Writing		30%

Tutors *Mrs S Letza, Mr M Shuttleworth*

**GEOGRAPHY**  
**AS & A LEVEL**  
**Examining Board AQA**

**COURSE REQUIREMENTS**

It is desirable, but not essential, to have studied Geography at GCSE. A keen interest and enthusiasm for this subject is required.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

The variety of topics and skills covered gives geographers a variety of career opportunities, which include personnel management, estate management, tourism, town planning and landscape architecture. The subject supports applications to a wide range of higher education courses from Law to Earth Science.

**COURSE OUTLINE**

Geography tackles the big issues such as environmental responsibility, our global independence and cultural understanding. It is a bridge between the arts and sciences but has its own transferable skills such as data analysis and evaluation, report writing and research. Team work and problem solving skills are developed through a range of field trips.

Geography post 16 offers scope for personal and academic development, actively involving students in the process of learning through enquiry into questions, issues, challenges and problems of relevance in the world today. In particular it investigates the inter-relationships of people and their environment.

The course followed is AQA GCE Geography. This is an issues based course, which examines many of the problems in the physical and human environments of the world.

**THE AS UNITS**

Unit 1 Physical and Human Geography - the physical element of the course tackles rivers, floods and their management and coastal environment issues. In human geography population and health issues are studied.

Unit 2 Geographical Skills - throughout Year 12 pupils will embark on a number of field trips across the human and physical disciplines in order to prepare for this unit. Investigative, cartographic, graphical, ICT and statistical skills will be tested in a 1 hour exam paper.

**THE A2 UNITS**

Unit 3 Contemporary Geographical Issues - explores physical and human themes such as plate tectonics, ecosystems, world cities and conflicts.

Unit 4 Geographical Fieldwork Investigation - students are given the opportunity to extend an area of the subject content and carry out their own fieldwork study. Pupils' fieldwork skills will be tested in a 1½ hour exam where candidates analyse and evaluate their fieldwork in response to the questions set.

Tutors *Mrs F Green, Mr J Pimm*

**GERMAN**  
**AS & A LEVEL**  
**Examining Board WJEC**

**COURSE REQUIREMENTS**

To study German you should have a good grade in GCSE German and feel confident about GCSE grammar.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

You are able to pursue your language to degree level, linking it with almost any other subject.

Professions entered by linguists are varied including translating, interpreting, teaching, travel and tourism, the law, banking, business and armed forces.

**COURSE OUTLINE**

The Examination Board is WJEC and the 2 year course leading to AS and A2 level builds on the language acquired at GCSE. The Topic areas are as follows:-

**Advanced Subsidiary (AS)**

- a) **Leisure and Lifestyles** - travel and tourism, sport hobbies, entertainment, customs, traditions, healthy living and unhealthy living (drugs, aids, smoking, alcohol etc.).
- b) **The Individual and Society** - relationships, responsibilities, gender issues, youth culture, education, vocational training and careers.

**Advanced Level (A2)**

- c) **Environmental Issues** - technology, pollution, global warming, transport, energy, nuclear energy, renewable energies, conservation, recycling, sustainability.
- d) **Social and Political Issues** - the media, racism, immigration, social exclusion and integration, terrorism, world of work.

**SUMMARY OF ASSESSMENT**

<b>AS Level</b>	<b>Weighting of AS Level</b>	<b>Weighting of A Level</b>
Speaking	40%	20%
Listening, Reading & Writing	60%	30%
<b>A2 Level</b>		
Speaking		20%
Listening, Reading & Writing		30%

Tutor Mrs L Payne

**GOVERNMENT & POLITICS**  
**AS & A LEVEL**  
**Examining Board Edexcel**  
**Course No 8GPO1 - AS Level**  
**Course No 9GPO1 - A2 Level**

**COURSE REQUIREMENTS**

Students taking this course are expected to have demonstrated an ability to research widely, analyse evidence and reach balanced conclusions. Students also need an enquiring mind, a passion for discussing current affairs and an ability to reason and think independently.

**OPPORTUNITIES AFTER THE COURSE**

Students taking this option have gone on to study a wide variety of subjects including Politics, Economics, Business, History, International Relations and Law at University. It also combines well with many other AS and A level subjects. The study of Politics helps to develop the type of analytical mind, ability to synthesise information and excellent communication skills that are a prerequisite for a wide range of career paths. Students in this subject have gone on to careers in Law, Finance, General Management, Journalism, Politics and International relations.

**COURSE OUTLINE**

The Edexcel AS course focuses on developing an understanding of *politics in the UK*.

Unit 1: 'People and Politics'

This unit introduces students to the study of politics, representation and electoral systems

Unit 2: 'Governing the UK'

This unit examines the way in which the UK is governed, within the context of the European Union

The Edexcel A level course is also made up of two units and focuses on the *US political system*, its governance and representative processes.

**EXAM STRUCTURE**

Both AS units will be examined at the end of the course ie. in the Summer. Both A level units will be examined the following Summer. There is no coursework option.

Tutor *Miss V Maxwell*

**HISTORY**  
**AS & A LEVEL**  
**Examining Board Edexcel**

**COURSE REQUIREMENTS**

Previous knowledge of the subject is not a requirement, as some of the topics are new to all students. Instead, a genuine interest and enthusiasm, initiative, critical thinking and debate are more valuable skills.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

History is a subject that encourages students to critically evaluate and interpret evidence from the past in order to develop reasoned hypotheses and form balanced judgments. With such transferable skills, History therefore provides an excellent foundation for various higher education courses, as well as increasing employability in a range of career areas, especially those that require developed communication skills. Some examples include Journalism, Law, Politics and Management.

**COURSE OUTLINE**

There are four units:

- Unit 1: Historical themes - 'The Wars of the Roses in England 1455-85' and 'The reign of Henry VII 1485-1509' (AS level);
- Unit 2: British History Depth Study - 'Henry VIII: Authority, Nation and Religion, 1509-40' (AS level);
- Unit 3: In-depth Study - 'The United States, 1917-54: Boom, Bust and Recovery' (A2 level);
- Unit 4: Historical Enquiry - 'The Golden Age of Spain, 1474-1598' (A2 level). (Coursework)

**EXAM STRUCTURE**

Unit No.	Level	Method of Assessment	Availability
1	AS	External	January and June
2	AS	External	June
3	A2	External	June
4	A2	Internal	January and June

Tutor *Miss A M Davies*

## INFORMATION AND COMMUNICATION TECHNOLOGY

### Examining Board WJEC

#### Course - A LEVEL

This course offered by the WJEC is *not* a narrowly-based course which focuses on topics such as programming and computer architecture. Two things are distinctive about it:

- It endeavours to promote an understanding of information technology from a wide perspective. It includes, for example, consideration of the social impact of information technology in our society and of the legal framework within which the capture and use of data takes place.
- It seeks to give students practical experience applying information technology to challenging real world situations.

### COURSE REQUIREMENTS

It is desirable, but not essential, to have studied ICT at GCSE. A keen interest and enthusiasm for this subject is required.

The AS and A2 qualifications together consist of four modules. Two of them are assessed by means of *written examinations*. These modules cover the following areas:

**Information Systems** An introductory AS module covering : Knowledge, information and data; the value and importance of information in our society; control of information; the capabilities and limitations of information technology; the social impact of information technology; the role of communication systems; information and the professional; information systems malpractice and crime; the legal framework of IT; Health & Safety; Data capture; verification and validation; organisation of data for effective retrieval; software - nature, capabilities and limitations; manipulation and processing of data; dissemination/distribution of information; hardware - nature, capabilities and limitations; security of data; network environments; the human/computer interface.

**Use and Impact of ICT** A more advanced A2 module which covers: Organisational structure; Management Information Systems; the development and life cycle of an information system; corporate IS strategy; information and data; the management of change; legal aspects; audit requirements; disaster recovery management; legislation; user support; training; project management and effective IT teams; information and the professional; policy and strategy issues - future proofing; backup procedures; software evaluation; database management concepts; communication and information systems - applications of networked and distributed systems; networks - security, audit, accounting, and user interfaces; human/computer interaction and interfaces; software development; software reliability; portability of data - protocols and standards.

The other two units consist of *pieces of coursework*. In the AS module candidates will carry out project work which allows them to demonstrate advanced knowledge of several different application packages such as a desktop publishing program such as Microsoft Publisher, presentation software such as Microsoft PowerPoint, web authoring software such as Adobe Dreamweaver as well as graphics and video editing software in providing a solutions to several different tasks. In the A2 module the project becomes more advanced, and will require you to identify and research a realistic problem, and develop an information system for the end-user, for example a business using database software such as Microsoft Access.

### **ASSESSMENT**

There are two written papers, one on each of the modules assessed by written examination. Each of these is weighted at 30% of the total A Level mark. In addition two pieces of project work are submitted. Each of these is weighted at 20% of the total A Level mark. The overall coursework weighting is thus 40% of the total.

Tutor *Mr S Hennessey*

**MATHEMATICS**  
**AS & A LEVEL**  
**Examining Board OCR - Mathematics (MEI)**  
**Course No 3895 - AS LEVEL**  
**Course No 7895 - A LEVEL**

**COURSE REQUIREMENTS**

Higher Tier GCSE Mathematics.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

Maths is an exciting and interesting subject to study and a Maths degree leads on to many opportunities in industry and commerce where it is the discipline of mind developed by studying Mathematics which is valued rather than the subject content.

**AS MATHEMATICS**

This consists of three units, two pure and one applied.

The pure units are known as C1 and C2, the "C" standing for "Core", and are compulsory.

The applied unit that we offer at AS is Statistics 1 known as S1.

In Pure Maths you will learn new methods and techniques which will build on your knowledge of graphs, trigonometry, algebra and vectors. We will also study a new topic called calculus, which is a powerful tool for working out, for example, gradients of curves and areas under graphs. You will learn to understand the need both for mathematical vigour and for being able to use the various techniques within models of real life situations.

In Statistics you will learn to appreciate that it is a practical subject in constant everyday use, whilst at the same time, it has a strong theoretical background. You will build on to your knowledge of probability and data analysis as you investigate the idea of statistical modelling.

Calculators are not allowed in C1, but a graphical calculator is allowed in all of the other units.

You may be interested to know there is no coursework at AS level.

**A LEVEL MATHEMATICS**

In Year 13 you will study another three units, two of which are pure, C3 and C4 (which are compulsory), and one applied unit, Statistics 2.

*Tutors Mr R Brocklehurst, Miss S Little  
Mrs L Herring, Mr D Steward*

**FURTHER MATHEMATICS**  
**AS & A LEVEL**  
**Examining Board OCR - Mathematics (ME1)**  
**FURTHER MATHS Course No 3896 - AS LEVEL**  
**FURTHER MATHS Course No 7896- A LEVEL**

**COURSE REQUIREMENTS**

Higher Tier GCSE Mathematics.

This course is only open to students taking A level Mathematics. It is taken in order to extend and broaden your knowledge of the subject. If you want to read mathematics at university you will find yourself at a disadvantage if you have not taken at least AS Level Further Mathematics. You will also find it advantageous if you are wishing to go on to study Engineering or other Mathematics related courses.

**AS FURTHER MATHEMATICS**

This consists of three units, one pure and two applied.

The pure module is FP1 or Further Pure 1.

The applied units that we offer are Decision 1 and Mechanics 1.

The pure unit, FP1, is compulsory and will introduce the detailed study of a number of topics in algebra, geometry and complex numbers.

Decision Mathematics (D1) is the application of Mathematics to solve real world problems in commerce and industry. These problems usually involve applying algorithms or a set of rules to a problem. Networks, critical path analysis, linear programming and simulation techniques all form part of this course.

Mechanics (M1) is an introduction to mathematical modelling and to the concepts in kinematics, statics and dynamics: the particle model; the language of vectors; motion in 1, 2 and 3 dimensions; Newton's Laws of Motion; the motion of a particle.

N.B. There is no coursework.

**A LEVEL FURTHER MATHEMATICS**

In Year 13 you will study another three units, one pure, FP2, and two applied; probably M2 and D2.

FP2 is compulsory and continues the detailed study of a number of topics in algebra, geometry, complex numbers and calculus.

M2 (Mechanics 2) and D2 (Decision 2) will build on the work in M1 and D1 by extending the range of concepts used in different situations.

Again, with this choice of units, there is no coursework.

Tutors *Mr R Brocklehurst, Miss S Little,*  
*Mrs L Herring, Mr D Steward*

**MUSIC**  
**AS & A Level**  
**Examining Board Edexcel**  
**Course Code 8MU01**

From 2011, A level music will be taught in the High School's new purpose-built suite of music rooms including a recording studio and practice rooms.

**COURSE REQUIREMENTS**

Performance is an integral part of the course and students are expected to be aiming for a minimum of grade 5 on an instrument or voice by the end of the first year and grade 6 by the end of the second year. Students will find A Level music difficult if they do not already read standard notation, however, GCSE music is not a prerequisite for taking the course.

**OPPORTUNITIES AFTER STUDYING 'A' LEVEL MUSIC**

Many universities offer degrees in music. Some offer general courses and some specialise in genres such as jazz, popular, modern, early music or world music. The Royal Colleges and the Conservatoires offer more practical performance-based courses leading to careers as orchestral or solo performers or instrumental teachers. Other institutions offer courses in music management, recording and production or broader courses in media studies. A level music is recognised as a subject in which high grades demonstrate the ability to study and master complex skills and knowledge.

**OUTLINE OF AS**

Students study a variety of pieces from the renaissance to the present day, focussing on set works taken from the Edexcel Anthology of Music. They learn about the context in which music is created and performed. They also learn the basic rules of melody & harmony and in the spring term they compose a short piece of music which will be recorded and externally assessed. In the first year students will need to produce a short programmed performance (about 6 minutes) for which they are free to choose any music of a suitable level, in the second year the requirement rises to 12 minutes. An exam at the end of the year will test students' ability to analyse the music they have heard.

**OUTLINE OF A2**

In the A2 students continue to study set works from the Anthology and to deepen their knowledge of melody & harmony to the point where they can compose pastiches of famous composers past and present, for example: Bach or Bartok. They must submit two compositions from either a choice of briefs or based on their own ideas. Students perform an extended "concert" of between 12-15 minutes of music they have chosen. There is a further examination which will test students' knowledge of the music they have studied.

Tutor *Mr R Fox*

## PHYSICAL EDUCATION YEARS 12 AND 13

### PHYSICAL EDUCATION AND SPORT

The activities that could be available to the girls within school, usually during the lunch hour or after school, include hockey, netball, volleyball, football, table tennis, badminton, jogging, aerobics/fitness, interactive fitness, yoga/relaxation, tennis, rounders/softball and athletics. Locally there is the swimming pool in Newport and also Newport Fitness Centre.

There are many opportunities for girls to be involved in helping to run the PE department eg. helping with clubs, teams and even lessons for the younger pupils.

Girls who help run clubs in and out of school have the opportunity to become involved with the step into Sport Volunteering Award.

Students also have the opportunity to take on responsibility. The School House Games Captains and girls on the Sports Committee work closely with the PE teacher helping to administer sport within the school.

The school has a house system with three houses. Each house has a Games Captain and a Deputy, and they are responsible for selecting and helping teams for house sport competitions. Girls should be willing to support their house in house matches and Sports Day.

The Sports Committee has three sub committees, the Competitions Committee (run by the House Games Captains), the Sports Volunteer Committee and the Publicity Committee. Girls can apply to be on these committees usually at the beginning of the academic year i.e. September.

Girls also have the chance to represent school and county in the U-19 hockey, netball and badminton teams, and the senior cross country teams. The importance of committing themselves to regular exercise is emphasized to all students.

Tutors *Mrs G Stallwood*  
*Mrs F Green*  
*Mrs S Dobson*

**PHYSICS**  
**AS & A LEVEL**  
**Examining Board OCR**  
**Course Nos H158 (AS Level), H558 (A2 Level)**

**COURSE REQUIREMENTS**

Good GCSE grades in Additional Science or Separate Science Physics and Mathematics are required.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

Physics A level carries a high degree of kudos and is looked upon extremely favourably by admissions tutors and employers. As well as understanding why the world around us behaves as it does, students will also gain strong analytical and thinking skills which are highly valued by every sector including research, development, business, marketing, finance and universities. A-level Physics is an expected entrance qualification to university degrees in Physics, Applied Physics and Engineering as well as being very useful to support Architecture, Medicine and Accountancy applications.

Physicists are employed in many areas e.g. health and medicine, transport, industry and commerce, environment, engineering of all types, space, architecture, communications, marketing, energy, theatre, utilities and infrastructure. There are many openings at university for further study.

**COURSE OUTLINE**

In the Lower Sixth we will be looking at forces, motion, energy, materials, electricity, waves and quantum theory. In the Upper Sixth we shall be taking many of the lower sixth ideas further and also be looking at oscillations, gravitation, electric fields, nuclear physics and radioactivity. The approach will be to develop ideas and then to see where they work in the world around us alongside the ways in which Science in general works in our society. Practical skills will be developed throughout the course and these will be assessed via structured tasks. Physics is a really satisfying subject which gives students a good understanding of the world around them (and it's good fun too!).

**EXAM STRUCTURE**

*AS, 3 modules:*

G481 Mechanics (1hr written exam)	30% of AS, 15% of A2
G482 Electrons, Waves & Photons (1 $\frac{3}{4}$ hr written exam)	50% of AS, 30% of A2
G483 Practical Skills in Physics 1 (3 class based practical tasks)	20% of AS, 10% of A2

*A2, 3 modules:*

G484 Newtonian World (1hr written exam)	15% of A2
G485 Fields, Particles & Frontiers of Physics (1 $\frac{3}{4}$ hr written exam)	25% of A2
G486 Practical Skills in Physics 2 (3 class based practical tasks)	10% of A2

Tutors *Mr T Dawson*  
*Miss C Hodgkinson*

**PSYCHOLOGY**  
**AS AND A LEVEL**  
**Examining Board AQA - Specification A**  
**Course Nos 1181 (AS) and 2181 (A2)**

**COURSE REQUIREMENTS**

Few, if any students will have done GCSE, therefore no previous knowledge is assumed. Good grades in GCSE Maths, Science and English Language are advised and students should be prepared for a significant emphasis on essays, particularly at A2.

Focus is on applying Psychological theories and concepts to real world situations.

Research methods teaching is integrated throughout the two years.

**OPPORTUNITIES AFTER STUDYING THE COURSE**

A level Psychology provides students with a range of transferable skills including critical evaluation and argument construction which are an excellent basis for many university courses. With a degree in Psychology and further postgraduate training there are a wealth of opportunities in clinical, educational, occupational and forensic Psychology, as well as other careers where working with people is central.

**COURSE OUTLINE**

AS	Unit 1	Cognitive & Developmental Psychology & Research Methods eg. memory and eye witness testimony, attachment
	Unit 2	Biological & Social Psychology & Individual Differences eg. stress and its management, social influence, treating pathological behaviour
A2	Unit 3	Topics in Psychology eg. sleep and biorhythms, relationships, aggression
	Unit 4	Psychopathology, Media Psychology & Research Methods

**EXAM STRUCTURE**

2 x AS Units examined during Year 12 (currently 1 in January, 1 in June)

2 x A2 units examined during Year 13 (currently 1 in January, 1 in June)

Tutor *Mrs J Haycock*

## SUBJECT EXAM CODES

Subject	Exam Board	Course Code	AS Code	A2 Code	Module Codes	
					AS	A2
Art & Design (fine art)	OCR		H161	H561	F411 F421	F431 F441
Biology	AQA	2410	1411	2411	BIOL1 BIOL2 BIOL3T	BIOL4 BIOL5 BIOL6T
Business Studies	AQA	2130	1131	2131	BUSS1 BUS2	BUSS3 BUS4
Chemistry	OCR		H034	H434	F321 F322 F323	F324 F325 F326
Critical Thinking	OCR		H052		F501 F502	
Design & Technology	AQA	2550	1551	2551	PROD1 PROD2	PROD3 PROD4
English Literature	OCR		H071	H471	F661 F662	F663 F664
EPQ	AQA	9990				
French	WJEC		2191-01	3191-01	FN1/1191 FN2/1192	FN3/1193 FN4/1194
Geography	AQA	2030	1031	2031	GEOG1 GEOG2	GEOG3 GEOG4A
German	WJEG		2221-01	3221-01	GN1/1221 GN2/1222	GN3/1223 GN4/1224
Government & Politics	Edexcel		8GP/01	9GP/01	6GP01 6GP02	GP03C GP04C
History	Edexcel		8HI/01	9HI/01	6Hi01 6Hi02	6Hi03 6Hi04
ICT	WJEC		2241-01	3241-01	IT1/1241 IT2/1242	IT3/1243 IT4/1244
Mathematics	OCR (MEI)		3895	7895	4751 - 4772 incl	

Subject	Exam Board	Course Code	AS Code	A2 Code	Module Codes	
					AS	A2
Further Maths	OCR (MEI)		3896	7896		
Music	Edexcel	8MU01	8MU01	9MU01	6Mu01 6Mu02 6Mu03	6Mu04 6Mu05 6Mu06
Physics	OCR		H158	H558	G481G482G483	G484G485G486
Psychology	AQA	2180	1181	2181	PSYA1 PSYA2	PSYA3 PSYA4

**Thank you for your interest in  
Newport Girls' High School.**

**Should you require any further  
information please contact:**

**The Headteacher**

**Tel: 01952 386400**

**Fax: 01952 386415**

**E-mail: [A4364@telford.gov.uk](mailto:A4364@telford.gov.uk)**

**Website: [www.nghs.co.uk](http://www.nghs.co.uk)**

**All details contained in this prospectus are correct at the date of publication (September 2011). Readers are advised that circumstances may dictate changes after this time. You are invited to contact the school about specific points, which you may wish to verify.**