

The Sixth Form Academy



North
Hertfordshire
College

AS Level Programme

Full-time courses



Subject Information



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FULL TIME AS-LEVEL PROGRAMME

FREQUENTLY ASKED QUESTIONS

What entry qualifications do I need to join the AS programme?

You should have gained at least five GCSEs at grade C or above, including English and Mathematics. You may need to achieve a B grade in certain subjects to go on to study the subject at AS level. There are supplementary entry criteria for Biology (42.4 GCSE points) and there are various criteria, for example you should have double science at C to study science, you should have grade C in French to study AS French. You will be advised about this in your interview and at enrolment.

How many AS subjects will I be studying?

You are normally expected to study for 4 AS subjects.

What is an AS level?

An AS level is made up of three units of study taken over one year. The final grade is produced by adding together the marks you achieve in the three units. If you go on to the second year and study a subject at A2 level, then your AS marks will make up 50% of your full A level.

What will my timetable look like?

The classes are timetabled in blocks. You will see a copy of the subjects and the times they run in your introductory pack.

Your individual timetable will be constructed by choosing subjects from the blocks. Each AS level is delivered over 4.5 hours, usually as a one 3 hour session in the morning and a one 1.5 hour session in the afternoon. Morning classes begin at 9.00am and afternoon sessions begin at either 1.45pm or 3.30pm. Your day will finish at either 3.15pm or at 5.00pm.

NHC is a member of the Stevenage 16-19 Consortium and additional subjects may be available at local schools: transport at lunchtimes is provided to enable you to move from NHC to the school.

An example NHC subject matrix is available separately to this document.

Which teaching methods are used?

This will very much depend on your subject choice. There is a variety of teaching methods and learning activities. In addition to formal, structured taught classes, you will be engaged in many of the following; discussion, debates, practical work, small group work and individual investigations. You will have the opportunity to learn using the internet and the interactive whiteboard. Regular homework and assignment tasks form an important part of your learning and assessment.

How are the AS levels assessed?

There are formal written examinations, project work, research essays, practical assessments, case studies. The actual methods depend on which subjects you study.

Will I have a personal tutor?

You will be allocated to a personal tutor and a tutor group on the first day of your course. The personal tutor meets with the students weekly for a group tutorial. You will also have individual tutorials. Your tutor is there to help you to succeed academically and also to help with any difficulties that you have at college.

What about key Skills?

You will be expected to work towards achieving Key Skills. The qualifications you will take are likely to be Communication at Level 3 and Improving Own Learning and Performance at level 2. These are compulsory parts of the programme.

How much private study is involved?

We will expect you to spend approximately three hours private study a week on each of your AS-levels.

This time should include organising and reading course notes, reading and researching, completing homework and assignments, working on coursework, revising for tests and preparing revision materials. At times you will spend more than three hours and it is important that you realise that the grade you get is largely a result of the work you put in.

Can I get any extra support with my studies?

There is a virtual learning environment called Blackboard. We are developing support for individual course and subjects through online resources. Blackboard can be accessed via any Internet enabled computer, at college or at home.

Relevant visits are arranged, such as revision conferences, to support your learning. If you need help with any aspect of your use of English or with numeracy your personal tutor will arrange this for you.

What costs are involved?

You will need to pay for text books and writing materials. There may also be additional costs for trips and visits. If you need to retake any examinations, you will be expected to pay.

If you are 19 or over, you will also need to pay the college administration fee at the beginning of your course and to pay for your examination entries.

When do I take my examinations?

You will take your examinations in the summer sitting in May-June. It is important not to book holidays in these periods. Resit opportunities will be available in January of the A2 year.

How do I progress to A2?

Progression to A2 is conditional on:

- Achieving a pass in the AS-level qualifications
- Satisfactory attendance and behaviour record
- Satisfactory completion of homework and assignments

In the A2 year, how many subjects will I be studying?

You will normally study three subjects at A2 level. It is also possible for you to take a new AS subject alongside two A2 subjects in your second year.

What do most full time A-level students do when they leave college after two years of study?

Almost all of the A2 students progress to degree level study at university.

Will I get advice with my university application?

Yes, we organise several events to help you to begin thinking about University towards the end of the AS year. You will have the opportunity to hear speakers from Universities and be able to visit the Higher Education Convention at Hatfield. You will also talk through your plans with your personal tutor.

At the beginning of your A2 year, your personal tutor will monitor your completion of the online application form.

What do I do next?

If you are interested in applying to study AS-levels with us, please complete the application form in the middle of the NHC full-time prospectus and send it to central Enquiries at NHC. You will then be contacted and invited to come in to college for an informal interview. All places offered are subject to satisfactory results and reference.



AS COMMUNICATION AND CULTURE

This is a course which will provide many opportunities for students to relate their own life experiences to contemporary academic debates. They will closely examine cultural practices, cultural products and the ways in which cultural meanings are communicated. At AS level, the focus is on the understanding of cultural codes in a cultural context.

Course content and assessment

Module one: Understanding Communication and Culture

Written Paper, 1 hour, 45 minutes.

Two questions about culture and communication

Two questions inviting guided analysis and interpretation of cultural practice(s) and a cultural product/text

Module two: The Individual and Contemporary Culture: Portfolio

Coursework, moderated by AQA.

A piece of independent work

Investigation in Communication, Culture and the Individual

Exploration of Cultural Practices

Presentation on My Culture comprising visual and oral components

Topics set by AQA

Web-portfolio/portfolio of work

Teaching & Learning

Much of the teaching of this course takes place through group discussion where Learners respond to ideas, visual material and media extracts presented to them by their lecturer. Small group practical work, role-play and individual presentations will all form a central part of the learning process.

The ability to research independently is vital.

Exam Board: AQA

AS-LEVEL ENGLISH LITERATURE



This course aims to encourage Learners to develop their understanding and enjoyment of Literature through reading widely, critically and independently. Learners will read texts from different centuries and learn different ways of approaching texts.

Course content and assessment

Module one: Texts in Context

Written Exam, 2 hours open book – 60% of total AS marks.

Subject content:

One set poetry text plus wider reading in one of the following areas of study.

Option A: Victorian Literature

Option B: World War One Literature

Option C: The Struggle for Identity in Modern Literature

Module two: Creative Study

Coursework – 40% of total AS marks.

Two pieces of work:

- A personal, informed response to the chosen prose text, either a creative interpretation or creative transformational writing
- A piece of writing on the chosen drama text, focussing on the text in context and aspects such as theme, structure, characterisation.
- Total 2000 – 2500 words.

Subject content:

One prose text and one drama text from the chosen area of study (see module one).

Teaching & Learning

Group discussion of texts is at the heart of the study of this subject. Small group work, individual research and the sharing of written work all form an important part of the course. Trips to the theatre are arranged where possible. Students are expected to read widely around their set texts and encouraged to experiment with their own reading for pleasure.

Exam Board: AQA

Syllabus: Specification A

AS-LEVEL ENGLISH LANGUAGE AND LITERATURE



This course allows you to study language and literature as interconnecting subjects in order to deepen your understanding and enjoyment of these areas.

You will learn to:

- Develop as independent, confident and reflective readers.
- Develop skills in speaking and writing for different purposes and audiences.
- Relate literary and non-literary texts to the contexts in which they were produced.
- Develop your ability to use linguistic and literary critical concepts and analytical frameworks.

Course content and assessment

Module One: Integrated Analysis and text Production

Written paper, 1 hour 30 minutes.

Two questions:

- Literary and stylistic issues – the use of language and style to develop and explore issues with the two set texts.
- Language production task – candidates adopt a different style/voice.

Module Two: Analysing Speech and its representation

Written paper, 1 hour 30 minutes.

Two questions:

- Unseen comparative analysis of different speech texts.
- Examination of speech and other stylistic issues within the set text.

Teaching and Learning

All learners are encouraged to participate fully in class discussion and to engage in independent research outside of the classroom. A variety of teaching and learning methods are employed to enhance the learner experience.

Exam Board: AQA

Syllabus: Specification A



AS-LEVEL FILM STUDIES

The syllabus provides a course of study relevant to Learners who wish to pursue film and related subjects into further/higher education or to develop their own potential for a variety of careers. Learners with no prior knowledge of Film Studies can pursue this course, though it is likely to appeal to those Learners whose principal interests lie in the arts and media.

The syllabus makes possible the systematic study of cinema and film based on the key conceptual issues which informed film study and criticism.

The syllabus seeks to encourage:

- An understanding of a wide range of different types of film, including Hollywood, British Cinema, Surrealist Cinema, early Russian Cinema, French New Wave, Counter-Cinema, as well as major figures in cinema such as Godard, Hitchcock, Eisenstein and Tarantino.
- An ability to deploy the critical language which has been developed to understand how meaning is constructed.
- A critical sense of the contexts past and present, in which films are produced, circulated and consumed.

Course content and assessment (Year1)

Module 1: Exploring Film Form

- **One** analysis of how the micro aspects of a chosen extract from a film of candidate's choice produce meanings and responses (1500 words)
- **One** creative project based on a film sequence or short film
: sequence or short film reflective analysis

Module 2: British and American Film

Three questions, **one** from each section:

Section A: Response to stimulus material set by Awarding Body based on producers and audiences of film

Section B: Topics in British Film

Section C: US Film - Comparative study of two films

Teaching and Learning

Though much of the teaching of this course takes place through lectures, discussion is also a feature of this course, where learners respond to ideas, visual material and film extracts presented to them. Learners are encouraged to do practical work, e.g. storyboards, screenplays and making films in addition to their academic studies.

Exam Board: WJEC (Welsh Board)



AS-LEVEL MEDIA STUDIES

Why choose Media Studies?

- Comprehensive and integrated coverage of media theory and practice
- Focus on new technologies
- Covers audiences as both producers and consumers of media texts
- Production in both AS and A2
- Opportunities for students to investigate what interests them
- Choice of cross-media studies
- Prepares students for progression into work or higher education in a range of media-related areas

AS

Media Concepts

- Media Forms
- Media Representations
- Media Institutions
- Media Audiences

Media Platforms

- Broadcasting
- Digital/web-based media (e-media)
- Print

Investigating the Media (Unit 1) requires candidates to carry out a cross-media study for an unseen examination. (50%)

Creating Media (Unit 2) candidates will produce two media productions in two of the three different media platforms, with an evaluation of the productions, including a consideration of the use of the third media platform. (50%)

Both units require candidates to look at cross-cultural issues where appropriate.

AS-LEVEL FRENCH



The Edexcel Advanced Subsidiary in French aims to encourage students to:

- Develop an interest in and an enthusiasm for language learning.
- Communicate confidently, clearly and effectively in the language for a range of purposes.
- Develop awareness and understanding of the contemporary society cultural background and heritage of countries and communities where the language is spoken.

Course content (General Topic Areas)

1. Youth Culture
2. Health & Fitness
3. The world around us: Travel & Tourism, Environmental issues, French speaking world
4. Education & Employment

Assessment

Unit 1: Spoken expression & response in French (30%)

Here you will develop your skills in French conversation. You will be assessed on your ability to converse on a general topic area chosen in advance. You will also need to demonstrate being able to engage in a discussion relating to a chosen general topic area.

Unit 2: Understanding & Written response in French

This unit requires students to understand and convey their understanding of French language text and recordings. In addition, students will need to produce an essay to demonstrate an ability to manipulate the French language in a variety of contexts and in relation to a prescribed range of general topic areas. You will be required to take a 2hrs 30min paper with 3 sections:

- A) Listening
- B) Reading-Writing
- C) Writing a letter/report/article based on stimulus (200)

Teaching and Learning

As well as lectures there will a significant amount of practical work in order to develop the required competence. Group work and discussion is essential to evaluate cultural and social ideas.

Exam Board: Edexcel
Syllabus: Specification 8190



AS-LEVEL SPANISH

The Edexcel Advanced Subsidiary in Spanish aims to encourage students to:

- Develop an interest in and an enthusiasm for language learning.
- Communicate confidently, clearly and effectively in the language for a range of purposes.
- Develop awareness and understanding of the contemporary society cultural background and heritage of countries and communities where the language is spoken.

Course content (General Topic Areas)

5. Youth Culture
6. Health & Fitness
7. The world around us: Travel & Tourism, Environmental issues, Spanish speaking world
8. Education & Employment

Assessment

Unit 1: Spoken expression & response in Spanish (30%)

Here you will develop your skills in Spanish conversation. You will be assessed on your ability to converse on a general topic area chosen in advance. You will also need to demonstrate being able to engage in a discussion relating to a chosen general topic area.

Unit 2: Understanding & Written response in Spanish

This unit requires students to understand and convey their understanding of Spanish language text and recordings. In addition, students will need to produce an essay to demonstrate an ability to manipulate the Spanish language in a variety of contexts and in relation to a prescribed range of general topic areas. You will be required to take a 2hrs 30min paper with 3 sections:

- D) Listening
- E) Reading-Writing
- F) Writing a letter/report/article based on stimulus (200)

Teaching and Learning

As well as lectures there will a significant amount of practical work in order to develop the required competence. Group work and discussion is essential to evaluate cultural and social ideas.

Exam Board: Edexcel
Syllabus: Specification 8590



AS-LEVEL ART- PHOTOGRAPHY

Learners will be introduced to a variety of experiences exploring a range of photographic media, techniques and processes - both traditional and new technologies.

You will explore relevant images, artefacts and resources relating to Photography and a wider range of art and design, from the past and from recent times, including European and non-European examples. Your responses to these examples will be shown through practical and critical activities which demonstrate your understanding of different styles, genres and traditions. You will use sketchbooks/workbooks/journals to underpin your work where appropriate. There is no specific requirement for you to demonstrate drawing skills in this AS level, unless you wish to. You may use traditional methods and/or digital techniques to produce images.

Course content

You will explore overlapping areas and combinations of areas - for example

- portraiture, documentary and/or photo-journalism
- landscape photography (working from the urban, rural and/or coastal environment)
- working from objects, still life or from the natural world
- experimental imagery, photographic installation, video, television and film

You will be required to demonstrate skills in the following:

- the ability to explore elements of visual language, line, form, colour, pattern and texture in the context of Photography;
- responding to an issue, theme, concept, brief or idea
- an appreciation of viewpoint, composition, depth of field and movement; time-based, through such techniques as sequence or frozen moment
- the appropriate use of the camera, film, lenses, filters and lighting
- an understanding of techniques related to developing, printing, presentation, layout and mounting.

You must also show knowledge and understanding of:

- how ideas, feelings and meanings can be conveyed and interpreted
- the historical and contemporary developments and different styles and genres
- how images relate to social, environmental, cultural and/or ethical contexts, and to the time and place in which they were created;
- continuity and change in different styles, genres and traditions
- the relevant working vocabulary and specialist terminology

Assessment

Unit 1: Development of a coursework portfolio exemplifying work carried out during the AS course, Coursework 80 marks, 50% of total AS marks

Unit 2: An externally-set assignment containing five exciting starting points. Candidates choose one, 80 marks, 50% of total AS marks.

Teaching and Learning

As well as lectures there will be a significant amount of practical work in order to develop the required competence. Group work and discussion is essential to evaluate cultural and social ideas. Superb darkroom facilities are available on the Hitchin Centre for the Arts, hence this AS level is taught at Hitchin.

SYLLABUS: AQA ART AND DESIGN: PHOTOGRAPHY (ARTF)



AS-LEVEL LAW

This AS Level aims to develop the learner's knowledge and understanding of the English Legal System. It enhances the ability to evaluate its operation and performance. The new specification introduces substantive law and develops the ability to apply aspects of both criminal and civil law. Additionally, it develops the learner's skills acquisition for either University or work by enhancing:

- An understanding of legal method and reasoning.
- The techniques of logical thinking and the skills necessary to analyse and solve problems by applying legal rules.
- The ability to communicate legal arguments and conclusions with reference to appropriate legal authority.
- A critical awareness of the changing nature of law in society.

Course content and assessment :

Unit 1: Law Making and the Legal System: Written Paper: 1 h 30 mins

Section A: Law Making

Parliamentary law making

Delegated legislation

Statutory interpretation

Judicial precedent

Section B: The Legal System

The civil courts and other forms of dispute resolution

The criminal courts and lay people

The legal profession and other sources of advice and funding

The judiciary

Unit 2: The Concept of Liability- Written Paper: 1 h 30 mins

Section A: Introduction to Criminal Liability

Underlying principles of criminal liability

The courts: procedure and sentencing

Section B: Introduction to Tort

Liability in negligence

The courts: procedure and damages

Teaching and Learning

In addition to the lectures there is a significant amount of discussion of legal and moral issues. Learners will analyse Cases and develop their written ability to present arguments.

Exam Board: AQA

Syllabus: Specification 5161



AS-LEVEL PSYCHOLOGY

The specification enables candidates to:

- develop an interest in and enthusiasm for psychology, including an interest in further study and careers in the subject
- 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 psychology and how they relate to each other.

Course content and assessment

Unit 1:

- Cognitive Psychology: Models of memory and memory in every day life, ie the accuracy of eyewitness testimony and strategies for improving memory.
- Developmental Psychology: Explanations and variety of attachment and attachment in everyday life, ie the influence of research on childcare practices.
- Research Methods: Experimental and non-experimental Methods, Designs and data analysis, including an understanding of the ethical guidelines that guide psychological research.

Unit 2:

- Biological Psychology: the bodies response to Stress and stress in everyday life, ie sources of stress and stress management techniques.
- Social Psychology: Explanations for conformity / obedience and social influence in everyday life, ie the influence of individual differences on resisting social pressure and implications of research for social change.
- **Individual differences: Defining and explaining abnormality; treating abnormality, ie physical and psychological treatment techniques.**

These units will be assessed via two formal exams lasting one hour thirty minutes each.

Teaching and Learning

A significant amount of group work and discussion takes place. The subject is very well supported by learning resources on the virtual learning environment. The essay writing skills of each learner will progressively improve and there will be regular online testing.

Exam Board: AQA

Syllabus: Specification A 2180



AS-LEVEL SOCIOLOGY

This subject enables candidates to:

- Acquire knowledge and a critical understanding of contemporary societies.
- Appreciate the significance of theoretical and conceptual issues in sociological debate.
- Understand sociological methodology and a range of research methods.
- Reflect on their own experience of the social world in which they live.
- Develop skills, which enhance their ability to participate more effectively in adult life.

Sociology is an interesting subject, especially if you are interested in current affairs and enjoy asking questions. It is a challenging subject and learners have to back up statements with logical argument and statistics.

Course content and assessment need more detail on units and assessment

Unit 1

Families and Households
Culture and Identity
Wealth, Poverty and Welfare.

*The above is assessed by a 1 hour written paper. Candidates choose from **one** of the above and answer a **five part** question.*

Unit 2

Education
Health
Sociological Methods

*The above is assessed by a 2 hour written paper. Candidates choose **Health or Education** and answer a **four part** question. One question of sociological methods in the context of the chosen topic must also be completed. Finally, candidates must answer **one** free-standing question on methods which consists of **four parts**.*

Teaching and Learning

Sessions consist of lectures, group work and class discussions. Regular self-directed study is required as well as the completion of homework.

AQA



AS-LEVEL HISTORY

English and Aspects of European History 1485-1660)

This course is intended to stimulate interest in and promote the study of History:

- Through the acquisition of an understanding and a sound knowledge of selected periods or themes.
- By consideration of the nature of historical sources and the methods used by Historians
- Through acquaintance with the variety of approaches to aspects and periods of history and a familiarity with differing interpretations of particular historical problems
- By promoting an awareness of change and continuity in the past

Spiritual, moral, ethical, social and cultural development objectives:

- The study of history can contribute to the personal growth of the individual.
- Candidates will have the opportunity to interpret their own search for more meaning in life through the study of the past.
- Varying patterns of belief, issues of ethical and moral development, problems of intolerance, the consequences of civil conflict, poverty and cultural diversity, provide challenging opportunities for Learners to question a variety of moral and social concerns.

Course content and assessment details on units required

Unit 1 and 2- Henry VII's foreign policy and Henry VII and Wolsey
Assessed by externally set and marked exam.

Henry VII and the establishment of a secure dynasty

Unit 2- Religious change and its consequences in reformation Europe

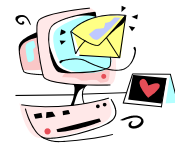
Both units externally assessed by exams lasting 1.5 hours each, based on documents and sources.

Teaching and Learning

Teaching and learning is through a variety of media including the examination of primary and secondary sources. Any class could consist of a variety of delivery methods from workshops, discussions, lectures, interactive teaching materials and role play.

Exam Board: AQA

Syllabus: Specification 5041 OPTIONS B AND N



BTEC National Award for IT Practitioners **(2-Year programme)**

Information Technology (IT) is everywhere. Whether you work in an office or in manufacturing, computer technology will be a major component in your work practices. It will also be an integral part of every degree programme. IT is more than just using a word-processor, spreadsheet or database; and it's more than playing games. It's about computer equipment (hardware), communication of information and ideas, facilitating and developing processes (software), and more. The BTEC Award is a two-year programme, consisting of 6 units and equivalent to a full A-level. It will provide you with a broad in-depth knowledge and a practical experience of the range of IT. It will be informative, challenging and fun!

Course content and assessment

YEAR 1

Module 1: Communication and Employability Skills for IT (Unit 1)

This unit provides you with an opportunity to identify and consider your own set of employability and communication skills and, where necessary, improve them.

On completion of this unit you should:

- Understand the attributes of employees that are valued by employers
- Understand the principles of effective communication
- Be able to exploit ICT to communicate effectively
- Be able to identify personal development needs and the ways of addressing them.

Module 2: Computer Systems (Unit 2)

This unit is a general introduction to the 2 main aspects of a computer system: the machinery/electronics; and the programs that run on it.

On completion of this unit you should:

- Understand the hardware components of computer systems
- Understand the software components of computer systems
- Be able to undertake routine computer maintenance.

Module 3: Computer Animation (Unit 26)

This unit brings together computer graphics and animation techniques to create moving images via the use of computers. This is an increasingly prominent application of ICT in both WEB, film and games development.

On completion of this unit a learner should:

- Understand the origins and types of animation
- Be able to use software techniques used in animation
- Be able to plan, create and review an animation using digital methods.

YEAR 2

Module 4: Principles of Software Design and Development (Unit 18)

Sometimes, a business need is identified that cannot be addressed using existing packages and in these situations it is necessary to build a solution using an appropriate computer language. This unit will introduce you to the whole design and development process of programming.

On completion of this unit you should:

- Know the nature and features of programming languages
- Be able to use software design and development tools
- Be able to design and create a program
- Be able to document, test, debug and review a programmed solution.

Module 5: Website Production and Management (Unit 21)

The need for good web designers and developers continues to grow as more and more companies realise they must develop a web presence and keep it maintained and updated. This unit considers the whole development process of identification of need, design, build, upload, test, maintain and review.

On completion of this unit you should:

- Be able to design an interactive website
- Be able to create an interactive website
- Understand the factors that influence website performance
- Understand the constraints related to the production and use of websites.

Module 6: IT Essentials (part of CompTIA A+ examination) (Unit 49)

This unit will provide you with an industry standard qualification in computer maintenance. This unit is delivered using CISCO training materials and achieved by means of an external on-line examination.

On completion of this unit you should:

- Understand the process of installation, configuration and upgrade of hardware systems
- Be able to diagnose and troubleshoot hardware systems (PCs and portable systems)
- Know about PC preventive maintenance, safety and environmental issues
- Understand the fundamentals of operating systems
- Know printing and scanning technologies
- Understand the principles of networks
- Be able to communicate effectively and professionally.

Teaching and Learning

You will be taught in a variety of ways; including class discussion, small group work, presentation. Practical work with computers will feature strongly, both as reinforcement of the theory and as preparation for the assignments, which are the method of assessment in 5 modules. You will find the practical work that you will do both enjoyable and stretching. By the end of the two year programme, you will be confident and skilful in your knowledge and use of IT.

Exam Board: EDEXCEL



AS-LEVEL COMPUTING

This course is about computational thinking – the kind of thinking done by humans and machines. It has an emphasis on abstract thinking, general problem solving, algorithmic and mathematical reasoning, scientific and engineering-based thinking. It is a good foundation for understanding future challenges that computer scientists are likely to face.

Course content and assessment

Unit 1: Problem Solving, Programming, Data Representation and Practical Exercise

This unit includes topics about problem solving and programming techniques, learning how data of different kinds is represented in computer systems and the Systems Development Life Cycle of programs.

You will be assessed by means of a 2 hour, on-screen examination (100 marks) in which you will answer short questions and write a program.

Unit Value: 60% of the AS, 30% of the full A Level

Unit 2 Computer Components, the Stored Program Concept and the Internet

This unit includes topics about the different types of hardware (physical components) and software (programs that make it work); how the processor actually works; the structure of the internet and how to design web pages; and the legal and social issues relevant to using computers.

You will be assessed by means of a 1 hour written examination (60 marks) consisting of compulsory short answer questions.

Unit Value: 40% of the AS, 20% of the full A Level

Progression to Year 2: you will study the 2 units:

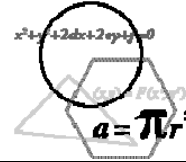
- Problem Solving, Programming, Operating Systems, Databases and Networking
 - The Computing Practical Project
- (Details of these units can be supplied at interview or on request)

Teaching and Learning

Learners will be engaged in a variety of methods, e.g. lecture, group work, discussion, problem solving and, of course, practical work.

Exam Board: AQA

Syllabus: Specification 1511



AS-LEVEL MATHEMATICS

The AS-Level Mathematics Course aims to encourage students to:

- Develop their understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment;
- Develop abilities to reason logically and to recognise incorrect reasoning, to generalise and to construct mathematical proofs;
- Extend their range of mathematical skills and techniques and use them in more difficult unstructured problems;
- Develop an understanding of coherence and progression in mathematics and of how different areas of mathematics can be connected;

Course content and assessment

The following equally weighted modules are covered:

Module 1: Core Pure 1 – This module extends the work you covered in GCSE Maths. Some new topics are introduced including calculus and algebraic division. You will develop the ability to produce logical and coherent work by using appropriate mathematical symbols and language.

Module 2: Core Pure 2 – This module extends the trigonometry you covered in GCSE Maths and the calculus you covered in Core Pure 1. New topics introduced are sequences and series, exponentials and logarithms.

Module 3: Statistics 1 – This module extends the concepts of probability, numerical measures and correlation and regression covered in GCSE Maths. New topics introduced are normal distributions, binomial distributions and estimation.

There is no coursework element in AS Mathematics.

Each module is assessed by a 1.5 hour examination.

Calculators are **not** allowed in the Pure Core 1 examination.

Scientific and graphics calculators are permitted in the Pure Core 2 and the Statistics 1 examinations.

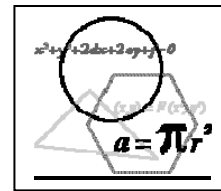
Teaching and Learning

Teaching is by lectures, class problem solving sessions and individual help.

Homework is set every session and students will need to complement their class and homework study with additional work outside class.

Exam Board: AQA

Syllabus: Specification 5361



AS-LEVEL FURTHER MATHEMATICS

The AS-Level Further Mathematics Course aims to encourage students to:

- Develop their understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment;
- Develop abilities to reason logically and to recognise incorrect reasoning, to generalise and to construct mathematical proofs;
- Extend their range of mathematical skills and techniques and use them in more difficult unstructured problems;
- Develop an understanding of coherence and progression in mathematics and of how different areas of mathematics can be connected;
- Acquire a wider range of mathematical knowledge, skills and experience particularly relevant to higher study of subjects like Physics and Engineering.

Course content and assessment

If enough learners enrol for us to mount a full course, then we shall use the AQA syllabus which we follow for the single subject Maths. If, however, there are fewer enrolments, we shall not be able to mount a full course, but will give some support to students studying through the Further Maths Network, and that might involve them studying the MEI syllabus.

AQA

The following equally weighted modules are covered:

Module 1: Decision Maths 1 – This module can be studied independently of any other AS-Level modules. Subjects covered will include sorting algorithms, linear programming and a selection of problems dealing with graphs and networks.

Module 2: Further Pure 1 – This module extends some of the topics covered in the single subject syllabus: complex numbers are used to provide solutions for all quadratic equations; coordinate geometry stretches to include a basic treatment of all the conic sections; the general solution is found to trigonometric equations; matrices are used to extend the range of transformations covered.

Module 3: Further Pure 2 – This module continues the work of FP1 in polynomials and complex numbers; and it introduces proof by induction, the summing of series, hyperbolic trig functions and the use of calculus to find an arc length or a surface of revolution.

There is no coursework element in the AQA syllabus.

MEI

If the MEI syllabus is used, there will also be three modules.

Module 1 – Decision Maths 1 – This is similar to the AQA Decision 1, with the addition of a couple of topics, notably critical path analysis.

Module 2 – Further Pure 1 – The syllabus is similar to the AQA syllabus with one or two additions like a more rigorous treatment of mathematic proof, including proof by induction.

Module 3 – Numerical Methods – This module picks up and extends some of the numerical methods covered in the single subject but makes more of them. Methods are studied for finding approximate numerical solutions to equations, and for approximating definite integrals and gradient functions.

This module has a coursework component which forms 20% of the marks for this module.

GENERAL

Each AQA module is assessed by a 1.5 hour examination. Each MEI module exam lasts 1 hour 20 mins.

Calculators are permitted in all the exams. We encourage learners to use the latest Casio fx-83 Natural Display calculator. A graphics calculator could also be useful but is not necessary.

Teaching and Learning

Teaching is by lectures, class problem solving sessions and individual help. Homework is set every session and students will need to complement their class and homework study with additional work outside class. The AQA syllabus is Specification 5371.

If learners work with the Further Maths Network, the network will provide support to individual study and will set and mark assignments. The College will also provide some tutorial support.

The MEI syllabus specification is 3896.

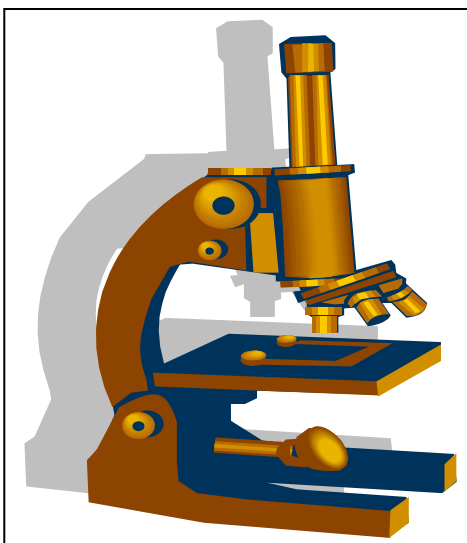
BTEC National Award in Medical Science (Level 3 Applied Science)

What are BTEC National Awards?

BTEC Nationals are designed to provide specialist work-related Qualifications; they give learners the knowledge; understanding and skills that they need to prepare them for employment.

How will I be assessed?

By a wide variety of assessment methods, including case studies, assignments and work-based assessments, along with projects, performance observation and time-constrained assessments



Year 1 Units

Unit 1 Fundamentals of science

We will be moving on from GCSE Science, developing themes such as chemical reactions, the cell, energy and electricity. This unit covers the fundamentals of chemistry; physics and biology that you will need to fully appreciate other modules.

Unit 4 Scientific Practical Techniques

The ability to sample and test substances and materials is fundamental to many branches of science: Industry; research; Sport Science and Forensic Science. This has led to advances in new drugs and diagnosis; swift conviction of criminals and have enabled athletes' to go faster, higher and further than ever before. In all of these areas the ability to undertake scientific practical techniques safely, accurately and precisely is essential to scientific research.

Unit 11 Physiology of Human Body systems.

Here we study the major systems of the body and how they function together to keep us working, playing and resting. Practical work will feature highly in this unit which will help develop analytical skills required

Year 2 Units

Unit 5 Perceptions of science

A new study shows... Scientists predict...

The media and our understanding or preconceptions shape how we respond as a society to science issues. Facts, fiction, morals and ethics come together allowing for research, discussion and debate developing an understanding of the relationship between science, commerce and politics.

Unit 12 Physiology of Human Regulation and Reproduction

Did you know that a change in body core temperature of only 4 °C can be fatal?

Building on the knowledge gained in Unit 11, we will investigate even more intriguing body systems and processes. We will look at how humans reproduce; how body processes are coordinated and how Homeostatic mechanisms regulate the body's internal environment.

Unit 18 Genetics and Genetic Engineering

To study genetics is to study the basis of life itself. This unit is designed to show how chemicals make up living organisms, and how the mechanisms for DNA replication lead to complex patterns of inheritance and evolution.



AS-LEVEL BIOLOGY

Many learners study Biology because they wish to study the subject at university while others do so in order to study subjects such as medicine, veterinary science, dentistry, physiotherapy, psychology, biochemistry and pharmacy, for which A-level Biology is essential. However Biology is an important subject, not just for science, but for many other types of career.

Biology at A level involves a good deal of biochemistry it is highly recommended that you take Chemistry to at least AS level alongside AS-level Biology.

Biology is also far more numerical at A-level than at GCSE, confidence with basic numerical skills is essential for successful study at A-level.

Course content and assessment

Unit 1 Biology and Disease.

- How digestive and gas exchange systems may be affected by communicable and non-communicable diseases
- How knowledge of basic biology allows us to understand the symptoms of disease and interpret data relating to risk factors

Unit 2 – The Variety of Living Organisms.

- The influence of genetic and environmental factors on intraspecific variation
- How the variety of life is reflected in similarities and differences in its biochemical basis and cellular organisation
- How size and metabolic rate affect an organism's requirements and give rise to adaptations.

Unit 3 – Practical and Investigative Skills

This includes – Drawing, an essay and the design implementation and write up of a practical investigation.

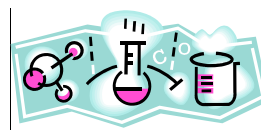
The AS Level comprises of two written papers, plus the centre assessed practical component.

Teaching and Learning

You will be taught in a variety of ways; including whole class teaching, class discussion, small group work, presentation, doing quizzes. Practical work will feature strongly, both as reinforcement of the theory and as preparation for the practical exam.

A key aspect of preparation for the AS examinations will be frequent tests – expect a test every 2 weeks, the tests will take 2 forms: 1. Mastery learning tests – a series of 16 short answer tests designed to aid your learning of key terminology and 2. Longer Class tests at the end of 6 key topics designed to give exam practice.

Exam Board: AQA
Syllabus: Specification A



AS-LEVEL CHEMISTRY

Many learners study chemistry because they wish to study the subject at university while others do so in order to study subjects such as medicine, veterinary science, dentistry, biochemistry and pharmacy, for which A-level chemistry is essential. However Chemistry is an important subject, not just for science, but for many other types of career. Even if you have no idea what you would like to do but you are interested in chemistry you will make a good choice with A-level chemistry.

Course content and assessment

Unit 1: Atoms, Bonds and Groups

This unit provides the basic underpinning chemistry concepts:

- Atoms and Reactions - Atoms, moles and equations, acids and redox
- Electrons, Bonding and Structure - Electron structure, Bonding and structure
- The Periodic Table – An introduction to the periodic table looking in more detail at the chemistry of group 2 and 7 elements.

Unit 2: Chains, energy and resources

This unit is about organic chemistry and energy

- The basic concepts and the hydrocarbons alkanes and alkenes
- Alcohols, Halogenoalkanes and modern analytical techniques
- Enthalpy changes, rates and equilibrium
- **Chemistry of the air and green chemistry**

Unit 3: Practical work

This AS unit is teacher assessed and externally moderated by OCR. You are assessed on one task from each of the following categories: qualitative, quantitative and evaluative tasks so you will carry out three tasks in total. The qualitative and quantitative tasks will test skills of observation and measurement and all the tasks carried out under controlled conditions. Each task will be internally assessed using a mark scheme provided by OCR.

Teaching and Learning

You will be taught in a variety of ways; including class discussion, small group work, presentation, working on the laptops doing quizzes. Practical work will feature strongly, both as reinforcement of the theory and as preparation for the practical exam. One of the most enjoyable aspects of the course is the amount of practical work that you will do. By the end of the year learners are confident and skilful.

Exam Board: OCR Syllabus: Specification A H034



AS-LEVEL PHYSICS

There are a wide range of career opportunities available to those who study physics. Physicists are wanted in many areas, such as astronomy, medicine, meteorology, nursing, oceanography, patent examiner, as well as the more obvious engineering, communications and many other careers. There are often incentives in the form of grants and scholarships, to study physics to higher levels. If you want to be well paid, a physics degree can help you get a job in finance, telecommunications or the electrical industry with an average starting salary of about £40k. (Institute of Physics survey, website www.iop.org Feb 2008).

Course content and assessment

Unit 1 - Particles, Quantum Phenomena and Electricity

Particle physics introduces the fundamental properties and nature of matter, radiation and the quantum phenomena. The study of electricity builds on and develops previous GCSE studies, provides opportunities for practical work and looks into important applications.

Written examination of 1¼ hours, 40% of AS marks.

Unit 2 - Mechanics, Materials and Waves

This unit introduces vectors and develops knowledge and understanding of forces and energy. Materials are studied in terms of their bulk properties and tensile strength. The waves section develops the in depth knowledge of their characteristics, properties and applications, including refraction, diffraction, superposition and interference.

Written examination of 1¼ hours, 40% of AS marks.

Unit 3 - Investigative and Practical Skills in AS Physics

Experimental and investigative activities are carried out in order to develop practical skills. These activities allow the use of knowledge and understanding of Physics in planning, carrying out, analysing and evaluation. This unit is assessed by Practicals Skills Assessment and Investigative Skills Assignment. 20% of AS marks.

Teaching and Learning

A variety of teaching and learning methods are used to assist your study. There is regular practical work to support the learning of theory and practice of skills leading to the assessment in the practical exam. There are various computer resources, including many different simulations to support the practical and theoretical work. Students are expected to undertake work outside the classroom with directed homework and your own research to improve your understanding. This is supported by the college Virtual Learning Environment “BlackBoard”.

Exam Board: AQA , syllabus: AS Physics Specification A,
website www.aqa.org

