



# Yavneh College

## Sixth Form

### Course Descriptions

for courses commencing  
September 2010

# Jewish Studies

All sixth form students follow our 'Yahadut' course for three hours per week, examining fundamental elements of Jewish life and Jewish living in the modern world (for further details, please see the sixth form prospectus). In addition, we offer the following optional additional 'BMT' course for those students intending to spend a period of time studying in a Yeshiva or Seminary after leaving school:

## Bet Midrash Track (BMT)

The Bet Midrash Track (BMT), which runs for three hours per week, offers essential preparation for success in Jewish learning at the highest level.

BMT students are provided with a series of courses in Tanach, Gemara and Halakha, to familiarise them with text and teachings and to develop and refine their Jewish learning skills. Unlike other courses at Yavneh College, boys and girls following the BMT are taught separately because of the different requirements of Yeshivot and Seminaries, although identical curricula are followed where appropriate. There is a chance to meet representatives from various Yeshivot and Seminaries and the possibility of participating in a pre-gap year Israel pilot trip.

### Boys' Programme:

The boys' programme devotes a considerable amount of time to learning Gemara. The aim is not only to teach them the Gemara, but also the skills of how to learn Gemara. These skills are vital to any boys who are intending to spend time in Yeshiva. In addition to this, other areas of study may include; philosophy from the Rambam's Hilchot Deot; Halacha from the Mishna Berura and Tenach with an emphasis on Mefarshim.

### Girls' Programme:

The girls' programme devotes a considerable amount of time to learning Tenach with Mefarshim. In the Autumn and Spring terms, the girls learn Megillat Esther, with Mefarshim (commentaries), in considerable depth. As with the boys' programme, the aim is not only to teach the girls Megillat Esther, but also the skills of learning Tenach with Mefarshim. In addition to this, other areas of study may include philosophy from the Rambam, Halacha by studying Mishna Berura and an exploration of Parshat Shelach Lecha and its implications on the Jewish People. In the Summer term, the girls have a Parshat Shavuah and Rashi shiur to replace the Megillat Esther course which they will have finished by this point.

# Choosing A Levels

In addition to advice from your current school, some students find it helpful to bear in mind future potential careers when making A Level course selections. The "why study?" section that appears on each subject page aims to provide some help, as do the following Websites:

## **General sites**

[www.cascaid.co.uk](http://www.cascaid.co.uk)

Quiz to find out which careers match your skills/interests.

[www.eclips-online.co.uk](http://www.eclips-online.co.uk)

Look up careers of your choice, job families or general information such as housing and travel.

<http://www.connexions-direct.com>

Search careers by job family, things you're interested in, what subjects you're studying, qualifications or work environment; or ask questions to a Careers Adviser by e-mail or webchat.

<http://careersadvice.direct.gov.uk>

Look up a specific job/ career or answer a quiz about your skills and interests to find out which jobs you are suited to.

## **Career-specific sites (a small selection appears below)**

'icould', [www.icould.com](http://www.icould.com) 1000 films to show how people have ended up in their jobs. Hugely diverse e.g. storytellers, cemetery supervisors, cabinet makers, judges, senior beauty therapists, Richard Branson.

[www.enginuity.org.uk](http://www.enginuity.org.uk) Engineering and technology careers

<http://careers.fssc.org.uk/en/> Careers in financial services

[www.mathscareers.org.uk](http://www.mathscareers.org.uk) Engineering, medicine, finance, computer graphics and forensic science (not just Maths!)

[www.rsc.org/education/](http://www.rsc.org/education/) Royal Society of Chemistry website

[www.physics.org](http://www.physics.org) Institute of Physics website. Choose "Careers"

[www.forensic.gov.uk](http://www.forensic.gov.uk) Choose "Careers" for careers in forensic science

[www.tda.gov.uk](http://www.tda.gov.uk) Careers in teaching and education

<http://www.stepintothenhhs.nhs.uk/> Videos of medical careers incl. some you might not have heard of before

[www.socialworkandcare.co.uk](http://www.socialworkandcare.co.uk) Careers in social work and social care

[www.bigambition.co.uk](http://www.bigambition.co.uk) 40 videos of people working in IT

<http://www.bbc.co.uk/blast/> Get inspired by videos of people in the world of art, fashion, music, games, writing, film and dance. Access mentors online and in free events and workshops around the UK, and see opportunities for creative work experience

[www.skillset.org/careers/](http://www.skillset.org/careers/) Careers in broadcast, film, video, interactive media and photo-imaging and publishing

[www.careers.civil-service.gov.uk](http://www.careers.civil-service.gov.uk) Careers in the Civil Service

[www.springboarduk.org.uk/careers](http://www.springboarduk.org.uk/careers) Careers in hospitality, leisure, travel and tourism

[www.skillsactive.com/careers/](http://www.skillsactive.com/careers/) Careers in active leisure, sport and recreation

[www.languageswork.org.uk](http://www.languageswork.org.uk) Careers with languages

[www.skillsmartretail.com](http://www.skillsmartretail.com) Careers in retail

[www.nctj.com](http://www.nctj.com) Select "Careers advice" for careers in Journalism

[www.lawcareers.net](http://www.lawcareers.net) Careers in law

# A Level Options

Below are the provisional A Level option blocks for 2010/11, for information.

Once these blocks have been finalised, students will be asked to choose four (or, in the case of exceptionally able students, five) subjects to study at AS Level in Year 12.

No more than one subject can be chosen from each block, because all of the subjects in a block are taught at the same time.

BLOCK 1	BLOCK 2	BLOCK 3	BLOCK 4	BLOCK 5
Physics	Chemistry	Biology	Mathematics	Further Mathematics
English Literature	Government & Politics	History	Psychology	Psychology
	ICT	Business Studies	PE	Religious Studies
	Modern Hebrew			Geography
				Drama & Theatre Studies

# Biology

## SPECIFICATION

AQA 1411/2411

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade AB in Dual Award Science GCSE (or grade B in Biology GCSE) and at least Grade B in Mathematics GCSE.

### COURSE OUTLINE

Biology A Level will appeal to students who like solving problems within the context of planning and conducting investigations; will enjoy devoting private study time to the background reading of biological reviews and other scientific articles; are keen to develop the skills necessary to work safely with apparatus, biological material and living organisms; have an appreciation of life and living organisms and an interest in technological applications and their ethical, social, economic and environmental implications.

The course is divided into 6 units over 2 years. Units 1, 2 and 3 comprise the AS Level. Units 4, 5 and 6 comprise the A2 Level.

- Unit 1: Biology and Disease  
Students examine how the symptoms and risk factors of various diseases are related to the physiology of digestive, respiratory and blood circulatory systems.
- Unit 2: The Variety of Living Organisms  
The unit covers genetics and cytology; biochemistry and cellular organisation; exchange surfaces and mass transport systems; principles of taxonomy; genetic comparisons between species; adaptive responses by bacteria to antibiotics; biodiversity.
- Unit 3: Investigative and Practical skills  
Practical work relating to topics covered in Units 1 and 2.
- Unit 4: Populations and the Environment  
Students study population dynamics; photosynthesis; respiration; genetic variation - inheritance, selection and how species arise.
- Unit 5: Control in cells and in organisms  
This unit examines the detection of and response to internal and external stimuli; coordination of chemical and electrical stimuli; skeletal muscles; homeostasis; negative and positive feedback systems; the genetic code and gene cloning.
- Unit 6: Investigative and practical skills  
Practical work relating to topics covered in Units 4 and 5

Units 1 and 4 are examined by a written paper consisting of short answer questions, a short comprehension and a short structured essay. Unit 2 is examined by a written paper consisting of short answer questions, one longer data handling question and one longer question involving analysis and evaluation. Unit 3 is a centre-assessed Practical Skills Assessment and an Investigative Skills Assessment exam. Unit 5 is examined by a written paper consisting of short answer questions plus a longer data-handling question and a synoptic essay. Unit 6 is a centre-assessed practical skills and investigative skills assessment.

### WHY STUDY A LEVEL BIOLOGY?

A Level biology is an excellent preparation for entry to degrees leading to careers in medicine, osteopathy, homeopathy, nursing, social work, physiotherapy, pharmacy, agriculture, horticulture, food industry, forensic science, environmental science, botany, freshwater and marine biology, applied biology, ecology, sports science, genetics, optics, microbiology and biochemistry.

# Business Studies

## SPECIFICATION

OCR HO30/HO31/H430

## SPECIFIC GCSE REQUIREMENTS

None

## COURSE OUTLINE

Business Studies A Level will appeal to students who are interested in a subject which has direct relevance to their own lives and experiences. Business Studies requires students to have an interest in current affairs, to have an enquiring mind and to be interested in how businesses make decisions.

The course is divided into four units. Units 1 and 2 comprise the AS Level. Units 2 and 4 comprise the A2 Level. Unit 1 is examined by a written paper. Units 2, 3 and 4 are examined by questions relating to a case study.

- o Unit 1: An Introduction to Business

This unit introduces students to the study of business by looking at how businesses are operated and how the external business environment affects them. Students learn about people in business and what motivates them as well as the awareness of how the business environment provided opportunities and imposes constraints on the pursuit of short-term and long-term objectives.

- o Unit 2: Business Functions

This unit enables students to examine four important functions or departments of business. Students learn why these four functions are important and the main principles on which they are based. Students learn about the inter-relationships between each of the four functions and that for an organisation to be a success in a dynamic and challenging environment, decisions have to be made in the context of the organisation's objectives and resources.

- o Unit 3: People in Organisation

Students learn about issues related to human resources and their use in solving problems and making decisions. They evaluate businesses' organisational structures and activities and the environment within which human resources activities take place.

- o Unit 4: Strategic Management

If a business is to succeed, it is extremely important that it be able to make effective, well-informed decisions and solve quickly and positively any problems that it might encounter. This unit introduces students to some of the techniques that a business can use to support the decision-making and problem-solving process.

## WHY STUDY A LEVEL BUSINESS STUDIES?

This course is relevant, fun, interesting and not wedded to a text book. It requires an understanding of real issues. The ability to think critically and solve problems is essential. Successful A Level business students can go on to study a variety of subjects at university including business, marketing, accountancy, retail and advertising. Students will also have a grounding in the operation of a business should they enter the workplace or set up their own business.

# Chemistry

## SPECIFICATION

Edexcel : 1110/9CH01.

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade AB in Dual Award Science GCSE (or grade B in Chemistry GCSE) and at least Grade B in Mathematics GCSE.

### COURSE OUTLINE

A-Level chemistry suits individuals who are focussed, able to think laterally, have good mathematical skills and an ability and desire to question results and analyse data. Chemists need to be methodical – practical work often needs to be repeated numerous times until the desired results are obtained – and a student who has the drive to continue at a problem until the desired result is achieved will do well. The course is divided into six units. Students use a knowledge and understanding of fundamental chemistry concepts to explain different aspects of contemporary chemistry such as climate change, green chemistry, pharmaceuticals and chemistry research.

AS Units:

- o Unit 1: The Core Principles of Chemistry

Formulae, equations and amounts of substance; energetics; atomic structure and the Periodic Table; bonding; introductory organic chemistry. Contexts - green chemistry, industrial processes, nanotechnology, biofuels and new materials

- o Unit 2: Application of Core Principles of Chemistry

Shapes of molecules and ions; intermediate bonding and bond polarity; intermolecular forces; redox reactions; the Periodic Table groups 2 and 7; kinetics; chemical equilibria; organic chemistry; mechanisms; mass spectra and IR. Contexts - pharmaceuticals Industry, supramolecules, catalysts in biological systems, green chemistry.

- o Unit 3: Chemistry Laboratory Skills I

Four practical assessments - general practical competence, qualitative observation, quantitative measurement, and preparation

A2 Units:

- o Unit 4: General Principles of Chemistry I: Rates, Equilibria and Further Organic Chemistry

How fast? – rates; How far? – entropy; equilibria; applications of rates and equilibrium; acid/base equilibria; further organic chemistry; spectroscopy and chromatography. Contexts - green chemistry, industrial chemistry, biochemistry, food chemistry, polymers.

- o Unit 5: General Principles of Chemistry II: Transition Metals and Organic Nitrogen Chemistry

Redox and the chemistry of transition metals; organic chemistry – arenes; nitrogen compounds and synthesis. Contexts- chemistry of breathalysers, fuel cells, industrial processes, biochemistry, polymers

- o Unit 6: Chemistry Laboratory Skills II

As for Unit 3 OR 3 practical assessments - general practical competence, qualitative observation and one longer practical comprising both quantitative measurement and preparation.

Units 1,2, 4 and 5 are examined by written examinations involving short answer questions, extended answer questions, contemporary context questions and data questions. Units 3 and 6 are examined by centre-assessed practicals.

### WHY STUDY A LEVEL CHEMISTRY?

Chemistry is essential for some careers and desirable for many others e.g. medicine, pharmacy, dentistry, biochemistry, chemical engineering, nanotechnology, alternative fuels, polymers, science teaching, nursing, occupational therapy, physiotherapy, forensics, materials design, scientific patent law, homeopathy, business, computational modelling, environmental management.

# Drama and Theatre Studies

## SPECIFICATION

AQA 1241/2241

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in both Drama and English Literature GCSE. Students who have not studied GCSE Drama will be able to audition for a place on this course.

### COURSE OUTLINE

This course would suit those who are keen to pursue their interests and develop their skills in a range of practical drama elements including acting and directing. The requirements of the specification, with its 60% written paper weighting, also enable students to gain an entry qualification for courses in higher education, whether in the area of drama and theatre studies or in a host of other subjects.

The units of study for AS Level are:

- Unit 1 – Live theatre production and assessment of a prescribed play.

In this unit, students are required to write a personal response to various aspects of live theatre seen during the course. Students also study a set text from the point of view of an actor, director or a designer taking into consideration the potential effectiveness for an audience, and the social and historical context of the play, as well as its period and genre.

- Unit 2 - Presentation of an extract of a play

In this unit, students are required to work in groups to present, for an audience, an extract from a published play of their choice. The work in this unit can be of students' free choice as long as it represents a different period to that studied in Unit 1.

The units of study for A2 Level are:

- Unit 3 – Further Prescribed Plays including Pre-Twentieth Century

Students are required to answer questions on each of the two set plays. They are required to focus on an interpretation of the plays from a performance perspective and demonstrate a creative overview of the chosen play.

- Unit 4 – Presentation of Devised Drama

Students are required to work in groups to present, for an audience, a devised drama performed in the theatrical style of their choice. Students nominate a specific theatre skill on which they will be assessed. Students are also required to provide supporting notes which give evidence of their research and dramatic intentions.

### WHY STUDY A LEVEL DRAMA AND THEATRE STUDIES?

Most careers require the ability to communicate, assess and analyse. As a highly regarded qualification, Drama and Theatre Studies is a way into higher education and a way of building a strong foundation for a career in many different fields such as theatre, film and television, media and teaching.

# English Literature

## SPECIFICATION

OCR H071/H471

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in both English Language and English Literature.

### COURSE OUTLINE

This A Level would suit students who wish to develop their critical, analytical and creative skills. The course requires a great deal of reading - not just the compulsory texts, but also wider reading - and independent study, so students should be highly motivated and have a genuine interest in literature if they wish to pursue this option. The A2 Level provides the opportunity for very able students to undergo 'stretch and challenge', giving them more control of the texts chosen for coursework and be awarded with an A\* at the end of the course.

The units of study for AS Level are:

- o Poetry and Prose 1800-1945

This unit develops critical literary skills and greater understanding of contexts in which texts are produced. It is examined by a 2 hour examination. The chosen texts are: Wilfred Owen poetry and *Tess of the D'Urbervilles* by Thomas Hardy.

- o Literature post-1900

Students learn to compare texts and gain confidence in their use of literary critical concepts and terminology. This unit is examined by coursework. The chosen texts are: *The Horror of Isolation: The Beach* by Alex Garland, *The Birthday Party* by Harold Pinter, *The Wasp Factory* by Iain Banks

The units of study for A2 Level are:

- o Drama & Poetry pre-1800

This unit involves critical analysis of structure, form and meaning, and consideration of others' interpretations. It is examined by a 2 hour examination. The chosen texts are: *Twelfth Night* by William Shakespeare, *Doctor Faustus* by Christopher Marlowe, *Paradise Lost Book One* by John Milton.

- o F664: Texts in Time

This unit allows students to fully develop research skills and synthesise their knowledge and understanding in an extended individual study of literary texts across genres. It is examined by coursework. The texts will be EITHER *Feminist Perspective: Woman on the Edge of Time* by Marge Piercy, *The Handmaid's Tale* by Margaret Atwood, Sylvia Plath poetry OR WW1: *Regeneration* by Pat Barker, *All Quiet on the Western Front* by Erich Maria Remarque, Siegfried Sassoon war poetry

### WHY STUDY A LEVEL ENGLISH LITERATURE?

Most careers require the ability to communicate, critically assess and analyse. As a highly regarded academic qualification, English Literature A Level provides a solid base for many higher education or career choices, such as law, teaching, the media (advertising, journalism, TV and film etc), research or the publishing industry.

# Geography

## SPECIFICATION AQA (2030)

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in GCSE English, Geography and Science

### COURSE OUTLINE

This course provides a strong foundation for understanding the two main themes of the subject: human and physical geography. Physical geography looks at the scientific aspects of our world and emphasises the ways humans can help to manage them. Human geography on the other hand explores how people and groups move and live in the world around us and focuses on a range of current issues such as energy conversation.

Geography 'A' Level is likely to appeal to students who are interested in the world around them and who want to develop their understanding of the global issues which threaten to destroy our planet. A keen interest in the environment is essential, although a natural curiosity about people and the countries or cultures they come from is also necessary. The course will provide students with opportunities to visit places of geographical interest as well as get involved in fieldwork.

AS Geography consists of two units; unit 1 which contributes 70% and unit 2 which contributes 30% towards the final AS level grade. Each unit is assessed through a 2 hour written examination at the end of the AS course.

#### Unit 1: Physical and Human Geography

- Explores the core physical and human geographical themes of rivers, floods and management, hot desert environments, population change and energy issues.

#### Unit 2: Applied Geography

- Students geographical skills will be assessed based on the material covered in unit 1. Skills to be assessed will include investigative research, cartographic, graphical, ICT and interpretation of statistical data

A2 Geography also consists of two units; unit 3 which contributes 30% and unit 4 which contributes 20% towards the final 'A' level grade. Unit 3 is assessed through a 2 hour written examination and unit 4 is assessed through a 1hour 30 minute examination.

#### Unit 3: Contemporary Geographical Issues

- Explores contemporary geographical themes and issues which will include the study of plate tectonics, ecosystems and world cities.

#### Unit 4: Geographical Issue Investigation (to be confirmed)

- The issue investigation provides students with the opportunity to analyse and evaluate a current geographical issue which extends from the specification content – information on the issue is released 2 months prior to the examination taking place

### WHY STUDY A LEVEL GEOGRAPHY?

Geography 'A' Level is well-regarded for entry to degree courses in specialist subjects such as Geography, Geology and Meteorology although is also seen as an excellent foundation for many other university courses due to the research and analysis skills which are developed throughout the course. The course also provides students with a number of skills relevant to many different sectors of employment such as advertising, business, environmental management and law due to its focus on people and globalisation.

# Government and Politics

## SPECIFICATION

Edexcel 8GP01/9GP01

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in GCSE English Language.

### COURSE OUTLINE

Politics exists because people disagree. They disagree about how they should live (moral questions), about who should get what (resource questions) and about who should make decisions (power questions). As an activity, politics is the process through which people with different ideas, values, opinions and interests attempt to find a way of living together within the same society. Politics therefore seeks to establish the general rules under which we live and it is those rules that make orderly existence possible. For these rules to be effective, as many people as possible should actively participate in making, upholding and changing them. What makes politics different as an academic subject is its emphasis on debate, discussion and argument.

Politics therefore suits students who have an interest in the world around them and want to know more about how society works and how it could be changed; enjoy debate and discussion and are comfortable with the fact that there are no simple 'rights' or 'wrongs' in politics; like to think independently and want to develop their own views; enjoy weighing up and evaluating evidence. The course involves student-centred learning, using presentations, debates, case studies, discussions, video and audio-based exercises, note-taking and individual research. Students are expected to read a newspaper regularly and carry out internet research.

#### Unit 1: People and Politics

- Introduces students to the key channels of communication between government and the people. This unit encourages students to evaluate the adequacy of the existing arrangements for ensuring representative democracy and participation.

#### Unit 2: Governing the UK

- Introduces students to the major governmental processes within the UK. This unit encourages students to develop a critical understanding of the role and effectiveness of key institutions, and of the relationship amongst them in the context of multi-level governance.

#### Unit 3: Key Themes in Political Analysis

- Introduces students to key themes in political analysis. Students study the topic 'Representative Processes in the USA'.

#### Unit 4: Extended Themes in Political Analysis

- This unit extends students' understanding of key themes in political analysis. The topic 'Governing the USA' will be studied by all students.

In Year 12, students take units 1 and 2 to achieve AS Level, which are both assessed by a written examination of 1 hour and 20 minutes. In Year 13, units 3 and 4 are taken to achieve A2 Level, and these are both assessed by a written examination of 1 hour 30 minutes. There is no coursework.

### WHY STUDY A LEVEL GOVERNMENT AND POLITICS?

This A Level provides students with adaptable skills which enable them to understand and assess ideas and arguments and to construct and communicate clear answers to problems based on well-validated evidence. It is suitable for progression to degree courses such as politics and international politics/relations, history, law, geography, economics, social policy and business.

The study of politics can lead to a variety of careers within areas such as law, journalism and broadcasting, business, management, publishing, local government, public policy and policy research, interest groups, local government and the voluntary sector, as well as within politics itself.

# History

## SPECIFICATION

Edexcel 8H101/9H101

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in History GCSE as well as a Grade B or above in English Language.

Students do not have to have studied GCSE History, although it is desirable because the A Level course builds upon the skills developed at GCSE, such as the communication of historical knowledge and the ability to analyse historical sources.

### COURSE OUTLINE

History A Level is likely to appeal to those students who have an interest in the world around them, the society they live in and how it has developed; like learning about people, how they interact and what motivates them; like learning about different countries, societies and cultures; enjoy discussion, debate and argument; like to think for themselves and develop their own views; enjoy research and analysing material to check for bias and propaganda.

The course provides opportunities for student-centred learning, using a variety of methods including presentations, debates, case studies, discussions, video and audio based exercises, note-taking and individual research. Students are expected to read a variety of books around their chosen subject area. In Year 12, students take Units 1 and 2 to achieve AS Level. In Year 13, Units 3 and 4 are taken to achieve A2 Level.

#### Unit 1: Historical Themes in Breadth

- Introduces students to the aspects of the past in breadth through periods or themes. Students study 'The Road to Unification: Italy, c1815-1870' and 'Germany Divided and Reunited, 1945 – 1991' within the option 'The Expansion and Challenge of Nationalism'.

#### Unit 2: British History Depth Studies

- Introduces students to British History in depth through an exploration of source material in its historical context. Students study 'British Political History, 1945-1990: Consensus and Conflict' within the option 'Britain in the Later Twentieth Century: Responding to Change'

#### Unit 3: Depth Studies and Associated Historical Controversies

- Students undertake a study in some depth at a more demanding level than Unit 2 through a mixture of essay-writing and an analysis of source material. Students study 'From Kaiser to Fuhrer, 1900-1945' within the option 'The Challenge of Fascism'.

#### Unit 4: Historical Enquiry

- Develops students' understanding of the process of change over a long period. Students complete a two-part assignment on something of their personal choice drawn from the topic 'The Making of Modern Russia, 1856 – 1994'

Units 1 and 2 are each examined by a written exam of 1 hour 20 minutes. Unit 3 is examined by a written examination of 2 hours. Unit 4 is examined by an internally assessed 4000-word essay.

### WHY STUDY A LEVEL HISTORY?

History A Level is well-regarded for entry to degree courses in history, politics, law, business, English literature, economics and many others. It develops a number of skills relevant to many types of employment, such as the ability to seek information and to analyse it in order to identify facts and motives and to present information clearly for others to understand e.g. careers in law, business, journalism, teaching, museums, galleries, heritage sites, record offices and archives, libraries, national and local government and the civil service.

# ICT (Information and Communications Technology)

## SPECIFICATION

OCR H517/ H117

### SPECIFIC GCSE REQUIREMENTS

Students should have achieved at least Grade C in ICT or in an ICT-based subject e.g. business studies, systems & control, etc. Students who do not satisfy this requirement can be considered if they can satisfy our Head of ICT that they have acquired an equivalent level of ICT skills through self-study or a non-examination course at school.

### COURSE OUTLINE

A-Level ICT is split into two units at AS Level and two units at A2 Level, each stage consisting of one theory and one practical module. The new specification has been updated to accommodate the fast-moving nature of ICT in both the business and wider world. The course is assessed through a combination of coursework (40%) and written examinations (60%), at both AS and A2 Levels.

There are two AS Units:

- o Information, Systems and Applications

This unit focuses on the fundamental knowledge required to support all subsequent units. Topics covered are: data; information; knowledge and processing; software and hardware components of an information system; characteristics of standard applications software and application areas; spreadsheet concepts; relational database concepts; applications software used for presentation and communication of data; the role and impact of ICT.

- o Structured ICT Tasks

This is a coursework unit, designed to use structured ICT tasks to test students' practical skills in design, software development, testing and documentation. Tasks may involve: the design of part of a system; the production of a testing strategy; the use of software for development; the production of user documentation to show the user how to use the system; the production of technical documentation to show how the system was developed.

There are two A2 Units:

- o ICT Systems, Applications and Implications

This unit covers communications between computers and interactions between humans and computers. A range of other information and communications technologies is also covered. The convergence of communications technology and information technology and their impact on society, commerce and industry is an integral part of the module. The following topics are studied: the systems cycle; designing computer-based information systems; networks and communications; applications of ICT; implementing computer-based information systems; implications of ICT.

- o ICT Coursework Project

This project allows candidates to develop their knowledge and understanding of ICT systems and how they are created. It is a substantial piece of work requiring analysis and design over an extended period of time, organised, evaluated and presented in a report. Students choose, in conjunction with a real end-user, a well-defined client-driven problem that enables them to demonstrate their ability to: analyse a problem; design a solution to the problem; develop the software solution; test the solution against the requirements specification; document the solution; evaluate the solution; work with another person/people to successfully complete the above steps.

### WHY STUDY A LEVEL ICT?

A-Level ICT suits individuals who think creatively, innovatively, analytically, logically and critically; enjoy using different ICT skills to work collaboratively; enjoy using ICT in a range of contexts to solve problems; are interested in learning about the consequences ICT use on individuals, organisations and society; are interested in social, legal, ethical aspects of the use of ICT; have an awareness of emerging technologies and an appreciation of the potential impact these may have on individuals, organisations and society. It provides a suitable basis for careers in e-commerce, business management, systems design/analysis, programming and web development.

# Mathematics

## Further Mathematics

### SPECIFICATIONS

Mathematics: Edexcel 8371/9371

Further Mathematics: Edexcel 8372/9371

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in GCSE Mathematics to study AS or A-Level Mathematics. Students should have a good A or an A\* in GCSE Mathematics to study AS or A-Level Further Mathematics.

### COURSE OUTLINE

The course is designed 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 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; recognise how a situation may be represented mathematically and understand the relationship between 'real-world' problems and standard and other mathematical models and how these can be refined and improved; use mathematics as an effective means of communication; read and comprehend mathematical arguments and articles concerning applications of mathematics; acquire the skills needed to use technology such as calculators and computers effectively, recognise when such use may be inappropriate and be aware of limitations; develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general; take increasing responsibility for their own learning and the evaluation of their own mathematical development.

Students study 3 units at AS Level and 3 units at A2 Level, covering core pure mathematics (C units), mechanics (M units) and statistics (S units). Each unit is assessed by a 1½ hour written paper, all of which are equally weighted. We will be studying units C1, C2 and either S1/M1 in Year 12, and C3, C4 and one of S1/M1/S2 in Year 13:

- o Unit C1: Algebra and functions; coordinate geometry in the  $(x, y)$  plane; sequences and series; differentiation; integration. C1 is the only non-calculator paper.
- o Unit C2: Algebra and functions; coordinate geometry in the  $(x, y)$  plane; sequences and series; trigonometry; exponentials and logarithms; differentiation; integration.
- o Unit M1: Mathematical models in mechanics; vectors in mechanics; kinematics of a particle moving in a straight line; dynamics of a particle moving in a straight line or plane; statics of a particle; moments.
- o Unit C3: Algebra and functions; trigonometry; exponentials and logarithms; differentiation; numerical methods.
- o Unit C4: Algebra and functions; coordinate geometry in the  $(x, y)$  plane; sequences and series; differentiation; integration; vectors.
- o Unit S1: Mathematical models in probability and statistics; representation and summary of data; probability; correlation and regression; discrete random variables; discrete distributions; the Normal distribution.

Further Mathematics to AS level is an additional three units of which FP1 is compulsory and two others from FP2, FP3, S1, S2, M1, M2 or D1. Further Mathematics to A-Level is an additional six units of which FP1, FP2 and FP3 are compulsory and three from S1, S2, M1, M2 or D1. Further Mathematics is best suited to students who are also studying physical sciences (physics and chemistry).

### WHY STUDY A LEVEL MATHEMATICS?

Mathematics is an essential or highly desirable qualification for a wide number of careers and university courses (e.g. mathematics, economics, business, accountancy, engineering, medicine, sciences, social sciences, law) and is highly valued by employees because of the problem-solving nature of the discipline.

# Modern Hebrew

## SPECIFICATION

AQA 2675/MHEB1

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in GCSE Modern Hebrew.

### COURSE OUTLINE

As with all modern languages, Modern Hebrew has now become a modular subject. To be awarded AS Level, students take an exam at the end of Year 12. To be awarded A2 they take a second module at the end of Year 13. Each module makes up 50% of the final A Level grade.

Students learn a range of language skills: the ability to communicate confidently in Hebrew, to understand and respond to written Hebrew, to translate coherently from Hebrew into English (for AS Level) and from English into Hebrew (for A2 Level), to structure essays using increasingly accurate, complex and varied language and to display critical thinking and analytical skills. All lessons are conducted in Modern Hebrew, to maximise the development of students' language skills.

The topics covered in the course are very varied. They include: the media, family issues, religion, social issues, environmental issues, science & society, crime and punishment, education, employment & unemployment, law and order.

The first year of the course is devoted mainly to developing students' language skills through translation, reading comprehension and essay writing.

The second year of the course introduces literary and non-literary texts, ranging from subjects such as Individuals in the Mirror and In Society, Literary Representations of Historical Events and Topics, Democracy and Citizenship in Israel or Communities, Ethnic Groups and Religions in Israel.

We will be reading pieces written by leading contemporary Israeli writers such as David Grossman, Savyon Librecht or Amos Oz, and gaining an insight into the rich tapestry which makes up Israeli society of today.

### WHY STUDY A LEVEL MODERN HEBREW?

The course is stimulating, informative and a great boon to anyone planning to spend time in Israel. It also provides students with a sound basis for further study, whether in British or Israeli Universities.

Modern language A Levels are well-regarded by universities for entry to a wide range of degrees, including law, economics and business. Modern Hebrew A Level provides students with the knowledge and skills required for careers in linguistics and employment in the growing number of companies trading with Israel.

# PE

## SPECIFICATION

OCR G451- Anatomy and Physiology/ Skill Acquisition/ Socio-Cultural Studies, G452- Coursework

### SPECIFIC REQUIREMENTS

Students who have studied GCSE PE must have achieved at least Grade B. All students must have achieved at least Grade BB in GCSE Dual Award Science if they are to cope effectively with the physiological modules. Students who do not have a GCSE in PE will need to commit to familiarising themselves with the necessary anatomy and physiology knowledge in order to begin the AS course. Students are also expected to have reached a good standard of performance in two different sports activities and competing regularly in at least one of these sports.

### COURSE OUTLINE

This course would suit talented sportsmen or sportswomen who are keen to develop their practical performance in their chosen sport by developing an in-depth understanding of the theoretical concepts which underpin physical education. This course takes a multi-disciplinary approach, encouraging the development of different methods of enquiry, with the focal point being the performer and the performance. The course is based on the interaction between the theory and practice of physical education.

The majority of lessons in A Level PE are classroom-based. These classroom lessons make reference to, and draw upon, students' practical experiences in their chosen activities. Students are expected to attend additional practical sessions after school, where aspects of the practical coursework are covered or assessed, and to attend sixth form recreational PE sessions and to participate in one or more sports regularly outside of school.

#### The modules studied at AS level are:

G451 (60%):

Anatomy and Physiology- Section A the skeletal and muscular systems, motion and movement, the cardiovascular and respiratory system in relation to performance  
Acquiring Movement Skills. Section B- classification of motor skills and abilities, the development of motor skills, informing processing, motor control of skills in physical activity, learning skills in physical activity, socio-culture Studies relating to participating in physical activity. Section C, physical activity, sport and culture and contemporary studies

G452 (40%):

Acquiring, developing and evaluating practical skills. Pupils will be assessed in: Performance in two chosen activities (from two different activity profiles) and in evaluation & planning for improvement of performance in one of the chosen activities.

Anatomy/ physiology (40)	Skill Acquisition (40)	Contemporary Issues (40)	Practical (40)	Practical (40)	Oral (30)
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#### The modules studied at A2 level are:

G453 (35%): Historical aspects of sport and Psychology of sport

G454 (15%): Coursework

The remaining 50% is calculated using the student's AS scores (30% for G451 and 20% for G452). In order to be successful at A2 students will need to: Have an independent approach to their studies - independent research is a fundamental requirement for the theoretical aspects of this subject, become effective collaborators, working in groups during both practical and theory lessons, apply their theoretical knowledge to help improve performance, work with past examination papers and mark schemes.

### WHY STUDY A LEVEL PE?

With an A Level in physical education, students can go on to higher education and pursue a career in sports studies/science, physiotherapy, leisure management or teaching.

# Physics

## SPECIFICATION

AQA Specification Physics A (1451)

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade AB in Dual Award Science GCSE (or grade B in Physics GCSE) and at least Grade B in Mathematics GCSE.

### COURSE OUTLINE

Physics is so fundamental that there is scarcely a single area of modern life which is not affected by its theories and applications. It is the science of matter and the universe around us and is the basis of all developments in high technology and engineering.

A Level physics will appeal to students who have an interest in how the universe works, from the smallest particles to the end of the universe; like finding out how things work; enjoy solving practical and theoretical problems whether working alone or as part of a team; enjoy fitting difficult facts and ideas into simple working models.

The AQA Physics A curriculum is a concept-led teaching course demonstrating how science works, building upon the core disciplines learnt in Dual Award Science at GCSE. The course is divided into six units over 2 years. Units 1, 2 and 3 comprise the AS Level. Units 4, 5 and 6 comprise the A2 Level.

- o Unit 1: Particles, Quantum Phenomenon and Electricity -the atom, radioactivity, particles and anti-particles, particle interactions, particle classification, quarks, wave particle duality, current, potential difference, resistivity, EMF, internal resistance and AC.
- o Unit 2: Mechanics, Materials and Waves - scalars, vectors, equations of motion, Newton's laws, energy and power, properties of materials including Hooke's law and Young's modulus, refraction, interference and diffraction of waves.
- o Unit 3: Investigative and Practical Skills in AS Physics - internal assessment comprising of a series of practical tasks undertaken during the year and a practical test taken towards the end of year 12.
- o Unit 4: Fields and Further Mechanics – further mechanics, introduction to fields and particles, momentum, circular motion, simple harmonic motion, resonance, gravitational, electrical and magnetic fields.
- o Unit 5: Nuclear and thermal Physics - radioactive decay, nuclear energy, thermal energy and kinetic theory. One option to be studied from: Astrophysics, Medical Physics, Applied Physics and Turning Points in Physics.
- o Unit 6: Investigative and Practical Skills in A2 Physics –internal assessment, comprising of a series of practical tasks undertaken during the year and a practical test taken towards the end of Year 13.

The units in the A2 year also assess synoptically, which means that they contain material that also draws on knowledge from the AS year.

### WHY STUDY A LEVEL PHYSICS?

A Level physics develops the skills that can be applied to any career or path of study chosen: logical thinking, analysing, using analogies as well as applying mathematics to practical situations. A Level physics students are well prepared for degrees and careers in science including engineering, medicine, dentistry and pharmacy, computing, actuary, sports science and aeronautics.

# Psychology

## SPECIFICATION

AQA A (2180)

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved Grade C or above in English, Maths and Science.

### COURSE OUTLINE

Psychology is the study of mind and behaviour, bridging the social sciences and natural sciences. Students are encouraged to develop an understanding of psychological research; the ability to apply this knowledge to real life situations; critically analyse and evaluate the value of psychological research and its credibility as an explanation of human behaviour.

In year 12, students study units 1 and 2 which are each examined by a mixture of short answer questions and a structured essay. In year 13, units 3 and 4 are studied; unit 3 is examined by essays and unit 4 by structured essays:

#### Unit 1: Cognitive Psychology, Developmental Psychology and Research Methods

- **Research Methods** investigates the way studies into behaviour are designed and analysed.
- **Human Memory** explores the structure of human memory, the reasons why people forget, and the use and reliability of eyewitness testimonies.
- **Early Social Development** explores early childhood attachments, the effect these attachments have on adult behaviour and the impact of day care on a child's development.

#### Unit 2: Biological Psychology, Social Psychology and Individual Differences

- **Stress** explores causes of stress and the relationship between stress and physical illness, in addition to the psychological & physiological methods that people use to manage stress.
- **Social Influence** explores why people are influenced by majority groups, the factors that lead to blind obedience to authority and the reasons why people are able to remain independent.
- **Abnormality** explores definitions and different psychological perspectives on the cause of psychological abnormality. Students will also research a range of therapies that are used to treat people with psychological disorders.

#### Unit 3: Topics in Psychology

- **Relationships** explores why people are attracted and fall in love, in addition to reasons why relationships are formed, how they are maintained and why they breakdown.
- **Aggression** explores the social and biological causes of human aggression, in addition to explanations of lynch mob behaviour and football hooliganism.
- **Eating Behaviours** explores factors which affect attitudes to food and eating behaviours, in addition to the biological and psychological causes of eating disorders.

#### Unit 4: Psychopathology, Psychology in Action and Research Methods

- **Psychopathology** explores the clinical characteristics, biological and psychological causes of OCD, in addition to the various therapies that are available to help treat people.
- **The Psychology of Addictive Behaviour** explores reasons for addictive behaviours such as smoking and gambling, in addition to investigating biological and psychological types of intervention which help addicts step out of the cycle of addictive behaviour.
- **Psychological research and scientific method** builds on the research methods unit students were introduced to during the AS course.

### WHY STUDY A LEVEL PSYCHOLOGY?

A Level psychology develops the analytical skills needed to excel in higher education. It leads to a wide range of career options, particularly those involving dealing with people, such as teaching, the police force, law, medicine, journalism, advertising, public relations and social work.

# Religious Studies

## SPECIFICATION

OCR H172/H572

### SPECIFIC GCSE REQUIREMENTS

Students must have achieved at least Grade B in English Language and English Literature. Grade B or above in GCSE Religious Studies is desirable but not essential.

### COURSE OUTLINE

This course aims to encourage students to develop their interest in religion and relate their study of religion to the wider world. Students are encouraged to reflect and develop their own attitudes, values and opinions in light of their learning. Two complementary strands are covered at both AS and A2 level; Jewish scriptures and Judaism.

The course will appeal to students who are interested in Judaism and Jewish history; to any student who is philosophically minded and interested in why the world is as it is and how religions in general, and Judaism in particular, respond to world issues; and to students who are literary-minded and enjoy the study and analysis of texts.

There are two AS Units:

- o Jewish scriptures

Students will explore the background to Tanach, Covenants, Prophecy and the idea of G-d and Suffering.

- o Judaism

This unit considers sacred writings, beliefs and practices.

There are two A2 Units:

- o Jewish scriptures

Students will explore the ideas of Reward and Punishment, the Book of Ruth and Messianism.

- o Judaism

This unit considers beliefs and developments in Judaism.

Each of these four units is assessed by one 1½ hour written examination. There is no coursework option.

### WHY STUDY A LEVEL RELIGIOUS STUDIES?

RS A level is a well-respected qualification that, due to its general application and openness, leads to a variety of careers or university courses. Students interested in pursuing further studies or careers which incorporate English, history, philosophy, psychology, sociology, religious studies, economics, law and many more, would do well to consider this A Level as an appropriate and rewarding option.